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The Right Honorable the Treasurer

BY

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## PREFACE

By the Constitution of the Commonwealth of Australia, the Parliament of the Commonwealth is empowered, subject to the Constitution, "to make laws for the peace, order, and good government of the Commonwealth, with respect to . . . . . Census and statistics." In the exercise of the power so conferred, a Census and Statistics Act was passed in 1905, and in the year following the Commonwealth Bureau of Census and Statistics was created. The first Official Year Book was published early in 1908. The publication here presented is the fiftieth Official Year Book issued under the authority of the Commonwealth Government.

The Synopsis on pp. xi to xxix following shows the general arrangement of the work. The special index (preceding the General Index) provided at the end of the volume, together with certain references given in the various chapters, will assist in tracing in previous issues special articles and other more or less important miscellaneous matter which, in order to conserve space, have been omitted or abbreviated in the present volume. Where, in the General Index, more than one reference to a subject is given, the chief reference (or references) has been specially indicated wherever possible.

Among the new matter included and existing matter revised or rearranged in this volume the following items may be especially mentioned.

Chapter II. Climate and Meteorology. New maps added showing Annual Rainfall and Average Annual Thunder-days (pp. 42 and 44).

Chapter XII. Employment and Unemployment (pp. 401-30). New chapter, including data relating to industry, occupation, etc. formerly included in the chapter Population, together with a new section dealing with the work force survey (pp. 417-24) and a revised and enlarged section relating to wage and salary earners in employment, formerly included in the chapter Labour, Wages and Prices.

Chapter XV. Transport and Communication. Special section summarizing the results of the Census of Motor Vehicles of 31st December, 1962 (pp. 590-4).

Chapter XVII. Public Justice (pp. 643-53). Revised chapter arrangement which groups particulars according to the nature of the proceedings rather than the type of court.

Chapter XIX. Education, Cultural Activities and Research. Statistics on schools and universities advanced an additional year (to 1963) (pp. 711-18 and 730-7). and new matter on grades of school pupils (pp. 715-8).

Chapter XXI. Private Finance. Revised and enlarged section relating to Savings Banks (pp. 854-64).

Chapter XXIX. International Relations (pp. 1217-26). Revised chapter.

Chapter XXX. Miscellaneous. Results of 30th June, 1962, Census of Retail Establishments and other Services (pp. 1239-45).

National Accounts. New matter (pp. 1253-82).

The material in the Year Book has been carefully checked throughout, but I shall be grateful to those who will be kind enough to point out defects or make suggestions.

## PREFACE

The statistics contained in the majority of the chapters of this volume relate to the years ended June or December, 1963, and the Appendix contains a selection of the more significant data which have become available since the chapters were prepared. As with previous Year Books, the contents of this issue have already been published in separate Parts as the successive chapters or groups of chapters were printed.

More detailed statistics on subjects dealt with in the Year Book are available in the various annual printed reports published by this Bureau. The more recent statistics published by the Bureau are contained in the *Digest of Current Economic Statistics* (monthly), the *Monthly Review of Business Statistics*, the *Quarterly Summary of Australian Statistics*, and in other publications issued monthly, quarterly, half-yearly, or yearly. These publications are listed in § 7, Statistical Publications of Australia, Chapter XXX. Miscellaneous, and the last pages of this volume contain a list of current and recent printed publications, showing issue numbers, dates and prices.

The Deputy Commonwealth Statisticians in New South Wales, Victoria, Queensland and Western Australia publish Official Year Books concerning their respective States, and the Deputy Commonwealth Statisticians of all States issue a number of printed and mimeographed publications. These are listed on pages 1163-5 of the 1962 issue of this Year Book, and, together with publications of the central Bureau, in *Publications of the Commonwealth Bureau of Census and Statistics* issued by this Bureau.

My thanks are tendered to the Deputy Commonwealth Statistician in each State, who has collected and compiled the data on which a great part of the information given in the Year Book is based. Thanks are also tendered to the responsible officers of the various Commonwealth and State Departments, and to others who have kindly, and often at considerable trouble, supplied information.

I also desire to express my keen appreciation of the valuable work performed by Mr. J. M. Jones, B.A., Editor of Publications, Mr. E. H. Harry, B.A., B.Com., and Mr. C. W. F. Johns, B.Com., Dip. Pub. Ad., Assistant Editors and the other officers of the Publications Division, and of the services rendered by the officers in charge of the several Branches of the Commonwealth Bureau of Census and Statistics upon whom has devolved the duty of revising the chapters relative to their respective Branches, and by the Government Printer and his staff in printing this Year Book and in assisting and advising throughout its preparation.

K. M. ARCHER,  
Commonwealth Statistician

COMMONWEALTH BUREAU OF CENSUS AND STATISTICS,  
Canberra, A.C.T., September, 1964

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## CORRIGENDA

## Page

- 5 and elsewhere where figures relating to areas of Australian States and Territories appear—  
for revised figures *see* Appendix, page 1297.
- 72—paragraph 8, line 14 *delete* for at least five years; line 22 *delete* for a period of five years.
- 106—paragraph 2 (iv), line 2—*for* 169 *read* 177; line 3—*for* 64 *read* 86; *for* 585 *read* 615.
- 181—Motor bodies, 1962–63—*for* 262,257 *read* 370,376.
- 312—paragraph 1, Annual Totals, 1963, Tasmania—*for* 2,708 *read* 2,579; Australia—*for* 81,045 *read* 80,916.
- 313—paragraph 2, Annual Rates, 1963, Tasmania—*for* 7.43 *read* 7.08; Australia—*for* 7.42 *read* 7.41.
- 562—paragraph 1, 1962–63, Adelaide—*for* 2,348 | 6,159 *read* 2,344 | 6,170; Devonport—*for* 707 *read* 720.
- 563—paragraph 2, Adelaide—*for* 6,159 *read* 6,170.
- 572—paragraph 4, 1931, South Australia—*for* 3,898 *read* 3,725; Australia—*for* 26,809 *read* 26,636.
- 1007—line 5—*for* No. 43, page 883 *read* No. 43, page 833.

**SYMBOLS AND OTHER FORMS OF USAGE IN THIS YEAR BOOK**

The following symbols, where shown in columns of figures, mean—

- n.a. —not available.
- . . —nil or less than half the final digit shown, or not applicable.
- p —preliminary—figure or series subject to revision.
- r —figure or series revised since previous issue.
- n.e.i.—not elsewhere included.
- n.e.c.—not elsewhere classified.
- n.s. —not stated.

A blank space in a column of figures means that the figure concerned is not yet available.

Yearly periods shown as, e.g., 1963, refer to the year ended 31st December, 1963; those shown as, e.g., 1962-63, refer to the year ended 30th June, 1963. Other yearly periods are specifically indicated.

Unless otherwise indicated, the British system of weights and measures is used.

Values are expressed in £ Australian, shown with or without the letter A., unless another currency is specifically stated.



# OFFICIAL YEAR BOOK

OF THE

## COMMONWEALTH OF AUSTRALIA

### CHAPTER I

#### DISCOVERY, COLONIZATION AND FEDERATION OF AUSTRALIA

##### § 1. Early Knowledge and Discovery of Australia

NOTE.—The following paragraphs contain only a bare outline of the more important facts relating to the early history of Australian discovery. A more detailed summary of these facts may be found in Official Year Book No. 39 (*see p. 1*) and earlier issues.

1. *Terra Australis*.—There was, apparently, an early Chaldean tradition as to the existence of an Austral land to the south of India, and rumours to that effect found their way in the course of time to Europe. References to this *Terra Australis* are found in the works of Ælianus (A.D. 205–234), Manilius (probably a contemporary of Augustus or Tiberius Caesar), and Ptolemy (A.D. 107–161). Evidence pointing to knowledge of such a land appeared in maps and manuscripts of the Middle Ages and the fourteenth and fifteenth centuries, but there is no definite evidence connecting this so-called *Terra Australis* with Australia.

Reference by Marco Polo (1254–1324) to a land called Locac and several indications on maps and globes in the fifteenth and sixteenth centuries have been assumed to relate to Australia, but little weight can now be attached to these suppositions. Cornelius Wytfliet's map of 1597, however, indicates roughly the eastern and western coasts of Australia, as well as the Gulf of Carpentaria, although the oft-quoted passage in his *Descriptionis Ptolemaicæ Augmentum* describing the *Australis Terra* has been considered to have had its origin in the voyages through the Straits of Magellan and the discovery of Tierra del Fuego rather than that of Australia.

2. *Discovery of Australia*.—(i) *The Spaniards*. Disregarding the suggestion, for which there is no evidence, that the Arabs had come to Australia long before the Portuguese, the Spaniards, or the Dutch, and apart from the possibility that the Portuguese may have discovered part of the Australian coast before 1542, the coastal exploration of Australia may be taken as having begun with the Spaniards and the Dutch.

In 1606, the Spaniard Quiros, on reaching the island that has retained the name of Espiritu Santo (the largest island of the New Hebrides group), thought he had discovered the great land of the south, and therefore named the group *La Australia del Espiritu Santo*. After leaving the New Hebrides, Quiros sailed eastward, but Torres, his second-in-command, took a westerly course and passed through the strait that now bears his name. In all probability, he sighted the Australian continent, but no mention of it is made in his records. This voyage marks the close of Spanish activity in the work of discovery in the South Seas.

(ii) *The Dutch*. The Dutch discovered Australia when the Dutch East India Company sent the *Duyfken* from Bantam, Java, to explore the island of New Guinea. During March, 1606, the *Duyfken* coasted along the southern shores of New Guinea and followed the west coast of Cape York peninsula as far as Cape Keer-Weer (Turn Again).

During the following thirty years, there were nine visits of Dutch navigators to Australian waters; by 1636, through their efforts, the coast of Australia from Cape York westward around to the Great Australian Bight had been discovered.

In 1642, Abel Janszoon Tasman set out from Batavia to ascertain the extent of the great southern continent. He named Van Diemen's Land, imagining it to be part of Australia proper, and sailing north-easterly discovered New Zealand and returned to Batavia. In his second voyage, in 1644, Tasman visited the northern coast of Australia, sailing round the Gulf of Carpentaria and along the north-west coast as far south as the tropic of Capricorn. This voyage of Tasman's may be said to have ended the period of Dutch discoveries, although there were subsequent visits by the Dutch to Australia (de Vlamingh in 1696 and Van Delft in 1705).



3. Discoveries by the English.—In the meantime, the English had made their first appearance on the Australian coast in 1688, when the north-westerly shores were visited by William Dampier, as supercargo of the *Cygnets*, a trading vessel whose crew had turned buccaneers. In 1699, he again visited Australia, in command of H.M.S. *Roebuck*, and on his return to England published an account in which a description is given of trees, flowers, birds and reptiles observed, and of encounters with natives.

At the end of the seventeenth century, it was uncertain whether Tasmania and New Zealand were parts of Australia, or whether they were separated from it but themselves formed part of a great Antarctic Continent. Lieutenant (later Captain) James Cook's first voyage, though primarily undertaken for the purpose of observing the transit of Venus from Tahiti, had also the objective of ascertaining whether the unexplored part of the southern hemisphere was only an immense mass of water or contained another continent. In command of H.M.S. *Endeavour*, a barque of 370 tons burden carrying about 85 persons, and accompanied by Sir Joseph Banks the botanist, Dr. Solander the naturalist, Green the astronomer, draughtsmen and servants, Cook, after observing the transit of Venus at Tahiti, turned toward New Zealand, sighting that land on 7th October, 1769, in the neighbourhood of Poverty Bay. Circumnavigating the North and South Islands, he proved that New Zealand was connected neither with the supposed Antarctic Continent nor with Australia, and took formal possession thereof in the name of the British Crown. On 20th April, 1770, at 6 a.m., Cook sighted the Australian mainland at a place he called Point Hicks, naming it after his first-lieutenant, who first saw it. Coasting northwards, Botany Bay was discovered on 29th April, 1770. The *Endeavour* dropped anchor and Cook landed on the same day. Cook sailed along the coast in a northerly direction for nearly 1,300 miles until 11th June, 1770, when the *Endeavour* was seriously damaged by striking a coral reef in the vicinity of Trinity Bay. Repairs occupied nearly two months, and the *Endeavour* then again set her course to the north, sailing through Torres Strait and anchoring in the Downs on 13th July, 1771. In 1772, Cook was put in command of the ships *Resolution* and *Adventure*, with a view to ascertaining whether a great southern continent existed. Having satisfied himself that, even if it did, it lay so far to the south as to be useless for trade and settlement, he returned to England in 1774. Cook's last voyage was undertaken in 1776, and he met his death on 14th February, 1779, by which date practically the whole coast of Australia had been explored. The only remaining discovery of importance was the existence of a channel between Tasmania and Australia. This was made by Bass and Flinders in 1798.

## § 2. The Annexation of Australia

1. Annexation of the Eastern Part of Australia, 1770.—Although representatives of the nations mentioned in the previous section landed or claimed to have landed on the shores of Australia on various occasions during the sixteenth and seventeenth centuries, it was not until 23rd August, 1770, that the history of Australia was brought into definite political connexion with Western civilization. It was on that date that Captain Cook took possession "of the whole eastern coast, from latitude 38° S. to this place, latitude 10½° S., in right of His Majesty King George the Third". Cook, however, proclaimed British sovereignty over only what are now the eastern parts of New South Wales and Queensland, and formal possession, on behalf of the British Crown, of the whole of the eastern part of the Australian continent and Tasmania was not taken until 26th January, 1788. It was on this last date that Captain Phillip's commission, first issued to him on 12th October, 1786, and amplified on 2nd April, 1787, was read to the people whom he had brought with him in the "First Fleet".

A full historical account of the period referred to may be found in the *Historical Records of New South Wales*, Vol. I., parts 1 and 2.

2. Original Extent of New South Wales.—The commission appointed Phillip "Captain-General and Governor-in-Chief in and over our territory called New South Wales, extending from the Northern Cape or extremity of the coast called Cape York, in the latitude of ten degrees thirty-seven minutes south, to the southern extremity of the said territory of New South Wales or South Cape, in the latitude of forty-three degrees thirty-nine minutes south and of all the country inland westward as far as the one hundred and thirty-fifth degree of east longitude reckoning from the meridian of Greenwich, including all the islands adjacent in the Pacific Ocean within the latitudes aforesaid of ten degrees thirty-seven minutes south and forty-three degrees thirty-nine minutes south".

Although Captain Cook had taken possession of the North Island of New Zealand in November, 1769, and of the South Island in January, 1770, it is doubtful whether, at the time when Captain Phillip's commission was drawn up, New Zealand was considered as one of the "islands adjacent in the Pacific Ocean". The fact that under the Supreme

Court Act (Imperial) of 1823, British residents in New Zealand were brought under the jurisdiction of the Court at Sydney, and that in 1839 there was a proposal on the part of the British Government to appoint a consul in New Zealand, would leave this an open question, as nothing more than extra-territorial jurisdiction may have been intended. Various hoistings of flags notwithstanding, New Zealand does not appear to have become British territory unequivocally until 1840. In that year, on 29th January, Captain Hobson arrived at the Bay of Islands. On the following day, he read his commission, which extended the boundaries of the Colony of New South Wales so as to embrace and comprehend the islands of New Zealand. On 5th February, the Treaty of Waitangi, made with the native chiefs, was signed. Finally, on 21st May, British sovereignty over the islands of New Zealand was explicitly proclaimed.

3. **Extension of New South Wales Westward, 1825.**—On 17th February, 1824, Earl Bathurst notified Sir Thomas Brisbane that he had recommended to His Majesty the dispatch of a ship of war to the north-west coast of New Holland for the purpose of taking possession of the coast between the western coast of Bathurst Island and the eastern side of Coburg Peninsula. Captain James J. Gordon Bremer of H.M.S. *Tamar*, who was selected for the purpose, took possession on 20th September, 1824, of the coast from the 135th to the 129th degree of east longitude. On 16th July, 1825, the whole territory between those boundaries was described in Darling's commission as being within the boundaries of New South Wales, thus increasing its area by 518,134 square miles, and making it, including New Zealand and excluding Tasmania, 2,076,308 square miles, or also excluding New Zealand, 1,972,446 square miles.

4. **Annexation of Western Australia, 1827.**—An expedition under Major Lockyer, sent by Lieutenant-General Sir Ralph Darling, then Governor of New South Wales, to found a settlement at King George Sound, sailed from Sydney on 9th November, 1826, landed at the Sound on 26th December following, and on 21st January, 1827, hoisted the British flag. Captain Stirling, in command of H.M.S. *Success*, arrived at Sydney a few weeks after the departure of the expedition to King George Sound. He obtained the Governor's permission to visit Swan River with a view to seizing a position on the western coast and reporting upon its suitability as a place of settlement. Captain Stirling left Sydney on 17th January, 1827, and on his return in the following April submitted a glowing report on what he described as a "rich and romantic country", urging its occupation for the purpose of settlement. He left for England in July, 1827, continuing his advocacy—notwithstanding much discouragement—with unabated enthusiasm. He was at last successful, the result being due mainly to the formation of an association of prospective settlers having capital at their disposal. He was appointed Lieutenant-Governor and with a party of settlers arrived at Garden Island, near the Swan River, in the ship *Parmelia* in June, 1829. On the 2nd of the preceding month, Captain Fremantle, in command of H.M.S. *Challenge*, arrived and hoisted the British flag on the south head of Swan River, again asserting possession of "all that part of New Holland which is not included within the territory of New South Wales". Thus, before the middle of 1829, the whole territory now known as the Commonwealth of Australia had been constituted a dependency of the United Kingdom.

### § 3. The Creation of the Several Colonies

1. **New South Wales.**—In Governor Phillip's commission of 1786, the mainland of Australia was divided by the 135th meridian of east longitude into two parts. The earliest colonists believed that the present State of Tasmania was actually joined to the mainland, and it was not until 1798 that the contrary was known. In that year, Bass and Flinders proved that it was an island by sailing through Bass Strait. The territory of New South Wales, as originally constituted, and of New Zealand, which may be included although Cook's annexation was not properly given effect to until 1840, consisted of 1,584,389 square miles. A further area of 518,134 square miles was added in 1825, when the western boundary was extended to the 129th east meridian. The territory was subsequently reduced by the separation of various areas to form the other colonies, and at the time of the establishment of the Commonwealth the area of New South Wales was 310,372 square miles.

Lord Howe Island, which is a dependency of New South Wales and for political purposes is included in one of the electorates of Sydney, is situated in latitude 31° 30' south, longitude 159° 5' east, about 436 miles north-east of Sydney, and has an area of 3,220 acres. The climate is mild and the rainfall abundant, but on account of the rocky formation of its surface only about 300 acres are suitable for cultivation, most of which are devoted to the production of *Kentia* palm seed. The land belongs to the Crown and

is occupied rent-free on sufferance. Discovered in 1788, the Island was first settled by a small party of Maoris in 1853; afterwards a colony was settled from Sydney. A Board of Control at Sydney manages the affairs of the Island and supervises the palm seed industry. The population was 249 at the Census of 30th June, 1961.

2. **Tasmania.**—In 1825, Van Diemen's Land, as Tasmania was then called, was politically separated from New South Wales, being constituted a separate colony on 14th June of that year. The area of the colony was 26,215 square miles. The name of the colony was officially changed to Tasmania in 1856, when responsible government was established.

Macquarie Island, about 1,000 miles south-east of Hobart, together with a few rocky islets nearby, has been a dependency of Tasmania since the nineteenth century. In December, 1911, five members of the Australasian Antarctic Expedition landed on the island and remained there until 1915. On 3rd March, 1948, another party was landed to man a new station which has since been maintained as a scientific base. The island is about 21 miles long and two miles wide.

3. **Western Australia.**—The territory westward of the 129th meridian, comprising 975,920 square miles, was constituted a colony under the name of Western Australia in June, 1829. It was always distinct and independent of New South Wales, except for the settlement on King George Sound (*see* p. 3), which remained under the jurisdiction of New South Wales until 1831.

4. **South Australia.**—On 15th August, 1834, the Act 4 and 5 William IV., cap. 95, was passed, creating South Australia a "province", and settlement took place towards the end of the year 1836. The first Governor, Captain Hindmarsh, R.N., arrived at Holdfast Bay on 28th December, 1836, and on the same day the new colony was officially proclaimed. The new colony embraced 309,850 square miles of territory, lying south of the 26th parallel of south latitude and between the 141st and 132nd meridians of east longitude. On 10th December, 1861, by authority of the Imperial Act 24 and 25 Vict., cap. 44, the western boundary of South Australia was extended to coincide with the eastern boundary of Western Australia, namely, the 129th east meridian. The area of the extension was approximately 70,220 square miles. Nearly two years later, on 6th July, 1863, the Northern Territory, comprising 523,620 square miles, was brought under the jurisdiction of South Australia, which thereupon controlled an area of 903,690 square miles. The Territory was transferred to the Commonwealth on 1st January, 1911 (*see* p. 5).

5. **New Zealand.**—New Zealand, nominally annexed by Captain Cook and formally declared by proclamation in 1840 as a dependency of New South Wales by letters patent of 16th November of that year, was constituted a separate colony under the powers of the Act 3 and 4 Vict., cap. 62, of 7th August, 1840. Proclamation of the separation was made on 3rd May, 1841. The area of the colony was 103,862 square miles.

6. **Victoria.**—In 1851, what was known as the "Port Phillip District" of New South Wales was constituted the colony of Victoria, "bounded on the north and north-west by a straight line drawn from Cape Howe to the nearest source of the River Murray and thence by the course of that river to the eastern boundary of the colony of South Australia". The area of the new colony was 87,884 square miles, and its separate existence took effect from 1st July, 1851, upon the issuing of the writs for the first election of elective members of the Legislative Council.

7. **Queensland.**—The northern squatting districts of Moreton, Darling Downs, Burnett, Wide Bay, Maranoa, Leichhardt and Port Curtis, together with the reputed county of Stanley, were granted an independent administration and formed into a distinct colony under the name of Queensland by letters patent dated 6th June, 1859, although separation from New South Wales was not completed until 10th December of the same year, upon the assumption of office of the first Governor. The territory comprised in the new colony was "so much of the colony of New South Wales as lies northwards of a line commencing on the sea-coast at Point Danger in latitude about 28° 8' south, running westward along the Macpherson and Dividing Ranges and the Dumaresq River to the Macintyre River, thence downward to the 29th parallel of south latitude, and following that parallel westerly to the 141st meridian of east longitude, which is the eastern boundary of South Australia, together with all the adjacent islands, their members, and appurtenances in the Pacific Ocean". The area of the colony thus constituted was 554,300 square miles. By letters patent dated 13th March, 1861, forwarded by the Colonial Secretary to the Governor of Queensland on 12th April, 1862, the area of Queensland was increased by the annexation of "so much of the colony of New South Wales as lies to the northward of the 26th parallel

of south latitude, and between the 141st and 138th meridians of east longitude, together with all and every the adjacent islands, their members, and appurtenances, in the Gulf of Carpentaria." With this addition, the area of Queensland became 670,500 square miles. Following a thorough revision of the area of each Local Government Area of Queensland, based on the most recent maps available, the Surveyor-General, in 1958, determined the area of Queensland as 667,000 square miles—a reduction of 3,500 square miles from the area previously determined.

#### § 4. The Establishment of the Commonwealth of Australia

1. **General.**—On 1st January, 1901, the colonies mentioned, with the exception of New Zealand, were federated under the name of the "Commonwealth of Australia," the designation of "Colonies"—except in the case of the Northern Territory, to which the designation "Territory" is applied—being at the same time changed to that of "States".

2. **Transfer of the Northern Territory to the Commonwealth.**—On 7th December, 1907, the Commonwealth and the State of South Australia entered into an agreement for the transfer of the Northern Territory to the Commonwealth, subject to approval by the Parliaments of the Commonwealth and the State. This approval was given by the South Australian Parliament under *The Northern Territory Surrender Act 1907* (assented to on 14th May, 1908) and by the Commonwealth Parliament under the *Northern Territory Acceptance Act 1910* (assented to on 16th November, 1910). The Territory was formally transferred to the Commonwealth on 1st January, 1911, and became the Northern Territory of Australia.

By Imperial Order in Council, dated 23rd July, 1931, Ashmore Islands, known as Middle, East and West Islands, and Cartier Island, situated in the Indian Ocean off the north-west coast of Australia, were placed under the authority of the Commonwealth. The islands were accepted by the Commonwealth in the *Ashmore and Cartier Islands Acceptance Act 1933*, under the name of the Territory of Ashmore and Cartier Islands, on 10th May, 1934. The Act authorized the Governor of Western Australia to make ordinances having the force of law in and in relation to the Territory. An amendment to the Act in July, 1938, annexed the islands to the Northern Territory, whose laws, ordinances and regulations, wherever applicable, thereupon applied.

3. **Transfer of the Australian Capital Territory to the Commonwealth.**—On 18th October, 1909, the Commonwealth and the State of New South Wales entered into an agreement for the surrender to and acceptance by the Commonwealth of an area of 911 square miles as the Seat of Government of the Commonwealth. In December, 1909, Acts were passed by the Commonwealth and New South Wales Parliaments approving the agreement, and on 5th December, 1910, a proclamation was issued vesting the Territory in the Commonwealth on and from 1st January, 1911. By the *Jervis Bay Territory Acceptance Act 1915*, an area of 28 square miles at Jervis Bay, surrendered by New South Wales according to an agreement made in 1913, was accepted by the Commonwealth, and was transferred as from 4th September, 1915.

4. **Present Composition of the Commonwealth.**—Following the revision of the area of Queensland, as mentioned in § 3 above, the total area of the Commonwealth of Australia has been determined as 2,971,081 square miles. The dates of creation and the areas of its component States and Territories are shown below.

THE COMMONWEALTH OF AUSTRALIA: AREA, ETC., OF COMPONENT STATES AND TERRITORIES

State or Territory	Year of formation into separate Colony or Territory	Present area in square miles	State or Territory	Year of formation into separate Colony or Territory	Present area in square miles
New South Wales	1786	309,433	Northern Territory	1863	523,620
Victoria ..	1851	87,884	Australian Capital Territory ..	1911	939
Queensland ..	1859	667,000			
South Australia ..	1834	380,070			
Western Australia	1829	975,920	Commonwealth of Australia ..	..	2,971,081
Tasmania ..	1825	26,215			

### § 5. The Constitution of the Commonwealth

NOTE.—Information regarding the development of the Constitutions of the various Colonies (now States), together with a brief history of the Federal movement in Australia, was embodied in this Chapter in issues of the Official Year Book up to and including No. 22.

1. **Commonwealth Constitution Act.**—*The Commonwealth of Australia Constitution Act*, 63 and 64 Vict., Chapter 12, namely: “An Act to constitute the Commonwealth of Australia”, as amended by the *Constitution Alteration (Senate Elections)* 1906, the *Constitution Alteration (State Debts)* 1909, the *Constitution Alteration (State Debts)* 1928, and the *Constitution Alteration (Social Services)* 1946, is given *in extenso* hereunder, and the text contains all the alterations of the Constitution which have been made up to and including 31st December, 1963.

#### THE COMMONWEALTH OF AUSTRALIA CONSTITUTION ACT, 63 & 64 VICT., CHAPTER 12.

*An Act to constitute the Commonwealth of Australia. (9th July, 1900.)*

WHEREAS the people of New South Wales, Victoria, South Australia, Queensland, and Tasmania, humbly relying on the blessing of Almighty God, have agreed to unite in one indissoluble Federal Commonwealth under the Crown of the United Kingdom of Great Britain and Ireland, and under the Constitution hereby established:

And whereas it is expedient to provide for the admission into the Commonwealth of other Australian Colonies and possessions of the Queen:

Be it therefore enacted by the Queen's Most Excellent Majesty, by and with the advice and consent of the Lords Spiritual and Temporal, and Commons, in this present Parliament assembled, and by the authority of the same, as follows:—

1. This Act may be cited as the Commonwealth of Australia Constitution Act.
2. The provisions of this Act referring to the Queen shall extend to Her Majesty's heirs and successors in the sovereignty of the United Kingdom.
3. It shall be lawful for the Queen, with the advice of the Privy Council, to declare by proclamation that, on and after a day therein appointed, not being later than one year after the passing of this Act, the people of New South Wales, Victoria, South Australia, Queensland, and Tasmania, and also, if Her Majesty is satisfied that the people of Western Australia have agreed thereto, of Western Australia, shall be united in a Federal Commonwealth under the name of the Commonwealth of Australia. But the Queen may, at any time after the proclamation, appoint a Governor-General for the Commonwealth.
4. The Commonwealth shall be established, and the Constitution of the Commonwealth shall take effect, on and after the day so appointed. But the Parliaments of the several colonies may at any time after the passing of this Act make any such laws, to come into operation on the day so appointed, as they might have made if the Constitution had taken effect at the passing of this Act.
5. This Act, and all laws made by the Parliament of the Commonwealth under the Constitution, shall be binding on the courts, judges, and people of every State and of every part of the Commonwealth, notwithstanding anything in the laws of any State; and the laws of the Commonwealth shall be in force on all British ships, the Queen's ships of war excepted, whose first port of clearance and whose port of destination are in the Commonwealth.

6. “The Commonwealth” shall mean the Commonwealth of Australia as established under this Act.

“The States” shall mean such of the colonies of New South Wales, New Zealand, Queensland, Tasmania, Victoria, Western Australia, and South Australia, including the northern territory of South Australia, as for the time being are parts of the Commonwealth, and such colonies or territories as may be admitted into or established by the Commonwealth as States; and each of such parts of the Commonwealth shall be called “a State.”

“Original States” shall mean such States as are parts of the Commonwealth at its establishment.

7. The Federal Council of Australasia Act, 1885, is hereby repealed, but so as not to affect any laws passed by the Federal Council of Australasia and in force at the establishment of the Commonwealth.

Any such law may be repealed as to any State by the Parliament of the Commonwealth, or as to any colony not being a State by the Parliament thereof.

8. After the passing of this Act the Colonial Boundaries Act, 1895, shall not apply to any colony which becomes a State of the Commonwealth; but the Commonwealth shall be taken to be a self-governing colony for the purposes of that Act.

9. The Constitution of the Commonwealth shall be as follows:—

THE CONSTITUTION.

This Constitution is divided as follows:—

- Chapter I.—The Parliament:
  - Part I.—General:
  - Part II.—The Senate:
  - Part III.—The House of Representatives:
  - Part IV.—Both Houses of the Parliament:
  - Part V.—Powers of the Parliament:
- Chapter II.—The Executive Government:
- Chapter III.—The Judicature:
- Chapter IV.—Finance and Trade:
- Chapter V.—The States:
- Chapter VI.—New States:
- Chapter VII.—Miscellaneous:
- Chapter VIII.—Alteration of the Constitution.
- The Schedule.

CHAPTER I.—THE PARLIAMENT.

PART I.—GENERAL.

1. The legislative power of the Commonwealth shall be vested in a Federal Parliament, which shall consist of the Queen, a Senate, and a House of Representatives, and which is hereinafter called “ The Parliament ”, or “ The Parliament of the Commonwealth ”.

2. A Governor-General appointed by the Queen shall be Her Majesty’s representative in the Commonwealth, and shall have and may exercise in the Commonwealth during the Queen’s pleasure, but subject to this Constitution, such powers and functions of the Queen as Her Majesty may be pleased to assign to him.

3. There shall be payable to the Queen out of the Consolidated Revenue Fund of the Commonwealth, for the salary of the Governor-General, an annual sum which, until the Parliament otherwise provides, shall be ten thousand pounds.

The salary of a Governor-General shall not be altered during his continuance in office.

4. The provisions of this Constitution relating to the Governor-General extend and apply to the Governor-General for the time being, or such person as the Queen may appoint to administer the Government of the Commonwealth; but no such person shall be entitled to receive any salary from the Commonwealth in respect of any other office during his administration of the Government of the Commonwealth.

5. The Governor-General may appoint such times for holding the sessions of the Parliament as he thinks fit, and may also from time to time, by Proclamation or otherwise prorogue the Parliament, and may in like manner dissolve the House of Representatives.

After any general election the Parliament shall be summoned to meet not later than thirty days after the day appointed for the return of the writs.

The Parliament shall be summoned to meet not later than six months after the establishment of the Commonwealth.

6. There shall be a session of the Parliament once at least in every year, so that twelve months shall not intervene between the last sitting of the Parliament in one session and its first sitting in the next session.

## PART II.—THE SENATE.

7. The Senate shall be composed of senators for each State, directly chosen by the people of the State, voting, until the Parliament otherwise provides, as one electorate.

But until the Parliament of the Commonwealth otherwise provides, the Parliament of the State of Queensland, if that State be an Original State, may make laws dividing the State into divisions and determining the number of senators to be chosen for each division, and in the absence of such provision the State shall be one electorate.

Until the Parliament otherwise provides there shall be six senators for each Original State.\* The Parliament may make laws increasing or diminishing the number of senators for each State, but so that equal representation of the several Original States shall be maintained and that no Original State shall have less than six senators.

The senators shall be chosen for a term of six years, and the names of the senators chosen for each State shall be certified by the Governor to the Governor-General.

8. The qualification of electors of senators shall be in each State that which is prescribed by this Constitution, or by the Parliament, as the qualification for electors of members of the House of Representatives; but in the choosing of senators each elector shall vote only once.

9. The Parliament of the Commonwealth may make laws prescribing the method of choosing senators, but so that the method shall be uniform for all the States. Subject to any such law, the Parliament of each State may make laws prescribing the method of choosing the senators for that State.

The Parliament of a State may make laws for determining the times and places of elections of senators for the State.

10. Until the Parliament otherwise provides, but subject to this Constitution, the laws in force in each State, for the time being, relating to elections for the more numerous House of the Parliament of the State shall, as nearly as practicable, apply to elections of senators for the State.

11. The Senate may proceed to the despatch of business, notwithstanding the failure of any State to provide for its representation in the Senate.

12. The Governor of any State may cause writs to be issued for elections of senators for the State. In case of the dissolution of the Senate the writs shall be issued within ten days from the proclamation of such dissolution.

13. As soon as may be after the Senate first meets, and after each first meeting of the Senate following a dissolution thereof, the Senate shall divide the senators chosen for each State into two classes, as nearly equal in number as practicable; and the places of the senators of the first class shall become vacant at the expiration of [the third year] *three years*,† and the places of those of the second class at the expiration of [the sixth year] *six years*,† from the beginning of their term of service; and afterwards the places of senators shall become vacant at the expiration of six years from the beginning of their term of service.

The election to fill vacant places shall be made [in the year at the expiration of which] *within one year before*† the places are to become vacant.

For the purposes of this section the term of service of a senator shall be taken to begin on the first day of [January] *July*† following the day of his election, except in the cases of the first election and of the election next after any dissolution of the Senate, when it shall be taken to begin on the first day of [January] *July*† preceding the day of his election.

14. Whenever the number of senators for a State is increased or diminished, the Parliament of the Commonwealth may make such provision for the vacating of the places of senators for the State as it deems necessary to maintain regularity in the rotation.

15. If the place of a senator becomes vacant before the expiration of his term of service, the Houses of Parliament of the State for which he was chosen shall, sitting and voting together, choose a person to hold the place until the expiration of the term, or until the election of a successor as hereinafter provided, whichever first happens. But if the Houses of Parliament of the State are not in session at the time when the vacancy is notified,

\* The Parliament has otherwise provided, by means of the *Representation Act 1948*, that the number of senators shall be ten for each State from the first meeting of Parliament after the first dissolution of the House of Representatives occurring after the commencement of the Act (18th May, 1948).

† As amended by Section 2 of the *Constitution Alteration (Senate Elections) 1906*. The words in square brackets have been repealed; amendments are shown in italics.

the Governor of the State, with the advice of the Executive Council thereof, may appoint a person to hold the place until the expiration of fourteen days after the beginning of the next session of the Parliament of the State, or until the election of a successor, whichever first happens.

At the next general election of members of the House of Representatives, or at the next election of senators for the State, whichever first happens, a successor shall, if the term has not then expired, be chosen to hold the place from the date of his election until the expiration of the term.

The name of any senator so chosen or appointed shall be certified by the Governor of the State to the Governor-General.

16. The qualifications of a senator shall be the same as those of a member of the House of Representatives.

17. The Senate shall, before proceeding to the despatch of any other business, choose a senator to be the President of the Senate; and as often as the office of President becomes vacant the Senate shall again choose a senator to be the President.

The President shall cease to hold his office if he ceases to be a senator. He may be removed from office by a vote of the Senate, or he may resign his office or his seat by writing addressed to the Governor-General.

18. Before or during any absence of the President, the Senate may choose a senator to perform his duties in his absence.

19. A senator may, by writing addressed to the President, or to the Governor-General if there is no President or if the President is absent from the Commonwealth, resign his place, which thereupon shall become vacant.

20. The place of a senator shall become vacant if for two consecutive months of any session of the Parliament he, without the permission of the Senate, fails to attend the Senate.

21. Whenever a vacancy happens in the Senate, the President, or if there is no President or if the President is absent from the Commonwealth the Governor-General, shall notify the same to the Governor of the State in the representation of which the vacancy has happened.

22. Until the Parliament otherwise provides, the presence of at least one-third of the whole number of the senators shall be necessary to constitute a meeting of the Senate for the exercise of its powers.

23. Questions arising in the Senate shall be determined by a majority of votes, and each senator shall have one vote. The President shall in all cases be entitled to a vote; and when the votes are equal the question shall pass in the negative.

### PART III.—THE HOUSE OF REPRESENTATIVES.

24. The House of Representatives shall be composed of members directly chosen by the people of the Commonwealth, and the number of such members shall be, as nearly as practicable, twice the number of the senators.

The number of members chosen in the several States shall be in proportion to the respective numbers of their people, and shall, until the Parliament otherwise provides, be determined, whenever necessary, in the following manner:—

- (i) A quota shall be ascertained by dividing the number of the people of the Commonwealth, as shown by the latest statistics of the Commonwealth, by twice the number of the senators;
- (ii) The number of members to be chosen in each State shall be determined by dividing the number of the people of the State, as shown by the latest statistics of the Commonwealth, by the quota; and if on such division there is a remainder greater than one-half of the quota, one more member shall be chosen in the State.

But notwithstanding anything in this section five members at least shall be chosen in each Original State.

25. For the purposes of the last section, if by the law of any State all persons of any race are disqualified from voting at elections for the more numerous House of the Parliament of the State, then, in reckoning the number of the people of the State or of the Commonwealth, persons of that race resident in that State shall not be counted.



26. Notwithstanding anything in section twenty-four, the number of members to be chosen in each State at the first election shall be as follows:—

New South Wales ..	23	South Australia ..	6
Victoria ..	20	Tasmania ..	5
Queensland ..	8		

Provided that if Western Australia is an Original State, the numbers shall be as follows:—

New South Wales ..	26	South Australia ..	7
Victoria ..	23	Western Australia ..	5
Queensland ..	9	Tasmania ..	5

27. Subject to this Constitution, the Parliament may make laws for increasing or diminishing the number of the members of the House of Representatives.

28. Every House of Representatives shall continue for three years from the first meeting of the House, and no longer, but may be sooner dissolved by the Governor-General.

29. Until the Parliament of the Commonwealth otherwise provides, the Parliament of any State may make laws for determining the divisions in each State for which members of the House of Representatives may be chosen, and the number of members to be chosen for each division. A division shall not be formed out of parts of different States.

In the absence of other provision, each State shall be one electorate.

30. Until the Parliament otherwise provides, the qualification of electors of members of the House of Representatives shall be in each State that which is prescribed by the law of the State as the qualification of electors of the more numerous House of Parliament of the State; but in the choosing of members each elector shall vote only once.\*

31. Until the Parliament otherwise provides, but subject to this Constitution, the laws in force in each State for the time being relating to elections for the more numerous House of the Parliament of the State shall, as nearly as practicable, apply to elections in the State of members of the House of Representatives.

32. The Governor-General in Council may cause writs to be issued for general elections of members of the House of Representatives.

After the first general election, the writs shall be issued within ten days from the expiry of a House of Representatives or from the proclamation of a dissolution thereof.

33. Whenever a vacancy happens in the House of Representatives, the Speaker shall issue his writ for the election of a new member, or if there is no Speaker or if he is absent from the Commonwealth the Governor-General in Council may issue the writ.

34. Until the Parliament otherwise provides, the qualifications of a member of the House of Representatives shall be as follows:—

- (i) He must be of the full age of twenty-one years, and must be an elector entitled to vote at the election of members of the House of Representatives, or a person qualified to become such elector, and must have been for three years at the least a resident within the limits of the Commonwealth as existing at the time when he is chosen:
- (ii) He must be a subject of the Queen, either natural-born or for at least five years naturalized under a law of the United Kingdom, or of a Colony which has become or becomes a State, or of the Commonwealth, or of a State.†

35. The House of Representatives shall, before proceeding to the despatch of any other business, choose a member to be the Speaker of the House, and as often as the office of Speaker becomes vacant the House shall again choose a member to be the Speaker.

The Speaker shall cease to hold his office if he ceases to be a member. He may be removed from office by a vote of the House, or he may resign his office or his seat by writing addressed to the Governor-General.

36. Before or during any absence of the Speaker, the House of Representatives may choose a member to perform his duties in his absence.

\* The Parliament has otherwise provided, by means of the *Commonwealth Electoral Act 1918-1962*, Sections 39 and 39A (repealing an earlier provision made by the *Commonwealth Franchise Act 1902*). For present qualifications see Chapter III. General Government.

† The Parliament has otherwise provided, by means of the *Commonwealth Electoral Act 1918-1962*, Section 69. For present qualifications see Chapter III. General Government.

37. A member may by writing addressed to the Speaker, or to the Governor-General if there is no Speaker or if the Speaker is absent from the Commonwealth, resign his place, which thereupon shall become vacant.

38. The place of a member shall become vacant if for two consecutive months of any session of the Parliament he, without the permission of the House, fails to attend the House.

39. Until the Parliament otherwise provides, the presence of at least one-third of the whole number of the members of the House of Representatives shall be necessary to constitute a meeting of the House for the exercise of its powers.

40. Questions arising in the House of Representatives shall be determined by a majority of votes other than that of the Speaker. The Speaker shall not vote unless the numbers are equal, and then he shall have a casting vote.

#### PART IV.—BOTH HOUSES OF THE PARLIAMENT.

41. No adult person who has or acquires a right to vote at elections for the more numerous House of the Parliament of a State shall, while the right continues, be prevented by any law of the Commonwealth from voting at elections for either House of the Parliament of the Commonwealth.

42. Every senator and every member of the House of Representatives shall before taking his seat make and subscribe before the Governor-General, or some person authorized by him, an oath or affirmation of allegiance in the form set forth in the schedule to this Constitution.

43. A member of either House of the Parliament shall be incapable of being chosen or of sitting as a member of the other House.

44. Any person who—

- (i) Is under any acknowledgment of allegiance, obedience, or adherence to a foreign power, or is a subject or a citizen or entitled to the rights or privileges of a subject or a citizen of a foreign power: or
- (ii) Is attainted of treason, or has been convicted and is under sentence, or subject to be sentenced, for any offence punishable under the law of the Commonwealth or of a State by imprisonment for one year or longer: or
- (iii) Is an undischarged bankrupt or insolvent: or
- (iv) Holds any office of profit under the Crown, or any pension payable during the pleasure of the Crown out of any of the revenues of the Commonwealth: or
- (v) Has any direct or indirect pecuniary interest in any agreement with the Public Service of the Commonwealth otherwise than as a member and in common with the other members of an incorporated company consisting of more than twenty-five persons:

shall be incapable of being chosen or of sitting as a senator or a member of the House of Representatives.

But sub-section iv. does not apply to the office of any of the Queen's Ministers of State for the Commonwealth, or of any of the Queen's Ministers for a State, or to the receipt of pay, half-pay, or a pension by any person as an officer or member of the Queen's navy or army, or to the receipt of pay as an officer or member of the naval or military forces of the Commonwealth by any person whose services are not wholly employed by the Commonwealth.

45. If a senator or member of the House of Representatives—

- (i) Becomes subject to any of the disabilities mentioned in the last preceding section: or
- (ii) Takes the benefit, whether by assignment, composition, or otherwise, of any law relating to bankrupt or insolvent debtors: or
- (iii) Directly or indirectly takes or agrees to take any fee or honorarium for services rendered to the Commonwealth, or for services rendered in the Parliament to any person or State:

his place shall thereupon become vacant.

46. Until the Parliament otherwise provides, any person declared by this Constitution to be incapable of sitting as a senator or as a member of the House of Representatives shall, for every day on which he so sits, be liable to pay the sum of one hundred pounds to any person who sues for it in any court of competent jurisdiction.

47. Until the Parliament otherwise provides, any question respecting the qualification of a senator or of a member of the House of Representatives, or respecting a vacancy in either House of the Parliament, and any question of a disputed election to either House shall be determined by the House in which the question arises.

48. Until the Parliament otherwise provides, each senator and each member of the House of Representatives shall receive an allowance of four hundred pounds a year, to be reckoned from the day on which he takes his seat.\*

49. The powers, privileges, and immunities of the Senate and of the House of Representatives, and of the members and the committees of each House, shall be such as are declared by the Parliament, and until declared shall be those of the Commons House of Parliament of the United Kingdom, and of its members and committees, at the establishment of the Commonwealth.

50. Each House of the Parliament may make rules and orders with respect to—

- (i) The mode in which its powers, privileges, and immunities may be exercised and upheld;
- (ii) The order and conduct of its business and proceedings either separately or jointly with the other House.

#### PART V.—POWERS OF THE PARLIAMENT.†

51. The Parliament shall, subject to this Constitution, have power to make laws for the peace, order, and good government of the Commonwealth with respect to—

- (i) Trade and commerce with other countries, and among the States:
- (ii) Taxation; but so as not to discriminate between States or parts of States:
- (iii) Bounties on the production or export of goods, but so that such bounties shall be uniform throughout the Commonwealth:
- (iv) Borrowing money on the public credit of the Commonwealth:
- (v) Postal, telegraphic, telephonic, and other like services:
- (vi) The naval and military defence of the Commonwealth and of the several States, and the control of the forces to execute and maintain the laws of the Commonwealth:
- (vii) Lighthouses, lightships, beacons and buoys:
- (viii) Astronomical and meteorological observations:
- (ix) Quarantine:
- (x) Fisheries in Australian waters beyond territorial limits:
- (xi) Census and statistics:
- (xii) Currency, coinage, and legal tender:
- (xiii) Banking, other than State banking; also State banking extending beyond the limits of the State concerned, the incorporation of banks, and the issue of paper money:
- (xiv) Insurance, other than State insurance; also State insurance extending beyond the limits of the State concerned:
- (xv) Weights and measures:
- (xvi) Bills of exchange and promissory notes:
- (xvii) Bankruptcy and insolvency:
- (xviii) Copyrights, patents of inventions and designs, and trade marks:
- (xix) Naturalization and aliens:
- (xx) Foreign corporations, and trading or financial corporations formed within the limits of the Commonwealth:
- (xxi) Marriage:

\* The Parliamentary allowance has been varied from time to time (*see pp. 69 and 70 of Official Year Book No. 42*). In 1959, it was increased to £2,750, while additional allowances of £1,500 and £3,250, respectively, were granted to the Leaders of the Opposition in the Senate and the House of Representatives, and an additional allowance of £750 to the Leader in the House of Representatives (other than the Leader of the Opposition) of a recognized political party which has not less than ten members in the House of Representatives and of which no member is a Minister.

† Particulars of proposed laws which were submitted to referendums are referred to in the List of Special Articles at the end of this volume.

- (xxii) Divorce and matrimonial causes; and in relation thereto, parental rights, and the custody and guardianship of infants:
  - (xxiii) Invalid and old-age pensions:
  - (xxiiiA) *\*The provision of maternity allowances, widows' pensions, child endowment, unemployment, pharmaceutical, sickness and hospital benefits, medical and dental services (but not so as to authorize any form of civil conscription), benefits to students and family allowances:*
  - (xxiv) The service and execution throughout the Commonwealth of the civil and criminal process and the judgments of the courts of the States:
  - (xxv) The recognition throughout the Commonwealth of the laws, the public Acts and records, and the judicial proceedings of the States:
  - (xxvi) The people of any race, other than the aboriginal race in any State, for whom it is deemed necessary to make special laws:
  - (xxvii) Immigration and emigration:
  - (xxviii) The influx of criminals:
  - (xxix) External affairs:
  - (xxx) The relations of the Commonwealth with the islands of the Pacific:
  - (xxxi) The acquisition of property on just terms from any State or person for any purpose in respect of which the Parliament has power to make laws:
  - (xxxii) The control of railways with respect to transport for the naval and military purposes of the Commonwealth:
  - (xxxiii) The acquisition, with the consent of a State, of any railways of the State on terms arranged between the Commonwealth and the State:
  - (xxxiv) Railway construction and extension in any State with the consent of that State:
  - (xxxv) Conciliation and arbitration for the prevention and settlement of industrial disputes extending beyond the limits of any one State:
  - (xxxvi) Matters in respect of which this Constitution makes provision until the Parliament otherwise provides:
  - (xxxvii) Matters referred to the Parliament of the Commonwealth by the Parliament or Parliaments of any State or States, but so that the law shall extend only to States by whose Parliaments the matter is referred, or which afterwards adopt the law:
  - (xxxviii) The exercise within the Commonwealth, at the request or with the concurrence of the Parliaments of all the States directly concerned, of any power which can at the establishment of this Constitution be exercised only by the Parliament of the United Kingdom or by the Federal Council of Australasia:
  - (xxxix) Matters incidental to the execution of any power vested by this Constitution in the Parliament or in either House thereof, or in the Government of the Commonwealth, or in the Federal Judicature, or in any department or officer of the Commonwealth.
52. The Parliament shall, subject to this Constitution, have exclusive power to make laws for the peace, order, and good government of the Commonwealth with respect to—
- (i) The seat of Government of the Commonwealth, and all places acquired by the Commonwealth for public purposes:
  - (ii) Matters relating to any department of the public service the control of which is by this Constitution transferred to the Executive Government of the Commonwealth:
  - (iii) Other matters declared by this Constitution to be within the exclusive power of the Parliament.

53. Proposed laws appropriating revenue or moneys, or imposing taxation, shall not originate in the Senate. But a proposed law shall not be taken to appropriate revenue or moneys, or to impose taxation, by reason only of its containing provisions for the imposition or appropriation of fines or other pecuniary penalties, or for the demand or payment or appropriation of fees for licences, or fees for services under the proposed law.

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\* Under Section 2 of the *Constitution Alteration (Social Services)* 1946, the Constitution was amended by the insertion of this paragraph.

The Senate may not amend proposed laws imposing taxation, or proposed laws appropriating revenue or moneys for the ordinary annual services of the Government.

The Senate may not amend any proposed law so as to increase any proposed charge or burden on the people.

The Senate may at any stage return to the House of Representatives any proposed law which the Senate may not amend, requesting, by message, the omission or amendment of any items or provisions therein. And the House of Representatives may, if it thinks fit, make any of such omissions or amendments, with or without modifications.

Except as provided in this section, the Senate shall have equal power with the House of Representatives in respect of all proposed laws.

54. The proposed law which appropriates revenue or moneys for the ordinary annual services of the Government shall deal only with such appropriation.

55. Laws imposing taxation shall deal only with the imposition of taxation, and any provision therein dealing with any other matter shall be of no effect.

Laws imposing taxation, except laws imposing duties of customs or of excise, shall deal with one subject of taxation only; but laws imposing duties of customs shall deal with duties of customs only, and laws imposing duties of excise shall deal with duties of excise only.

56. A vote, resolution, or proposed law for the appropriation of revenue or moneys shall not be passed unless the purpose of the appropriation has in the same session been recommended by message of the Governor-General to the House in which the proposal originated.

57. If the House of Representatives passes any proposed law, and the Senate rejects or fails to pass it, or passes it with amendments to which the House of Representatives will not agree, and if after an interval of three months the House of Representatives, in the same or the next session, again passes the proposed law with or without any amendments which have been made, suggested, or agreed to by the Senate, and the Senate rejects or fails to pass it, or passes it with amendments to which the House of Representatives will not agree, the Governor-General may dissolve the Senate and the House of Representatives simultaneously. But such dissolution shall not take place within six months before the date of the expiry of the House of Representatives by effluxion of time.

If after such dissolution the House of Representatives again passes the proposed law, with or without any amendments which have been made, suggested, or agreed to by the Senate, and the Senate rejects or fails to pass it, or passes it with amendments to which the House of Representatives will not agree, the Governor-General may convene a joint sitting of the members of the Senate and of the House of Representatives.

The members present at the joint sitting may deliberate and shall vote together upon the proposed law as last proposed by the House of Representatives, and upon amendments, if any, which have been made therein by one House and not agreed to by the other, and any such amendments which are affirmed by an absolute majority of the total number of the members of the Senate and House of Representatives shall be taken to have been carried, and if the proposed law, with the amendments, if any, so carried is affirmed by an absolute majority of the total number of members of the Senate and House of Representatives, it shall be taken to have been duly passed by both Houses of the Parliament, and shall be presented to the Governor-General for the Queen's assent.

58. When a proposed law passed by both Houses of the Parliament is presented to the Governor-General for the Queen's assent, he shall declare, according to his discretion, but subject to this Constitution, that he assents in the Queen's name, or that he withholds assent, or that he reserves the law for the Queen's pleasure.

The Governor-General may return to the House in which it originated any proposed law so presented to him, and may transmit therewith any amendments which he may recommend, and the Houses may deal with the recommendation.

59. The Queen may disallow any law within one year from the Governor-General's assent, and such disallowance on being made known by the Governor-General by speech or message to each of the Houses of the Parliament, or by Proclamation, shall annul the law from the day when the disallowance is so made known.

60. A proposed law reserved for the Queen's pleasure shall not have any force unless and until within two years from the day on which it was presented to the Governor-General for the Queen's assent the Governor-General makes known, by speech or message to each of the Houses of the Parliament, or by Proclamation, that it has received the Queen's assent.

CHAPTER II.—THE EXECUTIVE GOVERNMENT.

61. The executive power of the Commonwealth is vested in the Queen and is exercisable by the Governor-General as the Queen's representative, and extends to the execution and maintenance of this Constitution, and of the laws of the Commonwealth.

62. There shall be a Federal Executive Council to advise the Governor-General in the government of the Commonwealth, and the members of the Council shall be chosen and summoned by the Governor-General and sworn as Executive Councillors, and shall hold office during his pleasure.

63. The provisions of this Constitution referring to the Governor-General in Council shall be construed as referring to the Governor-General acting with the advice of the Federal Executive Council.

64. The Governor-General may appoint officers to administer such departments of State of the Commonwealth as the Governor-General in Council may establish.

Such officers shall hold office during the pleasure of the Governor-General. They shall be members of the Federal Executive Council, and shall be the Queen's Ministers of State for the Commonwealth.

After the first general election no Minister of State shall hold office for a longer period than three months unless he is or becomes a senator or a member of the House of Representatives.

65. Until the Parliament otherwise provides, the Ministers of State shall not exceed seven in number, and shall hold such offices as the Parliament prescribes, or, in the absence of provision, as the Governor-General directs.\*

66. There shall be payable to the Queen, out of the Consolidated Revenue Fund of the Commonwealth, for the salaries of the Ministers of State, an annual sum which until the Parliament otherwise provides, shall not exceed twelve thousand pounds a year.\*

67. Until the Parliament otherwise provides, the appointment and removal of all other officers of the Executive Government of the Commonwealth shall be vested in the Governor-General in Council, unless the appointment is delegated by the Governor-General in Council or by a law of the Commonwealth to some other authority.

68. The command in chief of the naval and military forces of the Commonwealth is vested in the Governor-General as the Queen's representative.

69. On a date or dates to be proclaimed by the Governor-General after the establishment of the Commonwealth the following departments of the public service in each State shall become transferred to the Commonwealth:—

Posts, telegraphs, and telephones:		Lighthouses, lightships, beacons, and buoys:
Naval and military defence:		Quarantine.

But the Departments of customs and of excise in each State shall become transferred to the Commonwealth on its establishment.

70. In respect of matters which, under this Constitution, pass to the Executive Government of the Commonwealth, all powers and functions which at the establishment of the Commonwealth are vested in the Governor of a Colony, or in the Governor of a Colony with the advice of his Executive Council, or in any authority of a Colony, shall vest in the Governor-General, or in the Governor-General in Council, or in the authority exercising similar powers under the Commonwealth, as the case requires.

\* \* The number of Ministers of State has been increased from time to time and has been 25 since 1964. The annual appropriation for Ministers' salaries has been correspondingly increased and has been £73,350 since 1964.

## CHAPTER III.—THE JUDICATURE.

71. The judicial power of the Commonwealth shall be vested in a Federal Supreme Court, to be called the High Court of Australia, and in such other federal courts as the Parliament creates, and in such other courts as it invests with federal jurisdiction. The High Court shall consist of a Chief Justice, and so many other Justices, not less than two, as the Parliament prescribes.\*

72. The Justices of the High Court and of the other Courts created by the Parliament—

- (i) Shall be appointed by the Governor-General in Council:
- (ii) Shall not be removed except by the Governor-General in Council, on an address from both Houses of the Parliament in the same session, praying for such removal on the ground of proved misbehaviour or incapacity:
- (iii) Shall receive such remuneration as the Parliament may fix; but the remuneration shall not be diminished during their continuance in office.\*

73. The High Court shall have jurisdiction, with such exceptions and subject to such regulations as the Parliament prescribes, to hear and determine appeals from all judgments, decrees, orders, and sentences—

- (i) Of any Justice or Justices exercising the original jurisdiction of the High Court:
  - (ii) Of any other federal court, or court exercising federal jurisdiction; or of the Supreme Court of any State, or of any other court of any State from which at the establishment of the Commonwealth an appeal lies to the Queen in Council:
  - (iii) Of the Inter-State Commission, but as to questions of law only:
- and the judgment of the High Court in all such cases shall be final and conclusive.

But no exception or regulation prescribed by the Parliament shall prevent the High Court from hearing and determining any appeal from the Supreme Court of a State in any matter in which at the establishment of the Commonwealth an appeal lies from such Supreme Court to the Queen in Council.

Until the Parliament otherwise provides, the conditions of and restrictions on appeals to the Queen in Council from the Supreme Courts of the several States shall be applicable to appeals from them to the High Court.

74. No appeal shall be permitted to the Queen in Council from a decision of the High Court upon any question, howsoever arising, as to the limits *inter se* of the Constitutional powers of the Commonwealth and those of any State or States, or as to the limits *inter se* of the Constitutional powers of any two or more States, unless the High Court shall certify that the question is one which ought to be determined by Her Majesty in Council.

The High Court may so certify if satisfied that for any special reason the certificate should be granted, and thereupon an appeal shall lie to Her Majesty in Council on the question without further leave.

Except as provided in this section, this Constitution shall not impair any right which the Queen may be pleased to exercise by virtue of Her Royal prerogative to grant special leave of appeal from the High Court to Her Majesty in Council. The Parliament may make laws limiting the matters in which such leave may be asked, but proposed laws containing any such limitation shall be reserved by the Governor-General for Her Majesty's pleasure.

75. In all matters—

- (i) Arising under any treaty:
- (ii) Affecting consuls or other representatives of other countries:
- (iii) In which the Commonwealth, or a person suing or being sued on behalf of the Commonwealth, is a party:
- (iv) Between States, or between residents of different States, or between a State and a resident of another State:
- (v) In which a writ of Mandamus or prohibition or an injunction is sought against an officer of the Commonwealth:

the High Court shall have original jurisdiction.

\* The *Judiciary Act* 1903 provided for a Chief Justice and two other Justices, increased by subsequent amendments to six. The *Judiciary Act* 1903 also provided for the payment of a salary of £3,500 a year to the Chief Justice and of £3,000 a year to each other Justice, increased by subsequent amendments to £10,000 and £8,500 a year, respectively.

76. The Parliament may make laws conferring original jurisdiction on the High Court in any matter—

- (i) Arising under this Constitution, or involving its interpretation:
- (ii) Arising under any laws made by the Parliament:
- (iii) Of Admiralty and maritime jurisdiction:
- (iv) Relating to the same subject-matter claimed under the laws of different States.

77. With respect to any of the matters mentioned in the last two sections the Parliament may make laws—

- (i) Defining the jurisdiction of any federal court other than the High Court:
- (ii) Defining the extent to which the jurisdiction of any federal court shall be exclusive of that which belongs to or is invested in the courts of the States:
- (iii) Investing any court of a State with federal jurisdiction.

78. The Parliament may make laws conferring rights to proceed against the Commonwealth or a State in respect of matters within the limits of the judicial power.

79. The federal jurisdiction of any court may be exercised by such number of judges as the Parliament prescribes.

80. The trial on indictment of any offence against any law of the Commonwealth shall be by jury, and every such trial shall be held in the State where the offence was committed, and if the offence was not committed within any State the trial shall be held at such place or places as the Parliament prescribes.

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#### CHAPTER IV.—FINANCE AND TRADE.

81. All revenues or moneys raised or received by the Executive Government of the Commonwealth shall form one Consolidated Revenue Fund, to be appropriated for the purposes of the Commonwealth in the manner and subject to the charges and liabilities imposed by this Constitution.

82. The costs, charges, and expenses incident to the collection, management, and receipt of the Consolidated Revenue Fund shall form the first charge thereon; and the revenue of the Commonwealth shall in the first instance be applied to the payment of the expenditure of the Commonwealth.

83. No money shall be drawn from the Treasury of the Commonwealth except under appropriation made by law.

But until the expiration of one month after the first meeting of the Parliament the Governor-General in Council may draw from the Treasury and expend such moneys as may be necessary for the maintenance of any department transferred to the Commonwealth and for the holding of the first elections for the Parliament.

84. When any department of the public service of a State becomes transferred to the Commonwealth, all officers of the department shall become subject to the control of the Executive Government of the Commonwealth.

Any such officer who is not retained in the service of the Commonwealth shall, unless he is appointed to some other office of equal emolument in the public service of the State, be entitled to receive from the State any pension, gratuity, or other compensation, payable under the law of the State on the abolition of his office.

Any such officer who is retained in the service of the Commonwealth shall preserve all his existing and accruing rights, and shall be entitled to retire from office at the time, and on the pension or retiring allowance, which would be permitted by the law of the State if his service with the Commonwealth were a continuation of his service with the State. Such pension or retiring allowance shall be paid to him by the Commonwealth; but the State shall pay to the Commonwealth a part thereof, to be calculated on the proportion which his term of service with the State bears to his whole term of service, and for the purpose of the calculation his salary shall be taken to be that paid to him by the State at the time of the transfer.

Any officer who is, at the establishment of the Commonwealth, in the public service of a State, and who is, by consent of the Governor of the State with the advice of the Executive Council thereof, transferred to the public service of the Commonwealth, shall have the same rights as if he had been an officer of a department transferred to the Commonwealth and were retained in the service of the Commonwealth.



85. When any department of the public service of a State is transferred to the Commonwealth—

- (i) All property of the State of any kind, used exclusively in connexion with the department, shall become vested in the Commonwealth; but, in the case of the departments controlling customs and excise and bounties, for such time only as the Governor-General in Council may declare to be necessary;
- (ii) The Commonwealth may acquire any property of the State, of any kind used, but not exclusively used in connexion with the department; the value thereof shall, if no agreement can be made, be ascertained in, as nearly as may be, the manner in which the value of land, or of an interest in land, taken by the State for public purposes is ascertained under the law of the State in force at the establishment of the Commonwealth;
- (iii) The Commonwealth shall compensate the State for the value of any property passing to the Commonwealth under this section; if no agreement can be made as to the mode of compensation, it shall be determined under laws to be made by the Parliament;
- (iv) The Commonwealth shall, at the date of the transfer, assume the current obligations of the State in respect of the department transferred.

86. On the establishment of the Commonwealth, the collection and control of duties of customs and of excise, and the control of the payment of bounties, shall pass to the Executive Government of the Commonwealth.

87. During a period of ten years after the establishment of the Commonwealth and thereafter until the Parliament otherwise provides, of the net revenue of the Commonwealth from duties of customs and of excise not more than one-fourth shall be applied annually by the Commonwealth towards its expenditure.

The balance shall, in accordance with this Constitution, be paid to the several States, or applied towards the payment of interest on debts of the several States taken over by the Commonwealth.

88. Uniform duties of customs shall be imposed within two years after the establishment of the Commonwealth.

89. Until the imposition of uniform duties of customs—

- (i) The Commonwealth shall credit to each State the revenues collected therein by the Commonwealth.
- (ii) The Commonwealth shall debit to each State—
  - (a) The expenditure therein of the Commonwealth incurred solely for the maintenance or continuance, as at the time of transfer, of any department transferred from the State to the Commonwealth;
  - (b) The proportion of the State, according to the number of its people, in the other expenditure of the Commonwealth.
- (iii) The Commonwealth shall pay to each State month by month the balance (if any) in favour of the State.

90. On the imposition of uniform duties of customs the power of the Parliament to impose duties of customs and of excise, and to grant bounties on the production or export of goods, shall become exclusive.

On the imposition of uniform duties of customs all laws of the several States imposing duties of customs or of excise, or offering bounties on the production or export of goods, shall cease to have effect, but any grant of or agreement for any such bounty lawfully made by or under the authority of the Government of any State shall be taken to be good if made before the thirtieth day of June, one thousand eight hundred and ninety-eight, and not otherwise.

91. Nothing in this Constitution prohibits a State from granting any aid to or bounty on mining for gold, silver, or other metals, nor from granting, with the consent of both Houses of the Parliament of the Commonwealth expressed by resolution, any aid to or bounty on the production or export of goods.

92. On the imposition of uniform duties of customs, trade, commerce, and intercourse among the States, whether by means of internal carriage or ocean navigation, shall be absolutely free.

But notwithstanding anything in this Constitution, goods imported before the imposition of uniform duties of customs into any State, or into any Colony which, whilst the goods remain therein, becomes a State, shall, on thence passing into another State within two

years after the imposition of such duties, be liable to any duty chargeable on the importation of such goods into the Commonwealth, less any duty paid in respect of the goods on their importation.

93. During the first five years after the imposition of uniform duties of customs, and thereafter until the Parliament otherwise provides—

- (i) The duties of customs chargeable on goods imported into a State and afterwards passing into another State for consumption, and the duties of excise paid on goods produced or manufactured in a State and afterwards passing into another State for consumption, shall be taken to have been collected not in the former but in the latter State:
- (ii) Subject to the last sub-section, the Commonwealth shall credit revenue, debit expenditure, and pay balances to the several States as prescribed for the period preceding the imposition of uniform duties of customs.

94. After five years from the imposition of uniform duties of customs, the Parliament may provide, on such basis as it deems fair, for the monthly payment to the several States of all surplus revenue of the Commonwealth.

95. Notwithstanding anything in this Constitution, the Parliament of the State of Western Australia, if that State be an Original State, may, during the first five years after the imposition of uniform duties of customs, impose duties of customs on goods passing into that State and not originally imported from beyond the limits of the Commonwealth; and such duties shall be collected by the Commonwealth.

But any duty so imposed on any goods shall not exceed during the first of such years the duty chargeable on the goods under the law of Western Australia in force at the imposition of uniform duties, and shall not exceed during the second, third, fourth, and fifth of such years respectively, four-fifths, three-fifths, two-fifths, and one-fifth of such latter duty, and all duties imposed under this section shall cease at the expiration of the fifth year after the imposition of uniform duties.

If at any time during the five years the duty on any goods under this section is higher than the duty imposed by the Commonwealth on the importation of the like goods, then such higher duty shall be collected on the goods when imported into Western Australia from beyond the limits of the Commonwealth.

96. During a period of ten years after the establishment of the Commonwealth and thereafter until the Parliament otherwise provides, the Parliament may grant financial assistance to any State on such terms and conditions as the Parliament thinks fit.

97. Until the Parliament otherwise provides, the laws in force in any Colony which has become or becomes a State with respect to the receipt of revenue and the expenditure of money on account of the Government of the Colony, and the review and audit of such receipt and expenditure, shall apply to the receipt of revenue and the expenditure of money on account of the Commonwealth in the State in the same manner as if the Commonwealth, or the Government or an officer of the Commonwealth, were mentioned whenever the Colony, or the Government or an officer of the Colony, is mentioned.

98. The power of the Parliament to make laws with respect to trade and commerce extends to navigation and shipping, and to railways the property of any State.

99. The Commonwealth shall not, by any law or regulation of trade, commerce, or revenue, give preference to one State or any part thereof over another State or any part thereof.

100. The Commonwealth shall not, by any law or regulation of trade or commerce, abridge the right of a State or of the residents therein to the reasonable use of the waters of rivers for conservation or irrigation.

101. There shall be an Inter-State Commission, with such powers of adjudication and administration as the Parliament deems necessary for the execution and maintenance, within the Commonwealth, of the provisions of this Constitution relating to trade and commerce, and of all laws made thereunder.

102. The Parliament may by any law with respect to trade or commerce forbid, as to railways, any preference or discrimination by any State, or by any authority constituted under a State, if such preference or discrimination is undue and unreasonable, or unjust to any State; due regard being had to the financial responsibilities incurred by any State in connexion with the construction and maintenance of its railways. But no preference or discrimination shall, within the meaning of this section, be taken to be undue and unreasonable, or unjust to any State, unless so adjudged by the Inter-State Commission.

## 103. The members of the Inter-State Commission—

- (i) Shall be appointed by the Governor-General in Council;
- (ii) Shall hold office for seven years, but may be removed within that time by the Governor-General in Council, on an address from both Houses of the Parliament in the same session praying for such removal on the ground of proved misbehaviour or incapacity;
- (iii) Shall receive such remuneration as the Parliament may fix; but such remuneration shall not be diminished during their continuance in office.

104. Nothing in this Constitution shall render unlawful any rate for the carriage of goods upon a railway, the property of a State, if the rate is deemed by the Inter-State Commission to be necessary for the development of the territory of the State, and if the rate applies equally to goods within the State and to goods passing into the State from other States.

105. The Parliament may take over from the States their public debts [as existing at the establishment of the Commonwealth],\* or a proportion thereof according to the respective numbers of their people as shown by the latest statistics of the Commonwealth, and may convert, renew, or consolidate such debts, or any part thereof; and the States shall indemnify the Commonwealth in respect of the debts taken over, and thereafter the interest payable in respect of the debts shall be deducted and retained from the portions of the surplus revenue of the Commonwealth payable to the several States, or if such surplus is insufficient, or if there is no surplus, then the deficiency or the whole amount shall be paid by the several States.

105A.† (1.) *The Commonwealth may make agreements with the States with respect to the public debts of the States, including—*

- (a) *the taking over of such debts by the Commonwealth;*
- (b) *the management of such debts;*
- (c) *the payment of interest and the provision and management of sinking funds in respect of such debts;*
- (d) *the consolidation, renewal, conversion, and redemption of such debts;*
- (e) *the indemnification of the Commonwealth by the States in respect of debts taken over by the Commonwealth; and*
- (f) *the borrowing of money by the States or by the Commonwealth, or by the Commonwealth for the States.*

(2.) *The Parliament may make laws for validating any such agreement made before the commencement of this section.*

(3.) *The Parliament may make laws for the carrying out by the parties thereto of any such agreement.*

(4.) *Any such agreement may be varied or rescinded by the parties thereto.*

(5.) *Every such agreement and any such variation thereof shall be binding upon the Commonwealth and the States parties thereto notwithstanding anything contained in this Constitution or the Constitution of the several States or in any law of the Parliament of the Commonwealth or of any State.*

(6.) *The powers conferred by this section shall not be construed as being limited in any way to the provisions of section one hundred and five of this Constitution.*

#### CHAPTER V.—THE STATES.

106. The Constitution of each State of the Commonwealth shall, subject to this Constitution, continue as at the establishment of the Commonwealth, or as at the admission or establishment of the State, as the case may be, until altered in accordance with the Constitution of the State.

107. Every power of the Parliament of a Colony which has become or becomes a State, shall, unless it is by this Constitution exclusively vested in the Parliament of the Commonwealth or withdrawn from the Parliament of the State, continue as at the establishment of the Commonwealth, or as at the admission or establishment of the State as the case may be.

\* Under Section 2 of the *Constitution Alteration (State Debts) 1909*, the words in square brackets were omitted.

† Under Section 2 of the *Constitution Alteration (State Debts) 1928*, the Constitution was amended by the insertion of this section.

108. Every law in force in a Colony which has become or becomes a State, and relating to any matter within the powers of the Parliament of the Commonwealth, shall, subject to this Constitution, continue in force in the State: and, until provision is made in that behalf by the Parliament of the Commonwealth, the Parliament of the State shall have such powers of alteration and of repeal in respect of any such law as the Parliament of the Colony had until the Colony became a State.

109. When a law of a State is inconsistent with a law of the Commonwealth, the latter shall prevail, and the former shall, to the extent of the inconsistency, be invalid.

110. The provisions of this Constitution relating to the Governor of a State extend and apply to the Governor for the time being of the State, or other chief executive officer or administrator of the government of the State.

111. The Parliament of a State may surrender any part of the State to the Commonwealth; and upon such surrender, and the acceptance thereof by the Commonwealth, such part of the State shall become subject to the exclusive jurisdiction of the Commonwealth.

112. After uniform duties of customs have been imposed, a State may levy on imports or exports, or on goods passing into or out of the State, such charges as may be necessary for executing the inspection laws of the State; but the net produce of all charges so levied shall be for the use of the Commonwealth; and any such inspection laws may be annulled by the Parliament of the Commonwealth.

113. All fermented, distilled, or other intoxicating liquids passing into any State or remaining therein for use, consumption, sale, or storage, shall be subject to the laws of the State as if such liquids had been produced in the State.

114. A State shall not, without the consent of the Parliament of the Commonwealth, raise or maintain any naval or military force, or impose any tax on property of any kind belonging to the Commonwealth, nor shall the Commonwealth impose any tax on property of any kind belonging to a State.

115. A State shall not coin money, nor make anything but gold and silver coin a legal tender in payment of debts.

116. The Commonwealth shall not make any law for establishing any religion, or for imposing any religious observance, or for prohibiting the free exercise of any religion, and no religious test shall be required as a qualification for any office or public trust under the Commonwealth.

117. A subject of the Queen, resident in any State, shall not be subject in any other State to any disability or discrimination which would not be equally applicable to him if he were a subject of the Queen resident in such other State.

118. Full faith and credit shall be given, throughout the Commonwealth, to the laws, the public Acts and records, and the judicial proceedings of every State.

119. The Commonwealth shall protect every State against invasion and, on the application of the Executive Government of the State, against domestic violence.

120. Every State shall make provision for the detention in its prisons of persons accused or convicted of offences against the laws of the Commonwealth, and for the punishment of persons convicted of such offences, and the Parliament of the Commonwealth may make laws to give effect to this provision.

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#### CHAPTER VI.—NEW STATES.

121. The Parliament may admit to the Commonwealth or establish new States, and may upon such admission or establishment make or impose such terms and conditions, including the extent of representation in either House of the Parliament, as it thinks fit.

122. The Parliament may make laws for the government of any territory surrendered by any State to and accepted by the Commonwealth, or of any territory placed by the Queen under the authority of and accepted by the Commonwealth, or otherwise acquired by the Commonwealth, and may allow the representation of such territory in either House of the Parliament to the extent and on the terms which it thinks fit.

123. The Parliament of the Commonwealth may, with the consent of the Parliament of a State, and the approval of the majority of the electors of the State voting upon the question, increase, diminish, or otherwise alter the limits of the State, upon such terms and conditions as may be agreed on, and may, with the like consent, make provision respecting the effect and operation of any increase or diminution or alteration of territory in relation to any State affected.

124. A new State may be formed by separation of territory from a State, but only with the consent of the Parliament thereof, and a new State may be formed by the union of two or more States or parts of States, but only with the consent of the Parliaments of the States affected.

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CHAPTER VII.—MISCELLANEOUS.

125. The seat of Government of the Commonwealth shall be determined by the Parliament, and shall be within territory which shall have been granted to or acquired by the Commonwealth, and shall be vested in and belong to the Commonwealth, and shall be in the State of New South Wales, and be distant not less than one hundred miles from Sydney.

Such territory shall contain an area of not less than one hundred square miles, and such portion thereof as shall consist of Crown lands shall be granted to the Commonwealth without any payment therefor.

The Parliament shall sit at Melbourne until it meet at the Seat of Government.

126. The Queen may authorize the Governor-General to appoint any person, or any persons jointly or severally, to be his deputy or deputies within any part of the Commonwealth, and in that capacity to exercise during the pleasure of the Governor-General such powers and functions of the Governor-General as he thinks fit to assign to such deputy or deputies, subject to any limitations expressed or directions given by the Queen; but the appointment of such deputy or deputies shall not affect the exercise by the Governor-General himself of any power or function.

127. In reckoning the numbers of the people of the Commonwealth, or of a State or other part of the Commonwealth, aboriginal natives shall not be counted.

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CHAPTER VIII.—ALTERATION OF THE CONSTITUTION.

128. This Constitution shall not be altered except in the following manner:—

The proposed law for the alteration thereof must be passed by an absolute majority of each House of the Parliament, and not less than two nor more than six months after its passage through both Houses the proposed law shall be submitted in each State to the electors qualified to vote for the election of members of the House of Representatives.

But if either House passes any such proposed law by an absolute majority, and the other House rejects or fails to pass it or passes it with any amendment to which the first-mentioned House will not agree, and if after an interval of three months the first-mentioned House in the same or the next session again passes the proposed law by an absolute majority with or without any amendment which has been made or agreed to by the other House, and such other House rejects or fails to pass it or passes it with any amendment to which the first-mentioned House will not agree, the Governor-General may submit the proposed law as last proposed by the first-mentioned House, and either with or without any amendments subsequently agreed to by both Houses, to the electors in each State qualified to vote for the election of the House of Representatives.

When a proposed law is submitted to the electors the vote shall be taken in such manner as the Parliament prescribes. But until the qualification of electors of members of the House of Representatives becomes uniform throughout the Commonwealth, only one-half the electors voting for and against the proposed law shall be counted in any State in which adult suffrage prevails.

And if in a majority of the States a majority of the electors voting approve the proposed law, and if a majority of all the electors voting also approve the proposed law, it shall be presented to the Governor-General for the Queen's assent.

No alteration diminishing the proportionate representation of any State in either House of the Parliament, or the minimum number of representatives of a State in the House of Representatives, or increasing, diminishing, or otherwise altering the limits of the State, or in any manner affecting the provisions of the Constitution in relation thereto, shall become law unless the majority of the electors voting in that State approve the proposed law.

## SCHEDULE.

## OATH.

I, *A.B.*, do swear that I will be faithful and bear true allegiance to Her Majesty Queen Victoria, Her heirs and successors according to law. So HELP ME GOD!

## AFFIRMATION.

I, *A.B.*, do solemnly and sincerely affirm and declare that I will be faithful and bear true allegiance to Her Majesty Queen Victoria, Her heirs and successors according to law.

(NOTE.—*The name of the King or Queen of the United Kingdom of Great Britain and Ireland for the time being is to be substituted from time to time.*)

2. **The Royal Proclamation.**—The preceding Act received the Royal assent on 9th July, 1900. This made it lawful to declare that the people of Australia should be united in a Federal Commonwealth. This proclamation, made on 17th September, 1900, constituted the Commonwealth as from 1st January, 1901; it read as follows.

## BY THE QUEEN.

## A PROCLAMATION.

(Signed) VICTORIA R.

WHEREAS by an Act of Parliament passed in the Sixty-third and Sixty-fourth Years of Our Reign, intituled "An Act to constitute the Commonwealth of *Australia*," it is enacted that it shall be lawful for the Queen, with the advice of the Privy Council, to declare by Proclamation, that, on and after a day therein appointed, not being later than One year after the passing of this Act, the people of *New South Wales, Victoria, South Australia, Queensland, and Tasmania*, and also, if Her Majesty is satisfied that the people of *Western Australia* have agreed thereto, of *Western Australia*, shall be united in a Federal Commonwealth under the name of the Commonwealth of *Australia*.

And whereas We are satisfied that the people of *Western Australia* have agreed thereto accordingly.

We therefore, by and with the advice of Our Privy Council, have thought fit to issue this Our Royal Proclamation, and We do hereby declare that on and after the First day of *January* One thousand nine hundred and one, the people of *New South Wales, Victoria, South Australia, Queensland, Tasmania, and Western Australia* shall be united in a Federal Commonwealth under the name of the Commonwealth of *Australia*.

Given at Our Court at *Balmoral* this Seventeenth day of *September*, in the Year of Our Lord One thousand nine hundred, and in the Sixty-fourth Year of Our Reign.

GOD SAVE THE QUEEN.

## § 6. The External Territories of Australia

1. **Transfer of Norfolk Island.**—In 1856, Norfolk Island was created a distinct and separate settlement under the jurisdiction of New South Wales. Later, in 1896, it was made a dependency under the Governor of that colony, and finally by the passage of the *Norfolk Island Act* 1913 it was accepted as a Territory of the Commonwealth of Australia. The island is situated in latitude 29° 3' 3" S., longitude 167° 57' 5" E., and comprises an area of 8,528 acres.

2. **Transfer of British New Guinea or Papua.**—Under the administration of the Commonwealth, but not included in it, is British New Guinea or Papua, finally annexed by the British Government in 1884. This Territory was for a number of years administered by the Queensland Government, but was transferred to the Commonwealth by proclamation on 1st September, 1906, under the authority of the *Papua Act* 1905. The area of Papua is about 90,540 square miles.

3. **Territory of New Guinea.**—In 1919, it was agreed by the Principal Allied and Associated Powers that a mandate should be conferred on Australia for the government of the former German territories and islands situated in latitude between the Equator

and 8° S., and in longitude between 141° E. and 159° 25' E. The mandate was issued by the League of Nations on 17th December, 1920. The Governor-General of the Commonwealth was authorized to accept the mandate by the *New Guinea Act 1920*, which also declared the area to be a Territory under the authority of the Commonwealth by the name of the Territory of New Guinea. The Territory comprises about 93,000 square miles, and the administration under the mandate dated from 9th May, 1921. New Guinea is now administered under a Trusteeship Agreement with the United Nations, approved on 13th December, 1946.

4. **Nauru.**—In 1919, the Governments of the United Kingdom, Australia and New Zealand entered into an agreement to make provision for the exercise of the mandate conferred on the British Empire for the administration of the island of Nauru, and for the mining of the phosphate deposits thereon. The island is situated in latitude 0° 32' S., and longitude 166° 55' E. and comprises about 5,263 acres. The agreement provided that the administration of the island should be vested in an administrator, the first appointment to be made by the Commonwealth Government, and thereafter in such manner as the three Governments decided. The agreement was approved by the Commonwealth Parliament in the *Nauru Island Agreement Act 1919*, and a supplementary agreement of 30th May, 1923, which gave the Government immediately responsible for the administration greater powers of control over the Administrator, was approved in 1932. So far, the administrators have been appointed by the Commonwealth Government. The administration under the mandate operated from 17th December, 1920, to 1st November, 1947, since when Nauru has been administered under a Trusteeship Agreement with the United Nations.

5. **Australian Antarctic Territory.**—An Imperial Order in Council of 7th February, 1933, placed under Australian authority "all the islands and territories other than Adelie Land which are situated south of the 60th degree of South Latitude and lying between the 160th degree of East Longitude and the 45th degree of East Longitude."

The Order came into force with a proclamation issued by the Governor-General on 24th August, 1936, after the passing of the *Australian Antarctic Territory Acceptance Act 1933* by the Commonwealth Parliament. The boundaries of Adelie Land were definitely fixed by a decree of 1st April, 1938, as latitude 60° S., longitude 135° E. and longitude 142° E.

6. **Territory of Heard and McDonald Islands.**—Heard and McDonald Islands, about 2,500 miles south-west of Fremantle, were transferred from United Kingdom to Australian control as from 26th December, 1947.

7. **Territory of Cocos (Keeling) Islands.**—*The Cocos (Keeling) Islands Act 1955* provided for the acceptance of the Cocos Islands, in the Indian Ocean, as a Territory under the authority of the Commonwealth of Australia and was parallel to an Act of the United Kingdom Parliament transferring authority over the islands to the Commonwealth. Consequent on the passing of these Acts, Her Majesty, by Order in Council, specified 23rd November, 1955, as the date of transfer. From that date, the islands came under Australian administration and an Official Representative of Australia was appointed to take charge of the local administration of the islands.

8. **Territory of Christmas Island.**—*The Christmas Island Act 1958* provided for the acceptance of Christmas Island, in the Indian Ocean, as a Territory under the authority of the Commonwealth of Australia. Complementary legislation having been passed by the Parliament of the United Kingdom, the island was transferred to the Australian administration on 1st October, 1958, and an Official Representative was appointed to administer the Territory.

## CHAPTER II

### PHYSIOGRAPHY

#### § 1. General Description of Australia

1. *Geographical Position.*—(i) *General.* The Australian Commonwealth, which includes the island continent of Australia proper and the island of Tasmania, is situated in the Southern Hemisphere, and comprises an area of 2,971,081 square miles, the mainland alone containing 2,944,866 square miles. Bounded on the west and east by the Indian and Pacific Oceans respectively, it lies between longitudes 113° 9' E. and 153° 39' E., while its northern and southern limits are the parallels of latitude 10° 41' S. and 43° 39' S., or, excluding Tasmania, 39° 8' S. On its north are the Timor and Arafura Seas and Torres Strait, on its south the Southern Ocean. The extreme points are Steep Point on the west, Cape Byron on the east, Cape York on the north, and South-East Cape or, if Tasmania be excluded, Wilson's Promontory, on the south.

(ii) *Tropical and Temperate Regions.* Of the total area of Australia, nearly 39 per cent. lies within the tropics. Taking the latitude of the Tropic of Capricorn as 23° 30' S., the areas within the tropical and temperate zones are approximately as follows.

#### AUSTRALIA: AREAS OF TROPICAL AND TEMPERATE REGIONS

(Square miles)

Area	N.S.W. (a)	Vic.	Qld	S. Aust.	W. Aust.	Tas.	N. Terr.	Total
Within tropical zone ..			360,642		364,000		426,320	1,150,962
,, temperate zone ..	310,372	87,884	306,358	380,070	611,920	26,215	97,300	1,820,119
Total Area ..	310,372	87,884	667,000	380,070	975,920	26,215	523,620	2,971,081

(a) Includes Australian Capital Territory (939 square miles).

Fifty-four per cent. of Queensland lies within the tropical zone and 46 per cent. in the temperate zone; 37 per cent. of Western Australia is tropical and 63 per cent. temperate; while 81 per cent. of the Northern Territory is tropical and 19 per cent. temperate. All of the remaining States lie within the temperate zone. The tropical part of Australia thus comprises about 39 per cent. of the whole of the continent.

2. *Area of Australia compared with Areas of other Countries.*—The area of Australia is almost as great as that of the United States of America excluding Alaska, four-fifths of that of Canada, more than half as large again as Europe excluding the U.S.S.R., and about 25 times that of Great Britain and Ireland. The areas of Australia and of certain other countries are shown in the table on the following page.



AREA OF AUSTRALIA AND OF OTHER COUNTRIES, *circa* 1961

('000 square miles)

Country	Area	Country	Area
<b>Continental Divisions—</b>		<b>Africa—continued</b>	
Europe (a) .. .. .	1,913	Niger .. .. .	489
Asia (a) .. .. .	10,402	Rhodesia and Nyasaland .. .. .	485
U.S.S.R. (Europe and Asia)	8,650	Angola .. .. .	481
Africa .. .. .	11,724	South Africa, Republic of .. .. .	472
North and Central America		Mali .. .. .	465
and West Indies .. .. .	9,362	Ethiopia and Eritrea .. .. .	457
South America .. .. .	6,870	Mauritania .. .. .	419
Oceania .. .. .	3,301	United Arab Republic (b) .. .. .	386
<b>Total, excluding Arctic</b>		Tanganyika .. .. .	362
<b>and Antarctic Conts. ..</b>	<b>52,222</b>	Nigeria, Federation of .. .. .	357
<b>Europe (a)—</b>		South-West Africa .. .. .	318
France .. .. .	213	Mozambique .. .. .	302
Spain (incl. possessions) .. .. .	195	Somaliland .. .. .	246
Sweden .. .. .	174	Central African Republic .. .. .	238
Finland .. .. .	130	Madagascar .. .. .	230
Norway .. .. .	125	Bechuanaland Protectorate .. .. .	222
Poland .. .. .	120	Other .. .. .	1,826
Italy .. .. .	116	<b>Total .. .. .</b>	<b>11,724</b>
Yugoslavia .. .. .	99	<b>North and Central America—</b>	
Germany, Fed. Republic of .. .. .	96	Canada .. .. .	3,852
United Kingdom .. .. .	94	United States of America (c) .. .. .	3,609
Romania .. .. .	92	Greenland .. .. .	840
Other .. .. .	459	Mexico .. .. .	762
<b>Total (a) .. .. .</b>	<b>1,913</b>	Nicaragua .. .. .	57
<b>Asia (a)—</b>		Cuba .. .. .	44
China, Mainland .. .. .	3,692	Honduras .. .. .	43
India .. .. .	1,175	Other .. .. .	155
Iran .. .. .	636	<b>Total .. .. .</b>	<b>9,362</b>
Saudi Arabia .. .. .	618	<b>South America—</b>	
Mongolian People's Republic .. .. .	593	Brazil .. .. .	3,286
Indonesia .. .. .	576	Argentina .. .. .	1,072
Pakistan .. .. .	366	Peru .. .. .	496
Turkey .. .. .	292	Colombia (excl. of Panama) .. .. .	440
Burma .. .. .	262	Bolivia .. .. .	424
Afghanistan .. .. .	251	Venezuela .. .. .	352
Thailand .. .. .	198	Chile .. .. .	286
Iraq .. .. .	173	Paraguay .. .. .	157
Other .. .. .	1,570	Ecuador .. .. .	105
<b>Total (a) .. .. .</b>	<b>10,402</b>	Other .. .. .	252
<b>U.S.S.R. .. .. .</b>	<b>8,650</b>	<b>Total .. .. .</b>	<b>6,870</b>
<b>Africa—</b>		<b>Oceania—</b>	
Sudan .. .. .	968	Commonwealth of Australia .. .. .	2,971
Algeria .. .. .	920	New Zealand .. .. .	104
Congo (Leopoldville) .. .. .	906	New Guinea (d) .. .. .	93
Libya .. .. .	679	Papua .. .. .	91
Chad .. .. .	496	Other .. .. .	42
		<b>Total .. .. .</b>	<b>3,301</b>

(a) Excludes U.S.S.R., shown below. (b) Egypt only. Syria seceded September, 1961.  
(c) Excludes State of Hawaii, which is included in Other Oceania. (d) Australian Trust Territory.  
Western New Guinea (West Irian) is included in Other Asia.

The areas shown in the table are obtained from the *Demographic Yearbook*, 1962, published by the Statistical Office of the United Nations, and the countries have been arranged in accordance with the continental groups used therein.

3. Areas of States and Territories, Coastal Configuration and Standard Times.—As already stated, Australia consists of six States and the Northern Territory and Australian Capital Territory. Particulars of areas, coastline and standard times are shown in the following table.

**AUSTRALIA: AREAS OF STATES AND TERRITORIES, COASTLINE AND STANDARD TIMES**

State or Territory	Area	Percentage of total area	Coastline	Area per mile of coastline	Standard times	
					Meridian selected	Ahead of G.M.T.
	Sq. miles		Miles	Sq. miles		Hours
New South Wales ..	309,433	10.42	(a) 700	(a) 443	150° E.	10
Victoria ..	87,884	2.96	680	129	150° E.	10
Queensland ..	667,000	22.45	3,000	222	150° E.	10
South Australia ..	380,070	12.79	1,540	247	142°30' E.	9½
Western Australia ..	975,920	32.85	4,350	224	120° E.	8
Northern Territory ..	523,620	17.62	1,040	503	142°30' E.	9½
Australian Capital Territory ..	939	0.03	..	..	150° E.	10
<i>Mainland</i> ..	<i>2,944,866</i>	<i>99.12</i>	<i>11,310</i>	<i>260</i>	..	..
Tasmania ..	26,215	0.88	900	29	150° E.	10
<b>Australia</b> ..	<b>2,971,081</b>	<b>100.00</b>	<b>12,210</b>	<b>243</b>	..	..

(a) Includes Australian Capital Territory.

There are few striking features in the configuration of the coast; the most remarkable indentations are the Gulf of Carpentaria on the north and the Great Australian Bight on the south. The Cape York Peninsula on the extreme north is the only other remarkable feature in the outline. In Official Year Book No. 1, an enumeration was given of the features of the coastline of Australia.

Prior to 1895, the official time adopted in the several colonies was for most purposes the mean solar time of the capital city of each. In 1894 and 1895, after several conferences had been held, legislation was enacted by each of the colonies whereby the mean solar times of the meridians of east longitude 120° (Western Australia), 135° (South Australia and Northern Territory) and 150° (Queensland, New South Wales, Victoria and Tasmania) were adopted. In 1898, however, the South Australian legislature amended its earlier provision and adopted the mean solar time of the meridian 142° 30' E. longitude as the standard time for that colony (and the Northern Territory). For further information on this subject, see Official Year Book No. 39, page 65.

4. Geographical Features of Australia.—(i) *General*. The following description is only a broad summary of the main physical characteristics of the Australian continent. For greater detail concerning particular geographical elements, earlier issues of the Official Year Book should be consulted. The list of special articles, etc., at the end of this volume indicates the nature of the information available and its position in the various issues.

(ii) *Orography of Australia*. (a) *General Description of the Surface*. Owing to the absence of any very high mountain chains and to the great depression in the centre of Australia, the average elevation of the Australian continent above the level of the surrounding oceans is less than that of any of the other continents. Three-quarters of the land-mass lies between the 600 and 1,500 feet contours in the form of a huge plateau.

A section through the continent from east to west, at the point of its greatest breadth, shows first a narrow belt of coastal plain. This plain, extending north and south along the whole eastern coast, is well watered by rivers. It is of variable width, seldom more than sixty or seventy miles, and occasionally only a few miles, the average being roughly about forty to fifty miles. Bordering this plain is the Great Dividing Range, which extends from the north of Queensland to the south of New South Wales and thence sweeps westward through Victoria. This range, which rises, often abruptly, from the plain, frequently presents bold escarpments on its eastern face, but the descent on its western slopes is gradual, until, in the country to the north of Spencer's Gulf, the plain is not above sea-level and occasionally even below it. Thence there is another almost imperceptible rise until the mountain ranges of Western Australia are reached, and beyond these lies another coastal plain.

The great central plain or plateau is the most distinctive feature of the Australian continent and the peculiarities of Australia's climate can probably be largely ascribed thereto.

(b) *Mountain Systems.* The main mountain feature of Australia is the Great Dividing Range, which runs along the whole eastern coast of the continent and can be traced over the islands of Torres Strait to New Guinea, while in the south one branch sweeps westwards towards the boundary of Victoria and South Australia, and the other, the main branch, terminates in Tasmania.

This mountain system is at no place more than 250 miles from the eastern coastline, and it approaches to less than 30 miles. On the whole, it is much closer to the coast in both New South Wales and Victoria than it is in Queensland, the corresponding average distances being about 70, 65 and 130 miles respectively. There is no connexion between the mountains of the eastern and other States of Australia.

The mountains of Australia are relatively low. Thus, in Queensland, the Great Dividing Range reaches a height above sea-level of less than 5,500 feet, the highest peak being Mount Bartle Frere. Mount Kosciusko, in New South Wales, is only about 7,300 feet, and Mount Bogong, in Victoria, about 6,500 feet high. In South Australia and Western Australia, heights of three to five thousand feet are attained. In Tasmania, the greatest height is only a little more than 5,300 feet. The fact that there are no high mountains in Australia is also of considerable importance in considering the climate of Australia.

It is probable that at one time Tasmania was connected with the mainland. As the Great Dividing Range can, in the north, be traced from Cape York across Torres Strait to New Guinea, so its main axis can be followed across the shallow waters of Bass Strait and its islands from Wilson's Promontory to Tasmania, which may be said to be completely occupied by ramifications of the chain. The central part of the island is occupied by an elevated plateau, roughly triangular in shape, and presenting bold fronts to the east, west and north. This does not extend in any direction more than about 60 miles. The plateau rests upon a more extensive tableland, the contour of which closely follows the coastline, and occasionally broadens out into low-lying tracts not much above sea-level. The extreme south of the island is rugged in character.

(iii) *Hydrology of Australia.* (a) *Rainfall.* On the whole, Australia is a country with a limited rainfall. This is immediately evident on studying its river systems, its lakes, and its artesian areas. Its one large river system is that of the Murray and Darling Rivers, of which the former stream is the larger and more important. Many of the rivers of the interior run only after heavy rains. Depending almost entirely on rainfall, a consequence of the absence of high mountains, they drain large areas with widely varying relation between rainfall and flow. Thus it has been estimated that not more than 10 per cent. of the rainfall on the catchment area of the Darling River above Bourke (New South Wales) discharges itself past that town. The rate of fall is often very slight.

(b) *Rivers.* The rivers of Australia may be divided into two major classes, those of the coastal plains with moderate rates of fall and those of the central plains with very slight fall. Of the former, not many are navigable for any distance from their mouths, and bars make many of them difficult of access or inaccessible from the sea.

The two longest rivers of the northern part of the eastern coast are the Burdekin, discharging into Upstart Bay, with a catchment area of 53,500 square miles, and the Fitzroy, which reaches the sea at Keppel Bay and drains about 55,600 square miles.

The Hunter is the largest coastal river of New South Wales, draining about 11,000 square miles before it reaches the sea at Newcastle. The Murray River, with its great tributary the Darling, drains a considerable part of Queensland, the major part of New

South Wales and a large part of Victoria. It debouches into the arm of the sea known as Lake Alexandrina, on the eastern side of the South Australian coast. The total length of the Murray is about 1,600 miles, 400 being in South Australia and 1,200 constituting the boundary between New South Wales and Victoria. The total length of the Murray-Darling from the source of the Darling to the mouth of the Murray is about 2,300 miles. In good seasons, the river is navigable for a considerable proportion of its length.

The rivers of the north-west coast of Australia (Western Australia) are of considerable size, e.g. the Murchison, Gascoyne, Ashburton, Fortesque, De Grey, Fitzroy, Drysdale and Ord. So also are those in the Northern Territory, e.g. the Victoria and Daly. The former of these, estimated to drain 90,000 square miles, is said to be navigable for 50 miles.

The rivers on the Queensland side of the Gulf of Carpentaria, such as the Gregory, Leichhardt, Cloncurry, Gilbert and Mitchell, are also of considerable size.

Owing to the small amount of fall of many of the interior rivers, they may flood hundreds of miles of country in wet seasons, while in dry seasons they form a mere succession of waterholes or are entirely dry. It is this fact that explains the apparently conflicting reports of the early explorers, one regarding the interior as an inland sea, and another as a desert.

The rivers of Tasmania have short and rapid courses, as might be expected from the configuration of the country.

(c) *Lakes.* The "lakes" of Australia may be divided into three classes—true permanent lakes; lakes which, being very shallow, become mere morasses in dry seasons or even dry up and finally present a cracked surface of salt and dry mud; and lakes which are really inlets of the ocean, opening out into a lake-like expanse.

The second class is the only one which seems to demand special mention. These are a characteristic of the great central plain of Australia. Some of them, such as Lakes Torrens, Gairdner, Eyre and Frome, are of considerable extent.

(d) *Artesian Areas.* A considerable tract of the plain country of New South Wales and Queensland carries a water-bearing stratum, usually at a great depth. A large number of artesian bores have been put down, from which there is a considerable flow. These are of great value and render usable large areas which otherwise would be difficult to occupy even for pastoral purposes.

For further information on this subject, see Chapter VIII. Water Conservation and Irrigation.

## § 2. Climate and Meteorology of Australia

NOTE.—This Section has been prepared by the Director of the Commonwealth Bureau of Meteorology, and the various States and Territories have been arranged in the standard order adopted by that Bureau.

1. *Introductory.*—Previous issues of the Official Year Book, notably No. 3, pages 79–83, and No. 4, pages 84 and 87, contained outlines of the history of Australian meteorology and the creation and organization of the Commonwealth Bureau of Meteorology. Year Book No. 38, pages 30–2, contained paragraphs devoted to (a) Organization of the Meteorological Service; (b) Meteorological Publications; (c) Equipment; and (d) Meteorological Divisions.\* In this issue, some material which appeared in previous issues has been deleted or condensed. For fuller information, reference should be made to Year Book No. 49, pages 29–52.

By reason of its insular geographical position and the absence of striking physical features, whether in marine gulfs or in important mountains, Australia is, on the whole, less subject to extremes of weather than are regions of similar area in other parts of the globe, and latitude for latitude Australia is generally more temperate.

The average elevation of the surface of the land is low, probably close to 900 feet above the sea. The altitudes range up to a little more than 7,300 feet; hence the Australian climate displays a great many features, from the characteristically tropical to what is essentially alpine, a fact indicated in some measure by the name Australian Alps given to the southern portion of the Great Dividing Range.

\* For details of the Meteorological Divisions of Australia see Year Book No. 22, pages 41–2.

On the coast, more particularly the tropical sections, the rainfall is often abundant and the atmosphere moist, but in some portions of the interior it is very limited and the atmosphere dry. The distribution of forest, therefore, with its climatic influence, is very uneven. In the interior, in places, there are fine belts of trees, but there are also large areas which are treeless, and here the air is hot and parching in summer. Again, on the coast, even so far south as latitude 35°, the vegetation is tropical in its luxuriance, and to some extent also in character.

2. Temperature.—(i) *Effective Temperature*. When a meteorologist speaks of temperature, he means the temperature of the air indicated by a thermometer sheltered from precipitation, from direct rays of the sun and from radiation of heat from the ground and neighbouring objects, yet freely exposed to the circulation of the air. In other words, he means temperature measured under conditions standardized as nearly as possible in a Stevenson Screen, the standard housing for meteorological thermometers.

This shade temperature as measured by a "dry bulb" thermometer shows only the actual temperature experienced by dry inorganic substances, not the *sensible* temperatures felt by organic bodies. In the case of human beings, *sensible* temperature is affected by the rate of conduction of heat to or from the body by moving air and also by the rate of cooling due to evaporation from the skin and respiratory passages. The wind and humidity therefore determine the *sensible* temperature.

The humidity (relative humidity) is determined from the readings of the dry and wet bulb thermometers. However, with increasing interest in human comfort in tropical climates, another term, *effective* temperature, has come into use. It may be defined as "the temperature of a still, saturated atmosphere which would on the average produce the same feeling of warmth or cold as the atmosphere in question".\*

The 80° F. isotherm is confined to a very narrow tract of country extending from the north-west coast of Western Australia through the Northern Rivers section of the Northern Territory to the seaboard area around the Gulf of Carpentaria. The 75° F. isotherm extends, broadly, from Onslow on the north-west coast of Western Australia to Tennant Creek, to Boulia, to the southern part of Cape York Peninsula, thence southward along the Queensland coast to Townsville, following in a general way the coastline of northern Australia but from 100 to 300 miles inland.

From investigations which have established "comfort zones"† bounded by limits of effective temperature within which people feel comfortable, American research workers have determined the following figures.‡

#### COMFORT ZONES: EFFECTIVE TEMPERATURES

Season	No subjects feel comfortable below—	Fifty per cent. of subjects feel comfortable between—	No subjects feel comfortable above—
Winter.. ..	60° F.	63° and 71° F.	74° F.
Summer .. ..	64° F.	66° and 75° F.	79° F.

Investigations made in Australia § in which the atmospheric vapour pressure was used as a measure of comfort, have shown that the limits of comfort range from 0.2 to 0.5 inch of vapour pressure.

(ii) *Seasons*. The Australian seasons are:—Summer, December to February; autumn, March to May; winter, June to August; spring, September to November. In most parts of Australia, January is the hottest month, but in Tasmania and southern Victoria, February is the hottest; in the tropical north, probably because the cooling "monsoon" rains occur in late summer, December is the hottest month, and at Darwin, November.

\* Houghton, F. C., Teague, W. W. and Miller, W. E. (1926) Amer. Soc. Heat. Vent. Engns.  
 † Yaglou, C. P. (1926) J. Industr. Hyg. ‡ Yaglou, C. P. (1927) Ibid. § Barkley, H. Zones of Relative Physical Comfort in Australia, Met. Bull. 20, 1934.

On a rainfall basis, in the tropical north, the year is divisible into "wet" and "dry" seasons, but on the basis of temperatures and physical comfort the "dry" season can be further sub-divided into two parts—"cool dry" and "warm dusty".\*

(a) "*Cool dry*" Season. From May to August. The average maximum temperature ranges from 80° to 85° F., the relative humidity is low and in inland areas cold nights are experienced when the temperature drops to 40° F. The skies generally are cloudless, but in about one year in three during June or July one to two inches of rain fall.

(b) "*Warm dusty*" Season. From the end of August, temperatures rise and reach a maximum in October or the beginning of November. Temperatures of over 120° F. have been recorded.

(c) "*Wet*" Season. After the first of the heavy storms, the maximum temperatures fall but still remain high with high relative humidity. At Wyndham during January, 1944, the minimum temperature did not drop below 75° F. for fourteen consecutive days. A maximum of over 100° F. was recorded on each rainless day.

In central and northern Australia, during the hottest months, the average temperatures range from 80° to 85° F., whereas in southern Australia they vary from 65° to 70° F. (see maps pp. 33-4).

Throughout Australia, the coldest month is July, when only a very narrow strip of the northern sea-board has an average temperature as high as 75° F. Over the southern half of the continent, July temperatures range from 55° to 45° F. at elevations below 1,500 feet and fall as low as 35° on the Australian Alps (see maps pp. 35-6). Here the temperature seldom, if ever, reaches 100° F. even in the hottest of seasons. Hotham Heights (6,100 feet above mean sea level) recorded the highest maximum of 82.0° F. on 20th January, 1935. In winter, readings slightly below 0° F. are occasionally recorded on the extreme heights.

Tasmania, as a whole, enjoys a moderate and equable range of temperature throughout the year, although occasionally hot winds may cause the temperature to rise to 100° F. in the eastern part of the State.

(iii) *Comparisons with other Countries.* In respect of Australian temperatures generally, the fact that the mean annual isotherm for 70° F. extends in South America and South Africa as far south as latitude 33° S., while in Australia it reaches only as far south as latitude 28° S., shows that, on the whole, Australia has, latitude for latitude, a more temperate climate than other places in the Southern Hemisphere.

The comparison is even more favourable when the Northern Hemisphere is included, for in the United States of America the 70° F. isotherm extends in several of the western States as far north as latitude 41° N. In Europe, the same isotherm reaches almost to the southern shores of Spain, passing afterwards, however, along the northern shores of Africa till it reaches the Red Sea, when it bends northward along the eastern shore of the Mediterranean till it reaches Syria. In Asia, nearly the whole of the land area south of latitude 40° N. has a mean annual temperature higher than 70° F.

The extreme range of temperature is less than 100° F. over practically the whole of Australia, that figure being only slightly exceeded at a very few places; it is mostly 70° to 90° F. over inland areas, and somewhat less on the coast. In parts of Asia and North America, the extreme range exceeds 130° and 150° F. in some localities.

Along the northern shores of Australia, the temperatures are very equable. At Darwin, for example, the difference in the means for the hottest and coldest month is only 8.5° F., and the extreme readings, or the highest maximum on record and the lowest minimum, show a difference of only about 50° F.

The highest temperature recorded in Australia was 127.5° F. at Cloncurry on 16th January, 1889. The world's highest (136° F.) was recorded at Azizia (Tripoli) on 13th August, 1922. The lowest temperature ever recorded in Australia was -8° F. at Charlotte Pass on 14th July, 1945, and again on 22nd August, 1947, as contrasted with the lowest recorded temperature in other temperate zones, where readings of -50° F. and lower have been registered at places in northern Europe, with an extreme of -67° F. at Ust' Shchugor (Russia); while in Siberian Asia, readings have been lower than -60° F. at a number of stations, the lowest being -90° F. at Oimyekon and Verkhoyansk, and in North America -76° F. has been recorded at Tanana (Alaska) and -74° F. at Watson Lake (Canada).

\* Maze, W. H. Austn. Geog., June, 1945. Settlement in E. Kimberleys.

In the polar regions, minimum readings of lower than  $-100^{\circ}$  F. have been registered in Antarctica, the lowest being  $-125.3^{\circ}$  F. on 25th August, 1958, and  $-126.9^{\circ}$  F. on 24th August, 1960, both at Vostok.

The mean temperatures and the range from the extreme maximum to the extreme minimum temperatures (in whole degrees) of the capital cities of Australia, and a comparison with those of the main cities of some other countries are presented in tabular form in Official Year Book No. 38, page 42.

(iv) *Hottest Parts of Australia.* In the interior of Australia, and during exceptionally dry summers, the temperature occasionally reaches or exceeds  $120^{\circ}$  F. in the shade. The hottest area of the continent is situated in the northern part of Western Australia about the Marble Bar and Nullagine goldfields, where the maximum shade temperature during the summer sometimes exceeds  $100^{\circ}$  F. continuously for days and weeks. The longest recorded period was 160 days from 31st October, 1923, to 7th April, 1924.

The area affected and the period of duration of the longest heat waves in Australia are shown in the map and diagram on page 37.

(v) *Tabulated Data for Selected Climatological Stations in Australia.* Tables showing normal mean temperature, extreme temperatures and normal rainfall for each month for selected climatological stations in each State and the Northern Territory appear in Official Year Book No. 40, pages 16-23, and similar data for other selected stations in the Commonwealth in Year Book No. 39, pages 41-48. Pages 54-61 of this issue contain this information in respect of Canberra, Darwin and the six State capitals.

(vi) *Frosts.\** The Observer's Handbook of the Meteorological Office, London, gives the following definition:—"Injury to the tissues of growing plants is not caused until the temperature has fallen considerably below the freezing point of water ( $32^{\circ}$  F.) and a 'ground frost' is regarded as having occurred when the thermometer on the grass has fallen to  $30.4^{\circ}$  F. or below".

In Australia, this definition is adopted for stations equipped with terrestrial minimum thermometers. However, these are few in number, so although many rainfall observers record "hoar frost" when seen, for statistical purposes a screen temperature of  $36^{\circ}$  F. is taken as indicating light frosts at ground level. For heavy frosts, a screen temperature of  $32^{\circ}$  F. is taken.

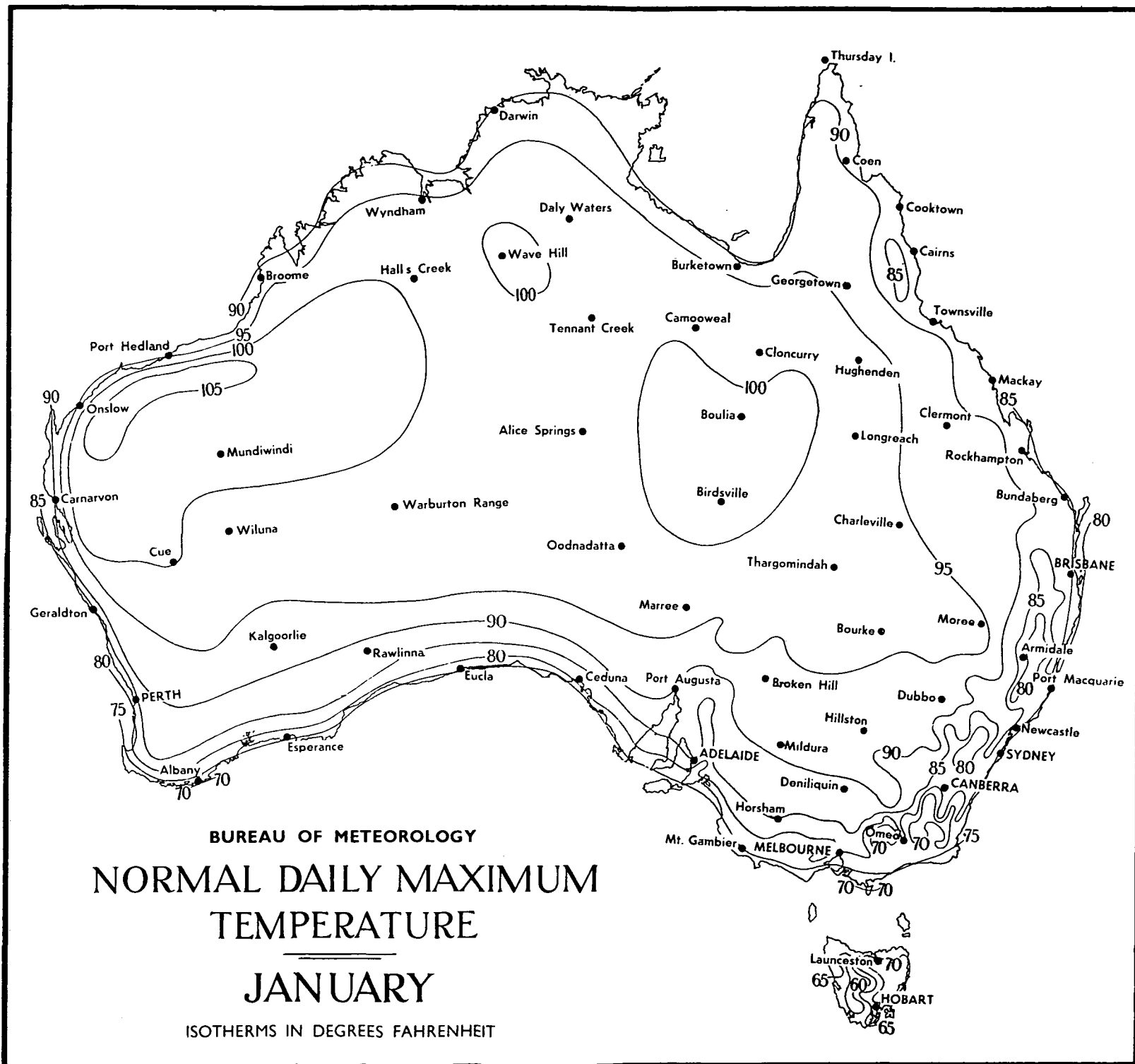
In America, a "killing" frost is defined as a frost "that is generally destructive of vegetation". A "black frost" is the phenomenon arising out of a combination of low temperature and low humidity causing rupturing of plant cells by expansion when freezing of the water which they contain takes place, though frost crystals are not formed on the ground.

The parts of Australia most subject to low temperature are the eastern highlands from about Omeo in Victoria northward to Cambooya and Bybera in Queensland. Most stations in this region experience more than ten nights a month with readings of  $32^{\circ}$  F. or under for three to five months of the year. In Tasmania, districts on the Central Plateau are subject to such conditions for three to six months of the year. Minimum temperatures of  $32^{\circ}$  F. are comparatively infrequent in Western Australia except in parts of the south and south-west. In South Australia, the Yongala district is much more subject to such temperatures than other parts of the State. Much of the south-east of Queensland has a higher frequency of such readings than South Australia. Generally speaking, the frequency is controlled by altitude, latitude and, to a lesser degree, by proximity to the sea.

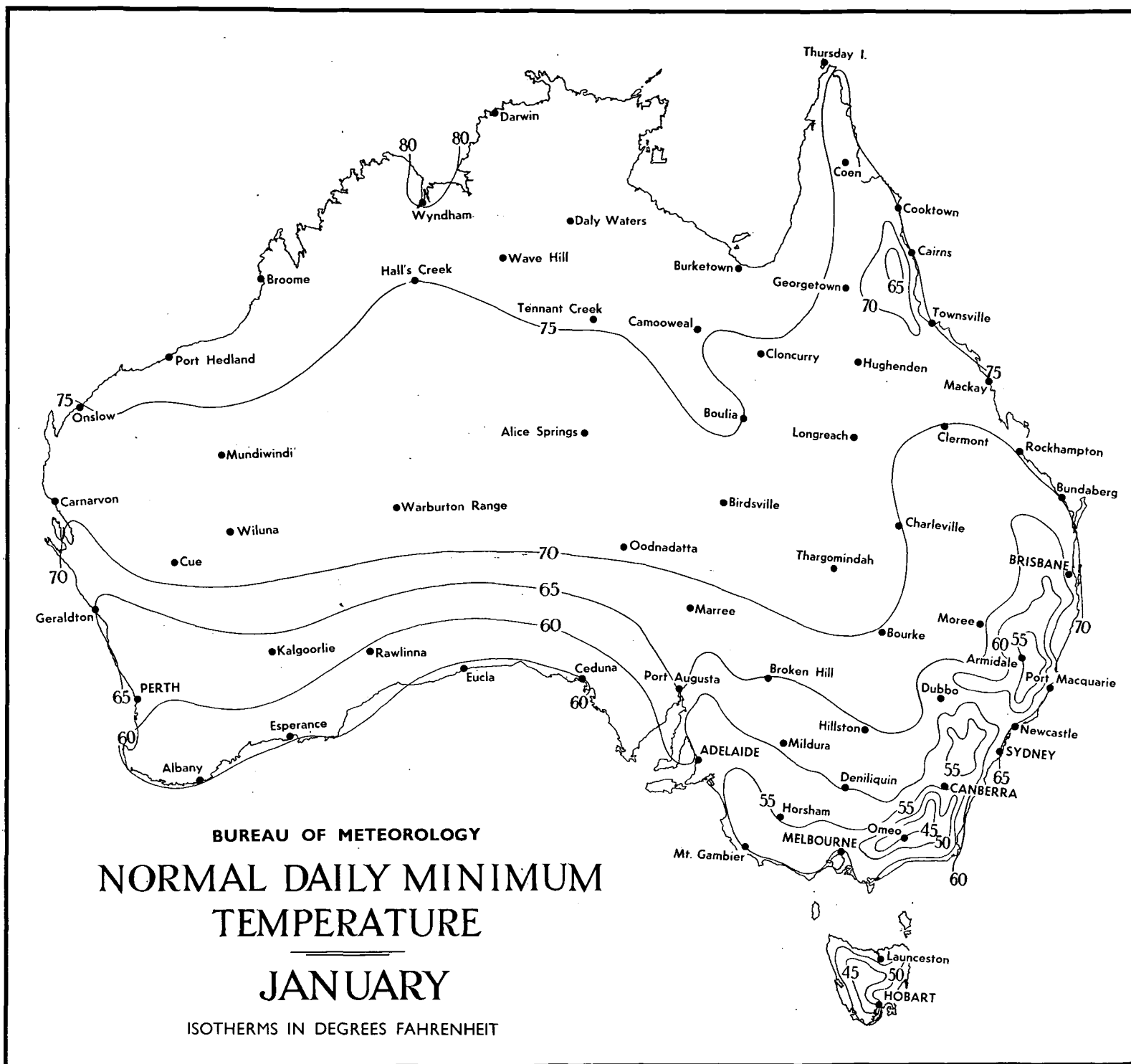
Frosts may occur within a few miles of the coastline over the whole continent, except in the Northern Territory and a considerable part of northern Queensland. Regions subject to frost in all months of the year comprise portions of the tablelands of New South Wales, the Eastern Highlands and parts of the Central Divide and Western district in Victoria, practically the whole of Tasmania, and a small area in the south-west of Western Australia.

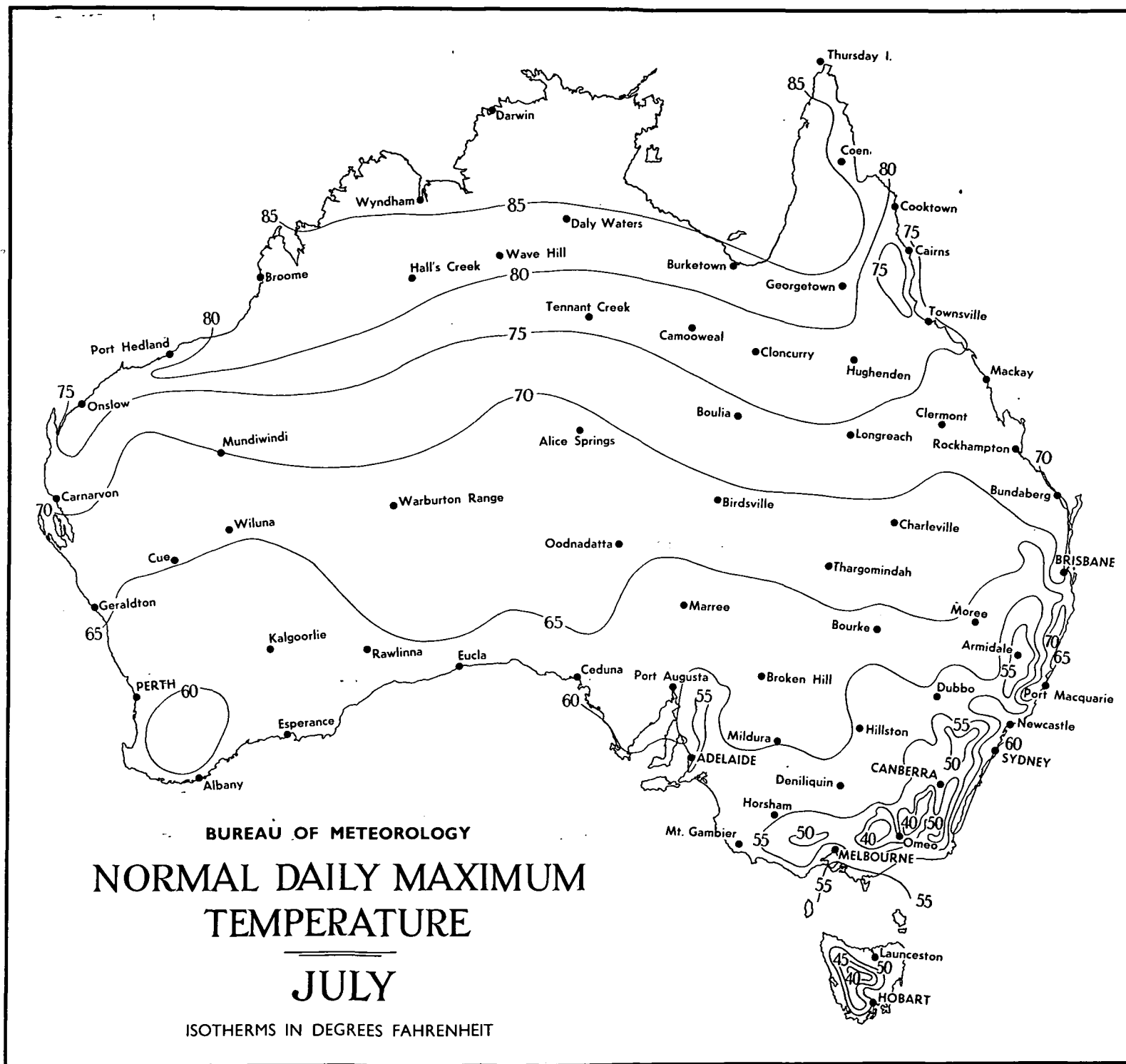
A map showing the average annual number of frost-free days (i.e. days on which the temperature does not fall below  $36^{\circ}$  F.) appears on page 39.

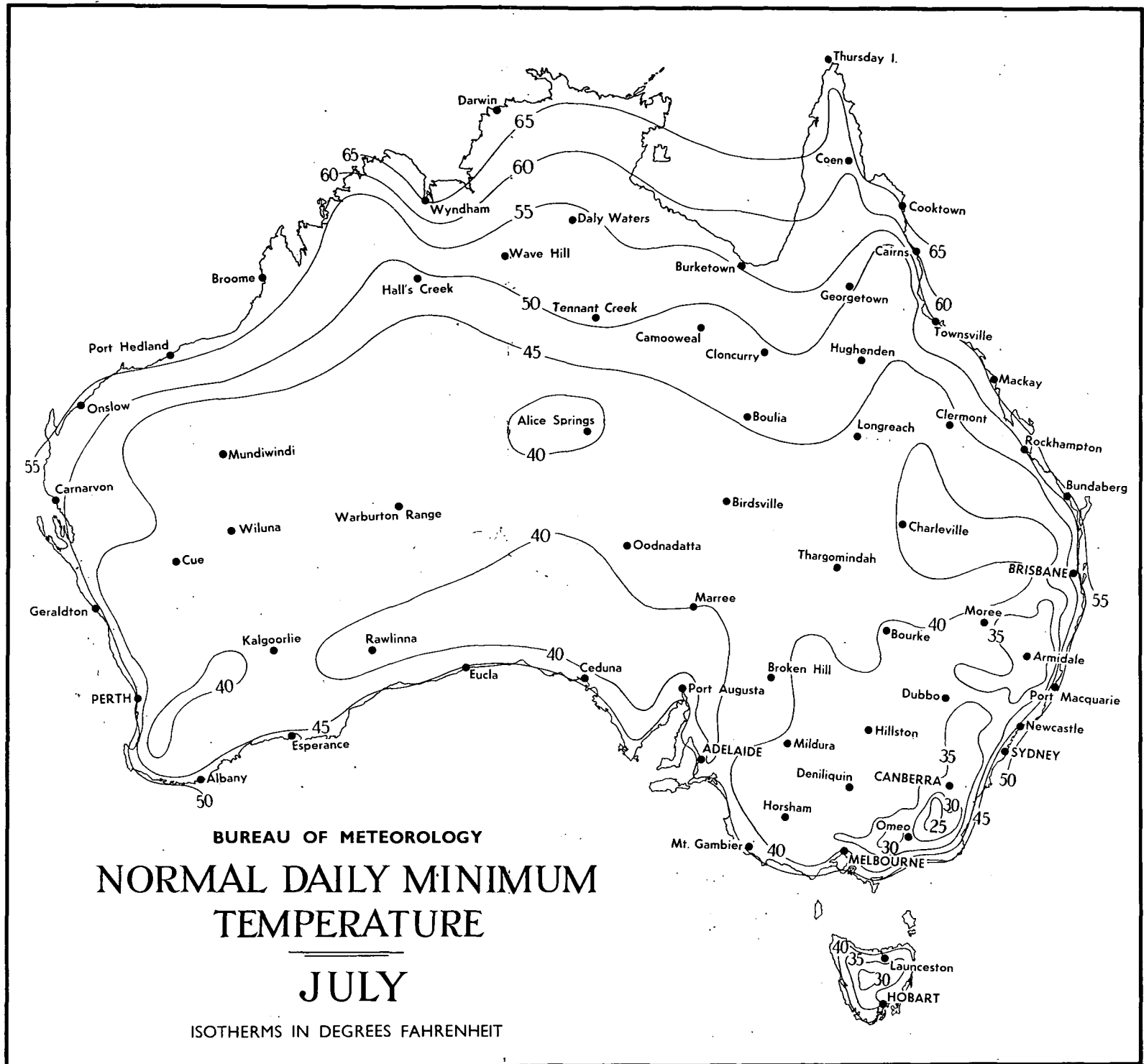
\* See also Foley, J. C. Frost in the Australian Region (Bull. 32, 1945).



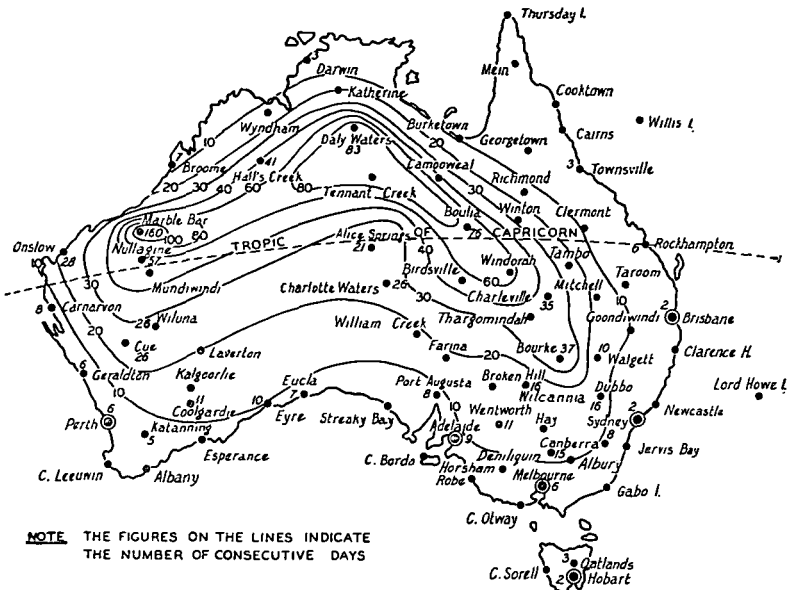




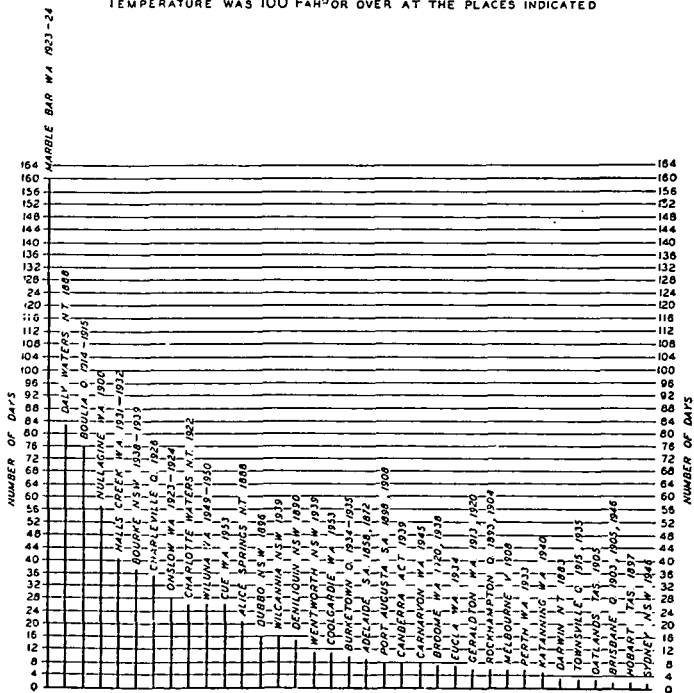




AREA AFFECTED AND PERIOD OF DURATION OF THE LONGEST HEAT WAVES WHEN THE MAXIMUM TEMPERATURE FOR CONSECUTIVE 24 HOURS REACHED OR EXCEEDED 100°F



GREATEST NUMBER OF CONSECUTIVE DAYS ON WHICH THE SHADE TEMPERATURE WAS 100°F<sup>a</sup> OR OVER AT THE PLACES INDICATED



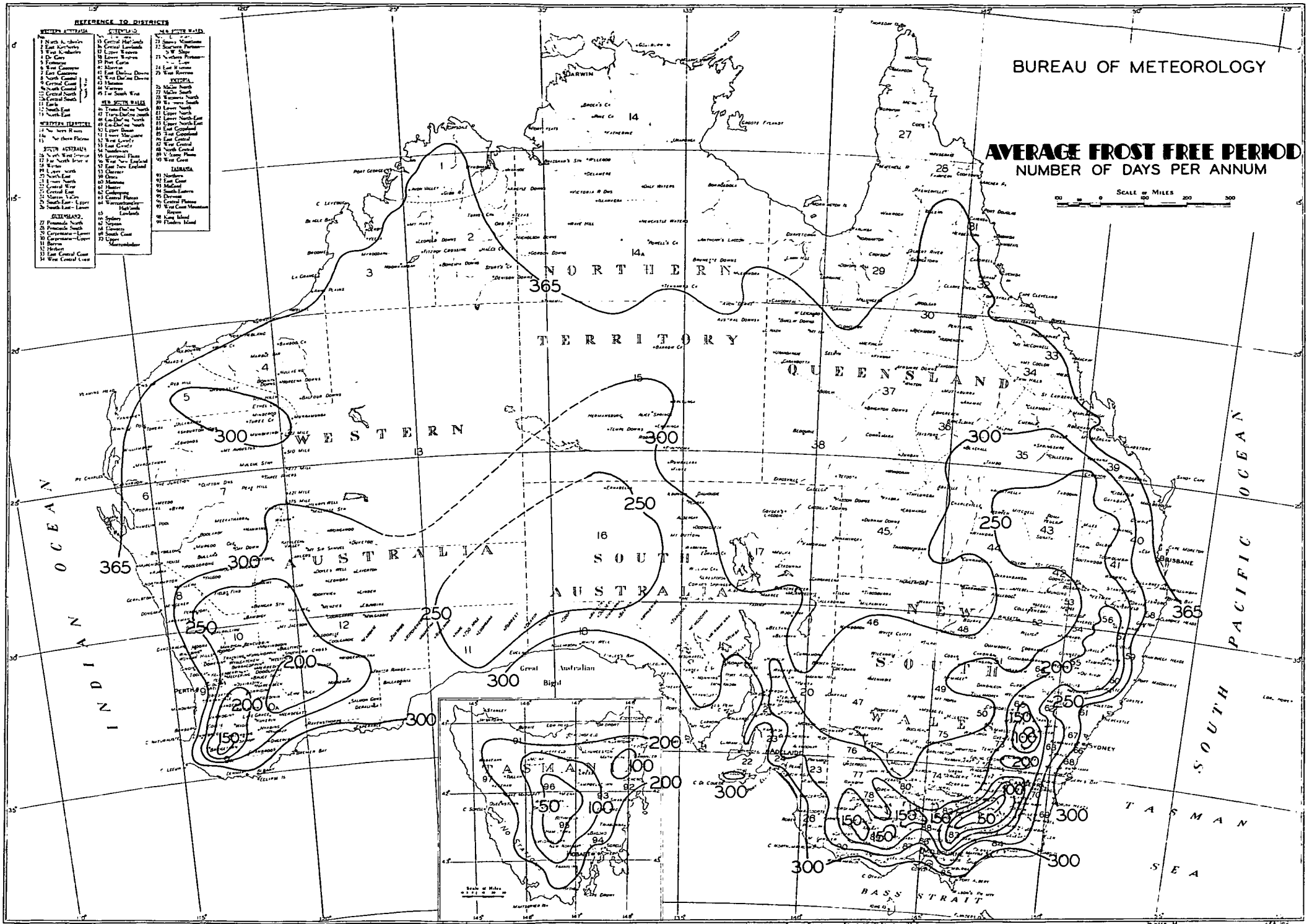


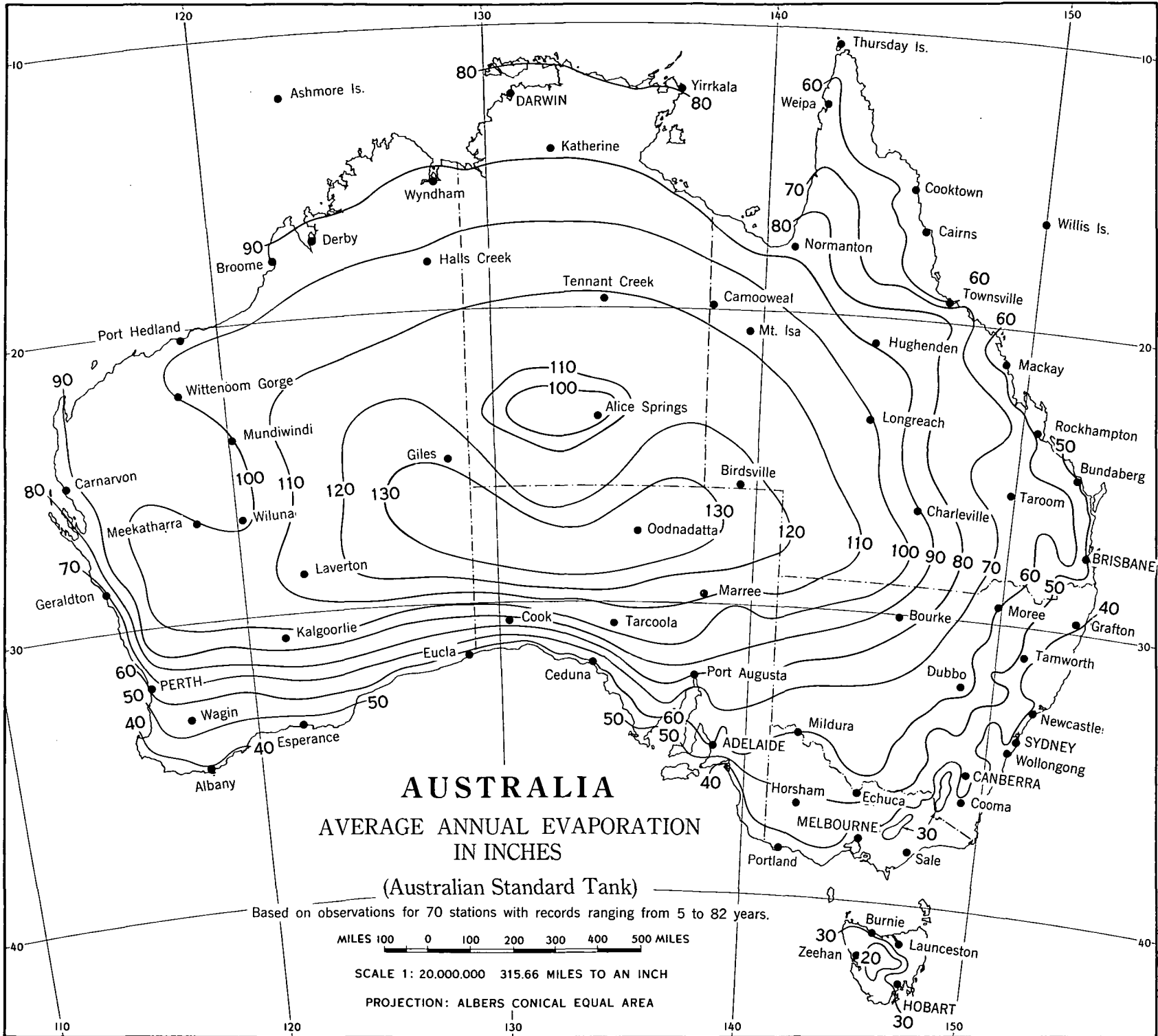
BUREAU OF METEOROLOGY

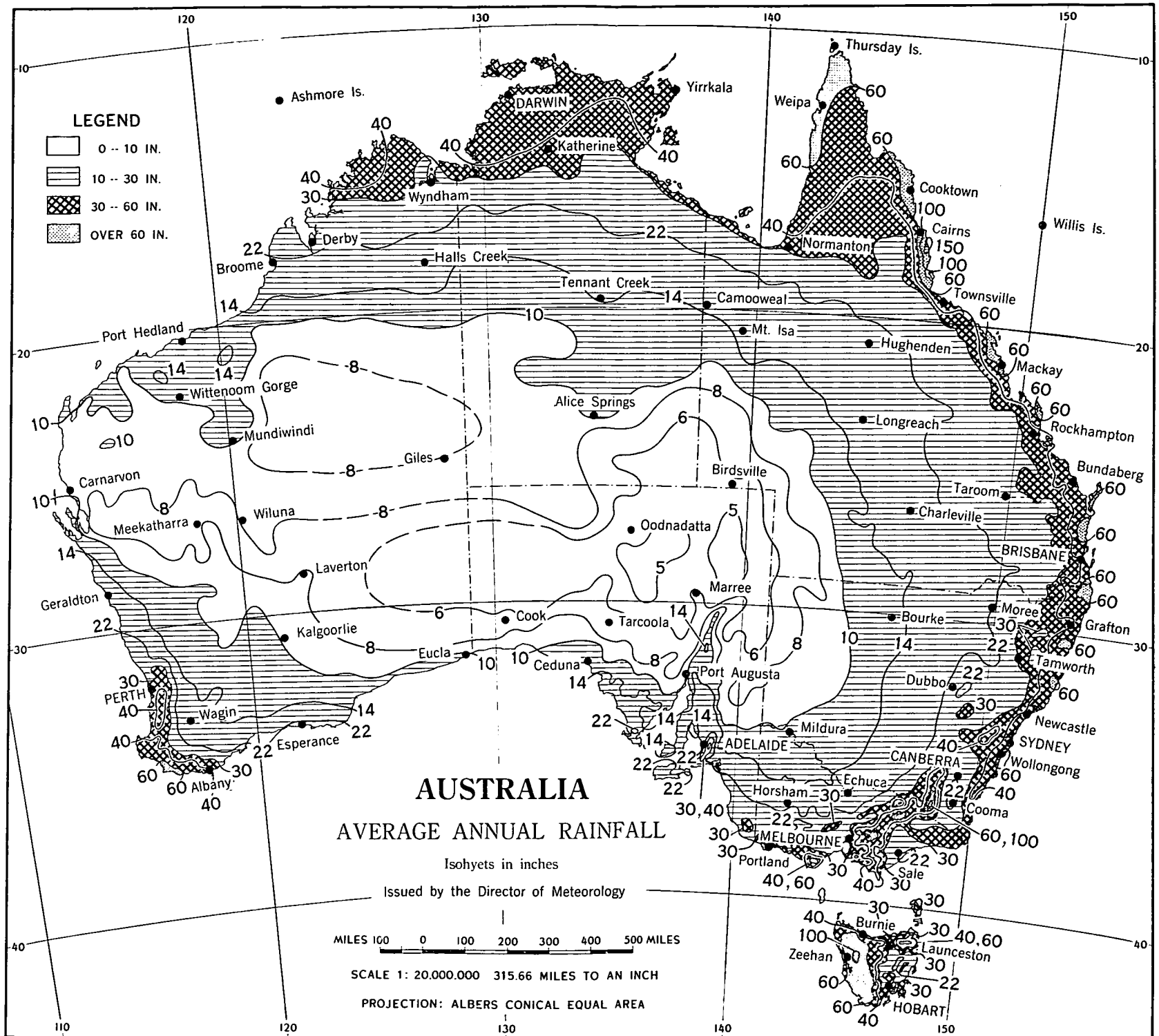
### AVERAGE FROST FREE PERIOD NUMBER OF DAYS PER ANNUM

SCALE OF MILES  
0 50 100 200 300

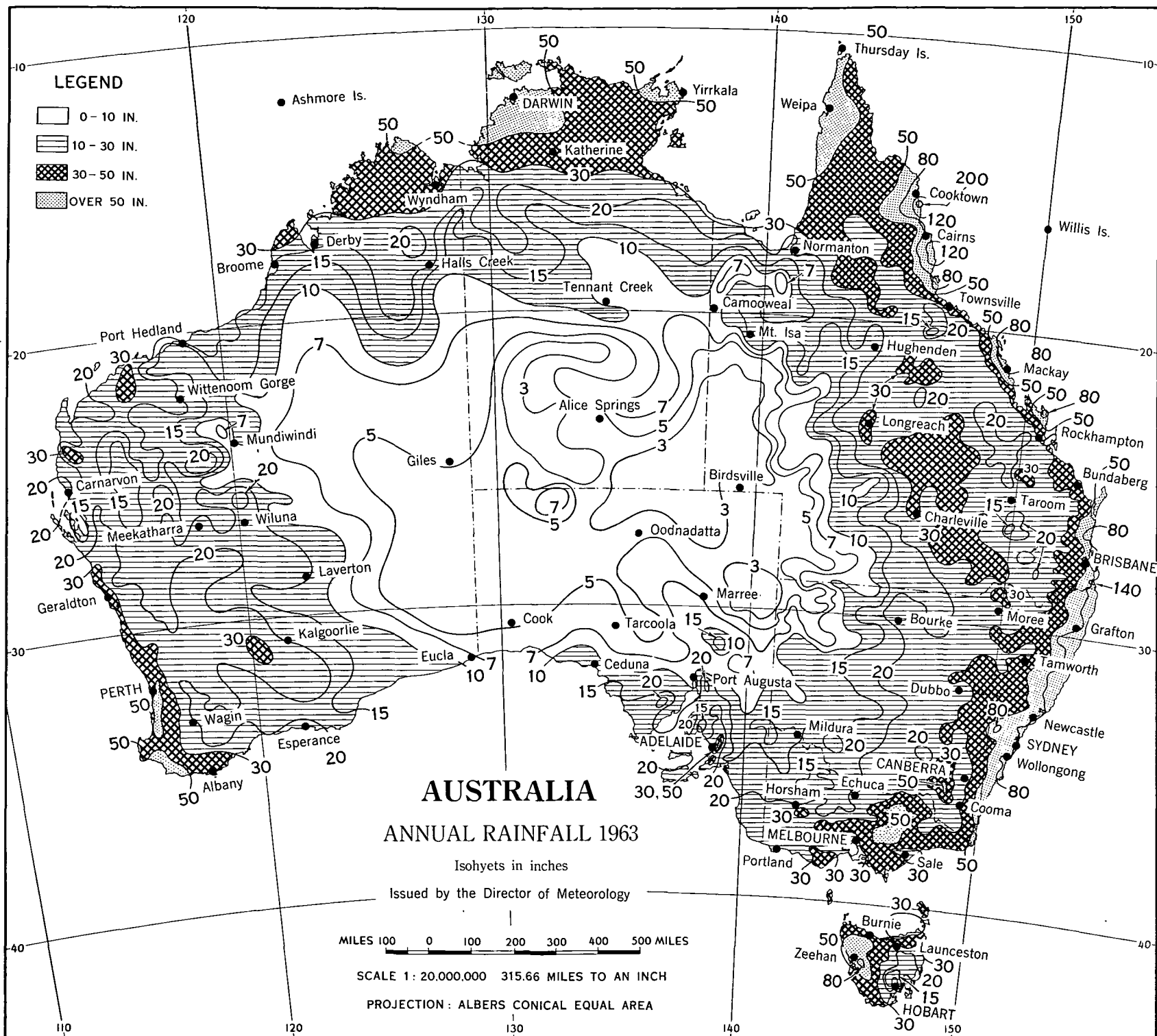
REFERENCE TO DISTRICTS		
WESTERN AUSTRALIA	CENTRAL AUSTRALIA	EAST AUSTRALIA
1 Perth	1 Perth	1 Perth
2 Geraldton	2 Geraldton	2 Geraldton
3 Mandurah	3 Mandurah	3 Mandurah
4 Albany	4 Albany	4 Albany
5 Esperance	5 Esperance	5 Esperance
6 South Coast	6 South Coast	6 South Coast
7 East Coast	7 East Coast	7 East Coast
8 North Coast	8 North Coast	8 North Coast
9 Northern	9 Northern	9 Northern
10 Southern	10 Southern	10 Southern
11 Western	11 Western	11 Western
12 Eastern	12 Eastern	12 Eastern
13 Northern	13 Northern	13 Northern
14 Southern	14 Southern	14 Southern
15 Western	15 Western	15 Western
16 Eastern	16 Eastern	16 Eastern
17 Northern	17 Northern	17 Northern
18 Southern	18 Southern	18 Southern
19 Western	19 Western	19 Western
20 Eastern	20 Eastern	20 Eastern
21 Northern	21 Northern	21 Northern
22 Southern	22 Southern	22 Southern
23 Western	23 Western	23 Western
24 Eastern	24 Eastern	24 Eastern
25 Northern	25 Northern	25 Northern
26 Southern	26 Southern	26 Southern
27 Western	27 Western	27 Western
28 Eastern	28 Eastern	28 Eastern
29 Northern	29 Northern	29 Northern
30 Southern	30 Southern	30 Southern
31 Western	31 Western	31 Western
32 Eastern	32 Eastern	32 Eastern
33 Northern	33 Northern	33 Northern
34 Southern	34 Southern	34 Southern
35 Western	35 Western	35 Western
36 Eastern	36 Eastern	36 Eastern
37 Northern	37 Northern	37 Northern
38 Southern	38 Southern	38 Southern
39 Western	39 Western	39 Western
40 Eastern	40 Eastern	40 Eastern
41 Northern	41 Northern	41 Northern
42 Southern	42 Southern	42 Southern
43 Western	43 Western	43 Western
44 Eastern	44 Eastern	44 Eastern
45 Northern	45 Northern	45 Northern
46 Southern	46 Southern	46 Southern
47 Western	47 Western	47 Western
48 Eastern	48 Eastern	48 Eastern
49 Northern	49 Northern	49 Northern
50 Southern	50 Southern	50 Southern
51 Western	51 Western	51 Western
52 Eastern	52 Eastern	52 Eastern
53 Northern	53 Northern	53 Northern
54 Southern	54 Southern	54 Southern
55 Western	55 Western	55 Western
56 Eastern	56 Eastern	56 Eastern
57 Northern	57 Northern	57 Northern
58 Southern	58 Southern	58 Southern
59 Western	59 Western	59 Western
60 Eastern	60 Eastern	60 Eastern
61 Northern	61 Northern	61 Northern
62 Southern	62 Southern	62 Southern
63 Western	63 Western	63 Western
64 Eastern	64 Eastern	64 Eastern
65 Northern	65 Northern	65 Northern
66 Southern	66 Southern	66 Southern
67 Western	67 Western	67 Western
68 Eastern	68 Eastern	68 Eastern
69 Northern	69 Northern	69 Northern
70 Southern	70 Southern	70 Southern
71 Western	71 Western	71 Western
72 Eastern	72 Eastern	72 Eastern
73 Northern	73 Northern	73 Northern
74 Southern	74 Southern	74 Southern
75 Western	75 Western	75 Western
76 Eastern	76 Eastern	76 Eastern
77 Northern	77 Northern	77 Northern
78 Southern	78 Southern	78 Southern
79 Western	79 Western	79 Western
80 Eastern	80 Eastern	80 Eastern
81 Northern	81 Northern	81 Northern
82 Southern	82 Southern	82 Southern
83 Western	83 Western	83 Western
84 Eastern	84 Eastern	84 Eastern
85 Northern	85 Northern	85 Northern
86 Southern	86 Southern	86 Southern
87 Western	87 Western	87 Western
88 Eastern	88 Eastern	88 Eastern
89 Northern	89 Northern	89 Northern
90 Southern	90 Southern	90 Southern
91 Western	91 Western	91 Western
92 Eastern	92 Eastern	92 Eastern
93 Northern	93 Northern	93 Northern
94 Southern	94 Southern	94 Southern
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98 Southern	98 Southern	98 Southern
99 Western	99 Western	99 Western
100 Eastern	100 Eastern	100 Eastern







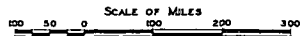




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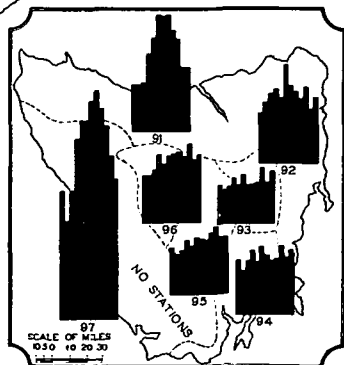
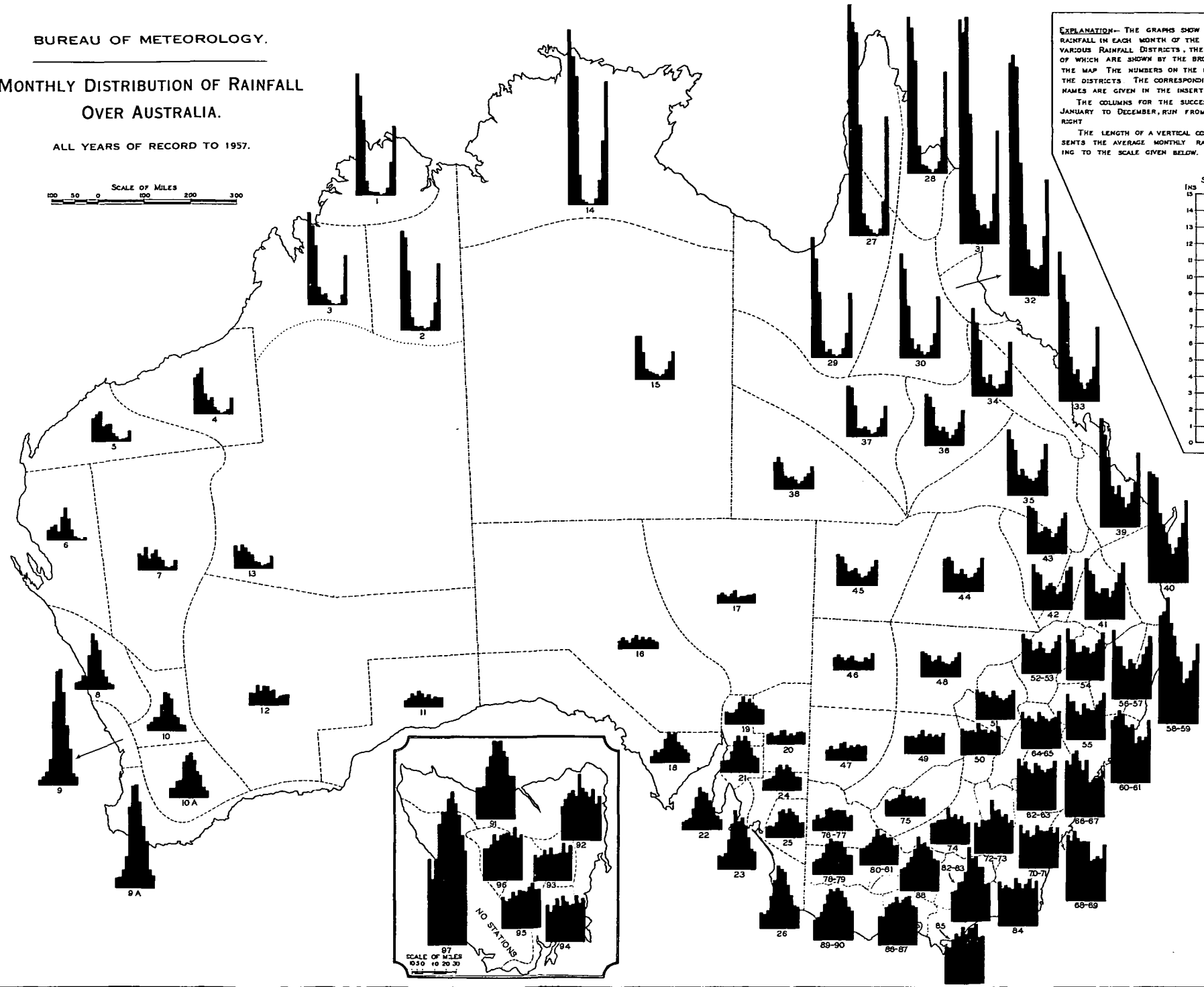
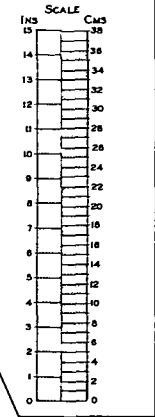
# MONTHLY DISTRIBUTION OF RAINFALL OVER AUSTRALIA.

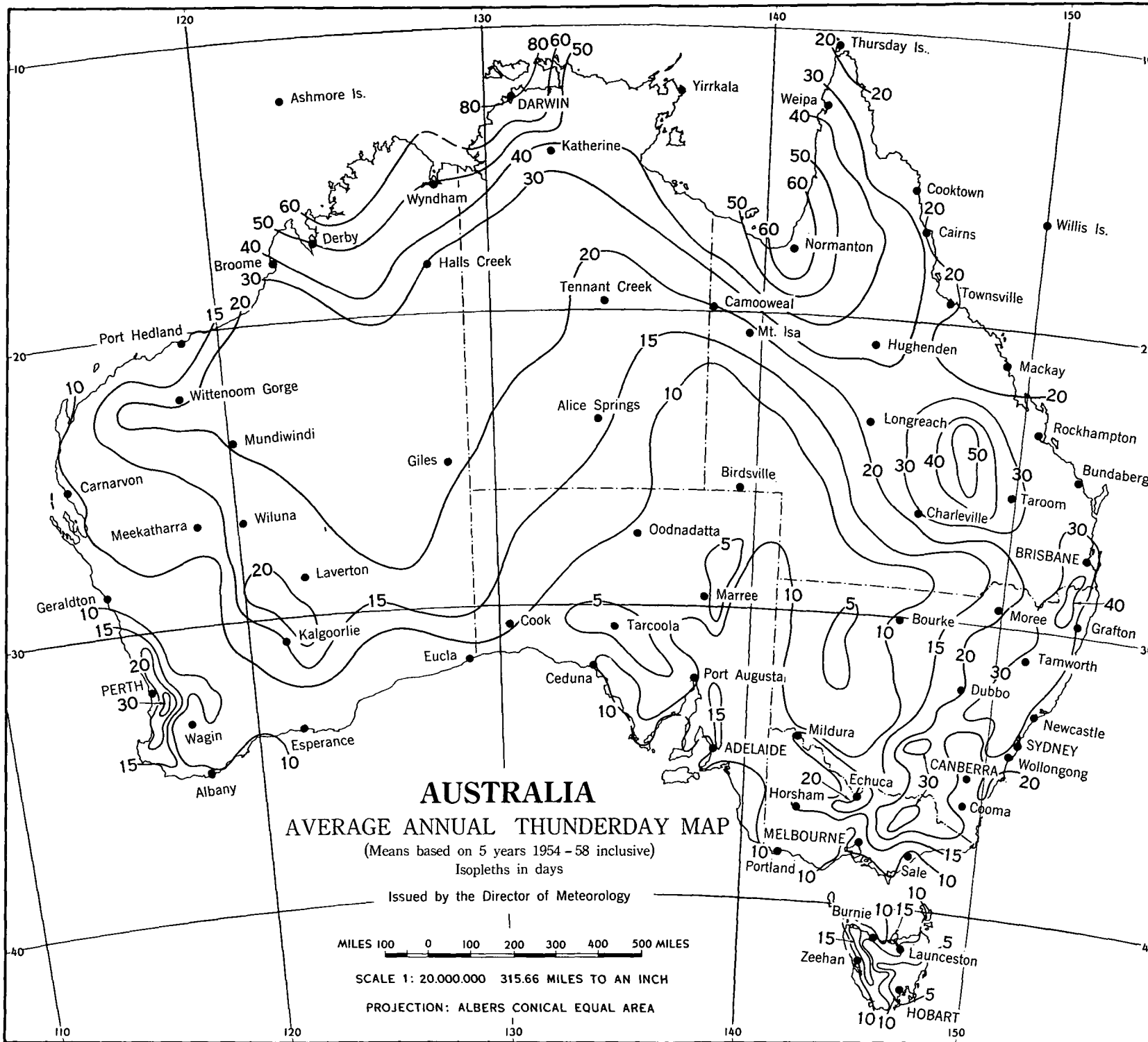
ALL YEARS OF RECORD TO 1957.



EXPLANATION— THE GRAPHS SHOW THE AVERAGE RAINFALL IN EACH MONTH OF THE YEAR IN THE VARIOUS RAINFALL DISTRICTS, THE BOUNDARIES OF WHICH ARE SHOWN BY THE BROKEN LINES ON THE MAP. THE NUMBERS ON THE MAP REFER TO THE DISTRICTS. THE CORRESPONDING DISTRICT NAMES ARE GIVEN IN THE INSERT ON PAGE 89. THE COLUMNS FOR THE SUCCESSIVE MONTHS, JANUARY TO DECEMBER, RUN FROM LEFT TO RIGHT.

THE LENGTH OF A VERTICAL COLUMN REPRESENTS THE AVERAGE MONTHLY RAINFALL ACCORDING TO THE SCALE GIVEN BELOW.



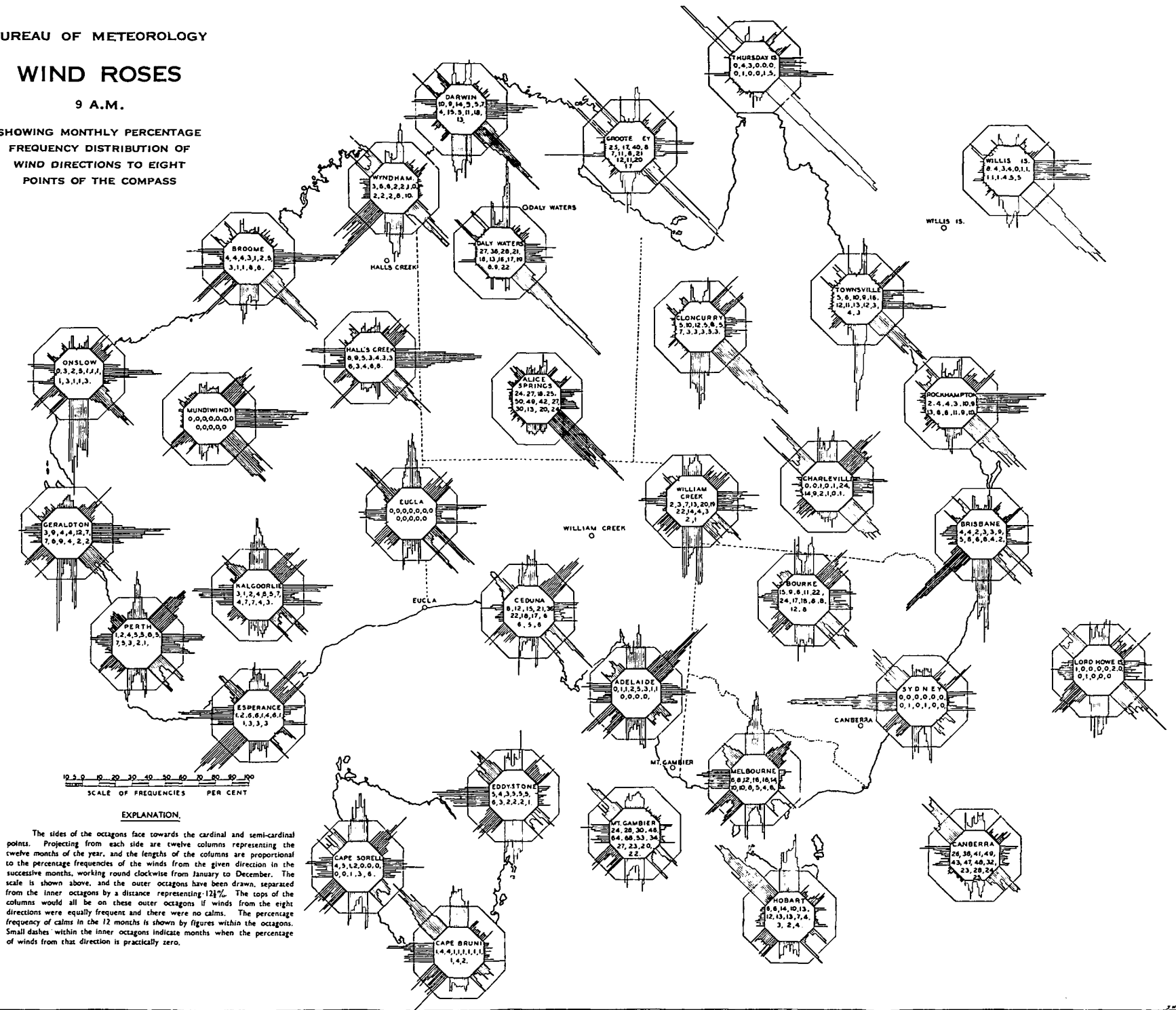


## BUREAU OF METEOROLOGY

## WIND ROSES

9 A.M.

SHOWING MONTHLY PERCENTAGE  
FREQUENCY DISTRIBUTION OF  
WIND DIRECTIONS TO EIGHT  
POINTS OF THE COMPASS

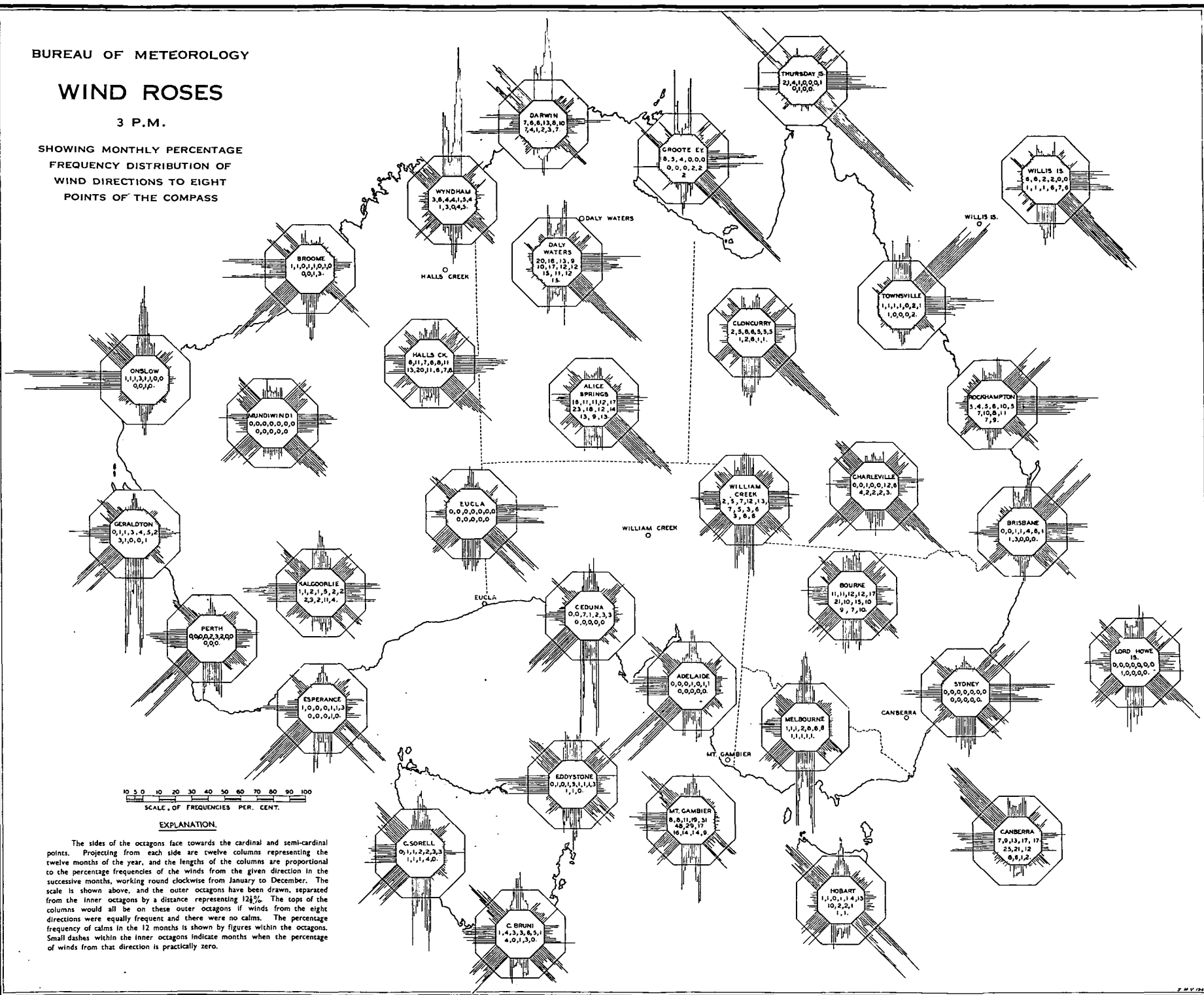


BUREAU OF METEOROLOGY

## WIND ROSES

3 P.M.

SHOWING MONTHLY PERCENTAGE  
FREQUENCY DISTRIBUTION OF  
WIND DIRECTIONS TO EIGHT  
POINTS OF THE COMPASS



Over most of the interior of the continent, and on the highlands in Queensland as far north as the Atherton Plateau, frosts appear in April and end in September, but they are infrequent in these months. Minimum temperatures of 32° F. are experienced in most of the sub-tropical interior in June and July.

3. Humidity.—After temperature, humidity is the most important element of climate as regards its effects on human comfort, rainfall supply and conservation and related problems.

“ Vapour pressure ” is the pressure exerted by the water vapour in the atmosphere. At any given temperature there is a definite upper limit to the amount of water that can exist as vapour in the atmosphere. When this limit is reached, the air is said to be saturated and the pressure of the water vapour is equal to the “ saturation vapour pressure ”.

In this publication, the humidity of the air has been expressed by the relative humidity, which is the quotient of the vapour pressure divided by the saturation vapour pressure and multiplied by one hundred. The mean 9 a.m. relative humidity, as well as its highest and lowest recorded mean values at 9 a.m., are shown in the tables of climatological data for the capital cities (*see para. 11*). The mean monthly vapour pressure has also been added to these tables.

Further references to humidity will be found in the section on effective temperature (*see p. 30*).

4. Evaporation.—(i) *General*. The rate and quantity of evaporation in any territory are influenced by the prevailing temperature, and by atmospheric humidity, pressure and wind movement. In Australia, the question is of great importance, since in its drier regions water has often to be conserved in tanks and dams. The magnitude of the economic loss by evaporation will be appreciated from the map reproduced herein (*see p. 40*).

(ii) *Comments on Map of Average Annual Evaporation*. The map of average annual evaporation in Australia (*see p. 40*) has been compiled on the basis of records obtained from a number of evaporimeters supplemented by estimates derived from records of saturation deficit by applying the Waite Institute factor of 263.\*

5. Rainfall.—(i) *General*. The rainfall of any region is determined mainly by the direction and route of the prevailing winds, by the varying temperatures of the earth's surface over which they blow, and by its geographical features.

Australia lies within the zones of the south-east trades and prevailing westerly winds. The southern limit of the south-east trades strikes the eastern shores at about 30° south latitude, and the heaviest rains of the Australian continent, with very few exceptions, are precipitated along the Pacific slopes to the north of that latitude, the varying quantities being more or less regulated by the differences in elevation of the shores and of the chain of mountains from the New South Wales northern border to Thursday Island, upon which the rain-laden winds blow. The converse effect is exemplified on the north-west coast of Western Australia, where the prevailing winds, blowing from the interior of the continent instead of from the ocean, result in the lightest coastal rain in Australia.

The westerly winds which skirt the southern shores are responsible for the reliable generally light to moderate rains enjoyed by the south-western portion of Western Australia, the agricultural areas of South Australia, a great part of Victoria, and the whole of Tasmania.

(ii) *Distribution of Rainfall*. The average annual rainfall map of Australia (*see p. 41*) shows that the heaviest yearly falls occur on the north coast of Queensland (up to more than 160 inches) and in western Tasmania (up to 140 inches), while from 50 to over 60 inches are received on parts of the eastern seaboard from Jervis Bay to the northern part of Cape York Peninsula, also around Darwin, on the West Kimberley coast, near Cape Leeuwin, about the Australian Alps in eastern Victoria and south-eastern New South Wales, and on the north-eastern highlands in Tasmania. A great part of the

\* Prescott J. A. “ Atmospheric Saturation Deficit in Australia ” (*Trans. Royal Society, S. A. Vol. LV., 1931*).

interior of the continent, stretching from the far west of New South Wales and the south-west of Queensland to the vicinity of Shark Bay in Western Australia, has a very low average rainfall of less than 10 inches a year. Between these two regions of heavy and very low rainfall are the extensive areas which experience useful to good rains, and in the southern and eastern parts of which are found the best country and most of the population and primary production.

The map showing mean monthly distribution of rainfall over Australia (*see* p. 43) gives, in graphic form, information on the amount and occurrence of rain, while the map on page 42 shows the distribution for 1962.

(iii) *Wettest and Driest Regions.* The wettest known part of Australia is on the north-east coast of Queensland, between Port Douglas and Cardwell, where Tully on the Tully River has an average annual rainfall of about 175 inches, and Harvey Creek on the northern coast-line about 167 inches. In addition, three stations situated on, or adjacent to, the Johnstone and Russell Rivers have an average annual rainfall of between 139 and 163 inches. The maximum and minimum annual amounts there, in inches, are:—Tully, 310.92 in 1950 and 104.98 in 1943, a range of 205.94 inches; Deeral, 287.18 in 1945 and 94.65 in 1951, a range of 192.53 inches; Harvey Creek, 254.77 in 1921 and 80.47 in 1902, a range of 174.30 inches; Goondi, 241.53 in 1894 and 67.88 in 1915, a range of 173.65 inches; Innisfail, 232.06 in 1950 and 69.87 in 1902, a range of 162.19 inches.

On five occasions, more than 200 inches have been recorded in a year at Goondi, the last of these being in 1950, when 204.97 inches were registered.

In 34 years of record to 1960, Tully has exceeded 200 inches on eleven occasions, and in 29 complete years of record, Harvey Creek has exceeded this figure four times.

In Tasmania, the wettest part is in the West Coast mountain region, the average annual rainfall at Lake Margaret being about 145 inches, with a maximum of 177.30 inches in 1948.

The driest known part of the continent is an area of approximately 180,000 square miles surrounding Lake Eyre in South Australia, where the annual average rainfall is between 4 and 6 inches and where the aggregates rarely exceed 10 inches in twelve months. Records at stations have at times been interrupted, but of the places in this region, the area with the lowest means is immediately to the east of the lake, where a number of stations with long records have averages of less than 5 inches, the lowest being 4.13 inches at Troudaninna over 42 years, followed by 4.28 inches at Mulka (39 years).

Troudaninna in the period 1893 to 1936 had only one year in which the total exceeded 9 inches (11.07 inches in 1894). There have been protracted periods when the average has been even less than 3 inches. From 1895 to 1903, Troudaninna received the following annual totals:—2.78, 0.99, 5.71, 3.04, 3.18, 2.83, 1.80, 1.11, 4.87, an average of 2.92 inches. From 1918 to 1929, the average was only 2.65 inches, and in this period the average from December, 1924, to November, 1929, was only 1.70 inches.

Since 1918, Mulka has only twice exceeded 10 inches for the annual total (11.72 inches in 1920 and 13.56 in 1955), and on 17 occasions in 39 years the annual total has been less than 3 inches. In one particular period from October, 1926, to September, 1930, the average was only 1.26 inches (505 points in 48 months). At Kanowana, however, an even lower four-year average of 1.12 inches was recorded between 1896 and 1899, with yearly totals of 43, 225, 87 and 94 points, while the smallest yearly total was recorded at Mungeranie in 1888 when only 39 points were recorded over five days.

The average number of days of rain a month in this region is only 1 or 2. Cordillo Downs has an average of 6.36 inches over 13 days a year, while Murnpeowie (4.71 inches) and Edwards Creek (5.56 inches) average 14 days.

No part of the earth, so far as is known, is absolutely rainless, and although at Arica, in northern Chile, the rainfall over a period of 15 years was nil, a further two years in which there were three measurable showers made the "average" for 17 years 0.02 inches.

(iv) *Quantities and Distribution of Rainfall.* The general distribution is best seen from the rainfall map on page 41, which shows the areas subject to average annual rainfalls lying between certain limits. The proportions of the total area of each State and of Australia as a whole enjoying varying quantities of rainfall determined from the latest available information are shown in the following table.

**AVERAGE ANNUAL RAINFALL: AREA DISTRIBUTION**  
(Per Cent.)

Average annual rainfall	W. Aust.	N. Terr.	S. Aust.	Q'land	N.S.W. (a)	Vic.	Tas. (b)	Total
Under 10 inches ..	58.0	24.7	82.8	13.0	19.7	Nil	Nil	39.0
10 and under 15 inches	22.4	32.4	9.4	14.4	23.5	22.4	Nil	20.6
15 and under 20 ..	6.8	9.7	4.5	19.7	17.5	15.2	0.7	11.2
20 and under 25 ..	3.7	6.6	2.2	18.8	14.2	17.9	11.0	9.0
25 and under 30 ..	3.7	9.3	0.8	11.6	9.1	18.0	11.4	7.2
30 and under 40 ..	3.3	4.7	0.3	11.1	9.9	16.1	20.4	6.1
40 inches and over ..	2.1	12.6	Nil	11.4	6.1	10.4	56.5	6.9
<b>Total</b> ..	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>

(a) Includes Australian Capital Territory.  
are available.

(b) Over an area of 2,777 square miles no records

(v) *Tables of Rainfall.* The following table of rainfall for a fairly long period of years for each of the Australian capitals affords information as to the variability of the fall in successive years, and the list of the more remarkable falls which follows in the next paragraph furnishes information as to what may be expected on particular occasions.

**RAINFALL: AUSTRALIAN CAPITAL CITIES**

Year	PERTH		ADELAIDE		BRISBANE		SYDNEY		CANBERRA(a)		MELBOURNE		HOBART(b)	
	Amount	No. of days	Amount	No. of days	Amount	No. of days	Amount	No. of days	Amount	No. of days	Amount	No. of days	Amount	No. of days
1932 ..	39.40	121	25.04	141	24.79	97	37.47	146	20.18	118	31.08	179	30.29	155
1933 ..	32.47	116	22.12	130	49.71	118	42.71	153	20.78	96	22.28	136	23.18	182
1934 ..	40.61	120	20.24	125	54.26	117	64.91	183	35.58	131	33.53	157	23.17	194
1935 ..	32.28	129	23.45	140	34.64	111	30.97	131	23.78	95	29.98	183	32.22	196
1936 ..	30.64	118	19.34	121	21.77	101	30.22	130	26.24	108	24.30	187	19.60	178
1937 ..	35.28	120	23.01	128	34.79	113	52.00	157	20.46	82	21.45	144	20.65	160
1938 ..	29.64	111	19.26	119	43.49	110	39.17	132	19.26	79	17.63	131	31.32	169
1939 ..	45.70	123	23.29	139	41.43	122	33.67	127	27.63	116	33.11	166	27.23	188
1940 ..	20.00	98	16.16	116	42.37	93	39.34	125	17.38	64	19.83	126	17.17	135
1941 ..	34.74	122	22.56	126	31.50	105	26.74	129	19.55	91	31.78	157	23.49	145
1942 ..	39.24	140	25.44	133	44.01	125	48.29	121	25.76	104	29.79	148	19.42	163
1943 ..	31.46	117	17.84	135	50.68	126	50.74	136	24.59	123	18.80	150	20.84	149
1944 ..	27.39	123	17.13	114	27.85	100	31.04	115	12.05	75	21.32	143	26.23	151
1945 ..	52.67	137	17.85	105	48.16	130	46.47	136	22.35	100	19.22	152	16.92	157
1946 ..	41.47	122	22.59	135	38.66	83	36.05	111	22.31	94	29.80	177	39.45	93
1947 ..	43.42	137	21.89	146	60.30	146	41.45	137	27.95	135	30.47	163	38.61	181
1948 ..	34.75	126	21.40	122	41.54	106	38.83	131	32.11	101	20.98	155	23.42	178
1949 ..	27.15	126	18.23	119	47.18	121	66.26	149	27.71	100	31.41	163	22.85	157
1950 ..	32.27	122	16.06	91	63.93	152	86.33	183	43.35	132	26.18	147	19.25	131
1951 ..	34.14	127	25.44	135	33.89	87	53.15	143	22.00	103	29.85	155	24.57	163
1952 ..	39.28	123	19.99	128	33.49	122	59.19	130	37.87	141	34.39	177	30.35	165
1953 ..	37.14	119	20.00	121	43.60	101	40.86	110	19.40	102	28.38	148	28.06	162
1954 ..	28.05	112	16.73	109	61.36	142	41.29	134	18.81	82	33.53	139	27.20	143
1955 ..	46.52	138	24.58	134	50.41	136	72.46	160	30.85	124	30.70	160	22.32	168
1956 ..	37.35	107	27.24	154	59.18	120	67.33	155	40.46	150	30.96	188	36.63	175
1957 ..	33.40	117	16.71	110	20.58	80	27.13	110	14.41	81	20.68	146	28.66	129
1958 ..	32.08	107	17.57	121	46.61	115	59.19	144	30.23	117	26.98	155	36.55	166
1959 ..	24.23	114	11.32	88	45.84	146	59.67	164	34.41	112	25.84	131	19.28	136
1960 ..	28.21	112	23.07	129	27.51	103	51.01	152	30.99	136	33.50	162	29.35	140
1961 ..	32.27	113	14.91	122	42.36	134	57.08	161	32.34	116	22.05	129	18.03	156
1962 ..	28.75	123	17.96	125	41.39	131	44.90	137	28.91	126	23.06	140	25.40	161
Average No. of years Standard 30 years' normal (c) ..	34.71	121	20.88	121	44.63	124	47.53	150	25.51	105	25.92	143	24.96	165
	87	87	124	124	111	103	104	104	35	35	107	107	80	80
	35.99	128	21.09	122	40.09	117	44.80	143	24.53	103	25.89	156	25.03	180

(a) Commonwealth Forestry Bureau; records in issues of the Official Year Book prior to No. 36 were for the station at Acton which closed down in 1939. (b) Records taken from present site commenced 1883. (c) 1911-1940. (d) Thirty years to 1957 inclusive.



6. Remarkable Falls of Rain.—The following are the most notable falls of rain which have occurred within a period of twenty-four hours ending at 9 a.m. in the various States and Territories. For other very heavy falls at various localities, reference may be made to Official Year Book No. 14, pages 60-4, No. 22, pages 46-8 and No. 29, pages 43, 44 and 51.

#### HEAVY RAINFALLS: WESTERN AUSTRALIA, UP TO 1962, INCLUSIVE

Name of town or locality	Date	Amt.	Name of town or locality	Date	Amt.
		in.			in.
Whim Creek ..	3 Apr., 1898	29.41	Pilbara ..	2 Apr., 1898	14.04
Fortesque ..	3 May, 1890	23.36	Roebuck Plains..	5 Jan., 1917	14.01
Roebuck Plains ..	6 Jan., 1917	22.36	Broome ..	6 Jan., 1917	14.00
Widjip ..	1 Apr., 1934	19.54	Carlton Hill ..	7 Feb., 1942	12.75
Kimberley (Re-search) ..	6 Apr., 1959	16.98	Wyndham ..	4 Mar., 1919	12.50
Derby ..	7 Jan., 1917	16.47	Onslow P.O. ..	3 Mar., 1961	12.38
Boodarie ..	21 Mar., 1899	14.53	Onslow Aero. ..	3 Mar., 1961	12.29
Balla Balla ..	21 Mar., 1899	14.40	Towrana ..	1 Mar., 1943	12.16
Winderrie ..	17 Jan., 1923	14.23	Marble Bar ..	2 Mar., 1941	12.00
			Jimba Jimba ..	1 Mar., 1943	11.54

#### HEAVY RAINFALLS: NORTHERN TERRITORY, UP TO 1962, INCLUSIVE

Name of town or locality	Date	Amt.	Name of town or locality	Date	Amt.
		in.			in.
Brocks Creek ..	24 Dec., 1915	14.33	Borroloola ..	7 Jan., 1940	12.68
Groote Eylandt ..	9 Apr., 1931	14.29	Borroloola ..	4 Feb., 1938	12.00
Borroloola ..	14 Mar., 1899	14.00	Bathurst Island		
Timber Creek ..	5 Feb., 1942	13.65	Mission ..	7 Apr., 1925	11.85
Cape Don ..	13 Jan., 1935	13.58	Darwin ..	7 Jan., 1897	11.67

#### HEAVY RAINFALLS: SOUTH AUSTRALIA, UP TO 1962, INCLUSIVE

Name of town or locality	Date	Amt.	Name of town or locality	Date	Amt.
		in.			in.
Ardrossan ..	18 Feb., 1946	8.10	Port Victoria ..	18 Feb., 1946	7.08
Carpa ..	18 Feb., 1946	7.83	Wynbring ..	28 Feb., 1921	7.00
Edithburgh ..	18 Feb., 1946	7.46	Mannum ..	25 Jan., 1941	6.84
Hesso ..	18 Feb., 1946	7.36	Wirrabarra Forest		
Maitland ..	18 Feb., 1946	7.21	Reserve ..	7 Mar., 1910	6.80
Wilmington ..	1 Mar., 1921	7.12	Cape Willoughby	18 Feb., 1946	6.80

## HEAVY RAINFALLS: QUEENSLAND, UP TO 1962, INCLUSIVE

Name of town or locality	Date	Amt.	Name of town or locality	Date	Amt.
		in.			in.
Crohamhurst ..	3 Feb., 1893	35.71	Springbrook ..	21 Feb., 1954	27.04
Finch-Hatton ..	18 Feb., 1958	34.58	Mt. Jukes ..	18 Feb., 1958	26.40
Port Douglas ..	1 Apr., 1911	31.53	Buderim Mountain	12 Jan., 1898	26.20
Yarrabah ..	2 Apr., 1911	30.65	Byfield (Parnass Vale) ..	3 Mar., 1949	25.43
Mt. Charlton ..	18 Feb., 1958	29.95	Flat Top Island ..	21 Jan., 1918	25.18
Mooloolah ..	3 Feb., 1893	29.11	Landsborough ..	3 Feb., 1893	25.15
Kuranda ..	2 Apr., 1911	28.80	Harvey Creek ..	31 Jan., 1913	24.72
Calen ..	18 Feb., 1958	27.84	Kuranda ..	1 Apr., 1911	24.30
Harvey Creek ..	3 Jan., 1911	27.75	Babinda (Cairns)	2 Mar., 1935	24.14
Sarina ..	26 Feb., 1913	27.75	Goondi ..	30 Jan., 1913	24.10
Plane Ck. (Mackay)	26 Feb., 1913	27.73	Banyan (Cardwell)	12 Feb., 1927	24.00
Deeral ..	2 Mar., 1935	27.60	Carruchan ..	24 Jan., 1934	24.00
Yarrabah Mission	24 Jan., 1916	27.20	Tully Mill ..	12 Feb., 1927	23.86
Springbrook ..	24 Jan., 1947	27.07			

## HEAVY RAINFALLS: NEW SOUTH WALES, UP TO 1962, INCLUSIVE

Name of town or locality	Date	Amt.	Name of town or locality	Date	Amt.
		in.			in.
Dorrigo ..	24 June, 1950	25.04	Tallowood Point	21 Feb., 1954	19.87
Cordeaux River ..	14 Feb., 1898	22.58	Buladelah ..	16 Apr., 1927	19.80
Morpeth ..	9 Mar., 1893	21.52	Orara Upper ..	24 June, 1950	19.80
Broger's Creek ..	13 Jan., 1911	20.83	Dorrigo(Townsend)	11 July, 1962	19.18
South Head (Sydney Harbour) ..	16 Oct., 1844	20.41	Tallowood Point	24 June, 1950	18.82
" "	29 Apr., 1841	20.12	Madden's Creek ..	13 Jan., 1911	18.68
Mount Pleasant ..	5 May, 1925	20.10	Condong ..	27 Mar., 1887	18.66
Broger's Creek ..	14 Feb., 1898	20.05	Candelo ..	27 Feb., 1919	18.58
Towamba ..	5 Mar., 1893	20.00	Tallowood Point	22 Jan., 1959	18.55
Viaduct Creek ..	15 Mar., 1936	20.00	Mt. Kembla ..	13 Jan., 1911	18.25
			Bega ..	27 Feb., 1919	17.88

## HEAVY RAINFALLS: AUSTRALIAN CAPITAL TERRITORY, UP TO 1962, INCLUSIVE

Name of town or locality	Date	Amt.	Name of town or locality	Date	Amt.
		in.			in.
Cotter Junction ..	27 May, 1925	7.13	Uriarra (Woodside)	27 May, 1925	6.57
Canberra (Acton)	27 May, 1925	6.84	Land's End ..	27 May, 1925	6.35

## HEAVY RAINFALLS: VICTORIA, UP TO 1962, INCLUSIVE

Name of town or locality	Date	Amt.	Name of town or locality	Date	Amt.
		in.			in.
Balook ..	18 Feb., 1951	10.81	Blackwood (Green- hill) ..	26 Jan., 1941	8.98
Hazel Park ..	1 Dec., 1934	10.50	Tambo Crossing	13 July, 1925	8.89
Kalorama ..	1 Dec., 1934	10.05	Corinella ..	28 June, 1948	8.75
Cann River ..	16 Mar., 1938	9.94	Erica ..	1 Dec., 1934	8.66
Tonghi Creek ..	27 Feb., 1919	9.90	Mt. Buffalo ..	6 June, 1917	8.53
Cann River ..	27 Feb., 1919	9.56	Korumburra ..	1 Dec., 1934	8.51
Olinda ..	1 Dec., 1934	9.10			

## HEAVY RAINFALLS: TASMANIA, UP TO 1962, INCLUSIVE

Name of town or locality	Date	Amt.	Name of town or locality	Date	Amt.
		in.			in.
Mathinna ..	5 Apr., 1929	13.25	Riana .. ..	5 Apr., 1929	11.08
Cullenswood ..	5 Apr., 1929	11.12	Triabunna ..	5 June, 1923	10.20

7. **Snowfall.**—Light snow has been known to fall occasionally as far north as latitude 31° S., and from the western to the eastern shores of the continent. During exceptional seasons, it has fallen simultaneously over two-thirds of New South Wales, and has extended at times along the whole of the Great Dividing Range, from its southern extremity in Victoria as far north as Toowoomba in Queensland. During the winter, for several months, snow covers the ground to a great extent on the Australian Alps, where the temperature falls below 0° F. during the night. In the ravines around Mt. Kosciusko and similar localities, the snow does not entirely disappear after a severe winter.

8. **Hail.**—Hail falls most frequently along the southern shores of the continent in the winter, and over eastern Australia during the summer months. The size of the hailstones generally increases with distance from the coast. A summer rarely passes without some station experiencing a fall of stones exceeding in size an ordinary hen egg, and many riddled sheets of light-gauge galvanized iron bear evidence of the weight and penetrating power of the stones.

The hailstones occur most frequently when the barometric readings indicate a flat and unstable condition of pressure. Tornadoes or tornadic tendencies are almost invariably accompanied by hail, and on the east coast the clouds from which the stones fall are frequently of a remarkable sepia-coloured tint.

9. **Droughts.**—A special article dealing with droughts was included in Year Book No. 45, pages 51–6. Fuller information is available in a Bureau of Meteorology publication *Droughts in Australia* by J. C. Foley (Bulletin 43, 1957).

10. **Wind.**—(i) *Trade Winds.* The two distinctive wind currents in Australia are, as previously stated, the south-east trade and the “prevailing” westerly winds. As the belt of the earth’s atmosphere in which they blow apparently follows the sun’s ecliptic path north and south of the equator, so the area of the continent affected by these winds varies at different seasons of the year. During the summer months, the anticyclonic belt travels in high latitudes, thereby bringing the south-east trade winds as far south as 30° south latitude. The “prevailing” westerly winds retreat a considerable distance to the south of Australia, and are less in evidence in the hot months. When the sun passes to the north of the equator, the south-east trade winds follow it, and for the greater part of the winter operate only to the north of the tropics. The westerly winds come into lower latitudes during the same period of the year. They sweep across the southern areas of the continent from Cape Leeuwin to Cape Howe, and during some seasons are remarkably persistent and strong, occasionally penetrating to almost tropical latitudes.

(ii) *North-west Monsoon.* As the belt of south-east trade winds retreats southward during the summer, it is replaced in the north and north-west of Australia first by a sequence of light variable winds and then by the north-west monsoon. In Australia, the north-west monsoon has not the persistence or regularity of the Indian south-west monsoon, but is sufficiently characteristic for the summer in the north of Australia to be called the “North-west Season”. In central and eastern Queensland, the north-west monsoon in the summer has comparatively little effect, and the trade winds, though weakened, are still dominant winds. With the movement of the sun northward in the autumn, the north-west monsoon is replaced first by light variable winds and then by the trade winds.

Further particulars of Australian wind conditions and meteorology will be found in Official Year Book No. 38, pages 58–62. Reference should also be made to the wind rose diagrams on pages 45 and 46.

(iii) *Cyclones and Storms.* The “elements” in Australia are ordinarily peaceful, and while destructive cyclones have visited various parts, more especially coastal areas, such visitations are rare, and may be properly described as erratic.

During the winter months, the southern shores of the continent are subject to deep depressions of the southern low-pressure belt. They are felt most severely over the south-western parts of Western Australia, to the south-east of South Australia, in Bass Strait, along the coastline of Victoria, and on the west coast of Tasmania. Apparently the more violent wind pressures from these disturbances are experienced in their northern half, or in that part of them which has a north-westerly to a south-westerly circulation.

The north-east coast of Queensland is occasionally visited by hurricanes from the north-east tropics. During the first four months of the year, these hurricanes appear to have their origin in the neighbourhood of the South Pacific Islands, their path being a parabolic curve first to the south-west and finally towards the south-east.

Very severe cyclones, locally known as “willy willies”, are peculiar to the north-west coast of Western Australia from the months of November to April, inclusive. They usually originate over the ocean to the north or north-west of Australia, and travel in a south-westerly direction with continually increasing force, displaying their greatest energy near Cossack and Onslow, between latitudes 20° and 22° South. The winds in these storms, like those from the north-east tropics, are very violent and destructive. The greatest velocities are usually to be found in the south-eastern quadrant of the cyclones, with north-east to east winds. After leaving the north-west coast, these storms either travel southwards, following the coast-line, or cross the continent to the Great Australian Bight. When they take the latter course, their track is marked by torrential rains, as much as 29.41 inches, for example, being recorded in 24 hours at Whim Creek from one such occurrence. Falls of 10 inches and over have frequently been recorded in the northern interior of Western Australia from similar storms.

Some further notes on severe cyclones and on “southerly bursters”, a characteristic feature of the eastern part of Australia, appeared in early issues of the Official Year Book (see No. 6, pp. 85–6), and a special article dealing with “Australian Hurricanes and Related Storms” appeared in Official Year Book No. 16, pages 80–4.

Depressions vary considerably in their isobaric forms, intensity and other characteristics. Some bring rain in variable quantities, some heat and others mainly wind. A common type in southern Australia is the “^” shaped trough with an abrupt “backing” of the wind or “line squall” as it passes. The cold front is most frequently found through the centre of the “trough”, because it is along this line, and extending into the upper levels of the atmosphere, that the demarcation of different air masses is so well defined. The best rains in inland Australia occur when extensive masses of warm moist tropical air move into the interior, and are forced to rise by convergence of flow or by impact with a cold air stream.

The speed of low pressure systems is very variable, but in general in southern latitudes the movement is of the order of 500 to 700 miles a day.

11. *Climatological Tables.*—The averages and extremes for a number of climatological elements, which have been determined from long series of observations at the Australian capitals up to and including the year 1962, are given on the following eight pages.

NOTE.—The following points apply throughout.

- (a) Where records are available, mean or average values have been calculated on a standard period of 30 years from 1911 to 1940.
- (b) Extreme values have been extracted from all available years of actual record, but the number of years quoted does not include intervening periods when observations were temporarily discontinued.

**CLIMATOLOGICAL DATA: PERTH, WESTERN AUSTRALIA**  
(LAT. 31° 57' S., LONG. 115° 51' E. HEIGHT ABOVE M.S.L. 210 FT.)  
Barometer, Wind, Evaporation, Lightning, Clouds and Clear Days

Month	Bar. corrected to 32° F., m.m. sea level and standard gravity from 9 a.m. and 3 p.m. readings	Wind (Height of anemometer 71 feet)				Prevailing direction		Mean amount of evaporation (inches)	No. of days of lightning	Mean amount of clouds, 9 a.m., 3 p.m., 9 p.m.(g)	No. of clear days
		Average miles per hour	Highest mean speed in one day (miles per hour)	Highest gust speed (miles per hour)	Prevailing direction						
					9 a.m.	3 p.m.					
No. of years of observations ..	30(b)	30(b)	65	50	30(b)	30(b)	30(b)	30(b)	30(b)	30(b)	
January ..	29.897	10.9	26.3	27/98	50	E	SSW	10.37	2	2.9	14
February ..	29.922	10.7	21.5	6/08	54	ENE	SSW	8.63	2	3.1	13
March ..	29.976	10.1	21.5	6/13	70	E	SSW	7.52	2	3.5	12
April ..	30.071	8.5	31.5	25/00	63	ENE	SSW	4.62	2	4.2	9
May ..	30.062	8.4	27.3	29/32	74	NE	WSW	2.80	3	5.4	6
June ..	30.068	8.4	30.2	17/27	80	N	NW	1.82	2	5.9	5
July ..	30.082	8.8	33.5	20/26	77	NNE	W	1.76	2	5.6	5
August ..	30.084	9.4	31.9	15/03	78	N	WNW	2.37	2	5.6	6
September ..	30.073	9.4	28.5	11/05	68	ENE	SSW	3.44	1	4.9	8
October ..	30.033	10.0	26.7	6/16	65	SE	SW	5.38	1	4.8	8
November ..	29.989	10.7	25.7	18/97	63	E	SW	7.65	2	3.9	9
December ..	29.923	11.0	25.6	6/22	64	E	SSW	9.69	2	3.2	13
Year { Totals ..	—	—	—	—	—	—	—	—	—	—	—
Year { Averages ..	30.015	9.7	—	—	—	E	SSW	66.05	23	—	108
Year { Extremes ..	—	—	33.5	20/7/26	80	—	—	—	—	4.4	—

(a) Scale 0-10. (b) Standard 30 years' normal (1911-1940).

**Temperature and Sunshine**

Month	Mean temperature (°Fahr.)			Extreme shade temperature (°Fahr.)		Extreme range	Extreme temperature (°Fahr.)		Mean daily hours of sunshine					
	Mean max.	Mean min.	Mean	Highest	Lowest		Highest in sun	Lowest on grass						
										30(a)	30(a)	30(a)	66	66
No. of years over which observation extends ..	30(a)	30(a)	30(a)	66	66	66	62	64	30(a)					
January ..	84.6	63.3	73.9	110.7	29/56	48.6	20/25	62.1	177.3	22/14	39.5	20/15	10.4	
February ..	85.1	63.5	74.3	112.2	8/33	47.7	1/02	64.5	173.7	4/34	39.8	1/13	9.8	
March ..	81.3	61.5	71.4	106.4	14/22	45.8	8/03	60.6	167.0	19/18	36.7	8/03	8.8	
April ..	76.3	57.4	66.8	99.7	9/10	39.3	20/14	60.4	157.0	8/16	31.0	20/14	7.5	
May ..	69.0	52.8	60.9	90.4	2/07	34.3	11/14	56.1	146.0	4/25	25.3	11/14	6.5	
June ..	64.4	49.8	57.1	81.7	2/14	34.9	22/55	46.8	135.5	9/14	25.9	27/46	4.8	
July ..	62.8	48.0	55.4	76.4	21/21	34.2	7/16	42.2	133.2	13/15	25.1	30/20	4.4	
August ..	63.8	48.4	56.1	82.0	21/40	35.4	31/08	46.6	145.1	29/21	26.7	24/35	7.0	
September ..	66.8	50.4	58.6	90.9	30/18	36.7	6/56	54.2	153.6	29/16	27.2	—	7.2	
October ..	69.7	52.6	61.1	99.0	26/61	40.0	16/31	59.0	161.2	19/54	29.8	16/31	8.1	
November ..	76.7	57.3	67.0	104.6	24/13	42.0	1/04	62.6	167.0	30/25	35.0	3/47	9.6	
December ..	81.2	60.9	71.0	107.9	20/04	47.5	29/57	60.4	168.8	11/27	38.0	29/57	10.4	
Year { Averages ..	73.5	55.5	64.5	—	—	—	—	—	—	—	—	—	—	
Year { Extremes ..	—	—	—	112.2	8/2/33	34.2	7/7/16	78.0	—	—	—	—	—	7.8

(a) Standard 30 years' normal (1911-1940). (b) 8/1952 and 6/1956.

**Humidity, Rainfall and Fog**

Month	Vapour pressure (inches)	Rel. hum. (%) at 9 a.m.			Rainfall (inches)				Fog					
		Mean	Highest mean	Lowest mean	Mean monthly	Mean No. of days of rain	Greatest monthly	Least monthly		Greatest in one day				
											30(a)	30(a)	66	66
No. of years over which observation extends ..	30(a)	30(a)	66 <td>66 <td>30(a)</td> <td>30(a)</td> <td>87 <td>87 <td>87 <td>30(a)</td> </td></td></td></td>	66 <td>30(a)</td> <td>30(a)</td> <td>87 <td>87 <td>87 <td>30(a)</td> </td></td></td>	30(a)	30(a)	87 <td>87 <td>87 <td>30(a)</td> </td></td>	87 <td>87 <td>30(a)</td> </td>	87 <td>30(a)</td>	30(a)				
January ..	0.438	51	63	41	0.33	3	2.17	1879	Nil	(b)	1.74	27/79	0	
February ..	0.434	51	65	43	0.50	3	6.55	1955	Nil	(b)	3.43	17/55	0	
March ..	0.432	57	66	46	0.90	5	5.71	1934	Nil	(b)	3.03	9/34	0	
April ..	0.397	61	75	61	1.75	8	5.85	1926	Nil	(b)	2.62	30/04	1	
May ..	0.365	70	81	61	5.14	15	12.13	1879	0.77	1949	3.00	17/42	2	
June ..	0.337	75	85	68	7.55	17	18.75	1945	2.16	1877	3.90	10/20	2	
July ..	0.322	76	88	69	7.08	19	16.73	1958	2.42	1876	3.00	4/21	2	
August ..	0.316	71	83	62	5.78	19	12.53	1945	0.46	1902	2.91	14/45	1	
September ..	0.341	66	75	58	3.37	15	7.84	1923	0.34	1916	1.82	4/31	0	
October ..	0.345	60	75	52	2.30	12	7.87	1890	0.15	1946	1.73	3/31	0	
November ..	0.374	52	63	41	0.75	7	2.78	1916	Nil	1891	1.54	29/56	0	
December ..	0.409	51	63	39	0.54	5	3.17	1951	Nil	(b)	1.84	3/51	0	
Year { Totals ..	—	—	—	—	35.99	128	—	—	—	—	—	—	—	8
Year { Averages ..	0.376	62	—	—	—	—	—	—	—	—	—	—	—	—
Year { Extremes ..	—	—	88	39	—	—	18.75	6/1945	Nil(c)	—	3.90	10/6/20	—	

(a) Standard 30 years' normal (1911-1940). (b) Various years. (c) November to April, various years. Dates in italics relate to nineteenth century.

CLIMATOLOGICAL DATA: DARWIN, NORTHERN TERRITORY  
(LAT. 12° 28' S., LONG. 130° 51' E. HEIGHT ABOVE M.S.L. 97 FT.)  
Barometer, Wind, Evaporation, Lightning, Clouds and Clear Days

Month	Bar. corrected to 32° F. in sea level and stan- dard gravity from 9 a.m. and 3 p.m. readings	Wind						Mean amount of evaporation (inches)	No. of days of lightning	Mean amount of clouds, 9 a.m., 3 p.m., 9 p.m.(d)	No. of clear days
		Average miles per hour	Highest mean speed in one day (miles per hour)	High- est gust speed (miles per hour)	Prevailing direction		Mean amount of evaporation (inches)				
					9 a.m.	3 p.m.					
No. of years of observations..	30	14	—	12(b)	—	—	—	30	30	30	
January ..	29.706	6.1	—	66	NW & S	W & NW	—	16	7.1	1	
February ..	29.728	6.7	—	54	W & S	W & NW	—	16	7.0	1	
March ..	29.751	5.3	—	98	SE	W & NW	—	14	6.2	3	
April ..	29.809	6.1	—	42	SE	E	—	6	3.5	11	
May ..	29.859	6.5	—	37	SE	E	—	1	2.1	19	
June ..	29.892	6.5	—	37	SE	E & SE	—	0	1.6	22	
July ..	29.911	6.2	—	38	SE	E & SE	—	0	1.4	23	
August ..	29.914	5.9	—	40	SE	NW & N	—	0	1.3	23	
September ..	29.886	6.2	—	36	SE & S	NW & N	—	1	2.0	18	
October ..	29.850	6.2	—	46	S	NW & N	—	8	3.2	10	
November ..	29.797	5.5	—	57	W & S	NW & N	—	17	4.8	4	
December ..	29.738	6.2	—	66	NW & S	NW & N	—	17	6.0	2	
Year { Totals	—	—	—	—	—	—	—	96	—	137	
Year { Averages	29.820	6.1	—	98	SE	NW	—	—	3.9	—	
Year { Extremes	—	—	—	—	—	—	—	—	—	—	

(a) Scale 0-10. (b) No records 1943-1958 inclusive.

Temperature and Sunshine

Month	Mean tempera- ture (°Fahr.)			Extreme shade temperature (°Fahr.)		Extreme range	Extreme temperature (°Fahr.)		Mean daily hours of sunshine	
	Mean max.	Mean min.	Mean	Highest	Lowest		Highest in sun	Lowest on grass		
										82(a)
No. of years over which observation extends..	30	30	30	82(a)	82(a)	82	25	—	—	
January ..	89.9	77.3	83.6	100.0	2/82	68.8	16/59	31.2	168.0	26/42
February ..	89.8	77.1	83.4	100.9	20/87	63.0	25/49	37.9	163.6	23/38
March ..	90.2	77.1	83.6	102.0	(b)	66.6	31/45	35.4	165.6	23/38
April ..	91.9	75.9	83.9	104.0	7/83	60.8	11/43	43.2	163.0	1/38
May ..	90.9	72.6	81.4	102.3	8/84	59.2	8/49	43.1	160.0	5/20
June ..	87.5	69.5	78.5	98.6	17/37	55.3	18/49	43.3	155.2	2/16
July ..	86.6	67.8	77.2	98.0	17/88	50.7	29/42	47.3	156.0	28/17
August ..	88.5	69.7	79.1	98.0	19/00	57.0	16/57	41.0	156.2	28/16
September ..	91.0	73.9	82.5	102.0	20/82	63.0	(c)	39.0	157.0	0
October ..	92.6	77.2	84.9	104.9	17/92	68.5	26/45	36.4	160.5	30/38
November ..	93.2	78.2	85.7	103.3	9/84	66.8	4/50	36.5	170.4	14/37
December ..	92.0	78.1	85.0	102.0	9/83	68.5	24/41	33.5	169.0	26/23
Year { Averages	90.3	74.5	82.4	—	—	—	—	—	—	—
Year { Extremes	—	—	—	104.9	—	50.7	29/7/42	54.2	170.4	14/11/37

(a) Years 1882-1941 at Post Office, 1942-1962 at Aerodrome; sites not strictly comparable. (b) 26/1883 and 27/1883. (c) 15/1883, 1/1906 and 7/1958. (d) 28/1916 and 3/1921.

Humidity, Rainfall and Fog

Month	Vapour pressure (inches)	Rel. hum. (%) at 9 a.m.			Rainfall (inches)					Fog Mean No. of days of fog				
		Mean 9 a.m.	Mean	Highest mean	Lowest mean	Mean monthly	Mean No. of days of rain	Greatest monthly	Least monthly		Greatest in one day			
												30	21	94(a)
No. of years over which observation extends	57	57	57	57	30	21	94(a)	94(a)	94(a)	30				
January ..	0.925	78	89	69	16.18	20	27.86	1906	2.25	1930	11.67	7/97	0 0	
February ..	0.920	79	88	71	12.37	18	28.23	1956	0.44	1931	11.00	18/55	0 0	
March ..	0.912	78	84	69	11.18	17	21.88	1898	0.81	1911	7.18	6/19	0 0	
April ..	0.800	69	80	60	3.08	6	23.74	1891	Nil	(b)	6.22	4/59	0 0	
May ..	0.652	63	76	49	0.33	1	14.00	1953	Nil	(b)	2.19	6/22	0 0	
June ..	0.545	61	75	52	0.09	1	1.53	1902	Nil	(b)	1.32	10/02	0.4	
July ..	0.522	59	71	47	0.01	0	2.56	1900	Nil	(b)	1.71	2/00	1.1	
August ..	0.613	63	73	53	0.02	0	3.30	1947	Nil	(b)	3.15	22/45	0.7	
September ..	0.732	65	73	54	0.60	2	4.26	1942	Nil	(b)	2.78	21/42	0.2	
October ..	0.832	65	72	60	1.93	5	13.34	1954	Nil	(b)	3.74	18/56	0 0	
November ..	0.868	68	75	62	4.32	10	15.72	1938	0.40	1870	4.73	9/51	0 0	
December ..	0.890	73	83	65	8.57	15	22.38	1910	0.98	1934	7.87	28/10	0 0	
Year { Totals	—	—	—	—	58.68	95	—	—	—	—	—	—	—	2.4
Year { Averages	0.768	68	—	—	—	—	—	—	—	—	—	—	—	—
Year { Extremes	—	—	89	47	—	—	28.23	2/56	Nil	(c)	11.67	7/1/1897	—	—

(a) The figures below are the highest or lowest recorded at either the Post Office or Aerodrome sites. (b) Various years. (c) April to October, various years.

Dates in italics relate to nineteenth century.

**CLIMATOLOGICAL DATA: ADELAIDE, SOUTH AUSTRALIA**  
(LAT. 34° 56' S., LONG. 138° 35' E. HEIGHT ABOVE M.S.L. 140 FT.)  
Barometer, Wind, Evaporation, Lightning, Clouds and Clear Days

Month	Bar. corrected to 32° F. min. sea level and standard gravity from 9 a.m. and 3 p.m. readings	Wind (Height of anemometer 75 feet)				Prevailing direction		Mean amount of evaporation (inches)	No. of days of lightning	Mean amount of clouds, 9 a.m. to 3 p.m. (g)	No. of clear days
		Average miles per hour	Highest mean speed in one day (miles per hour)	Highest gust speed (miles per hour)	Prevailing direction						
					9 a.m.	3 p.m.					
No. of years of observations..	30(b)	30(b)	74	46	30(b)	30(b)	30(b)	30(b)	30(b)	30(b)	
January ..	29.917	9.9	31.6 19/99	72	SW	SW	9.27	2.3	3.6	12.9	
February ..	29.953	8.8	28.8 22/96	66	NE	SW	7.56	2.0	3.7	11.2	
March ..	30.037	8.3	26.2 9/12	78	S	SW	6.39	1.8	4.0	10.6	
April ..	30.119	8.0	32.2 10/96	81	NE	SW	3.78	1.5	5.2	7.2	
May ..	30.131	8.1	31.7 9/80	70	NE	NW	2.27	1.3	5.8	4.9	
June ..	30.119	8.3	31.3 12/78	67	NE	N	1.37	1.3	6.1	4.1	
July ..	30.111	8.5	28.1 25/82	60	NE	NW	1.34	1.5	6.0	4.3	
August ..	30.084	9.2	32.2 31/97	75	NE	SW	1.99	2.0	5.5	5.6	
September ..	30.050	9.2	30.0 2/87	69	NNE	SW	3.05	2.0	5.3	5.8	
October ..	30.007	9.8	32.0 28/98	75	NNE	SW	5.03	2.8	5.3	5.7	
November ..	29.990	9.9	32.2 7/48	81	SW	SW	6.89	3.3	4.9	7.5	
December ..	29.922	9.9	28.1 12/91	75	SW	SW	8.74	2.2	4.2	9.5	
Year { Totals ..	—	—	—	—	—	—	57.68	24.0	—	89.0	
Year { Averages ..	30.037	9.0	—	—	NE	SW	—	—	5.0	—	
Year { Extremes ..	—	—	32.2 (c)	81	—	—	—	—	—	—	

(a) Scale 0-10. (b) Standard 30 years' normal (1911-1940). (c) 10/4/1896, 31/8/1897 and 7/11/1948.

**Temperature and Sunshine**

Month	Mean temperature (°Fahr.)			Extreme shade temperature (°Fahr.)		Extreme range	Extreme temperature (°Fahr.)		Mean daily hours of sunshine
	Mean max.	Mean min.	Mean	Highest	Lowest		Highest in sun	Lowest on grass	
No. of years over which observation extends ..	30(a)	30(a)	30(a)	106	106	106	54(b)	102	30(a)
January ..	84.8	61.0	72.9	117.7 12/39	45.1 21/84	72.6	180.0 18/82	36.5 14/79	10.0
February ..	85.7	61.8	73.7	113.6 12/99	45.5 23/18	68.1	170.5 10/00	35.8 23/26	9.3
March ..	81.3	59.1	70.2	110.5 9/34	43.9 21/33	66.6	174.0 17/83	32.1 21/33	7.9
April ..	73.0	54.4	63.7	98.6 5/38	39.6 21/59	59.0	155.0 1/83	30.2 16/17	6.0
May ..	66.8	50.8	58.8	89.5 4/21	36.9 (c)	52.6	148.2 12/79	25.6 19/28	4.8
June ..	61.0	46.6	53.8	78.1 4/57	32.5 (d)	45.6	138.8 18/79	21.0 24/44	4.2
July ..	59.9	45.4	52.7	74.0 11/06	32.0 24/08	42.0	134.5 26/90	22.1 30/29	4.3
August ..	62.3	46.2	54.3	85.0 31/11	32.3 17/59	52.7	140.0 31/92	22.8 11/29	5.4
September ..	66.8	48.3	57.5	95.1 30/61	32.7 4/58	62.4	160.5 23/82	25.0 25/27	6.3
October ..	72.5	51.7	62.1	102.9 21/22	36.1 20/58	66.8	162.0 30/21	27.8 (e)	7.3
November ..	78.1	55.4	66.7	113.5 21/65	40.8 2/09	72.7	166.9 20/78	31.5 2/09	8.6
December ..	82.6	58.9	70.7	114.6 29/31	43.0 (f)	71.6	175.7 7/99	32.5 4/84	9.5
Year { Averages ..	72.9	53.3	63.1	—	—	—	—	—	7.0
Year { Extremes ..	—	—	—	117.7 12/1/39	32.0 24/7/08	85.7 180.0 18/1/882	21.0 24/6/44	—	—

(a) Standard 30 years' normal (1911-1940). (b) Records incomplete, 1931-1934. Discontinued, 1934. (c) 26/1895 and 24/1904. (d) 27/1876 and 24/1944. (e) 4/1931 and 2/1918. (f) 4/1906 and 16/1861.

**Humidity, Rainfall and Fog**

Month	Vapour pressure (inches)	Rel. hum. (%) at 9 a.m.			Rainfall (inches)					Fog	
		Mean 9 a.m.	Mean	Highest mean	Lowest mean	Mean monthly	Mean No. of days of rain	Greatest monthly	Least monthly		Greatest in one day
No. of years over which observation extends ..	30(a)	30(a)	95	95	30(a)	30(a)	124	124	124	30(a)	
January ..	0.327	39	59	29	0.76	5	3.31 1941	Nil (b)	2.30 2/89	0.0	
February ..	0.352	41	57	30	1.10	5	6.09 1925	Nil (b)	5.57 7/25	0.0	
March ..	0.332	44	58	29	0.87	5	4.59 1878	Nil (b)	3.50 5/78	0.0	
April ..	0.329	55	72	37	1.45	10	5.81 1938	Nil 1945	3.15 5/60	0.0	
May ..	0.313	64	76	49	2.49	13	7.75 1875	0.10 1934	2.75 1/53	0.6	
June ..	0.294	75	84	63	2.93	15	8.58 1916	0.23 1958	2.11 1/20	1.1	
July ..	0.282	75	87	66	2.49	16	5.44 1890	0.39 1899	1.75 10/65	1.4	
August ..	0.282	68	78	54	2.58	16	6.20 1852	0.33 1944	2.23 19/51	0.4	
September ..	0.289	59	72	44	2.39	13	5.83 1923	0.27 1951	1.59 20/23	0.2	
October ..	0.287	48	67	29	1.54	10	5.24 1949	0.17 1914	2.24 16/08	0.0	
November ..	0.292	41	58	31	1.22	8	4.45 1839	0.08 1922	2.96 12/60	0.0	
December ..	0.322	40	56	31	1.27	6	3.98 1861	Nil 1904	2.42 23/13	0.0	
Year { Totals ..	—	—	—	—	21.09	122	—	—	—	3.7	
Year { Averages ..	0.308	54	—	—	—	—	—	—	—	—	
Year { Extremes ..	—	—	87	29	—	—	8.58 6/1916	Nil (c)	5.57 7/2/25	—	

(a) Standard 30 years' normal (1911-1940). (b) Various years. (c) December to April, various years. Dates in italics relate to nineteenth century.

CLIMATOLOGICAL DATA: BRISBANE, QUEENSLAND  
(LAT. 27° 28' S., LONG. 153° 2' E. HEIGHT ABOVE M.S.L. 134 FT.)  
Barometer, Wind, Evaporation, Lightning, Clouds and Clear Days

Month	Bar. corrected to 32° F., m.m. sea-level and standard gravity from 9 a.m. and 3 p.m. readings	Wind (Height of anemometer 105 feet)				Prevailing direction	Mean amount of evaporation (inches)	No. of days of lightning	Mean amount of clouds, 9 a.m., 3 p.m., 9 p.m. (a)	No. of clear days	
		Average miles per hour	Highest mean speed in one day (miles per hour)	Highest gust speed (miles per hour)	9 a.m. 3 p.m.						
					30(b)						48
No. of years of observations ..	30(b)	30(b)	48	48	30(b)	30(b)	30(b)	30(b)	30(b)		
January ..	29.865	6.8	19.7	23/47	58	SE	NE	6.74	9.8	5.7	3.5
February ..	29.912	7.0	23.2	21/54	67	SE	NE	5.49	6.5	5.6	2.4
March ..	29.975	6.5	20.3	1/29	65	S	E	5.05	5.9	5.1	5.4
April ..	30.035	5.9	16.7	3/25	64	S	E	4.05	5.0	4.3	7.8
May ..	30.083	5.8	17.9	17/26	49	SW	SE	3.09	4.1	4.3	8.3
June ..	30.091	5.7	19.0	14/28	58	SW	W & SW	2.45	2.9	4.4	9.2
July ..	30.090	5.6	22.0	13/54	67	SW	W & SW	2.69	2.8	3.8	12.4
August ..	30.105	5.8	14.8	4/35	36	SW	NE	3.51	3.8	3.1	13.1
September ..	30.067	5.9	16.1	1/48	63	SW	NE	4.51	5.8	3.3	13.0
October ..	30.019	6.3	15.7	1/41	62	S	NE	5.81	7.1	4.2	8.5
November ..	29.958	6.7	15.5	10/28	69	SE & N	NE	6.32	9.5	4.9	5.9
December ..	29.890	7.0	19.5	15/26	79	SE	NE	7.02	10.6	5.3	3.8
Year { Totals ..	—	—	—	—	—	—	—	56.73	73.8	—	93.3
Year { Averages	30.007	6.3	—	—	—	SW	NE	—	—	—	—
Year { Extremes	—	—	23.2	21/2/54	79	—	—	—	—	—	—

(a) Scale 0-10. (b) Standard 30 years' normal (1911-1940).

Temperature and Sunshine

Month	Mean temperature (°Fahr.)			Extreme shade temperature (°Fahr.)		Extreme range	Extreme temperature (°Fahr.)		Mean daily hours of sunshine				
	Mean max.	Mean min.	Mean	Highest	Lowest		Highest in sun	Lowest on grass					
										30(a)	30(a)	30(a)	76
No. of years over which observation extends ..	30(a)	30(a)	30(a)	76	76	76	50(b)	75	30(a)				
January ..	85.5	69.1	77.3	109.8	26/40	58.8	4/93	51.0	169.0	2/37	49.9	4/93	7.6
February ..	84.6	68.7	76.6	105.7	21/25	58.5	23/31	47.2	165.2	6/10	49.1	22/31	7.4
March ..	82.3	66.2	74.3	99.4	5/19	52.4	29/13	47.0	162.5	6/39	45.4	29/13	7.0
April ..	79.1	61.5	70.3	95.2	(c)	44.4	25/25	50.8	153.8	11/16	36.7	24/25	7.1
May ..	73.7	55.6	64.7	90.3	21/23	40.6	30/51	49.7	147.0	1/10	29.8	8/97	6.6
June ..	69.4	51.5	60.5	88.9	19/18	36.3	29/08	52.6	136.0	3/18	25.4	23/88	6.3
July ..	68.6	49.4	59.0	84.3	23/46	36.1	(d)	48.2	146.1	20/15	23.9	11/90	6.8
August ..	71.1	50.0	60.6	91.0	14/46	37.4	6/87	53.6	141.9	20/17	27.1	9/99	7.9
September ..	75.5	54.8	65.1	100.9	22/43	40.7	1/96	60.2	155.5	26/03	30.4	1/89	8.2
October ..	79.2	60.3	69.8	105.3	30/58	43.3	3/99	62.0	157.4	31/18	34.9	8/89	8.4
November ..	82.3	64.6	73.4	106.1	18/13	48.5	2/05	57.6	162.3	7/89	38.8	1/05	8.2
December ..	84.5	67.5	76.0	105.9	26/93	56.3	5/55	49.6	165.9	28/42	49.1	3/94	8.2
Year { Averages	78.0	59.9	69.0	—	—	—	—	—	—	—	—	—	—
Year { Extremes	—	—	—	109.8	26/1/40	36.1	(d)	73.7	169.0	2/1/37	23.9	11/7/1890	7.5

(a) Standard 30 years' normal (1911-1940). (b) From 1887 to March, 1947, excluding 1927-1936. (c) 9/1896 and 5/1903. (d) 12/7/1894 and 2/7/1896.

Humidity, Rainfall and Fog

Month	Vapour pressure (inches)	Rel. hum. (%) at 9 a.m.			Rainfall (inches)				Fog				
		Mean 9 a.m.	Highest mean	Lowest mean	Mean monthly	Mean No. of days of rain	Greatest monthly	Least monthly		Greatest in one day			
											30(a)	76	76
No. of years over which observation extends ..	30(a)	30(a)	76	76	30(a)	30(a)	111(b)	111(b)	111(b)	30(a)			
January ..	0.636	66	79	53	5.72	12	27.72	1895	0.32	1919	18.31	21/87	0.6
February ..	0.644	69	82	55	5.47	12	40.39	1893	0.58	1849	10.61	6/31	0.9
March ..	0.606	72	85	56	4.97	14	34.04	1870	Nil	1849	11.18	14/08	1.6
April ..	0.512	71	80	56	3.68	11	15.28	1867	0.04	1944	5.46	5/33	4.0
May ..	0.420	71	85	59	2.35	9	13.85	1876	Nil	1846	5.62	9/79	5.4
June ..	0.357	73	84	54	2.75	8	14.03	1873	Nil	1847	6.41	15/48	4.5
July ..	0.331	71	88	53	1.88	8	8.60	1950	Nil	1841	3.54	(c)	4.9
August ..	0.338	67	80	53	1.07	7	14.67	1879	Nil	(d)	4.89	12/87	5.9
September ..	0.396	62	76	47	1.69	7	5.43	1886	0.10	1907	2.46	2/94	2.8
October ..	0.459	59	72	48	2.27	8	11.41	1949	0.03	1948	5.34	25/49	1.6
November ..	0.533	61	73	45	4.00	10	12.40	1917	Nil	1842	4.46	16/86	0.7
December ..	0.589	62	70	51	4.24	11	17.36	1942	0.35	1865	6.60	28/71	0.4
Year { Totals	—	—	—	—	40.09	117	—	—	—	—	—	—	—
Year { Averages	0.485	67	—	—	—	—	—	—	—	—	—	—	—
Year { Extremes	—	—	88	45	—	—	40.39	2/1893	Nil	(e)	18.31	21/1/1887	—

(a) Standard 30 years' normal (1911-1940). (b) Records incomplete for various years between 1846 and 1859. (c) 15/1876 and 16/1889. (d) 1862, 1869 and 1880. (e) Various months in various years. Dates in italics relate to nineteenth century.



CLIMATOLOGICAL DATA: SYDNEY, NEW SOUTH WALES  
(LAT. 33° 52' S., LONG. 151° 12' E. HEIGHT ABOVE M.S.L. 138 FT.)  
Barometer, Wind, Evaporation, Lightning, Clouds and Clear Days

Month	Bar. corrected to 32° F., mn. sea level and standard gravity from 9 a.m. and 3 p.m. readings	Wind (Height of anemometer 58 feet)					Mean amount of evaporation (inches)	No. of days of lightning	Mean amount of clouds, 9 a.m., 3 p.m., 9 p.m. (c)	No. of clear days	
		Average miles per hour	Highest mean speed in one day (miles per hour)	Highest gust speed (miles per hour)	Prevailing direction						
					9 a.m.	3 p.m.					
No. of years of observations..	30(b)	26(c)	49(d)		46(e)	26(c)	26(c)	30(f)	30(b)	30(b)	
January	29.875	8.9	24.9	2/22	93	S	ENE	5.71	4.8	5.7	4.8
February	29.942	8.1	20.1	14/18	63	NE	ENE	4.68	3.3	5.5	5.4
March	30.009	7.5	20.7	10/44	58	W	ENE	4.05	2.8	5.5	5.8
April	30.063	7.0	23.4	19/27	72	W	NE	2.91	2.4	5.0	7.0
May	30.098	6.8	21.1	18/55	63	W	W	1.61	1.6	4.9	7.4
June	30.078	7.1	22.4	10/47	84	W	S	1.69	1.1	4.5	10.1
July	30.070	7.2	26.6	6/31	68	W	W	1.69	2.1	3.9	11.1
August	30.060	7.2	24.6	9/51	68	W	NE	2.30	3.0	4.2	10.0
September	30.018	8.0	22.3	19/17	70	W	NE	4.17	3.9	4.9	7.4
October	29.976	8.2	24.5	1/57	95	W	ENE	4.97	4.5	5.5	5.7
November	29.935	8.2	22.5	14/30	71	W & E	ENE	5.64	5.4	5.8	4.8
December	29.881	8.9	25.0	10/20	75	S	ENE	—	—	—	—
Year { Totals ..	—	—	—	—	—	—	—	42.90	36.4	—	87.8
Year { Averages	30.000	7.8	—	—	—	W	NE	—	—	5.0	—
Year { Extremes	—	—	26.6	6/7/31	95	—	—	—	—	—	—

(a) Scale 0-10. (b) Standard 30 years' normal (1911-1940). (c) 1915-1940. (d) 1914-1962.  
(e) 1917-1962. (f) 1921-1950.

Temperature and Sunshine

Month	Mean temperature (°Fahr.)			Extreme shade temperature (°Fahr.)			Extreme temperature (°Fahr.)			Mean daily hours of sunshine				
	Mean max.	Mean min.	Mean	Highest	Lowest	Extreme range	Highest in sun	Lowest on grass						
									104		104		84	
No. of years over which observation extends..	30(a)	30(a)	30(a)	104		104	84		104		30(b)			
January	78.6	65.1	71.8	113.6	14/39	51.1	18/49	62.5	164.3	26/15	43.7	6/25	7.5	
February	78.7	65.5	72.1	107.8	8/26	49.3	28/63	58.5	168.3	14/39	42.8	22/33	7.0	
March	76.6	62.9	69.8	102.6	3/69	48.8	14/86	53.8	158.3	10/26	39.9	17/13	6.4	
April	72.0	57.7	64.9	91.4	1/36	44.6	27/64	46.8	144.1	10/77	33.3	24/09	6.1	
May	67.0	52.4	59.7	86.0	1/19	40.2	22/59	45.8	129.7	1/96	29.3	25/17	5.7	
June	62.8	48.1	55.5	80.4	11/31	35.7	22/32	44.7	125.5	2/23	28.0	22/32	5.3	
July	61.8	46.4	54.1	78.3	22/26	35.9	12/90	42.4	124.7	19/77	24.0	4/93	6.1	
August	64.3	47.6	56.0	86.8	24/54	36.8	3/72	50.0	149.0	30/78	26.1	4/09	7.0	
September	68.3	51.4	59.9	92.3	27/19	40.8	2/45	51.5	142.2	12/78	30.1	17/05	7.3	
October	71.7	55.9	63.8	99.4	4/42	42.2	6/27	57.2	152.2	20/33	32.7	9/05	7.5	
November	74.5	59.8	67.1	104.5	6/46	45.8	1/05	58.7	158.5	28/99	36.0	6/06	7.5	
December	76.9	63.2	70.1	108.0	20/57	48.4	3/24	59.6	164.5	27/89	41.4	3/24	7.5	
Year { Averages	71.1	56.3	63.7	—	—	—	—	—	—	—	—	—	6.7	
Year { Extremes	—	—	—	113.6	14/1/39	35.7	22/6/32	77.9	168.3	14/2/39	24.0	4/7/1893	—	—

(a) Standard 30 years' normal (1911-1940). (b) 1921-1950 (different exposure prior to 1921).

Humidity, Rainfall and Fog

Month	Vapour pressure (inches)	Rel. hum. (%) at 9 a.m.				Rainfall (inches)					Fog Mean No. of days of fog		
		Mean	Highest mean	Lowest mean	Mean monthly	Mean No. of days of rain	Greatest monthly	Least monthly	Greatest in one day				
										80		80	
No. of years over which observation extends	30(a)	30(a)	80	80	30(a)	30(a)	104		104		42(b)		
January	0.537	65	78	58	3.86	13	15.26	1911	0.25	1932	7.08	13/11	0.3
February	0.560	68	81	60	3.15	12	22.22	1956	0.12	1939	8.90	25/73	0.8
March	0.527	71	85	62	4.44	13	20.52	1942	0.42	1876	11.05	28/42	1.7
April	0.441	73	87	63	5.65	14	24.49	1861	0.06	1868	7.52	29/60	2.4
May	0.362	75	90	63	4.98	12	23.03	1919	0.14	1957	8.36	28/89	3.4
June	0.303	76	89	63	3.68	11	25.30	1950	0.16	1962	5.17	16/84	2.8
July	0.282	74	88	63	4.89	12	13.23	1950	0.10	1946	7.80	7/31	2.5
August	0.288	68	84	54	2.41	10	14.89	1899	0.04	1885	5.33	2/60	2.0
September	0.325	62	79	49	2.77	11	14.05	1879	0.08	1882	5.69	10/79	1.0
October	0.378	60	77	46	2.80	11	11.13	(c)	0.21	1867	6.37	13/02	0.6
November	0.433	60	79	42	2.54	11	20.36	1961	0.07	1915	5.24	27/55	0.5
December	0.501	63	77	51	3.63	13	15.82	1920	0.23	1913	4.75	13/10	0.4
Year { Totals ..	—	—	—	—	44.80	143	—	—	—	—	—	—	18.4
Year { Averages	0.411	68	—	—	—	—	—	—	—	—	—	—	—
Year { Extremes	—	—	90	42	—	—	25.30	6/1950	0.04	8/1885	11.05	28/3/42	—

(a) Standard 30 years' normal (1911-1940). (b) 1921-1962. (c) 1916 and 1959.  
Dates in italics relate to nineteenth century.

CLIMATOLOGICAL DATA: CANBERRA, AUSTRALIAN CAPITAL TERRITORY  
(LAT. 35° 18' S., LONG. 149° 6' E. HEIGHT ABOVE M.S.L., 1,906 FT.)

Barometer, Wind, Evaporation, Lightning, Clouds and Clear Days

Month	Bar. corrected to 32° F., min. sea level and standard gravity from 9 a.m. and 3 p.m. readings	Wind (Height of anemometer 20 feet)				Prevailing direction		Mean amount of evaporation (inches)	No. of days of lightning	Mean amount of clouds, 9 a.m., and 3 p.m. (a)	No. of clear days
		Average miles per hour	Highest mean speed in one day (miles per hour)	Highest gust speed (miles per hour)	Direction						
					9 a.m.	3 p.m.					
No. of years of observations..	26	27	33	24(b)	27	27	28	20	26	27	
January ..	29 856	4.7	14.9	23/33	65	NW	NW	8.31	1.5	4.9	7.3
February ..	29 900	4.2	15.3	24/33	64	E	NW	6.42	2.3	5.1	6.3
March ..	30 009	3.7	18.2	28/42	52	E	NW	5.20	0.2	5.4	6.9
April ..	30 059	3.6	18.6	8/45	52	NW	NW	3.28	0.2	5.4	4.7
May ..	30 126	3.0	13.2	27/58	64	NW	NW	1.95	0.2	5.6	5.8
June ..	30 120	3.6	16.1	2/30	60	NW	NW	1.29	0.1	6.0	5.5
July ..	30 133	3.4	23.4	7/31	62	NW	NW	1.27	0.0	5.7	5.6
August ..	30 065	4.1	15.7	25/36	NW	NW	1.81	0.1	5.4	5.7	
September ..	30 057	4.2	17.4	28/34	61	NW	NW	2.87	0.4	5.1	6.1
October ..	29 954	4.3	14.7	12/57	74	NW	NW	4.43	1.0	5.4	5.2
November ..	29 885	4.7	17.2	28/42	66	NW	NW	5.87	1.1	5.5	4.5
December ..	29 834	4.7	16.1	11/38	66	NW	NW	7.64	0.7	5.0	6.3
Year { Totals	30.000	4.0	—	—	—	NW	NW	50.34	7.9	—	—
Year { Averages	—	—	—	—	—	—	—	—	—	—	—
Year { Extremes	—	—	23.4	7/7/31	74	—	—	—	—	5.3	—

(a) Scale 0-10.

(b) 1939-1962.

Temperature and Sunshine

Month	Mean temperature (°Fahr.)			Extreme shade temperature (°Fahr.)		Extreme range	Extreme temperature (°Fahr.)		Mean daily hours of sunshine				
	Mean max.	Mean min.	Mean	Highest	Lowest		Highest in sun	Lowest on grass					
										No. of years over which observation extends..			
No. of years over which observation extends..	30(a)	30(a)	30(a)	35	35	35	(b)	35	27				
January ..	82.5	55.9	69.3	107 4	11/39	38 0	1/56	69.4	—	30.1	10/50	8.4	
February ..	80.7	56.1	68.4	99 8	13/33	35 0	(c)	64.8	—	26.5	23/43	7.3	
March ..	76.2	52.6	64.4	99 1	6/38	34 8	31/49	64.3	—	26.4	26/35	7.2	
April ..	66.8	45.4	56.1	89 7	6/38	29 0	29/34	60.7	—	19.0	18/44	6.7	
May ..	59.3	38.9	49.1	72 6	1/36	22 5	(d)	50.1	—	15.6	(e)	5.2	
June ..	52.8	35.7	44.3	64 9	1/54	18 1	20/35	43.9	—	8.9	25/44	4.2	
July ..	51.8	33.7	42.7	63 5	16/34	20 0	(f)	43.5	—	10 8	9/37	4.8	
August ..	55.1	35.4	45.3	71 0	24/54	21 0	3/29	50.0	—	10 1	6/44	5.8	
September ..	61.4	38.9	50.1	81 5	16/34	25 2	6/46	56.3	—	13 0	6/45	7.2	
October ..	67.1	44.2	55.6	90 0	13/46	28 0	26/61	62.0	—	18 2	2/45	7.8	
November ..	73.0	48.7	60.9	101 4	19/44	32 2	11/36	69.2	—	22 9	6/56	8.2	
December ..	79.6	53.4	66.5	103 5	27/38	36 0	24/28	67.5	—	29 1	21/56	8.5	
Year { Averages	67.2	44.9	56.1	—	—	—	—	—	—	—	—	6.8	
Year { Extremes	—	—	—	107 4	11/39	18 1	20/6/35	89.3	—	—	8.9	25/6/44	—

(a) Thirty year period 1928-1957.

(b) No record.

(c) 22/1931 and 23/1931.

(d) 9/1929 and 15/1957.

(e) 13/1937 and 15/1946.

(f) 19/1929, 9/1937 and 27/1943.

Humidity, Rainfall and Fog

Month	Vapour pressure (inches)	Rel. hum. (%) at 9 a.m.			Rainfall (inches)					Fog			
		Mean 9 a.m.	Mean	Highest mean	Lowest mean	Mean monthly	Mean No. of days of rain	Greatest monthly	Least monthly		Greatest in one day		
												No. of years over which observation extends..	
No. of years over which observation extends..	26	28	28	28	30(a)	30(a)	35	35	35	25			
January ..	0.370	53	69	39	2.09	7	6.69	1941	0.02	1932	3.22	30/58	0.1
February ..	0.388	59	71	40	2.15	7	6.03	1948	0.01	1933	3.24	17/28	0.2
March ..	0.378	66	82	48	2.43	7	12.69	1950	0.01	1940	2.72	1/61	1.0
April ..	0.315	71	81	54	2.12	8	5.19	1952	0.07	1942	2.52	9/45	1.4
May ..	0.254	79	89	67	2.00	7	6.13	1948	0.06	1935	3.88	3/48	4.8
June ..	0.212	81	90	72	1.89	9	6.09	1931	0.18	1944	2.32	25/56	5.8
July ..	0.196	81	91	73	1.63	10	5.08	1960	0.27	1940	2.02	13/33	5.3
August ..	0.213	75	88	60	1.98	11	4.71	1939	0.36	(b)	2.07	12/29	2.4
September ..	0.239	66	78	51	1.58	9	4.52	1960	0.13	1946	1.78	16/62	1.4
October ..	0.273	60	72	46	2.70	11	6.98	1959	0.34	1940	5.19	21/59	0.4
November ..	0.301	55	67	38	2.08	9	5.98	1961	0.28	1936	2.45	9/50	0.1
December ..	0.338	51	70	37	1.88	8	8.80	1947	0.16	1938	2.29	28/29	0.0
Year { Totals	—	—	—	—	24 53	103	—	—	—	—	—	—	22.9
Year { Averages	0.290	66	—	—	—	—	—	—	—	—	—	—	—
Year { Extremes	—	—	91	37	—	—	12.69	3/50	0.01	7/33.3/40	5.19	21/10/59	—

(a) Thirty year period 1928-1957.

(b) 1944 and 1949.

All dates relate to twentieth century.

CLIMATOLOGICAL DATA: MELBOURNE, VICTORIA  
(Lat. 37° 49' S., LONG. 144° 58' E. HEIGHT ABOVE M.S.L. 114 FT.)  
Barometer, Wind, Evaporation, Lightning, Clouds and Clear Days

Month	Bar corrected to 32° F., min. sea level and standard gravity from 9 a.m. and 3 p.m. readings	Wind (Height of anemometer 93 feet)				Prevailing direction		Mean amount of evaporation (inches)	No. of days of lightning	Mean amount of clouds, 9 a.m.-3 p.m., 9 p.m.(c)	No. of clear days
		Average miles per hour	Highest mean speed in one day (miles per hour)	Highest gust speed (miles per hour)	Prevailing direction	9 a.m.	3 p.m.				
						30(b)	30(b)				
No. of years of observations..	30(b)	15(c)	50	53	30(b)	30(b)	30(b)	30(b)	30(b)	30(b)	
January ..	29.897	8.8	21.1	27/41	66	S & SW	S	6.55	1.8	4.9	6.8
February ..	29.950	8.4	19.0	13/47	74	N & S	S	5.10	2.3	4.8	6.4
March ..	30.025	7.8	18.0	3/61	66	N	S	4.26	1.8	5.3	5.5
April ..	30.092	7.1	19.9	16/43	67	N	S	2.53	1.2	5.9	4.6
May ..	30.113	7.4	21.8	1/57	72	N	N	1.57	0.5	6.1	3.4
June ..	30.097	7.2	22.8	16/47	62	N	N	1.18	0.4	6.5	2.7
July ..	30.079	8.7	22.7	22/60	68	N	N	1.16	0.3	6.3	2.9
August ..	30.048	8.2	21.3	20/42	65	N	N	1.54	0.9	6.0	3.1
September ..	30.001	8.5	21.0	21/59	69	N & W	N & S	2.41	1.3	5.9	3.3
October ..	29.968	8.4	18.6	12/52	69	N	S	3.54	1.8	6.1	3.8
November ..	29.951	8.6	21.2	13/58	71	S & SW	S	4.62	2.3	6.0	3.6
December ..	29.896	8.7	21.0	11/52	61	S & SW	S	5.85	1.9	5.6	4.5
Year { Totals ..	30.010	8.1	—	—	—	N	S	40.31	16.5	—	50.6
Year { Averages ..	—	—	—	—	—	—	—	—	—	—	—
Year { Extremes ..	—	—	22.8	16/6/47	74	—	—	—	—	5.8	—

(a) Scale 0-10. (b) Standard 30 years' normal (1911-1940). (c) Early records not comparable.

Temperature and Sunshine

Month	Mean temperature (°Fahr.)			Extreme shade temperature (°Fahr.)		Extreme range	Extreme temperature (°Fahr.)		Mean daily hours of sunshine				
	Mean max.	Mean min.	Mean	Highest	Lowest		Highest in sun	Lowest on grass					
										30(a)	30(a)	30(a)	107
No. of years over which observation extends..	30(a)	30(a)	30(a)	107	107	107	86(b)	103	35(c)				
January ..	77.7	56.9	67.3	114.1	13/39	42.0	28/85	72.1	178.5	14/62	30.2	28/85	7.8
February ..	78.6	58.0	68.3	109.5	7/01	40.2	24/24	69.3	167.5	15/70	30.9	6/91	7.4
March ..	74.9	55.2	65.1	107.0	11/40	37.1	17/84	69.9	164.5	1/68	28.9	(d)	6.5
April ..	67.9	50.8	59.3	94.8	5/38	34.8	24/88	60.0	152.0	8/61	25.0	23/97	5.0
May ..	62.0	46.9	54.5	83.7	7/05	29.9	29/16	53.8	142.6	2/59	21.1	26/16	3.4
June ..	56.3	43.8	50.3	72.3	2/57	28.0	11/66	44.3	129.0	1/61	19.9	30/29	3.4
July ..	56.2	42.6	49.4	69.3	22/26	27.0	21/69	42.3	125.8	27/80	20.5	12/03	3.7
August ..	58.7	43.7	51.2	77.0	20/85	28.3	11/63	43.7	137.4	29/69	22.8	18/02	4.6
September ..	63.3	46.0	54.7	88.6	28/28	31.0	3/40	57.6	142.1	20/67	21.8	8/18	5.5
October ..	67.9	48.7	58.3	98.4	24/14	32.1	3/71	66.3	154.3	28/68	24.8	22/18	5.8
November ..	71.3	51.8	61.5	105.7	27/94	36.5	2/96	69.2	159.6	29/65	24.6	2/96	6.2
December ..	75.4	55.3	65.3	110.7	15/76	40.0	4/70	70.7	170.3	20/69	33.2	1/04	7.0
Year { Averages ..	67.6	50.0	58.8	114.1	13/1/39	27.0	21/7/1869	87.1	178.5	14/1/1862	19.9	30/6/29	5.6
Year { Extremes ..	—	—	—	—	—	—	—	—	—	—	—	—	—

(a) Standard 30 years' normal (1911-1940). (b) Records discontinued, 1946. (c) 1916-1950. (d) 17/1884 and 20/1897.

Humidity, Rainfall and Fog

Month	Vapour pressure (inches)	Rel. hum. (%) at 9 a.m.			Rainfall (inches)				Fog				
		Mean	Highest mean	Lowest mean	Mean monthly	Mean No. of days of rain	Greatest monthly	Least monthly		Greatest in one day			
											30(a)	30(a)	30(a)
No. of years over which observation extends	30(a)	30(a)	52	52	30(a)	30(a)	107	107	107	30(a)			
January ..	0.382	58	68	50	1.88	9	6.66	1941	0.01	1932	2.97	9/97	0.1
February ..	0.417	62	77	48	2.00	8	7.72	1939	0.03	1870	3.44	26/46	0.3
March ..	0.385	64	79	50	2.22	9	7.50	1911	0.14	1934	3.55	5/19	1.1
April ..	0.351	72	82	66	2.30	13	7.67	1960	Nil	1923	3.15	23/60	2.3
May ..	0.311	79	88	70	1.94	14	5.60	1942	0.14	1934	1.85	7/97	6.8
June ..	0.276	83	92	75	2.06	16	4.51	1859	0.61	1958	1.74	21/04	6.5
July ..	0.264	82	86	75	1.93	17	7.02	1891	0.57	1902	2.71	12/97	6.7
August ..	0.271	76	82	65	2.02	17	4.35	1939	0.48	1903	1.94	26/24	3.0
September ..	0.288	68	76	60	2.20	15	7.93	1916	0.52	1907	2.62	12/80	1.3
October ..	0.307	62	71	52	2.63	14	7.61	1869	0.29	1914	3.00	17/69	0.3
November ..	0.336	60	69	52	2.33	13	8.11	1954	0.25	1895	2.86	21/54	0.3
December ..	0.373	59	69	48	2.38	11	7.18	1863	0.11	1904	3.92	4/54	0.2
Year { Totals ..	—	—	—	—	25.89	156	—	—	—	—	—	—	29.4
Year { Averages ..	0.330	69	—	—	—	—	—	—	—	—	—	—	—
Year { Extremes ..	—	—	92	48	—	—	8.11	11/1954	Nil	4/1923	3.92	4/12/54	—

(a) Standard 30 years' normal (1911-1940). Dates in italics relate to nineteenth century.

CLIMATOLOGICAL DATA: HOBART, TASMANIA  
(LAT. 42° 53' S., LONG. 147° 20' E. HEIGHT ABOVE M.S.L. 177 FT.)

Barometer, Wind, Evaporation, Lightning, Clouds and Clear Days

Month	Bar. corrected to 32° F., sea level and standard gravity from 9 a.m. and 3 p.m. readings	Wind (Height of anemometer 40 feet)						Mean amount of evaporation (inches)	No. of days of lightning	Mean amount of clouds, 9 a.m., 3 p.m., 9 p.m. (a)	No. of clear days
		Average miles per hour	Highest mean speed in one day (miles per hour)	Highest gust speed (miles per hour)	Prevailing direction						
					9 a.m.	3 p.m.					
No. of years of observations ..	30(b)	30(b)	70	72	30(b)	30(b)	30(b)	30(b)	30(b)	30(b)	
January ..	29.819	8.0	20.8 30/16	76	NNW	SSE	4.84	0.9	6.4	1.9	
February ..	29.913	7.2	25.2 4/27	67	NNW	SSE	3.71	1.0	6.2	2.3	
March ..	29.961	6.8	21.4 13/38	79	NW	SSE	3.10	1.2	6.1	2.4	
April ..	29.997	6.3	24.1 9/52	74	NW	W	1.98	0.7	6.5	1.7	
May ..	30.009	6.3	20.2 20/36	84	NNW	NW	1.37	0.4	6.1	2.4	
June ..	29.986	6.2	23.7 27/20	75	NNW	NW	0.91	0.4	6.2	2.4	
July ..	29.958	6.5	22.9 22/53	80	NNW	NNW	0.94	0.3	6.1	2.0	
August ..	29.906	6.8	25.5 19/26	87	NNW	NW	1.28	0.4	6.1	2.1	
September ..	29.860	7.9	21.5 26/15	84	NNW	NW	1.97	0.7	6.3	1.5	
October ..	29.833	8.2	19.2 8/12	74	NNW	SW	3.05	0.6	6.6	1.0	
November ..	29.831	7.9	21.2 18/15	84	NNW	S	3.77	0.7	6.4	1.3	
December ..	29.816	7.6	23.4 1/34	70	NNW	SSE	4.37	0.5	6.8	1.1	
Year { Totals	—	—	—	—	—	—	31.29	7.8	—	—	
Year { Averages	29.907	7.2	—	—	NNW	W	—	—	6.3	—	
Year { Extremes	—	—	25.5 19/8/26	87	—	—	—	—	—	—	

(a) Scale 0-10. (b) Standard 30 years' normal (1911-1940).

Temperature and Sunshine

Month	Mean temperature (°Fahr.)			Extreme shade temperature (°Fahr.)			Extreme range	Extreme temperature (°Fahr.)		Mean daily hours of sunshine
	Mean max.	Mean min.	Mean	Highest	Lowest	Highest in sun		Lowest on grass		
									30(a)	
No. of years over which observation extends ..	30(a)	30(a)	30(a)	93(b)	93(b)	92(b)	57(c)	75(b)	30	
January ..	69.8	52.4	61.0	105.0 (d)	40.1 (e)	64.9	160.0 (f)	30.6 19/97	7.7	
February ..	70.6	53.7	62.2	104.4 12/99	39.0 20/87	65.4	165.0 24/98	28.3 —/87	7.1	
March ..	67.5	51.3	59.4	99.1 13/40	35.2 31/26	63.9	150.9 26/44	27.5 30/02	6.4	
April ..	62.2	48.0	55.1	87.1 1/41	33.3 24/88	53.8	142.0 18/93	25.0 —/86	5.0	
May ..	57.8	44.6	51.2	77.8 5/21	29.2 20/02	48.6	128.0 (g)	20.0 19/02	4.4	
June ..	52.8	41.2	47.0	69.2 1/07	29.2 28/44	40.0	122.0 12/94	21.0 6/87	4.0	
July ..	52.7	40.6	46.6	66.1 14/34	27.7 11/95	38.4	121.0 12/93	18.7 16/86	4.4	
August ..	55.4	41.7	48.7	71.6 28/14	28.9 9/51	42.7	129.0 —/87	20.1 7/09	5.1	
September ..	59.0	43.7	51.4	81.7 23/26	31.0 16/97	50.7	138.0 23/93	18.3 16/26	5.9	
October ..	62.5	46.1	54.3	92.0 24/14	32.0 12/89	60.0	156.0 9/93	23.8 (h)	6.1	
November ..	65.0	48.2	56.6	98.3 26/37	35.0 16/41	63.3	154.0 19/92	26.0 1/08	7.2	
December ..	67.9	51.3	59.6	105.2 30/97	38.0 3/06	67.2	161.5 10/39	27.2 —/86	7.3	
Year { Averages	61.9	46.9	54.4	—	—	—	—	—	5.9	
Year { Extremes	—	—	—	105.2 30/12/1897	27.7 11/7/1895	77.5	165.0 24/2/1898	18.3 16/9/26	—	

(a) Standard 30 years' normal (1911-1940). (b) Records 1855-1882 not comparable. (c) Period 1934-1938 not comparable; records discontinued, 1946. (d) 1/1900 and 19/1959. (e) 9/1937 and 11/1937. (f) 5/1886 and 13/1905 (g) —/1889 and —/1893. (h) 1/1886 and —/1899.

Humidity, Rainfall and Fog

Month	Vapour pressure (inches)	Rel. hum. (%) at 9 a.m.			Rainfall (inches)					Fog
		Mean 9 a.m.	Highest mean	Lowest mean	Mean monthly	Mean No. of days of rain	Greatest monthly	Least monthly	Greatest in one day	
No. of years over which observation extends ..	30(a)	55	70	70	30(a)	30(a)	80(b)	80(b)	80(b)	30(c)
January ..	0.309	59	72	46	1.82	13	5.91 1893	0.17 (d)	2.96 30/16	0.0
February ..	0.342	63	77	48	1.68	10	5.15 1954	0.11 1914	2.20 1/54	0.0
March ..	0.323	67	77	52	2.13	13	10.05 1946	0.29 1943	3.47 17/46	0.3
April ..	0.290	72	84	58	2.31	14	9.77 1960	0.07 1904	5.25 23/60	0.2
May ..	0.263	78	89	65	1.71	14	8.43 1958	0.14 1913	1.75 2/93	0.9
June ..	0.233	80	91	68	2.25	16	9.38 1954	0.28 1886	5.80 7/54	0.8
July ..	0.227	80	94	72	2.14	17	6.02 1922	0.17 1950	2.51 18/22	1.0
August ..	0.232	76	92	60	1.82	18	6.32 1946	0.30 1892	2.28 14/90	0.4
September ..	0.240	67	85	58	1.90	17	7.93 1957	0.38 1951	6.15 15/57	0.1
October ..	0.258	63	73	51	2.52	18	7.60 1947	0.39 1914	2.58 4/06	0.0
November ..	0.274	60	72	50	2.23	16	7.39 1885	0.33 1921	3.70 30/85	0.1
December ..	0.306	58	67	45	2.52	14	7.72 1916	0.17 1931	3.33 5/41	0.0
Year { Totals	—	—	—	—	25.03	180	—	—	—	3.8
Year { Averages	0.275	69	—	—	—	—	—	—	—	—
Year { Extremes	—	—	94	45	—	—	10 05 3/1946	0 07 4/1904	6.15 15/9/57	—

(a) Standard 30 years' normal (1911-1940). (b) Records prior to 1883 not comparable. (c) 1922-1951. (d) 1915 and 1958.

Dates in italics relate to nineteenth century.

12. **Rainfall and Temperatures, Various Cities.**—Official Year Book No. 34, page 28, shows rainfall and temperature, and No. 38, page 42, temperature, for various important cities throughout the world and for the Australian capitals.

13. **Thunder Days.**—A new map has been included in this issue (*see* p. 44) which shows the average annual days of thunder experienced in the different areas of Australia.

Additional information on this subject and other items treated in this chapter may be obtained from the Commonwealth Bureau of Meteorology, Carlton, Victoria.

## CHAPTER III

### GENERAL GOVERNMENT

#### § 1. Scheme of Parliamentary Government

1. **General.**—Under Section 1 of the Commonwealth of Australia Constitution, the legislative power of the Commonwealth is vested in the Parliament of the Commonwealth, which consists of the Sovereign, the Senate, and the House of Representatives. The Sovereign is represented throughout the Commonwealth by the Governor-General who, subject to the Constitution of the Commonwealth, has such powers and functions as the Sovereign is pleased to assign to him. In each State, there is a State Governor who is the representative of the Sovereign for the State and who exercises such powers within the State as are conferred upon him by the Letters Patent which constitute his office and by the instructions which inform in detail of the manner in which his duties are to be fulfilled. The Legislature in each State was bi-cameral until 1922, when the Queensland Upper House was abolished and the Parliament became uni-cameral. In the bi-cameral Parliaments, the Upper House is known in the Commonwealth Parliament as the Senate, and in the State Parliaments as the Legislative Council, while the Lower House is known in the Commonwealth Parliament as the House of Representatives, in the State Parliaments of New South Wales, Victoria and Western Australia as the Legislative Assembly, and in the State Parliaments of South Australia and Tasmania as the House of Assembly. In Queensland, the Legislative Assembly constitutes the legislature. The legislative powers of the Parliaments are delimited by the Commonwealth and State Constitutions. The Assembly, which is the larger House, is, in all cases, elective, the franchise extending to adult British subjects with certain residential qualifications. The Council in each of the States other than New South Wales is elected by the people of the State concerned, the constituencies being differently arranged and, in general, some property or special qualification for the electorate being required. In Victoria, however, under the *Legislative Council Reform Act 1950*, adult suffrage was adopted for Legislative Council elections. In the case of New South Wales, the Council is elected by the members of both Houses of Parliament at a simultaneous sitting. In the Federal Parliament, the qualifications for the franchise are identical for both Houses, extending to adult British subjects who have lived in Australia for six months continuously.

2. **The Sovereign.**—(i) *Accession of Queen Elizabeth II.* On 7th February, 1952, the Governor-General and members of the Federal Executive Council proclaimed Princess Elizabeth Queen Elizabeth the Second, Queen of this Realm and of all Her other Realms and Territories, Head of the Commonwealth, Defender of the Faith, Supreme Liege Lady in and over the Commonwealth of Australia. The coronation of Her Majesty in Westminster Abbey took place on 2nd June, 1953.

(ii) *Royal Style and Titles Act 1953.* Following a conference of Prime Ministers and other representatives of the British Commonwealth in London in December, 1952, the passing of the *Royal Style and Titles Act 1953* gave Parliament's assent to the adoption by the Queen, for use in relation to the Commonwealth of Australia and its Territories, of the following Royal Style and Titles:—"Elizabeth the Second, by the Grace of God of the United Kingdom, Australia and Her other Realms and Territories Queen, Head of the Commonwealth, Defender of the Faith."

3. **Powers and Functions of the Governor-General and of the State Governors.**—(i) *Governor-General of the Commonwealth.* As the Queen's representative in Australia, the Governor-General exercises certain prerogative powers and functions assigned to him by the Queen. Other powers and functions are conferred on the Governor-General by the Constitution. Powers which have been so assigned or conferred include, among others, the power to grant pardons and to remit fines for offences against the laws of the Commonwealth; to appoint certain officers in the Diplomatic or Consular Service of the Commonwealth; to appoint times for holding the sessions of the Parliament, prorogue Parliament and dissolve the House of Representatives; to cause writs to be issued for general elections of members of the House of Representatives; to assent in the Queen's name to a proposed law passed by both Houses of the Parliament or withhold assent, or to reserve the law for the Queen's pleasure, or to return the proposed law to the House in which it originated and transmit therewith any amendments which he may recommend; to exercise the executive power of the Commonwealth; to choose and summon Executive Councilors, who hold office during his pleasure; to appoint Ministers of State for the Commonwealth. In addition, the command in chief of the naval and military forces of the Commonwealth is vested in the Governor-General, as the Queen's representative.

Most Acts of the Commonwealth Parliament provide that the Governor-General may make regulations to give effect to the Act. The Governor-General may also be authorized by statute to issue proclamations—for example, to declare an Act in force or a state of things to exist, e.g. the existence of an epidemic. He has been given power by statute to legislate for certain Territories of the Commonwealth.

Under the conventions of responsible government obtaining in British Commonwealth countries, the Governor-General's functions are exercised generally on the advice of Ministers of State.

(ii) *Governors of the States.* The Queen is represented in each of the States by a Governor, the office having been constituted by Letters Patent under the Great Seal of the United Kingdom of various dates.

The Governors of the States exercise prerogative powers conferred on them by these Letters Patent, their Commissions of appointment, and the Governor's Instructions given them under the Royal Sign Manual and Signet or other instrument as specified in the Letters Patent. In addition, they have been invested with various statutory functions, either under the State Constitutions, conferred by Imperial Act, or by Act of the Parliament of the State.

A Governor of a State assents in the Queen's name to Bills passed by the Parliament of the State, except those reserved for the Royal assent. The latter include certain classes of Bills which are regulated by the Constitution Acts and by the Governor's Instructions. He administers the prerogative of mercy by the reprieve or pardon of criminal offenders within his jurisdiction, and may remit fines and penalties due to the Crown.

In the performance of his functions generally, particularly those conferred by Statute, the Governor of a State acts on the advice of Ministers of State for the State.

(iii) *Holders of Office.* For the names of the Governors-General since the inception of the Commonwealth and the present State Governors, see § 3, page 73.

4. **The Cabinet and Executive Government.**—(i) *General.* Both in the Commonwealth and in the States, executive government is based on the system which was evolved in Britain in the 18th century, and which is generally known as "Cabinet" or "responsible" government. Its essence is that the head of the State (Her Majesty the Queen, and her representative, the Governor-General or Governor) should perform governmental acts on the advice of her Ministers; that she should choose her principal Ministers of State from members of Parliament belonging to the party, or coalition of parties, commanding a majority in the popular House; that the Ministry so chosen should be collectively responsible to that House for the government of the country; and that the Ministry should resign if it ceases to command a majority there.

The Cabinet system operates chiefly by means of constitutional conventions, customs, or understandings, and through institutions that do not form part of the legal structure of the government at all. The constitutions of the Commonwealth and the States make fuller legal provision for the Cabinet system than the British Constitution does—for example, by requiring that Ministers shall either be, or within a prescribed period become, members of the Legislature. In general, however, the legal structure of the executive government remains the same as it was before the establishment of the Cabinet system.

The executive power of the Commonwealth is exercisable by the Governor-General, and that of the States by the Governor. In each case, he is advised by an Executive Council, which, however, meets only for certain formal purposes, as explained below. The whole policy of a Ministry is, in practice, determined by some or all of the Ministers of State, meeting without the Governor-General or Governor under the chairmanship of the Prime Minister or Premier. This group of Ministers is known as the Cabinet.

(ii) *The Cabinet.* This body does not form part of the legal mechanism of government. Its meetings are private and deliberative. The actual Ministers of the day alone are present, no records of the meetings are made public, and the decisions taken have, in themselves, no legal effect. In Australia, until January, 1956, all Ministers were members of the Cabinet. Since then, however, although in the States all Ministers are members of the Cabinet, the Commonwealth ministry is made up of twelve senior Ministers, who constitute the Cabinet, and other Ministers\* of non-Cabinet rank who attend meetings of the Cabinet only when required, as, for example, when the business of the Cabinet concerns their departments. As Ministers are the leaders of the party or parties commanding a majority in the popular House, the Cabinet substantially controls, in ordinary circumstances, not only the general legislative programme of Parliament, but the whole course of Parliamentary proceedings. In effect, though not in form, the Cabinet, by reason of the fact that all Ministers are

\* Thirteen, as from 4th March, 1964.

members of the Executive Council, is also the dominant element in the executive government of the country. Even in summoning, proroguing or dissolving Parliament, the Governor-General or Governor is usually guided by the advice tendered him by the Cabinet, through the Prime Minister or Premier, though legally the discretion is vested in the Governor-General or Governor himself.

(iii) *The Executive Council.* This body is usually presided over by the Governor-General or Governor, the members thereof holding office during his pleasure. All Ministers of State must be members of the Executive Council. In the Commonwealth, and also in the States of Victoria and Tasmania, Ministers remain members of the Executive Council on leaving office, but are not summoned to attend its meetings, for it is an essential feature of the Cabinet system that attendance should be limited to the Ministers of the day. The meetings of the Executive Council are formal and official in character, and a record of proceedings is kept by the Secretary or Clerk. At Executive Council meetings, the decisions of the Cabinet are (where necessary) given legal form, appointments made, resignations accepted, proclamations issued, and regulations and the like approved.

(iv) *The Appointment of Ministers.* Legally, Ministers hold office during the pleasure of the Governor-General or Governor. In practice, however, the discretion of the Queen's representative in the choice of Ministers is limited by the conventions on which the Cabinet system rests. When a Ministry resigns, the Crown's custom is to send for the leader of the party which commands, or is likely to be able to command, a majority in the popular House, and to commission him, as Prime Minister or Premier, to "form a Ministry"—that is, to nominate other persons to be appointed as Ministers of State and to serve as his colleagues in the Cabinet.

(v) *Ministers in Upper and Lower Houses.* The following table shows the number of Ministers with seats in the Upper or Lower Houses of each Parliament in December, 1963.

AUSTRALIAN PARLIAMENTS: MINISTERS IN UPPER OR LOWER HOUSES, DECEMBER, 1963

Ministers with seats in—	C'wealth (a)	N.S.W.	Vic.	Q'land	S. Aust.	W. Aust.	Tas.	Total
The Upper House ..	5	2	4	(b)	3	2	1	17
The Lower House ..	17	14	10	13	5	8	8	75
<b>Total ..</b>	<b>22</b>	<b>16</b>	<b>14</b>	<b>13</b>	<b>8</b>	<b>10</b>	<b>9</b>	<b>92</b>

(a) By the *Ministers of State Act 1964*, the number of Ministers was increased to 25, of whom 5 were senators, as from 4th March, 1964.

(b) Abolished in 1922.

For the names of the occupants of ministerial office in each of the Parliaments of Australia in March, 1964, see § 3 of this chapter, pages 75–8. Subsequent changes will be found in the Appendix to this volume.

(vi) *Numbers and Salaries of Commonwealth Ministers.* Under sections 65 and 66, respectively, of the Constitution of the Commonwealth, the number of Ministers of State was not to exceed seven, and the annual sum payable for their salaries was not to exceed £12,000, each provision to operate, however, "until the Parliament otherwise provides".

Subsequently, the number and salaries have been increased from time to time, and from 1964 the annual sum payable for salaries has been fixed at £73,350 and the number of Ministers at 25. An additional ministerial allowance of £3,500 a year has been payable to the Prime Minister since 1952, and at the same time an additional ministerial allowance of £1,000 a year was granted to each other Minister. This latter figure was increased, in 1959, to £1,500 a year for senior Ministers and £1,250 a year for junior Ministers.

All amounts payable in the foregoing paragraphs are in addition to amounts payable as Parliamentary allowances (see para. 5 following).

5. *Number and Salary of Members of the Legislatures, Australian Parliaments, December, 1963.*—The following table shows the number and annual salary of members in each of the legislative chambers in December, 1963.



**AUSTRALIAN PARLIAMENTS: MEMBERS AND ANNUAL SALARIES,  
31st DECEMBER, 1963**

Members in—	C'wealth	N.S.W.	Vic.	Q'land	S. Aust.	W. Aust.	Tas.	Total
<b>NUMBER OF MEMBERS</b>								
Upper House ..	60	60	34	(a)	20	30	19	223
Lower House ..	124	94	66	78	39	50	35	486
<b>Total ..</b>	<b>184</b>	<b>154</b>	<b>100</b>	<b>78</b>	<b>59</b>	<b>80</b>	<b>54</b>	<b>709</b>
<b>ANNUAL SALARY (£)</b>								
Upper House ..	(b)2,750	750	(c)2,000	(a)	(d)2,500	(e)2,520	(f)1,850	..
Lower House ..	(b)2,750	(g)2,650	(c)2,000	(h)2,501	(d)2,500	(e)2,520	(f)1,850	..

(a) Abolished in 1922. (b) Plus expense allowances—Senators, £800; Members of the House of Representatives, city electorates, £850, country electorates, £1,050. Certain additional allowances are also provided for holders of parliamentary offices, etc. (c) Plus allowance of £550 for metropolitan, £730 for urban, £850 for inner country and £950 for outer country electorates. (d) Plus allowance of £600 where electorate is less than 50 miles from Adelaide or if a Minister; £800 if more than 50 miles, £950 if more than 200 miles. (e) Plus expense reimbursement ranging from £600 for a Metropolitan member to £950 for a North Province member. (f) Plus allowance according to area of electorate and distance from the capital varying from £250 to £575 in the case of the Legislative Council, and from £725 to £875 in the case of the House of Assembly. (g) Plus allowance varying from £730 to £1,050 according to location of electorate. (h) Plus individual electoral allowances varying between £325 and £1,175. In April, 1964, salaries were raised to £2,650 and electoral allowances to from £600 to £1,525, payable as from 1st July, 1963.

6. **Enactments of the Parliaments.**—In the Commonwealth, all laws are enacted in the name of the Sovereign, the Senate, and the House of Representatives. The subjects with respect to which the Commonwealth Parliament is empowered to make laws are enumerated in the Constitution. In the States other than South Australia and Tasmania, laws are enacted in the name of the Sovereign by and with the consent of the Legislative Council (except in Queensland) and Legislative Assembly. In South Australia and Tasmania, laws are expressed to be enacted in the name of the Governor of the State, with the advice and consent of the Parliament in the case of South Australia, and of the Legislative Council and House of Assembly in the case of Tasmania. Generally, assent to Bills passed by the legislatures is given by the Governor-General or State Governor acting on behalf of, and in the name of, the Sovereign. In certain special cases, Bills are reserved for the Royal assent. The Parliaments of the States are empowered generally, subject to the Commonwealth Constitution, to make laws in and for their respective States, in all cases whatsoever. Subject to certain limitations, they may alter, repeal, or vary their Constitutions. Where a law of a State is inconsistent with a law of the Commonwealth, the latter prevails, and the former is, to the extent of the inconsistency, invalid.

## § 2. Parliaments and Elections

1. **Commonwealth.**—(i) *The Parliament of the Commonwealth of Australia.* A special article describing the Commonwealth Parliament, its functions and procedure, prepared by the Clerk of the Senate and the Clerk of the House of Representatives, appears in Official Year Book No. 49, pages 65–71.

(ii) *Qualifications for Membership and for Franchise—Commonwealth Parliament.* Qualifications necessary for membership of either House of the Commonwealth Parliament are possessed by any British subject, twenty-one years of age or over, who has resided in the Commonwealth for at least three years and who is, or is qualified to become, an elector of the Commonwealth. Qualifications for Commonwealth franchise are possessed by any

British subject, not under twenty-one years of age and not disentitled on other grounds, who has lived in Australia for six months continuously. Residence in a subdivision for a period of one month prior to enrolment is necessary to enable a qualified person to enrol. Enrolment and voting are compulsory except that the compulsory enrolment provisions do not relate to an Aboriginal native of Australia. A member of the Defence Forces on service outside Australia who is a British subject not less than 21 years of age and has lived in Australia for six months continuously is entitled to vote at Commonwealth elections, whether enrolled or not.

The principal reasons for disqualification of persons otherwise eligible as members of either Commonwealth House are:—membership of the other House, allegiance to a foreign power, being attainted of treason, being convicted and under sentence for any offence punishable by imprisonment for one year or longer, being an undischarged bankrupt or insolvent, holding office of profit under the Crown (with certain exceptions), or having pecuniary interest in any agreement with the public service of the Commonwealth except as a member of an incorporated company of more than 25 persons. Persons of unsound mind, attainted of treason, convicted and under sentence for any offence punishable by imprisonment for one year or longer, or persons who are holders of temporary entry permits under the *Migration Act 1958* or are prohibited immigrants under that Act, are excluded from the franchise. In the main, these or similar grounds for disqualification apply also to State Parliament membership and franchise.

(iii) *Commonwealth Parliaments and Elections.* From the establishment of the Commonwealth until 1949, the Senate consisted of 36 members, six being returned by each of the original federating States. The Constitution empowers Parliament to increase or decrease the size of the Parliament, and, as the population of the Commonwealth had more than doubled since its inception, the Parliament passed the *Representation Act 1948* which provided that there shall be ten Senators from each State instead of six, increasing the total to 60 Senators, thus enlarging both Houses of Parliament and providing a representation ratio nearer to the proportion which existed at Federation.

In accordance with the Constitution, the total number of members of the House of Representatives must be as nearly as practicable double that of the Senate. Consequently, in terms of the Constitution and the Representation Act, from the date of the 1949 elections the number of members in the House of Representatives was increased from 74 to 121 (excluding the members for the internal Territories). As the States are represented in the House of Representatives on a population basis, the numbers were increased as follows:—New South Wales—from 28 to 47; Victoria—from 20 to 33; Queensland—from 10 to 18; South Australia—from 6 to 10; and Western Australia—from 5 to 8. Tasmania's representation remained at 5 and the total was increased from 74 to 121. The increase in the number of members of Parliament necessitated a redistribution of seats and a redetermination of electoral boundaries. This was carried out by Distribution Commissioners in each State on a quota basis, but taking into account community or diversity of interest, means of communication, physical features, existing boundaries of divisions and subdivisions, and State electoral boundaries.

The population as disclosed by the Census taken on 30th June, 1954, necessitated a further alteration in representation in the House of Representatives in respect of New South Wales, South Australia, and Western Australia. Representation as from the general election for the House of Representatives on 10th December, 1955, is New South Wales 46, Victoria 33, Queensland 18, South Australia 11, Western Australia 9, Tasmania 5, the total number of members (excluding the members for the internal Territories) being increased from 121 to 122. A redistribution of the States into electoral divisions was effected by Distribution Commissioners appointed for each State.

The population as disclosed by the Census taken on 30th June, 1961, revealed that, under the provisions of the Representation Act, New South Wales, Queensland, and Western Australia would each lose one member in the House of Representatives, while Victoria would gain a member. The Distribution Commissioners' reports were duly laid before both Houses of Parliament, but the Government decided not to proceed with the proposals. The Government has announced that it will amend the Representation Act to ensure that no State will lose a member at a future redistribution.

Since the general election of 1922, the Northern Territory has been represented by one member in the House of Representatives. The *Australian Capital Territory Representation Act 1948* gave similar representation to the Australian Capital Territory as from the elections of 1949. The members for the Territories may join in the debates but are not entitled to vote, except on any proposed law which relates solely to the respective

Territories, on a motion for the disallowance of any ordinance of the Territory or on any amendment to such motion, or on a motion for the disallowance of a regulation under an ordinance. The Commonwealth Parliament, however, when providing for a Legislative Council for the Northern Territory in 1947, relinquished the power to disallow ordinances for that Territory. As from the date of establishment of the Legislative Council, power to disallow ordinances was vested in the Governor-General in Council. In certain cases, ordinances passed must be reserved for the pleasure of the Governor-General.

The Constitution provides for a minimum of five members for each original State. Members of the House of Representatives are elected for the duration of the Parliament, which is limited to three years. At elections for Senators, the whole State constitutes the electorate. For the purpose of elections for the House of Representatives, the State is divided into single electorates corresponding in number with the number of members to which the State is entitled. Further information regarding the Senate and the House of Representatives is given in earlier issues of the Official Year Book.

There have been twenty-four complete Parliaments since Federation. Until 1927, the Parliament met in Melbourne; it now meets in Canberra, the first meeting at Parliament House, Canberra, being opened by the late King George VI., then Duke of York, on 9th May, 1927.

The *Commonwealth Electoral Act* 1948, introduced with the *Representation Act* 1948 to enlarge the Commonwealth Parliament (see p. 67), changed the system of scrutiny and counting of votes in Senate elections from the alternative vote to that of proportional representation. For a description of the system, see Year Book No. 38, pages 82-3. The system of voting for both the Senate and the House of Representatives is preferential.

The twenty-fourth Parliament opened on 20th February, 1962, and was dissolved on 1st November, 1963. Elections for the House of Representatives were held on 30th November, 1963. An election was also held on the same date to fill a single casual vacancy in the Senate for the State of Queensland. Particulars of electors and voting are given in the following table. For particulars of electors enrolled and of electors who voted in the several States and Territories at previous Commonwealth elections, see issue No. 48 and earlier Year Books.

#### COMMONWEALTH ELECTIONS, 30th NOVEMBER, 1963

Particulars	Electors enrolled			Electors who voted			Percentage of electors who voted		
	Males	Females	Total	Males	Females	Total	Males	Females	Total
Senate(a) ..	425,900	429,573	855,473	406,051	409,697	815,748	95.34	95.37	95.36
House of Representatives—									
New South Wales	1,078,611	1,137,272	2,215,883	1,030,944	1,080,081	2,111,025	95.58	94.97	95.27
Victoria ..	792,959	826,036	1,618,995	764,163	795,173	1,559,336	96.37	96.26	96.32
Queensland ..	425,900	429,573	855,473	406,051	409,697	815,748	95.34	95.37	95.36
South Australia	265,926	275,610	541,536	257,289	265,846	523,135	96.75	96.46	96.60
Western Australia ..	200,559	201,924	402,483	190,106	193,607	383,713	94.79	95.88	95.34
Tasmania ..	94,140	96,407	190,547	90,457	92,563	183,020	96.09	96.01	96.05
Australian Capital Territory ..	18,347	17,671	36,018	16,985	16,448	33,433	92.58	93.08	92.82
Australia(b)	2,876,442	2,984,493	5,860,935	2,755,995	2,853,415	5,609,410	95.81	95.61	95.71

(a) Queensland only. (b) Excludes Northern Territory. Total enrolment in the Territory, where there was no contest, was 14,906.

The state of the parties in each House at the end of 1963 was:—*Senate*—Liberal Party, 25; Country Party, 6; Australian Labour Party, 27; Australian Democratic Labour Party, 1; Independent, 1. *House of Representatives*—Liberal Party, 52; Country Party, 20; Australian Labour Party, 52 (including Northern Territory and Australian Capital Territory members with restricted voting rights).

The twenty-fifth Parliament opened on 25th February, 1964.

(iv) *Commonwealth Referendums*. According to Section 128 of the Constitution, any proposed law for the alteration of the Constitution, in addition to being passed by an absolute majority of each House of Parliament, must be submitted to a referendum of the electors

in each State, and must be approved also by a majority of the States and of the electors who voted, before it can be presented for Royal Assent. So far, 24 proposals have been submitted to referendums and the consent of the electors has been received in four cases only, the first in relation to the election of Senators in 1906, the second and third in respect of State Debts—one in 1910 and the other in 1928—and the fourth in respect of Social Services in 1946. Details of the various referendums and the voting thereon were given in previous issues of the Year Book (*see* List of Special Articles preceding General Index to this volume), and a brief summary was given in Official Year Book No. 41 (pp. 67–70).

2. *State Elections.*—(i) *Upper Houses.* The following table shows particulars of the voting at the most recent elections for the Upper Houses or Legislative Councils in the States of Victoria, South Australia, Western Australia and Tasmania. In New South Wales, members of the Legislative Council are elected at simultaneous sittings of the members of both Houses, in Queensland there has been no Legislative Council since 1922, and in Tasmania three members of the Council are elected annually (but four in each sixth year) and the Council cannot be dissolved as a whole.

STATE UPPER HOUSE ELECTIONS

State	Year of latest election	Electors enrolled—whole State			Contested electorates					
					Electors who voted			Percentage of electors who voted		
		Males	Fe-males	Total	Males	Fe-males	Total	Males	Fe-males	Total
Victoria ..	1961	758,029	796,827	1,554,856	717,755	750,107	1,467,862	94.69	94.14	94.41
South Australia ..	1962	(a)	(a)	1,182,118	(a)	(a)	98,786	(a)	(a)	83.56
Western Australia	1962	611,785	49,354	617,212	31,707	14,307	46,014	42.11	40.71	41.66
Tasmania ..	1963	(b)9,998	10,038	20,036	8,691	8,679	17,370	86.93	86.46	86.69

(a) Not available. (b) Total electors enrolled in contested divisions.

(ii) *Lower Houses.* The following table shows particulars of the voting at the most recent election for the Lower House in each State.

STATE LOWER HOUSE ELECTIONS

State	Year of latest election	Electors enrolled—whole State			Contested electorates					
					Electors who voted			Percentage of electors who voted		
		Males	Fe-males	Total	Males	Fe-males	Total	Males	Fe-males	Total
New South Wales	1962	1,060,658	1,113,110	2,173,768	960,514	996,894	1,957,408	94.38	93.52	93.94
Victoria ..	1961	758,029	796,827	1,554,856	717,755	750,107	1,467,862	94.69	94.14	94.41
Queensland ..	1963	416,507	422,816	839,323	388,773	394,261	783,034	94.53	94.06	94.29
South Australia ..	1962	(a)	(a)	644,497	(a)	(a)	417,462	(a)	(a)	93.98
Western Australia	1962	189,517	192,288	381,805	146,788	150,732	297,520	93.26	92.93	93.09
Tasmania ..	1959	89,034	91,310	180,344	85,120	85,439	170,559	95.60	93.57	94.57

(a) Not available. (b) Total electors in contested districts.

Official Year Book No. 49 and earlier issues contain particulars of the voting at elections for both Upper and Lower State Houses in years prior to those shown above.

3. *The Parliament of New South Wales.*—The two Houses of Parliament are the Legislative Council (or Upper House) and the Legislative Assembly (or Lower House).

The Legislative Council consists of 60 members. At elections held every third year a group of 15 members is elected for 12 years. The electoral body comprises the members, for the time being, of the two Houses of Parliament, who record their votes by secret ballot at simultaneous sittings of both Houses. Casual vacancies are filled by a like election. Any man or woman who is entitled to vote at the election of members of the Legislative

Assembly, and has been resident for at least three years in the Commonwealth of Australia, is eligible for election as a member of the Legislative Council. A proposal to abolish the Legislative Council was defeated at a referendum held on 29th April, 1961.

The Legislative Assembly, which is the more important House, consists of 94 members elected on a system of universal adult suffrage, by secret ballot, for a maximum period of three years. Adult British subjects, men and women, are qualified for enrolment as electors when they have resided in the Commonwealth for a period of six months, in the State for three months, and in any subdivision of an electoral district for one month preceding the date of claim for enrolment. Any person qualified to vote at any State election is eligible to be elected to the Legislative Assembly. Casual vacancies may be filled at by-elections.

Persons are disqualified either as parliamentary members or voters for reasons generally the same as those outlined on page 67.

Since the introduction of responsible government in New South Wales, there have been 39 complete Parliaments, the first of which opened on 22nd May, 1856, and was dissolved on 19th December, 1857, while the thirty-ninth was dissolved on 5th February, 1962. The fortieth Parliament opened on 10th April, 1962.

The Legislative Assembly elections of 1920, 1922, and 1925 were contested on the principle of proportional representation, but a reversion to the system of single seats and preferential voting was made at all later appeals to the people. The principle of one elector one vote was adopted in 1894, and that of compulsory enrolment in 1921. Compulsory voting was introduced at the 1930 election. The franchise was extended to women by the *Women's Franchise Act* 1902, and was exercised by them for the first time in 1904.

**4. The Parliament of Victoria.**—Both of the Victorian legislative Chambers are elective bodies, but there is a considerable difference in the number of members of each House, and there was also, until the *Legislative Council Reform Act* 1950, a difference in the qualifications necessary for members and electors. The number of members in the Upper House is 34, two members being returned for each of the 17 provinces, and in the Lower House, 66, one member being returned for each electorate. In the Legislative Council, the tenure of the seat is for six years, except that one-half of the members who are elected for provinces at any general election for the Council are entitled to hold their seats for a period of only three years, one member for each of the 17 provinces retiring every third year. Members of the Legislative Assembly are elected for the duration of Parliament, which is limited to three years.

Qualifications for membership of the Legislative Council are possessed by any adult natural-born subject of the Queen, or by any adult naturalized for five years and resident in Victoria for two years. Entitlement for enrolment as an elector is extended to every adult natural-born or naturalized subject who has resided in Australia for at least six months continuously and in Victoria for at least three months and in any subdivision for at least one month immediately preceding the date of claim for enrolment. These qualifications for membership and electors apply also in respect of the Legislative Assembly. Reasons for disqualification follow the general pattern for Australia (*see* p. 67).

Since the introduction of responsible government in Victoria, there have been forty-one complete Parliaments, the first of which opened on 21st November, 1856, and closed on 9th August, 1859, while the forty-first was dissolved on 1st June, 1961. The forty-second Parliament was opened on 1st August, 1961.

Single voting is observed in elections held for either House, plural voting having been abolished for the Legislative Assembly in 1899 and for the Legislative Council in 1937. A preferential system of voting (*see* Official Year Book No. 6, p. 1182) was adopted for the first time in Victoria at the Assembly election held in November, 1911. The franchise was extended to women by the *Adult Suffrage Act* 1908, while voting at elections was made compulsory for the Legislative Assembly in 1926 and for the Legislative Council in 1935.

**5. The Parliament of Queensland.**—The Legislative Council in Queensland was abolished in 1922. The Legislative Assembly is composed of 78 members, each elected for a period of three years and each representing an electoral district. The State is divided into three zones—metropolitan, provincial cities and country, having 28, 12 and 38 electoral districts respectively. Prior to 1960 there were 75 members and electorates.

With certain exceptions, any person qualified to be enrolled for any electoral district is qualified for election to the Legislative Assembly. Any person not under the age of twenty-one years who is a natural-born or naturalized British subject with continuous residence within Australia for six months, and in an electoral district for three months prior to making

a claim for enrolment, is qualified to enrol as an elector unless disentitled on racial or other grounds. The classes of persons not qualified to be elected are similar to those for other Australian Parliaments (see p. 67), but in Queensland, ministers of religion are not qualified for election.

Since the establishment of responsible government in Queensland, there have been 36 complete Parliaments, the last of which was dissolved on 19th April, 1963. The House met for the first time on 22nd May, 1860, and the Governor delivered the Opening Address on 29th May, 1860. The thirty-seventh Parliament was opened on 20th August, 1963.

The election of 1907 was the first State election in Queensland at which women voted, the right being conferred under the *Elections Acts Amendment Act* 1905. At the elections held in May, 1915, the principle of compulsory voting was introduced for the first time in Australia. A system of contingent or optional preferential voting operated for many years, but, in 1942, this was abolished and that of election of the candidate obtaining the highest number of votes in the electorate adopted. As from the 1963 election, the method of election was changed to preferential voting.

6. **The Parliament of South Australia.**—In this State there is a Legislative Council composed of 20 members and a House of Assembly with 39 members, both Chambers being elective. For the Legislative Council the State is divided into five districts each returning four members. The term of office is six years, two members for each district retiring at the end of every three years. Thirty-nine districts return one member each to the House of Assembly. The maximum duration of the House of Assembly is three years.

Any person who is at least 30 years of age, is a British subject or legally made a denizen of the State and who has resided in the State for at least three years is qualified for membership of the Legislative Council. Qualifications for the Council franchise are that a person is at least 21 years of age, a British subject, an inhabitant of the State with residence for at least six months prior to the registration of the electoral claim, and that he or she has had certain war service, or possesses property qualifications relating to ownership, leaseholding, or inhabitant occupancy. Any person qualified and entitled to be registered as an elector for the House of Assembly is qualified and entitled for election as a member of that House. Qualifications for enrolment as an elector for the House of Assembly are that a person is at least 21 years of age, is a British subject, and has lived continuously in Australia for at least six months, in the State for three months and in an Assembly subdivision for one month immediately preceding the date of claim for enrolment. Provisions in the Constitution for disqualification from membership or from the franchise in respect of either House follow the usual pattern for Australia (see p. 67); in addition, ministers of religion are disqualified from membership of either House.

Since the inauguration of responsible government in South Australia, there have been 36 complete Parliaments, the first of which was opened on 22nd April, 1857. The thirty-sixth Parliament closed on 28th February, 1962, and the thirty-seventh was opened on 12th April, 1962.

South Australia was the first of the States to grant women's suffrage (under the *Constitution Amendment Act* 1894), the franchise being exercised by women for the first time at the Legislative Assembly election on 25th April, 1896. Compulsory voting for the House of Assembly was first adopted at the 1944 election. A system of preferential voting is in operation.

7. **The Parliament of Western Australia.**—In this State, both Chambers are elective. For the Legislative Council, there are 30 members, each of the ten provinces returning three members. One member for each province retires at the end of every two years. At each biennial election, the member elected holds office for a term of six years, and automatically retires at the end of that period. The Legislative Assembly is composed of 50 members, one member being returned by each electoral district. Members of the Legislative Assembly are elected for the duration of the Parliament, normally three years.

Qualifications required for membership of the Legislative Council are the age of at least 30 years, residence in Western Australia for a minimum of two years, being a natural-born or naturalized British subject and being enrolled, or qualified for enrolment, as an elector at Legislative Assembly elections. Qualifications required for Council franchise are the age of at least 21 years, residence in Western Australia for a minimum of six months, being a natural-born or naturalized British subject, and possessing certain property qualifications relating to freehold, leasehold, or householder occupancy; Aboriginal natives of Australia who satisfy these requirements are entitled to enrolment as electors. Qualifications required for membership of the Legislative Assembly are the age of at least 21 years, residence in

Western Australia for a minimum of twelve months, being a natural-born or naturalized British subject and being enrolled, or qualified for enrolment, as an elector at Legislative Assembly elections. Qualifications required for the franchise are the age of at least 21 years, residence in Western Australia for a minimum of six months and in the electoral district for which enrolment is claimed for a continuous period of three months, and being a natural-born or naturalized British subject. Aboriginal natives of Australia may, but in general are not required to, enrol. Persons may be disqualified as members or voters for reasons similar to those for other Australian Parliaments (*see p. 67*).

Since the establishment of responsible government in Western Australia, there have been 23 complete Parliaments, the first of which was opened on 30th December, 1890. The twenty-third Parliament dissolved on 31st January, 1962, and the twenty-fourth was opened on 26th July, 1962. A preferential system of voting is in use in Western Australia.

Woman's suffrage was granted by the *Constitution Acts Amendment Act 1899*. The first woman member to be elected to an Australian Parliament was returned at the 1921 election in this State. Voting for the Legislative Assembly was made compulsory in December, 1936, the first elections for which the provision was in force being those held on 18th March, 1939.

**8. The Parliament of Tasmania.**—In Tasmania, there are two legislative Chambers, the Legislative Council and the House of Assembly, both bodies being elective. In accordance with the *Constitution Act 1946*, the Council now consists of nineteen members, elected for six years and returned from nineteen divisions. Three members retire annually (except in the 1953 elections and in each sixth successive year thereafter, when four retire) and the Council cannot be dissolved as a whole. There are five House of Assembly divisions, corresponding to the Commonwealth electoral divisions, each returning seven members elected under a system of proportional representation which first came into force at the 1909 elections. By the *Constitution Act 1936*, the life of the Assembly was extended from three to five years.

Persons qualified for election to the Legislative Council must be at least 25 years of age and qualified to vote as Council electors, have been resident in Tasmania for a period of five years at any one time or at least two years immediately preceding the election, and be natural-born subjects of the Queen or naturalized for at least five years. An elector for the Council must be at least 21 years of age, a natural-born or naturalized subject and resident in Tasmania for a period of twelve months, with certain freehold or occupancy property qualifications, or the spouse of a person qualified to vote as the owner or occupier of property, or with certain academic, professional, defence force, or war service qualifications. For the House of Assembly, members must be at least 21 years of age, have been resident in Tasmania for a period of five years at any one time or for a period of two years immediately preceding the election, and be natural-born subjects of the Queen or naturalized for a period of five years. Electors must be at least 21 years of age, natural-born or naturalized subjects and resident in Tasmania for a period of six months continuously. Reasons for disqualification of members or voters are similar to those for other Australian Parliaments (*see p. 67*).

The first Tasmanian Parliament opened on 2nd December, 1856, and closed on 8th May, 1861. There have been 32 complete Parliaments since the inauguration of responsible government, the thirty-second having been dissolved on 9th April, 1959. The thirty-third Parliament was opened on 2nd June, 1959.

The suffrage was granted to women under the *Constitution Amendment Act 1903* and compulsory voting for both Houses came into force on the passing of the *Electoral Act* in 1928. The system of voting is, for the Council, by single transferable vote, and for the Assembly, proportional representation by single transferable vote.

### § 3. Administration and Legislation

**1. The Commonwealth Parliaments.**—The first Parliament of the Commonwealth was convened by proclamation dated 29th April, 1901, by His Excellency the Marquis of Linlithgow, then Earl of Hopetoun, Governor-General. It was opened on 9th May, 1901, by H.R.H. the Duke of Cornwall and York, who had been sent to Australia for that purpose by His Majesty the King. The Rt. Hon. Sir Edmund Barton, G.C.M.G., K.C., was Prime Minister.

The following table shows the number and duration of Parliaments since federation.

## COMMONWEALTH PARLIAMENTS

Number of Parliament	Date of opening	Date of dissolution
First .. .. .	9th May, 1901 .. ..	23rd November, 1903
Second .. .. .	2nd March, 1904 .. ..	5th November, 1906
Third .. .. .	20th February, 1907 .. ..	19th February, 1910
Fourth .. .. .	1st July, 1910 .. ..	23rd April, 1913
Fifth .. .. .	9th July, 1913 .. ..	30th July, 1914(a)
Sixth .. .. .	8th October, 1914 .. ..	26th March, 1917
Seventh .. .. .	14th June, 1917 .. ..	3rd November, 1919
Eighth .. .. .	26th February, 1920 .. ..	6th November, 1922
Ninth .. .. .	28th February, 1923 .. ..	3rd October, 1925
Tenth .. .. .	13th January, 1926 .. ..	9th October, 1928
Eleventh .. .. .	9th February, 1929 .. ..	16th September, 1929
Twelfth .. .. .	20th November, 1929 .. ..	27th November, 1931
Thirteenth .. .. .	17th February, 1932 .. ..	7th August, 1934
Fourteenth .. .. .	23rd October, 1934 .. ..	21st September, 1937
Fifteenth .. .. .	30th November, 1937 .. ..	27th August, 1940
Sixteenth .. .. .	20th November, 1940 .. ..	7th July, 1943
Seventeenth .. .. .	23rd September, 1943 .. ..	16th August, 1946
Eighteenth .. .. .	6th November, 1946 .. ..	31st October, 1949
Nineteenth .. .. .	22nd February, 1950 .. ..	19th March, 1951(a)
Twentieth .. .. .	12th June, 1951 .. ..	21st April, 1954
Twenty-first .. .. .	4th August, 1954 .. ..	4th November, 1955
Twenty-second .. .. .	15th February, 1956 .. ..	14th October, 1958
Twenty-third .. .. .	17th February, 1959 .. ..	2nd November, 1961
Twenty-fourth .. .. .	20th February, 1962 .. ..	1st November, 1963
Twenty-fifth .. .. .	25th February, 1964 .. ..	

(a) A dissolution of both the Senate and the House of Representatives was granted by the Governor-General, acting on the advice of the Cabinet and under section 57 of the Constitution.

2. **Governors-General and Commonwealth Ministries.**—(i) *Governors-General.* The following statement shows the names of the Governors-General since the inception of the Commonwealth.

## GOVERNORS-GENERAL

- Rt. Hon. JOHN ADRIAN LOUIS, EARL OF HOPETOUN (afterwards MARQUIS OF LINLITHGOW), P.C., K.T., G.C.M.G., G.C.V.O. From 1st January, 1901, to 9th January, 1903.
- Rt. Hon. HALLAM, BARON TENNYSON, P.C., G.C.M.G. From 17th July, 1902, to 9th January, 1903, (Acting).
- Rt. Hon. HALLAM, BARON TENNYSON, P.C., G.C.M.G. From 9th January, 1903, to 21st January, 1904.
- Rt. Hon. HENRY STAFFORD, BARON NORTHCOTE, P.C., G.C.M.G., G.C.I.E., C.B. From 21st January, 1904, to 9th September, 1908.
- Rt. Hon. WILLIAM HUMBLE, EARL OF DUDLEY, P.C., G.C.B., G.C.M.G., G.C.V.O. From 9th September, 1908, to 31st July, 1911.
- Rt. Hon. THOMAS, BARON DENMAN, P.C., G.C.M.G., K.C.V.O. From 31st July, 1911, to 18th May, 1914.
- Rt. Hon. SIR RONALD CRAUFURD MUNRO FERGUSON (afterwards VISCOUNT NOVAR OF RAITH), G.C.M.G. From 18th May, 1914, to 6th October, 1920.
- Rt. Hon. HENRY WILLIAM, BARON FORSTER OF LEFE, P.C., G.C.M.G. From 6th October, 1920, to 8th October, 1925.
- Rt. Hon. JOHN LAWRENCE, BARON STONEHAVEN, P.C., G.C.M.G., D.S.O. From 8th October, 1925, to 22nd January, 1931.
- Rt. Hon. SIR ISAAC ALFRED ISAACS, P.C., G.C.B., G.C.M.G., K.C. From 22nd January, 1931, to 23rd January, 1936.
- General the Rt. Hon. ALEXANDER GORE ARKWRIGHT, BARON GOWRIE, V.C., P.C., G.C.M.G., C.B., D.S.O., K.G.St.J. From 23rd January, 1936, to 30th January, 1945.
- His Royal Highness PRINCE HENRY WILLIAM FREDERICK ALBERT, DUKE OF GLOUCESTER, EARL OF ULSTER AND BARON CULLODEN, K.G., K.T., K.P., P.C., G.C.B., G.C.M.G., G.C.V.O., General in the Army, Air Chief Marshal in the Royal Air Force, One of His Majesty's Personal Aides-de-Camp. From 30th January, 1945 to 11th March, 1947.
- Rt. Hon. SIR WILLIAM JOHN MCKELL, G.C.M.G., Q.C. From 11th March, 1947, to 8th May, 1953.
- Field-Marshal Sir WILLIAM JOSEPH SLIM (afterwards VISCOUNT SLIM OF YARRALUMLA), K.G., G.C.B., G.C.M.G., G.C.V.O., G.B.E., D.S.O., M.C., K.St.J. From 8th May, 1953, to 2nd February, 1960.
- Rt. Hon. WILLIAM SHEPHERD, VISCOUNT DUNROSSIL, P.C., G.C.M.G., M.C., K.St.J. Q.C. From 2nd February, 1960, to 3rd February, 1961.
- Rt. Hon. WILLIAM PHILIP, VISCOUNT DE L'ISLE, V.C., P.C., G.C.M.G., G.C.V.O., K.St.J. From 3rd August, 1961.



(ii) *Administrators.* In addition to the holders of the office of Governor-General listed above, certain persons have, from time to time, been appointed as Administrator of the Government of the Commonwealth during the absence from Australia or illness of the Governor-General. The following is a list of such appointments.

	Term of office
Rt. Hon. Frederic John Napier, Baron Chelmsford, K.C.M.G.	21st December, 1909, to 27th January, 1910
Lieut.-Colonel the Rt. Hon. Arthur Herbert Tennyson, Baron Somers, K.C.M.G., D.S.O., M.C.	3rd October, 1930, to 22nd January, 1931
Captain the Rt. Hon. William Charles Arcedeckne Vanneck, Baron Huntingfield, K.C.M.G., K.St.J.	29th March, 1938, to 24th September, 1938
Major-General Sir Winston Joseph Dugan, G.C.M.G., C.B., D.S.O.	5th September, 1944, to 30th January, 1945; 18th January, 1947, to 11th March, 1947
General* Sir John Northcott, K.C.M.G., C.B., M.V.O.†	19th July, 1951, to 14th December, 1951; 30th July, 1956, to 22nd October, 1956
General Sir Reginald Alexander Dallas Brooks, K.C.B., G.C.M.G., K.C.V.O., D.S.O. K.St.J.	8th January, 1959, to 16th January, 1959; 3rd February, 1961, to 3rd August, 1961; 5th June, 1962, to 4th October, 1962; 21st November, 1962, to 19th December, 1962

(iii) *Commonwealth Ministries.* (a) *Names and Tenure of Office, 1901 to 1964.* The following list shows the name of each Commonwealth Ministry to hold office since 1st January, 1901, and the limits of its term of office.

#### COMMONWEALTH MINISTRIES

- (i) BARTON MINISTRY, 1st January, 1901, to 24th September, 1903.
- (ii) DEAKIN MINISTRY, 24th September, 1903, to 27th April, 1904.
- (iii) WATSON MINISTRY, 27th April, 1904, to 17th August, 1904.
- (iv) REID-MCLEAN MINISTRY, 18th August, 1904, to 5th July, 1905.
- (v) DEAKIN MINISTRY, 5th July, 1905, to 13th November, 1908.
- (vi) FISHER MINISTRY, 13th November, 1908, to 1st June, 1909.
- (vii) DEAKIN MINISTRY, 2nd June, 1909, to 29th April, 1910.
- (viii) FISHER MINISTRY, 29th April, 1910, to 24th June, 1913.
- (ix) COOK MINISTRY, 24th June, 1913, to 17th September, 1914.
- (x) FISHER MINISTRY, 17th September, 1914, to 27th October, 1915.
- (xi) HUGHES MINISTRY, 27th October, 1915, to 14th November, 1916.
- (xii) HUGHES MINISTRY, 14th November, 1916, to 17th February, 1917.
- (xiii) HUGHES MINISTRY, 17th February, 1917, to 10th January, 1918.
- (xiv) HUGHES MINISTRY, 10th January, 1918, to 9th February, 1923.
- (xv) BRUCE-PAGE MINISTRY, 9th February, 1923, to 22nd October, 1929.
- (xvi) SCULLIN MINISTRY, 22nd October, 1929, to 6th January, 1932.
- (xvii) LYONS MINISTRY, 6th January, 1932, to 7th November, 1938.
- (xviii) LYONS MINISTRY, 7th November, 1938, to 7th April, 1939.
- (xix) PAGE MINISTRY, 7th April, 1939, to 26th April, 1939.
- (xx) MENZIES MINISTRY, 26th April, 1939, to 14th March, 1940.
- (xxi) MENZIES MINISTRY, 14th March, 1940, to 28th October, 1940.
- (xxii) MENZIES MINISTRY, 28th October, 1940, to 29th August, 1941.
- (xxiii) FADDEN MINISTRY, 29th August, 1941, to 7th October, 1941.
- (xxiv) CURTIN MINISTRY, 7th October, 1941, to 21st September, 1943.
- (xxv) CURTIN MINISTRY, 21st September, 1943, to 6th July, 1945.
- (xxvi) FORDE MINISTRY, 6th July, 1945, to 13th July, 1945.
- (xxvii) CHIFLEY MINISTRY, 13th July, 1945, to 1st November, 1946.
- (xxviii) CHIFLEY MINISTRY, 1st November, 1946, to 19th December, 1949.

\* Lieutenant-General Sir John Northcott was granted honorary rank of General while administering the Government of the Commonwealth. † K.C.V.O., 1954.

COMMONWEALTH MINISTRIES—*continued*

- (xxix) MENZIES MINISTRY, 19th December, 1949, to 11th May, 1951.  
 (xxx) MENZIES MINISTRY, 11th May, 1951, to 11th January, 1956.  
 (xxxi) MENZIES MINISTRY, 11th January, 1956, to 10th December, 1958.  
 (xxxii) MENZIES MINISTRY, 10th December, 1958, to 18th December, 1963.  
 (xxxiii) MENZIES MINISTRY, 18th December, 1963.

(b) *Names of Holders of Ministerial Office, to 31st March, 1964.* In Official Year Book No. 17, 1924, the names are given of each Ministry up to the Bruce-Page Ministry (9th February, 1923, to 22nd October, 1929), together with the names of the successive holders of portfolios therein, and issue No. 39 contains a list, commencing with the Bruce-Page Ministry, which covers the period between the date on which it assumed power, 9th February, 1923, and 31st July, 1951, showing the names of all persons who held office in each Ministry during that period.

This issue shows only particulars of the latest Menzies Ministry, as constituted on 31st March, 1964.

## MENZIES MINISTRY—from 18th December, 1963

(Portfolios from 4th March, 1964)

(The State in which each Minister's electorate is situated is shown in parenthesis.)

## \*Prime Minister—

THE RT. HON. SIR ROBERT MENZIES,  
K.T., C.H., Q.C., M.P. (Vic.)

## \*Minister for Trade and Industry—

THE RT. HON. J. McEWEN, M.P. (Vic.)

## \*Treasurer—

THE RT. HON. H. E. HOLT, M.P. (Vic.)

\*Vice-President of the Executive Council; and  
Minister for National Development—SENATOR THE HON. SIR WILLIAM  
SPOONER, K.C.M.G., M.M. (N.S.W.)

## \*Minister for Defence—

THE HON. P. M. C. HASLUCK, M.P.  
(W.A.)

## \*Minister for Labour and National Service—

THE HON. W. McMAHON, M.P.  
(N.S.W.)

## \*Minister for External Affairs—

THE HON. SIR GARFIELD BARWICK, Q.C.,  
M.P. (N.S.W.)

## \*Minister for Primary Industry—

THE HON. C. F. ADERMANN, M.P.  
(Qld.)

## \*Minister for Civil Aviation—

SENATOR THE HON. S. D. PALTRIDGE  
(W.A.)

## \*Minister for Health—

SENATOR THE HON. H. W. WADE  
(Vic.)

## \*Minister for Supply—

THE HON. A. FAIRHALL, M.P. (N.S.W.)

## \*Minister for Customs and Excise—

SENATOR THE HON. N. H. D. HENTY  
(Tas.)

*Minister for Works and assisting the Prime Minister in Commonwealth activities in relation to research and education which fall within the Prime Minister's Department—*

SENATOR THE HON. J. G. GORTON  
(Vic.)

*Minister for Shipping and Transport—*

THE HON. G. FREETH, M.P. (W.A.)

*Postmaster-General—*

THE HON. A. S. HULME, M.P. (Qld.)

*Minister for Immigration—*

THE HON. H. F. OPPERMAN, O.B.E.,  
M.P. (Vic.)

*Minister for Social Services—*

THE HON. H. S. ROBERTON, M.P.  
(N.S.W.)

*Minister for Repatriation—*

THE HON. R. W. C. SWARTZ, M.B.E.,  
E.D., M.P. (Qld.)

*Minister for Air—*

THE HON. D. E. FAIRBAIRN, D.F.C.,  
M.P. (N.S.W.)

*Attorney-General—*

THE HON. B. M. SNEDDEN, M.P. (Vic.)

*Minister for Territories—*

THE HON. C. E. BARNES, M.P. (Qld.)

*Minister for Housing—*

THE HON. L. H. E. BURY, M.P.  
(N.S.W.)

*Minister for the Army and assisting the Treasurer—*

THE HON. A. J. FORBES, M.C., M.P.  
(S.A.)

*Minister for the Interior—*

THE HON. J. D. ANTHONY, M.P.  
(N.S.W.)

*Minister for the Navy—*

THE HON. F. C. CHANEY, A.F.C., M.P.  
(W.A.)

\* Minister in the Cabinet.

(iv) *Commonwealth Ministers of State.* In Official Year Book No. 38, a statement is included showing the names of the Ministers of State who had administered the several Departments during the period 1st April, 1925, to 31st December, 1949 (pp. 74-9). This is in continuation of a similar statement covering the period from the inauguration of the Commonwealth Government to 1925 which appears in Official Year Book No. 18.

3. **Governors and State Ministers.**—The names of the Governors and members of the Ministries in each State in March, 1964, are shown in the following statement.

#### GOVERNORS AND STATE MINISTERS

##### NEW SOUTH WALES

*Governor*—LIEUT.-GENERAL SIR ERIC WINSLOW WOODWARD, K.C.M.G., K.C.V.O., C.B., C.B.E., D.S.O.

*Ministry (from 14th March, 1962)*

*Premier*—

THE HON. R. J. HEFFRON, M.L.A.

*Deputy Premier, Treasurer and Minister for Industrial Development and Decentralization*—

THE HON. J. B. RENSHAW, M.L.A.

*Attorney-General and Vice-President of the Executive Council*—

THE HON. R. R. DOWNING, M.L.C.

*Chief Secretary and Minister for Tourist Activities*—

THE HON. C. A. KELLY, M.L.A.

*Minister for Local Government and Minister for Highways*—

THE HON. P. D. HILLS, M.L.A.

*Minister for Health*—

THE HON. W. F. SHEAHAN, Q.C., M.L.A.

*Minister for Child Welfare and Minister for Social Welfare*—

THE HON. F. H. HAWKINS, M.L.A.

*Minister for Agriculture and Minister for Conservation*—

THE HON. A. G. ENTICKNAP, M.L.A.

*Minister for Housing and Minister for Co-operative Societies*—

THE HON. A. LANDA, M.L.A.

*Minister for Education*—

THE HON. E. WETHERELL, M.L.A.

*Minister for Labour and Industry*—

THE HON. J. J. MALONEY, M.L.C.

*Minister for Mines*—

THE HON. J. B. SIMPSON, M.L.A.

*Minister for Transport*—

THE HON. J. M. A. McMAHON, M.L.A.

*Minister for Public Works*—

THE HON. P. N. RYAN, M.L.A.

*Minister of Justice*—

THE HON. N. J. MANNIX, M.L.A.

*Minister for Lands*—

THE HON. K. C. COMPTON, M.L.A.

##### VICTORIA

*Governor*—MAJOR-GENERAL SIR ROHAN DELACOMBE, K.C.M.G., K.B.E., C.B., D.S.O.

*Ministry (from 7th June, 1955)*

*(Portfolios as from 4th September, 1962)*

*Premier and Treasurer*—

THE HON. H. E. BOLTE, M.P.

*Chief Secretary and Attorney-General*—

THE HON. A. G. RYLAH, E.D., M.P.

*Minister of Agriculture and a Vice-President of the Board of Land and Works*—

THE HON. G. L. CHANDLER, C.M.G., M.L.C.

*Minister of Water Supply and Minister of Mines*—

THE HON. W. J. MIBUS, M.P.

*Minister of Education*—

THE HON. J. S. BLOOMFIELD, M.P.

*Commissioner of Public Works*—

THE HON. H. R. PETTY, M.P.

*Commissioner of Crown Lands and Survey, Minister of Soldier Settlement and Minister for Conservation*—

THE HON. K. H. TURNBULL, M.P.

*Minister of Labour and Industry and Minister of Electrical Undertakings*—

THE HON. G. O. REID, M.P.

*Minister for Local Government*—

THE HON. M. V. PORTER, M.P.

*Minister of State Development*—

THE HON. A. J. FRASER, M.C., M.P.

*Minister of Housing and Minister of Forests*—

THE HON. L. H. S. THOMPSON, M.L.C.

*Minister of Health*—

THE HON. R. W. MACK, M.L.C.

*Minister of Transport*—

THE HON. E. L. MEAGHER, M.P.

*Minister of Immigration*—

THE HON. R. J. HAMER, E.D., M.L.C.

GOVERNORS AND STATE MINISTERS—*continued*

## QUEENSLAND

*Governor*—COLONEL SIR HENRY ABEL SMITH, K.C.M.G., K.C.V.O., D.S.O.

*Ministry (from 14th June, 1963)*

*(Portfolios as from 26th September, 1963)*

*Premier and Minister for State Development and Vice-President of the Executive Council—*

THE HON. G. F. R. NICKLIN, M.M., M.L.A.

*Minister for Industrial Development—*

THE HON. A. W. MUNRO, M.L.A.

*Minister for Education—*

THE HON. J. C. A. PIZZEY, M.L.A.

*Treasurer—*

THE HON. T. A. HILEY, M.L.A.

*Minister for Mines and Main Roads—*

THE HON. E. EVANS, M.L.A.

*Minister for Health—*

THE HON. H. W. NOBLE, M.L.A.

*Minister for Transport—*

THE HON. G. W. W. CHALK, M.L.A.

*Minister for Lands—*

THE HON. A. R. FLETCHER, M.L.A.

*Minister for Local Government and Conservation—*

THE HON. H. RICHTER, M.L.A.

*Minister for Labour and Industry—*

THE HON. A. T. DEWAR, M.L.A.

*Minister for Primary Industries—*

THE HON. J. A. ROW, M.L.A.

*Minister for Works and Housing—*

THE HON. J. BJELKE-PETERSEN, M.L.A.

*Minister for Justice and Attorney-General—*

THE HON. P. R. DELAMOTHE, O.B.E., M.L.A.

## SOUTH AUSTRALIA

*Governor*—LIEUT.-GENERAL SIR EDRIC MONTAGUE BASTYAN, K.C.M.G., K.C.V.O., K.B.E., C.B.

*Ministry (from 15th May, 1944)*

*(Portfolios as from 28th February, 1963)*

*Premier, Treasurer and Minister of Immigration—*

THE HON. SIR THOMAS PLAYFORD, G.C.M.G., M.P.

*Chief Secretary, Minister of Health and Minister of Mines—*

THE HON. SIR LYELL MCEWIN, K.B.E., M.L.C.

*Attorney-General and Minister of Labour and Industry—*

THE HON. C. D. ROWE, M.L.C.

*Minister of Works, Minister of Marine, and Minister of Aboriginal Affairs—*

THE HON. G. G. PEARSON, M.P.

*Minister of Agriculture and Minister of Forests—*

THE HON. D. N. BROOKMAN, M.P.

*Minister of Education—*

THE HON. SIR BADEN PATTINSON, K.B.E., M.P.

*Minister of Local Government, Minister of Roads and Minister of Railways—*

THE HON. N. L. JUDE, M.L.C.

*Minister of Lands, Minister of Repatriation and Minister of Irrigation—*

THE HON. P. H. QUIRKE, M.P.

## WESTERN AUSTRALIA

*Governor*—MAJOR-GENERAL SIR DOUGLAS ANTHONY KENDREW, K.C.M.G., C.B., C.B.E., D.S.O.

*Ministry (from 12th April, 1962)*

*Premier, Treasurer and Minister for Tourists—*

THE HON. D. BRAND, M.L.A.

*Deputy Premier, Minister for Agriculture and Electricity—*

THE HON. C. D. NALDER, M.L.A.

*Minister for Industrial Development, Railways and the North West—*

THE HON. C. W. M. COURT, O.B.E., M.L.A.

*Minister for Education and Native Welfare—*

THE HON. E. H. M. LEWIS, M.L.A.

*Minister for Works, Water Supplies and Labour—*

THE HON. G. P. WILD, M.B.E., M.L.A.

*Minister for Mines, Housing and Justice—*

THE HON. A. F. GRIFFITH, M.L.C.

*Minister for Lands, Forests and Immigration—*

THE HON. W. S. BOVELL, M.L.A.

*Chief Secretary and Minister for Health and Fisheries—*

THE HON. R. HUTCHINSON, D.F.C., M.L.A.

*Minister for Local Government, Town Planning and Child Welfare—*

THE HON. L. A. LOGAN, M.L.C.

*Minister for Transport and Police—*

THE HON. J. F. CRAIG, M.L.A.

GOVERNORS AND STATE MINISTERS—*continued*

## TASMANIA

*Governor*—LIEUT.-GENERAL SIR CHARLES HENRY GAIRDNER, K.C.M.G., K.C.V.O., K.B.E., C.B.

*Ministry (from 19th September, 1961)*

<i>Premier, Treasurer and Minister for Mines—</i>	<i>Chief Secretary—</i>
THE HON. E. E. REECE, M.H.A.	THE HON. J. B. CONNOLLY, M.L.C.
<i>Deputy Premier and Attorney-General—</i>	<i>Minister for Housing and Forests—</i>
THE HON. R. F. FAGAN, M.H.A.	THE HON. S. V. WARD, M.H.A.
<i>Minister for Education—</i>	<i>Minister for Transport and Police—</i>
THE HON. W. A. NEILSON, M.H.A.	THE HON. H. J. MCLOUGHLIN, M.H.A.
<i>Minister for Lands and Works—</i>	<i>Minister for Health—</i>
THE HON. D. A. CASHION, M.H.A.	THE HON. W. D. MCNEIL, M.H.A.
<i>Minister for Agriculture and Tourists—</i>	
THE HON. A. C. ATKINS, M.H.A.	

4. **Leaders of the Opposition, Commonwealth and State Parliaments.**—The Leader of the Opposition plays an important part in the Party system of government which operates in the Australian Parliaments. The following list gives the names of the holders of this position in each of the Parliaments in March, 1964.

Leader of the Opposition, Commonwealth and State Parliaments—

*Commonwealth*—The Hon. A. A. Calwell, M.P.

*New South Wales*—R. W. Askin, M.L.A.

*Victoria*—The Hon. C. P. Stoneham, M.P.

*Queensland*—J. E. Duggan, M.L.A.

*South Australia*—F. H. Walsh, M.P.

*Western Australia*—The Hon. A. R. G. Hawke, M.L.A.

*Tasmania*—The Hon. W. A. Bethune, M.H.A.

5. **The Course of Legislation.**—The actual legislation by the Commonwealth Parliament during 1963 is indicated in alphabetical order in *The Acts of the Parliament of the Commonwealth of Australia passed during the year 1963 in the Second Session of the Twenty-fourth Parliament of the Commonwealth, with Appendix, Tables and Index.*

A chronological table of Acts passed from 1901 to 1963 showing how they are affected by subsequent legislation or lapse of time is also given, and, further, a table of Commonwealth legislation passed from 1901 to 1963 in relation to the several provisions of the Constitution is furnished in the same volume. Reference should be made to these for complete information.

6. **Legislation during 1963.**—The Acts passed by the Commonwealth Parliament during the year 1963 are listed hereunder. In most cases the title of the Act indicates the general scope of the Act, but in some instances brief explanatory notes have been added. Appropriate chapters of this Year Book should be referred to for further information which may be available there.

The total enactments of the Commonwealth Parliament for a number of years at fairly even intervals since 1901 show a general increase. Seventeen Acts were passed in 1901, 36 in 1914, 38 in 1927, 87 in 1939, and 103 in 1963.

*Commonwealth Legislation passed during 1963.*

*Acts Interpretation Act 1963* (No. 19) defined the method of presentation of papers to Parliament and amended sections of the *Acts Interpretation Act 1901-1957* dealing with the disallowance of regulations by Parliament.

*Air Accidents (Commonwealth Liability) Act 1963* (No. 74) provided for payments up to £7,500 to dependants of persons killed or injured in air accidents when travelling as passengers on Commonwealth business or at Commonwealth expense.

*Air Navigation Act 1963* (No. 8) approved the ratification of a protocol amending the Chicago Convention of the International Civil Aviation Organization in respect of provisions for holding extraordinary meetings of the Assembly of the Organization.

*Air Navigation (Charges) Act 1963* (No. 97) increased charges payable by aircraft for the use of aerodrome facilities.

*Appropriation Act (No. 2) 1962-63* (No. 13); *Appropriation Act 1963-64* (No. 59).

*Appropriation (Works and Services) Act (No. 2) 1962-63* (No. 14); *Appropriation (Works and Services) Act 1963-64* (No. 60).

*Australian Antarctic Territory Act 1963* (No. 20).\*

*Australian National University Act 1963* (No. 9) empowered the Australian National University to make astronomical and meteorological observations in any part of the Commonwealth.

*Blowering Water Storage Works Agreement 1963* (No. 95) approved the agreement between the Commonwealth and the State of New South Wales for the construction of water storage works on the Tumut River at Blowering (see Chapter VIII, Water Conservation and Irrigation).

*Broadcasting and Television Act 1963* (No. 82) amended the *Broadcasting and Television Act 1942-1962* to provide for the licensing of television translator stations.

*Canned Fruit Excise Act 1963* (No. 92) provided the machinery arrangements to enable the Department of Customs and Excise to collect an excise duty on canned fruit (see also *Excise Tariff (No. 2) 1963* (No. 91), p. 80).

*Canned Fruits Export Charges Act 1963* (No. 90).

*Canned Fruits Export Marketing Act 1963* (No. 89) repealed the *Canned Fruits Export Control Act 1926-1938* and reconstituted the Australian Canned Fruits Board with additional members and extended powers. It provided, also, for the collection of a levy on the production of canned deciduous fruit sold on the domestic market to provide funds to be administered by the Board for assistance to the industry in the marketing of canned fruit. (Associated legislation is Acts 90 and 92 above and 91, p. 80.)

*Chowilla Reservoir Agreement Act 1963* (No. 100) approved the agreement between the Commonwealth and the State of New South Wales with respect to the construction of a reservoir at Chowilla (see Chapter VIII, Water Conservation and Irrigation).

*Christmas Island Act 1963* (No. 21); *Cocos (Keeling) Islands Act 1963* (No. 22).\*

*Commonwealth Banks Act 1963* (No. 57) provided for the payment of an additional £5,000,000 towards the capital of the Commonwealth Development Bank.

*Commonwealth Inscribed Stock Act 1963* (No. 18) amended the *Commonwealth Inscribed Stock Act 1911-1946* to enable subscribers to special bonds and treasury notes to have their securities inscribed and to increase to £600 the amount of a deceased person's stock transmittable without probate.

*Copper Bounty Act 1963* (No. 93) extended the operation of the *Copper Bounty Act 1958-1960* for a period of two years from January, 1964.

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\* These Acts make provision in respect of Territory legislation similar to that made by the *Acts Interpretation Act 1963* in respect of Commonwealth Acts.

- Copyright Act 1963* (No. 7) amended the *Copyright Act 1912–1950* in respect of the procedure governing submissions in cases of voluntary arbitration in disputes concerning the public performance of literary, dramatic, musical or other works.
- Crimes (Aircraft) Act 1963* (No. 64) provided that where a crime is committed on an aircraft engaged in a flight between two States or Territories the relevant law of the Australian Capital Territory shall apply, and provided penalties for the taking over or destruction of aircraft or endangering the safety of aircraft.
- Currency Act 1963* (No. 67) repealed the *Coinage Act 1909–1947* and established the dollar as the monetary unit of Australia. It provided conversion tables from pence to cents, for legal tender and arrangements for the introduction of the decimal currency system (see Chapter XXI. Private Finance).
- Customs Act 1963* (No. 48); *Customs Tariff 1963* (No. 10); *Customs Tariff (No. 2) 1963* (No. 37); *Customs Tariff (No. 3) 1963* (No. 42); *Customs Tariff (Canada Preference) 1963* (No. 11); *Customs Tariff (Canada Preference) (No. 2) 1963* (No. 38); *Customs Tariff (Federation of Rhodesia and Nyasaland Preference) 1963* (No. 40); *Customs Tariff (New Zealand Preference) (No. 1) 1963* (No. 12); *Customs Tariff (New Zealand Preference) (No. 2) 1963* (No. 43); *Customs Tariff Validation Act 1963* (No. 94).
- Dairy Produce Export Control Act 1963* (No. 79) provided for the appointment of a deputy chairman of the board in lieu of the member formally appointed to administer the research and promotion programmes.
- Dairy Produce Research and Sales Promotion Act 1963* (No. 80) amended the principal Act consequent upon the amendment of the Dairy Produce Export Control Act.
- Defence Forces Retirement Benefits Act 1963* (No. 103) provided for changes in benefits under the Defence Forces Retirement Benefits Act similar to those made to the Superannuation Act by the *Superannuation Act 1963* (No. 102) (see p. 82).
- Defence (Visiting Forces) Act 1963* (No. 81) repealed the *Defence (Visiting Forces) Act 1939* and laid down new procedure governing the general topic of criminal and civil jurisdiction in Australia in relation to the visiting forces of other countries.
- Disabled Persons Accommodation Act 1963* (No. 63) provided for assistance by the Commonwealth towards the erection or purchase by organizations of buildings for the accommodation of disabled persons.
- Estate Duty Assessment Act 1963* (No. 72) exempted from estate duty the property of certain persons who were in Australia for purposes connected with projects of the United States Government, and raised the general exemption level from £5,000 to £10,000.
- Evidence Act 1963* (No. 28) simplified the proof in courts of law of the making and contents of tariff and other proposals for financial imposts made in a House of the Parliament.
- Excise Act 1963* (No. 49); *Excise Tariff 1963* (No. 41).
- Excise Tariff (No. 2) 1963* (No. 91) provided for the imposition of duties of Excise on certain canned fruit (see also *Canned Fruit Excise Act 1963* (No. 92), p. 79).
- Gift Duty Assessment Act 1963* (No. 73) exempted from duty gifts made by certain persons who were in Australia for purposes connected with projects of the United States Government.
- Heard Island and McDonald Islands Act 1963* (No. 23).\*
- Income Tax and Social Services Contribution Act 1963* (No. 70); *Income Tax and Social Services Contribution Assessment Act 1963* (No. 34); *Income Tax and Social Services Contribution Assessment Act (No. 2) 1963* (No. 69); *Income Tax (International Agreements) Act 1963* (No. 71).

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\* This Act makes provision in respect of Territory legislation similar to that made by the *Acts Interpretation Act 1963* in respect of Commonwealth Acts.

- Insurance Act 1963* (No. 17) required insurers to maintain deposits with the Treasurer as security for the meeting of the liabilities of the insurer under policies issued by him.
- International Development Association Act 1963* (No. 51).\*
- International Development Association (Additional Contribution) Act 1963* (No. 66) approved a contribution to the extent of \$19,800,000 to the International Development Association.
- International Finance Corporation Act 1963* (No. 52); *International Monetary Agreements Act 1963* (No. 53).\*
- International Organizations (Privileges and Immunities) Act 1963* (No. 50) widened the scope of the previous Acts governing the granting of privileges and immunities in Australia to international organizations and to persons connected with the activities of those organizations, defined the limits of such privileges, and covered all international organizations in the one Act.
- Loan Act 1963* (No. 65) authorized the raising and expending of moneys up to £62,500,000 for defence purposes.
- Loan (Australian National Airlines Commission) Act 1963* (No. 31) approved an agreement between the Commonwealth and the Morgan Guaranty Trust Company of New York for the raising of a loan of \$11,000,000 to be lent to the Australian National Airlines Commission.
- Loan (Housing) Act 1963* (No. 6) authorized the raising and expending of moneys up to £2,700,000 for housing purposes; *Loan (Housing) Act (No. 2) 1963* (No. 56) authorized the raising and expending of moneys up to £49,850,000 for housing purposes.
- Loan (Qantas Empire Airways Limited) Act 1963* (No. 32) approved an agreement between the Commonwealth and the Morgan Guaranty Trust Company of New York for the raising of a loan of \$9,000,000 to be lent to Qantas Empire Airways Limited.
- Loan (War Service Land Settlement) Act 1963* (No. 55) authorized the raising and expending of moneys up to £4,225,000 for financial assistance to the States of South Australia, Western Australia, and Tasmania in connexion with War Service Land Settlement.
- Menindee Lakes Storage Agreement Act 1963* (No. 99) ratified and approved an agreement between the Commonwealth and the States of New South Wales, Victoria, and South Australia with respect to the storage of the waters of the Darling River at Menindee.
- National Health Act 1963* (No. 77) removed certain restrictions on special account contributors to hospital benefits organizations.
- Norfolk Island Act 1963* (No. 101) amended the *Norfolk Island Act 1957* by providing for the appointment of a deputy administrator and additional judges, and amended the functions of the Norfolk Island Council (see para. 2, p. 113).
- Overseas Telecommunications Act 1963* (No. 85) authorized the Overseas Telecommunications Commission (Australia) to establish and maintain cable and wireless telecommunication systems between Australia and Nauru and between Australia and other countries under any agreement to which the Australian Government is a party
- Papua and New Guinea Act 1963* (No. 27) changed the name of the Legislative Council to the House of Assembly and raised the membership to 64, comprising 10 official members, 44 members elected from a common roll in single member constituencies, and 10 non-indigenous elected members. It also increased the term of the legislature from three years to four years.
- Parliamentary Papers Act 1963* (No. 29) provided that a document delivered to the Clerk of a House of the Parliament and recorded in the Votes and Proceedings shall be deemed to have been laid before the House.
- Pay-roll Tax Assessment Act 1963* (No. 33).

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\* These Acts are consequential on the *International Organizations (Privileges and Immunities) Act 1963* and provide for the deletion of provisions authorizing the conferring of privileges and immunities by regulation.



- Phosphate Fertilizers Bounty Act* 1963 (No. 78) provided for the payment of bounty on the production of superphosphate and ammonium phosphate.
- Processed Milk Products Bounty Act* 1963 (No. 16) extended the period for payment of bounty on processed milk products for one year to 30th June, 1964, and made available £500,000 for payment of bounties during 1963-64.
- Public Works Committee Act* 1963 (No. 15).
- Raw Cotton Bounty Act* 1963 (No. 86) provided for the payment of bounty on certain raw cotton sold for use in Australia and for other purposes.
- Repatriation Act* 1963 (No. 47) provided for increased rates of pension and allowances paid to incapacitated ex-members of the forces and their dependants (see Chapter XXVIII. Repatriation).
- River Murray Waters Act* 1963 (No. 98) ratified and approved an agreement for the further variation of the agreement entered into between the Commonwealth and the States of New South Wales, Victoria, and South Australia respecting the River Murray and other waters, mainly consequential on the construction of the Chowilla Reservoir.
- Sales Tax Assessment (No. 5) Act* 1963 (No. 45); *Sales Tax (Exemptions and Classifications Act* 1963 (No. 44).
- Seat of Government (Administration) Act* 1963 (No. 24).\*
- Service and Execution of Process Act* 1963 (No. 35) made provision for the enforcement in one State of fines imposed by a court of summary jurisdiction in another State.
- Snowy Mountains Hydro-electric Authority Act* 1963 (No. 96) extended the term of office of the Commissioner of the Snowy Mountains Hydro-electric Authority for a period of three years to 1967.
- Social Services Act* 1963 (No. 46) provided for increased pensions and allowances to pensioners and their dependants (see Chapter XVI. Welfare Services).
- States Grants (Additional Assistance) Act* 1963 (No. 4); *States Grants (Additional Assistance) Act (No. 2)* 1963 (No. 36); *States Grants (Special Assistance) Act* 1963 (No. 76); *States Grants (Universities) Act* 1963 (No. 5); *States Grants (Universities) Act (No. 2)* 1963 (No. 75).
- Stevedoring Industry Act* 1963 (No. 58) suspended the making of declarations of port stoppages where one-third of the registered waterside workers in the port were involved in an unauthorized stoppage and provided that entitlement to attendance money should not be affected by suspensions before the commencement of the Act.
- Submarine Cables and Pipelines Protection Act* 1963 (No. 61) ratified articles 27, 28 and 29 of the Geneva Convention on the High Seas by providing penalties for the breaking or injuring of submarine cables or pipelines, imposing liability for the cost of repairing the break or injury, and indemnifying owners of ships for losses of anchors or gear sacrificed to avoid injury to submarine cables or pipelines.
- Superannuation Act* 1963 (No. 102) provided for increased Commonwealth contribution to existing pensioners, increased entitlement to pensions, and authorized certain changes in investment of funds by the Superannuation Board.
- Supply Act* 1963-64 (No. 25); *Supply (Works and Services) Act* 1963-64 (No. 26).
- United States Naval Communication Station Agreement Act* 1963 (No. 30) approved an agreement between the Government of the Commonwealth and the Government of the United States of America relating to the establishment of a United States Naval Communication Station in Australia.
- Universities (Financial Assistance) Act* 1963 (No. 68) provided for the grant of financial assistance to the States in connexion with Universities (see Chapter XIX. Education, Cultural Activities and Research).

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\* This Act makes provision in respect of Territory legislation similar to that made by the *Acts Interpretation Act* 1963 in respect of Commonwealth Acts.

*Vinyl Resin Bounty Act* 1963 (No. 88) provided for the payment of bounty on the production of vinyl resins used or sold for use in Australia.

*Western Australia (Northern Development) Agreement Act* 1963 (No. 87) approved an agreement between the Commonwealth and the State of Western Australia for the expenditure of £3,500,000 on the further development of the northern part of that State.

*Wheat Export Charge Act* 1963 (No. 84) and *Wheat Industry Stabilization Act* 1963 (No. 83) gave effect to the Wheat Industry Stabilization Plan 1963-64 to 1967-68 (see Chapter XXIII. Rural Industry).

*Wine Overseas Marketing Act* 1963 (No. 62).

*Wool Tax Act* (No. 1) 1963 (No. 2); *Wool Tax Act* (No. 2) 1963 (No. 3); *Wool Tax Assessment Act* 1963 (No. 1).

*World Health Organization Act* 1963 (No. 54).\*

#### § 4. Commonwealth Government Departments

1. **General.**—In Year Book No. 49, a list appears of the Commonwealth Government Departments, giving particulars for each Department of the principal matters dealt with and the Acts administered by the Minister concerned as at the end of 1962.

2. **The Department of Housing.**—When the eighth Menzies Ministry was constituted in December, 1963, it was announced that a new department would be created to administer housing. This decision was implemented under the Administrative Arrangements Order issued on 17th January, 1964, and the Department of Housing commenced operations immediately thereafter.

The Minister for Housing administers the following Acts, which were formerly administered by the Minister for National Development: *Commonwealth and State Housing Agreement Act* 1945-1955; *Commonwealth and State Housing Agreement Act* 1955; *Housing Agreement Act* 1956; *Housing Agreement Act* 1961; *Re-establishment and Employment Act* 1945-1962, Part VIII, Division 1 of Part XI, insofar as it extends Part VIII, Part XII to the extent to which it applies or may be applied in relation to the foregoing; *States Grants (Imported Houses) Act* 1950; *War Service Homes Act* 1918-1962; *War Service Homes Agreement Act* 1932; *War Service Homes (South Australia) Agreement Act* 1934.

The principal matters dealt with by the Department of Housing are the administration of the Commonwealth-State Housing Agreement and the War Service Homes Act. It is intended that the Department of Housing will, subject to the passage of the necessary legislation by Parliament, administer the proposed Home Savings Grant scheme and the scheme to insure certain housing loans.

#### § 5. Cost of Parliamentary Government

The tables in this section are intended to show, in broad groups, the expenditure incurred in the operation of the Parliamentary system in Australia, comprising the Governor-General and Governors, the Ministries, the Upper and Lower Houses of Parliament, and electoral activities; they do not attempt to cover the expenditure on Commonwealth and State administration generally. Only broad groups are shown, but even these are not entirely comparable because of differences in accounting procedures and in the presentation of accounts. A very large part of the expenditure under the head of Governor-General or Governor represents official services entirely outside the Governor's personal interest, carried out at the request of the Government.

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\* This Act is consequential on the *International Organizations (Privileges and Immunities) Act* 1963 and provides for the deletion of provisions authorizing the conferring of privileges and immunities by regulation.

The following statement shows this expenditure for the Commonwealth and for each State for the year ended 30th June, 1963.

### COST OF PARLIAMENTARY GOVERNMENT, 1962-63

(£)

Particulars	C'wth	N.S.W.	Vic.	Q'land	S. Aust.	W. Aust.	Tas.	Total
<b>Governor - General</b> or								
<b>Governor(a)</b> .. ..	247,668	53,261	92,034	55,971	44,617	61,326	42,235	597,112
<b>Ministry(c)</b> .. ..	270,600	34,850	46,010	28,026	17,050	31,784	37,589	465,909
<b>Parliament—</b>								
<b>Upper House(d)</b> ..	252,670	58,352	104,992	..	55,415	102,870	46,239	620,538
<b>Lower House(d)</b> ..	517,960	350,719	186,824	256,934	110,064	172,633	94,799	1,689,933
<b>Both Houses(e)</b> ..	906,222	350,654	259,907	134,113	161,076	186,032	46,891	2,044,895
<b>Miscellaneous(f)</b> ..	522,125	81,702	37,999	21,922	36,208	12,001	17,020	728,977
<b>Total, Parliament</b> ..	2,198,977	841,427	589,722	412,969	362,763	473,536	204,949	5,084,343
<b>Electoral(g)</b> .. ..	783,738	47,020	44,982	132,545	37,488	51,832	20,634	1,118,239
<b>Royal Commissions, Select Committees, etc.</b> ..	14,339	33,054	51,370	..	1,100	1,617	4,130	105,610
<b>Grand Total</b> .. ..	3,515,322	1,009,612	824,118	629,511	463,018	620,095	309,537	7,371,213

(a) Salaries and other expenses, including maintenance of house and grounds. (b) Includes official establishments, £19,440. (c) Salaries as ministers, and travelling and other expenses. (d) Allowances to members (including ministers' salaries as members), travelling and other expenses. (e) Government contribution to Members' Superannuation Funds, printing, reporting staff, library, etc. (f) Services, furniture, stores, etc. (g) Salaries, cost of elections, etc.

Figures for total cost and cost per head during each of the years 1958-59 to 1962-63 are shown in the next table.

### COST OF PARLIAMENTARY GOVERNMENT

Year	C'wealth	N.S.W.	Vic.	Q'land	S. Aust.	W. Aust.	Tas.	Total
<b>TOTAL</b>								
(£)								
1958-59 ..	2,986,399	898,897	725,261	470,289	377,463	450,270	256,856	6,165,435
1959-60 ..	3,181,262	906,100	695,399	599,125	390,741	479,357	279,896	6,531,880
1960-61 ..	3,240,180	1,082,508	748,491	582,588	418,241	536,496	280,394	6,888,898
1961-62 ..	3,708,681	1,214,538	870,167	576,018	470,617	629,898	289,062	7,758,981
1962-63 ..	3,515,322	1,009,612	824,118	629,511	463,018	620,095	309,537	7,371,213

### PER HEAD OF POPULATION

(s. d.)

1958-59 ..	6 0	4 10	5 3	6 6	8 4	12 9	15 2	12 5
1959-60 ..	6 3	4 9	4 11	8 1	8 4	13 4	16 3	12 10
1960-61 ..	6 3	5 7	5 2	7 9	8 9	14 8	16 0	13 3
1961-62 ..	7 0	6 2	5 11	7 7	9 7	16 11	16 3	14 8
1962-63 ..	6 6	5 0	5 5	8 1	9 3	16 3	17 1	13 8

## CHAPTER IV LAND TENURE AND SETTLEMENT

### § 1. Disposal of Crown Lands

1. **Land Legislation and Tenures.**—Descriptions of the land tenure systems of the several States and the internal Territories, and conspectuses of land legislation in force and of the systems of land tenure, have appeared in earlier issues of the Year Book (*see* List of Special Articles, etc., preceding General Index to this volume).

The land legislation in force in the several States may be classified broadly under five major types of land enactments, namely, Crown Lands Acts, Closer Settlement Acts, Mining Acts, Returned Service Personnel Settlement Acts, and Advances to Settlers Acts, but within the groupings there is, of course, a wide variety of individual Acts. In the two internal Territories, the legislation relating to lands is embodied in various Ordinances.

In each of the States, there is a Lands Department under the direction of a Minister who is charged generally with the administration of the Acts relating to the alienation, occupation and management of Crown Lands. In the Northern Territory, the Administrator, under the control of the Minister for Territories, is charged with the general administration of the Lands Ordinance and of Crown lands in the Northern Territory. In the Australian Capital Territory, the administration of the Leases Ordinances is in the hands of the Minister for the Interior.

In each of the States, there is also a Mines Department which is empowered under the several Acts relating to mining to grant leases and licences of Crown lands for mining and allied purposes. In the Northern Territory, there are several ordinances relative to mining.

As with land legislation, land tenures may be classified under broad headings; these indicate the nature of the tenure and comprise:—Free Grants and Reservations, Unconditional Purchases of Freehold, Conditional Purchases of Freehold, Leases and Licences under Land Acts, Closer Settlement, Leases and Licences under Mining Acts, and Settlement of Returned Service Personnel.

The following sections contain figures showing the extent of the different tenures in the several States and Territories, together with some general descriptive matter. Information in greater detail was provided in Year Book No. 48 and previous issues.

2. **Forms of Land Tenure.**—(i) *Free Grants and Reservations.* Provision exists in all States except Tasmania for the disposal of Crown lands for public purposes by free grants, and in all States for the temporary and or permanent reservation of Crown lands for public purposes. In the Northern Territory, any Crown lands not subject to any right of, or contract for, purchase, may be resumed for public purposes, and the whole or any portion of the lands resumed may be reserved for that purpose. In the Australian Capital Territory, under the *Seat of Government (Administration) Act* 1910, Crown lands may not be sold or disposed of for any estate in freehold except in pursuance of some contract entered into before the commencement of the Act.

The following table shows the total areas reserved in each State (except Tasmania) and in the Northern Territory, and the grand totals, at the end of the years 1958 to 1962.

**AREAS RESERVED**  
(‘000 Acres)

Year	N.S.W. (a)	Victoria (b)	Old (b)	S. Aust. (a)	W. Aust. (a)	Nor. Terr. (a)	Total (c)
1958.. ..	21,118	8,621	24,884	22,740	58,310	47,985	183,658
1959.. ..	20,901	8,624	24,891	22,742	59,807	48,985	185,950
1960.. ..	15,956	8,642	25,002	22,747	59,860	59,591	191,798
1961.. ..	15,877	8,646	25,006	22,750	59,885	59,590	191,754
1962.. ..	15,883	8,783	25,126	22,743	68,672	59,595	200,802

(a) At 30th June.  
not available.

(b) At 31st December.

(c) Excludes Tasmania, for which details are

Details of the purposes for which areas at the end of 1962, as shown above, were reserved are given hereunder.

*New South Wales.* For travelling stock, 5,026,598 acres; forest reserves, 1,535,018 acres; water and camping reserves, 781,479 acres; mining reserves, 1,044,220 acres; for recreation and parks, 686,846 acres; other reserves, 6,808,951 acres; total, 15,883,112 acres.

*Victoria.* For roads, 1,700,729 acres; water reserves, 316,072 acres; agricultural colleges, 8,434 acres; forest and timber reserves, 5,728,549 acres; mallee reserves, 410,000 acres; other reserves, 619,350 acres; total, 8,783,134 acres.

*Queensland.* Timber reserves, 2,984,339 acres; for State forests and national parks, 6,145,433 acres; Aboriginal reserves, 6,543,408 acres; for streets, surveyed roads and stock routes, 3,874,883 acres; general reserves, 5,577,460 acres; total, 25,125,523 acres.

*South Australia.* Total area of surveyed roads, railways and other reserves, 22,742,963 acres, including 18,828,514 acres set apart as Aboriginal reserves.

*Western Australia.* For State forests, 4,347,956 acres; timber reserves, 1,785,246 acres; other reserves, 62,538,582 acres; total, 68,671,784 acres.

*Northern Territory.* For Aboriginal, defence and public requirements, 59,595,000 acres.

(ii) *Conditional and Unconditional Purchases of Freehold.* Crown lands in the States may be disposed of by unconditional purchase at public auction or by certain other forms of purchase (for details see Official Year Book No. 48, pp. 91-2), and conditional purchases of various types may also be made. In the Northern Territory, only 0.1 per cent. of the total area is alienated, the remainder being held under lease or licence, or reserved for various purposes or unoccupied. In the Australian Capital Territory, about 18 per cent. of the area is alienated or in process of alienation in consequence of contracts existing prior to the establishment of the Territory.

(iii) *Leases and Licences. (a) General.* Well over half the area of the States of New South Wales and South Australia and of the two Territories and more than four-fifths of that of Queensland are occupied under some form of lease or licence. In Victoria, only about one-tenth of the area is leased or licensed, more than half being alienated; in Western Australia, more than one-third is leased or licensed, most of the remainder being unoccupied; and in Tasmania only one-tenth is leased or licensed, while about half the area of the State is occupied by the Crown or unoccupied, and the remainder alienated. Areas leased or licensed in the States are held under Crown lands Acts, closer settlement Acts, mining Acts, etc., and in the Territories under various Ordinances.

(b) *Land Acts and Ordinances.* The types of lease and licence which obtain under land legislation cover a wide range, and vary with each State or Territory. The following are examples:—grazing or pastoral, settlement and closer settlement, settlement purchase, conditional and conditional purchase, perpetual and Crown; however, the variations of these forms and the special forms of lease and licence which exist would extend this list considerably. Details of the various types in existence are given in Year Book No. 48, pages 93-4, and some detail is included in the tables on pages 90-2.

The following table shows the areas held under lease or licence other than mining and forestry in the States, the total under lease or licence for the Territories, and the grand totals, at the end of the years 1958 to 1962.

#### AREAS OCCUPIED UNDER LEASE OR LICENCE OTHER THAN MINING AND FORESTRY

('000 Acres)

Year	N.S.W. (a)	Vic.	Q'land	S. Aust. (a)	W. Aust. (a)	Tas. (a)	N.T. (a) (b)	A.C.T. (a) (b)	Total
1958 ..	114,451	6,901	364,681	138,370	217,746	1,504	174,399	293	1,018,345
1959 ..	114,801	7,186	362,146	138,304	223,476	1,624	174,697	293	1,022,527
1960 ..	113,359	7,188	366,277	145,377	223,532	1,482	179,021	293	1,036,529
1961 ..	111,065	6,459	366,279	145,752	227,702	1,301	179,049	293	1,037,900
1962 ..	111,809	5,542	364,928	146,889	235,914	1,617	174,102	292	1,041,093

(a) Year ended 30th June.

(b) Leases and licences for all purposes.

(c) *Mining Acts and Ordinances.* In addition to the lands held under lease or licence under land legislation, there are also areas occupied under mining Acts for the purpose of prospecting or mining for gold and other minerals. Details of the various types of mining lease and licence are given in Year Book No. 48, pp. 94-5.

Areas occupied in the States at the end of the years 1958 to 1962 are shown in the following table.

**AREAS OCCUPIED UNDER MINING ACTS AND ORDINANCES**  
(\*000 Acres)

Year	N.S.W. (a)	Victoria	Q'land (b)	S. Aust. (a) (b)	W. Aust. (c)	Tasmania (b)	N. Terr.	Total (d)
1958 ..	386	43	650	796	164	37	27	2,103
1959 ..	399	40	(e) 2,102	784	164	46	25	3,560
1960 ..	310	47	2,127	1,852	168	52	36	4,592
1961 ..	321	66	2,184	1,176	155	45	36	3,983
1962 ..	492	55	2,168	5,364	166	44	38	8,327

(a) Year ended 30th June. (b) Excludes lands held under miners' rights and dredging claims.  
(c) Excludes holdings under miners' rights. (d) Excludes Australian Capital Territory, included in previous table. (e) Increase due to inclusion of 1,452,800 acres special bauxite lease granted in 1959.

(d) *Oil Prospecting or Exploring.* The following table shows for each year from 1958 to 1962 the areas occupied in each State under authorities to prospect or explore for petroleum. The legislation relating to the search for petroleum differs from State to State, and the terminology of, and the conditions applying to, the forms of authorization differ accordingly. The figures below relate to the exploratory stage of operations.

**AREAS OCCUPIED UNDER AUTHORITIES TO PROSPECT OR EXPLORE  
FOR PETROLEUM**  
(\*000 Acres)

Year	N.S.W. (a)	Victoria	Q'land	S. Aust. (a)	W. Aust.	Tasmania	N. Terr.	Total
1958 ..	37,251	2,805	340,314	127,635	264,968	..	(b)	c 772,973
1959 ..	37,251	31,653	527,954	170,385	319,598	..	36,938	1,123,779
1960 ..	121,636	34,703	517,650	207,217	402,830	..	49,008	1,333,044
1961 ..	17,139	34,703	496,915	201,521	394,071	..	70,543	1,214,892
1962 ..	127,658	53,310	563,795	199,409	471,856	..	67,366	1,483,394

(a) Year ended 30th June.

(b) Not available.

(c) Excludes Northern Territory.

## § 2. Closer Settlement and War Service Settlement

1. *Closer Settlement.*—Particulars of the methods of acquisition and disposal of land for the closer settlement of civilians and returned service personnel (1914-18 War) in the several States are given in issues of the Official Year Book up to No. 22 (see No. 22, pp. 163-9), and the results of the operations of the several schemes have appeared in subsequent issues in considerable detail. However, the amalgamation in some States of closer settlement records with those of other authorities has since made it impossible to obtain up-to-date figures for those States and for Australia as a whole. Official Year Book No. 48 contains particulars as at 30th June, 1960 of the areas and costs for those States for which separate information is available (see p. 96).

2. *Settlement of Returned Service Personnel, 1939-45 War and Korea-Malaya Operations.*—(i) *General.* The War Service Land Settlement Scheme provides for the settlement on the land of eligible ex-servicemen from the 1939-45 War and the Korea-Malaya operations. Finance for capital expenditure under the scheme in South Australia, Western Australia and Tasmania and for special loans to New South Wales and Victoria is provided through Loan (War Service Land Settlement) Acts. Finance for other aspects

of the Scheme in all States is provided by annual parliamentary appropriation. The *States Grants (War Service Land Settlement) Act 1952* provides that the responsible Commonwealth Minister may make grants of financial assistance to the States under such terms as he may from time to time determine.

New South Wales, Victoria and Queensland agreed, at the inception of the Scheme, to find their own finance for the acquisition and development of properties. In 1954, Queensland abandoned the Scheme and made available for general settlement all unallotted lands held under it.

Detailed information about the agreements and the methods of operation and administration of the Scheme are contained in earlier Year Books (*see List of Special Articles, etc., preceding General Index to this volume.*)

(ii) *Summary of Operations to 30th June, 1963.* The following table shows the operations of the War Service Land Settlement Scheme in each State up to 30th June, 1963.

### WAR SERVICE LAND SETTLEMENT

SUMMARY TO 30TH JUNE, 1963

State	Land acquired	Farms allotted		Farms in course of development		Other
		No.	Acres	No.	Acres	
New South Wales ..	9,094,021	3,047	9,094,021	..	..	..
Victoria ..	1,181,599	3,048	1,181,599	..	..	..
Queensland ..	398,524	470	218,640	..	..	(a) 179,884
South Australia ..	755,873	1,013	668,672	11	11,000	(b) 76,201
Western Australia ..	c2,053,972	1,003	1,907,801	..	..	(b) 146,171
Tasmania ..	447,624	523	421,000	56	25,000	(b) 1,624
<b>Total ..</b>	<b>13,931,613</b>	<b>9,104</b>	<b>13,491,733</b>	<b>67</b>	<b>36,000</b>	<b>403,880</b>

(a) War Service Land Settlement was discontinued in 1954, and unallotted lands were made available for general settlement. (b) Will be surveyed on completion of projects under development. Western Australia had large tracts of virgin land developed under the scheme. (c) Figures adjusted following survey. Other land originally approved, but no longer required, has been disposed of outside the Scheme.

(iii) *Expenditure.* The following table shows a dissection of the Commonwealth expenditure on War Service Land Settlement to 30th June, 1963.

### WAR SERVICE LAND SETTLEMENT (1939-45 WAR AND KOREA-MALAYA OPERATIONS): COMMONWEALTH EXPENDITURE TO 30th JUNE, 1963

(£'000)

Advances to States	N.S.W.	Vic.	Qld	S. Aust.	W. Aust.	Tas.	Total
For acquisition of land ..	..	..	..	3,425	3,559	2,519	9,503
For development and improvement of land ..	..	..	..	14,585	19,688	15,397	49,670
Special loans ..	6,771	7,199	..	..	..	..	13,970
Commonwealth contributions to excess cost over valuation ..	627	5,851	116	1,753	783	759	9,889
To provide credit facilities to settlers ..	..	..	..	10,844	20,325	4,897	36,066
For remission of settlers' rent and interest ..	435	187	36	237	525	147	1,567
For payment of living allowances to settlers ..	1,010	1,212	163	398	485	151	3,419
For operation and maintenance of irrigation projects ..	..	..	..	942	16	3	961
Loss on advances ..	94	4	335	37	163	20	653
Cost of administration of credit facilities ..	..	..	..	415	757	177	1,349
<b>Total ..</b>	<b>8,937</b>	<b>14,453</b>	<b>650</b>	<b>32,636</b>	<b>46,301</b>	<b>24,070</b>	<b>127,047</b>

(iv) *Loans and Allowances (Agricultural Occupations) Scheme.* Full details of the measures taken for the re-establishment of ex-servicemen in rural occupations were given in an earlier Year Book (*see* List of Special Articles, etc., preceding General Index to this volume). These measures provide for a scheme of loans and allowances to assist ex-servicemen in establishing themselves in agricultural occupations.

The loans are made to eligible ex-servicemen for the purchase of land, effecting improvements on land, the acquisition of tools of trade, livestock, plant or equipment, the establishment of a co-operative business with other persons, reduction or discharge of a mortgage, bill of sale, etc. At 30th June, 1963, 14,307 loans had been approved and advances amounting to £10,176,531 had been made.

The allowances are payable only in respect of the period during which the income derived from the occupation by the ex-serviceman concerned is considered inadequate. At 30th June, 1963, 16,114 applications for allowances had been made, and the total amount paid in allowances was £2,276,597.

Official Year Book No. 48 contains details of the applications received and approved and the amounts involved for the individual States and Territories to 30th June, 1961 (*see* p. 98). There has been little subsequent change.

(v) *War Service Land Settlement Division—Total Expenditure.* The following table shows details of the total expenditure on various projects by the War Service Land Settlement Division from the commencement of operations to 30th June, 1963.

**COMMONWEALTH WAR SERVICE LAND SETTLEMENT DIVISION:  
EXPENDITURE TO 30th JUNE, 1963  
(£'000)**

Project	N.S.W.	Vic.	Qld	S. Aust.	W. Aust.	Tas.	Total Expenditure	Receipts and Re-payments	Net Expenditure
War Service Land Settlement expenditure from revenue or loan funds	8,937	14,453	650	32,636	46,301	24,070	127,047	(a)34,371	92,676
Agricultural loans(b) ..	4,283	1,797	874	827	1,973	405	(c)10,176	(d) 9,276	900
Agricultural allowances	580	296	478	325	481	116	(e) 2,277	..	2,277
Administration expenses	758	167	70	89	382	46	1,512	..	1,512
Rural training ..	330	504	106	190	227	108	1,465	149	1,316
<b>Total .. ..</b>	<b>14,888</b>	<b>17,217</b>	<b>2,178</b>	<b>34,067</b>	<b>49,364</b>	<b>24,745</b>	<b>f142,477</b>	<b>(g)43,796</b>	<b>98,681</b>

(a) Excludes interest, rent, and rates. £7,247,000. (b) Includes expenditure on new loans of moneys repaid by borrowers. (c) Includes Northern Territory, £10,000, and New Guinea, £7,000. (d) Excludes interest, £1,449,000. (e) Includes New Guinea, £1,000. (f) Includes Northern Territory, £10,000, and New Guinea, £8,000. (g) Excludes interest, rent, and rates, £8,696,000.

### § 3. Alienation and Occupation of Crown Lands

1. *General.*—The figures in the previous parts of this chapter show separate particulars of various forms of land settlement. The following tables set out the position with regard to the tenure of land in each State, in the Northern Territory, and in the Australian Capital Territory, during 1962. A summary for each State and Territory and for Australia as a whole is also included. Particulars for each year from 1952 to 1962 appear in the bulletin *Primary Industries* No. 56, Part I.—*Rural Industries*, page 1. The area occupied includes roads, permanent reserves, forests, etc. In some cases, lands which are permanently reserved from alienation are occupied under leases or licences, and have been included therein. Lands occupied under leases or licences for pastoral purposes are frequently held on short tenures only, and could thus be made available for settlement practically whenever required.

2. *New South Wales.*—The total area of New South Wales is 198,037,120 acres, of which 28.7 per cent. had been alienated at 30th June, 1962; 4.8 per cent. was in process of alienation; 57.4 per cent. was held under leases and licences; and the remaining 9.1 per cent. was unoccupied, or held by the Crown.



**ALIENATION AND OCCUPATION OF CROWN LANDS: NEW SOUTH WALES**  
30th JUNE, 1962  
(Acres)

Particulars	Area	Particulars	Area
1. Alienated .. .. .	56,799,666	3. Held under leases and licences— Homestead selections and grants Alienable leases, long-term and perpetual .. .. .	1,690,032 24,524,610
		Long-term leases with limited right of alienation .. .. .	1,324,840
		Other long-term leases .. .. .	82,026,301
		Short-term leases and temporary tenures .. .. .	2,243,516
		Forest leases .. .. .	1,765,819
		Mining and auriferous leases ..	203,744
		<i>Total</i> .. .. .	113,778,862
2. In process of alienation— Conditional purchases .. .. .	7,815,921	4. Unoccupied— Particulars of Lord Howe Island not being available, the area, 3,220 acres, is included under unoccupied (approximate) ..	17,954,789
Closer settlement purchases ..	1,184,284		
Soldiers' group purchases .. ..	126,137		
Other forms of sale .. .. .	377,461		
<i>Total</i> .. .. .	9,503,803	5. Total Area of State .. .. .	198,037,120

3. Victoria.—The total area of Victoria is 56,245,760 acres, of which 56.2 per cent. had been alienated up to the end of 1962: 4.2 per cent. was in process of alienation under deferred payments and closer settlement schemes; 9.9 per cent. was occupied under leases and licences; and 29.7 per cent. was unoccupied or held by the Crown.

**ALIENATION AND OCCUPATION OF CROWN LANDS: VICTORIA**  
31st DECEMBER, 1962  
(Acres)

Particulars	Area	Particulars	Area
1. Alienated .. .. .	31,634,458	3. Leases and licences held— Under Lands Department— Perpetual leases .. .. .	180,218
		Agricultural college leases .. ..	28,586
		Other leases and licences .. .. .	1,711
		Temporary (yearly) grazing licences .. .. .	5,331,777
2. In process of alienation— Exclusive of mallee and closer settlement lands .. .. .	177,431	<i>Total</i> .. .. .	5,542,292
Mallee lands (exclusive of closer settlement lands) .. .. .	1,061,560	4. Occupied by the Crown or un- occupied .. .. .	16,688,880
Closer settlement lands .. .. .	1,141,139		
<i>Total</i> .. .. .	2,380,130	5. Total Area of State .. .. .	56,245,760

4. Queensland.—The total area of this State is 426,880,000 acres, of which, on 31st December, 1962, 6.1 per cent. was alienated; 0.5 per cent. was in process of alienation; and 86.0 per cent. was occupied under leases and licences. The remainder, 7.4 per cent., was either unoccupied or held as reserves or for roads.

**ALIENATION AND OCCUPATION OF CROWN LANDS: QUEENSLAND**  
**31st DECEMBER, 1962**  
**(Acres)**

Particulars	Area	Particulars	Area
1. Alienated .. .. .	26,175,538	3. Occupied under leases and licences—	
		Pastoral leases .. .. .	243,959,040
		Occupation licences .. .. .	15,377,920
		Grazing selection and settlement farm leases .. .. .	94,937,983
		Leases—special purposes(a) .. .. .	3,509,555
		Mining leases .. .. .	2,176,276
		Perpetual lease selections and perpetual lease prickly pear selections .. .. .	6,759,092
		Auction perpetual leases, etc. .. .. .	43,041
		Forest grazing leases (of reserves)	341,760
		<i>Total</i> .. .. .	367,104,667
		4. Reserves (net, not leased) .. .. .	17,928,355
		5. Surveyed roads and surveyed stock routes .. .. .	3,874,883
		6. Unoccupied .. .. .	9,593,158
2. In process of alienation .. .. .	2,203,399	7. Total Area of State .. .. .	426,880,000

(a) Special leases of Crown land, 529,030 acres; special leases of reserves, 2,980,525 acres.

5. South Australia.—The area of South Australia is 243,244,800 acres and at 31st December, 1962, 6.5 per cent. was alienated; 0.2 per cent. in process of alienation 59.9 per cent. occupied under leases and licences; and 33.4 per cent. occupied by the Crown or unoccupied.

**ALIENATION AND OCCUPATION OF CROWN LANDS: SOUTH AUSTRALIA**  
**30th JUNE, 1962**  
**(Acres)**

Particulars	Area	Particulars	Area
1. Alienated .. .. .	15,751,054	3. Held under lease and licence(a)—	
		Perpetual leases, including irrigation leases .. .. .	20,412,052
		Pastoral leases .. .. .	122,122,358
		Other leases and licences .. .. .	3,261,707
		<i>Total</i> .. .. .	145,796,117
		4. Area unoccupied(b) .. .. .	81,218,578
2. In process of alienation .. .. .	479,051	5. Total Area of State .. .. .	243,244,800

(a) Mining leases and licences have also been issued over an area comprising 204,724,491 acres.  
(b) Includes surveyed roads, railways and other reserves, salt water lakes, lagoons, and fresh water lakes.

6. Western Australia.—The total area of Western Australia is 624,588,800 acres, of which, at 30th June, 1962, 4.5 per cent. was alienated; 2.1 per cent. was in process of alienation; and 38.4 per cent. was occupied under leases and licences issued either by the Lands, Mines or Forests Departments. The balance of 55.0 per cent. was unoccupied.

**ALIENATION AND OCCUPATION OF CROWN LANDS: WESTERN AUSTRALIA**  
**30th JUNE, 1962**  
 (Acres)

Particulars	Area	Particulars	Area
1. Alienated .. .. .	28,227,002	3. Leases and licences in force—	
2. In process of alienation—		(i) Issued by Lands Department—	
Free homestead farms ..	317,464	Pastoral leases ..	230,286,920
Conditional purchase ..	11,845,005	Special leases ..	3,350,308
Selections under the Agricultural Lands Purchase Act ..	244,902	Leases of reserves ..	755,650
Grazing land ..	758,433	Residential lots ..	4,558
Town and suburban lots ..	3,060	Perpetual leases ..	1,516,765
Crown grants of reserves ..	72,132	(ii) Issued by Mines Department—	
		Gold-mining leases ..	18,822
		Mineral leases ..	20,979
		Miners' homestead leases ..	33,313
		(iii) Issued by Forests Department—	
		Timber permits ..	4,049,432
		<i>Total</i> .. .. .	240,036,747
		4. Area unoccupied .. .. .	343,084,055
<i>Total</i> .. .. .	13,240,996	5. Total Area of State .. .. .	624,588,800

7. Tasmania.—The total area of Tasmania is 16,778,000 acres, of which, at 30th June, 1962, 38.2 per cent. had been alienated; 1.2 per cent. was in process of alienation; 10.5 per cent. was occupied under leases and licences for either pastoral, agricultural, timber or mining purposes, or for closer settlement; while the remainder (50.1 per cent.) was unoccupied or reserved by the Crown.

**ALIENATION AND OCCUPATION OF CROWN LANDS: TASMANIA**  
**30th JUNE, 1962**  
 (Acres)

Particulars	Area	Particulars	Area
1. Alienated .. .. .	6,416,582	3. Leases and licences— <i>continued</i>	
2. In process of alienation ..	196,916	(i) Issued by Lands Department— <i>continued</i>	
3. Leases and licences—		Soldier settlement ..	43,433
(i) Issued by Lands Department—		Short-term leases ..	1,128
Islands .. .. .	80,909	(ii) Issued by Mines Department ..	44,514
Ordinary leased land ..	949,730	<i>Total</i> .. .. .	1,763,381
Land leased for timber ..	626,425	4. Area occupied by the Crown or unoccupied .. .. .	8,401,121
Closer settlement ..	17,242	5. Total Area of State .. .. .	16,778,000

8. Northern Territory.—The area of the Northern Territory is 335,116,800 acres, of which, at 30th June, 1962, only 0.1 per cent. was alienated; 52.0 per cent. was held under leases and licences; 17.8 per cent. was reserved for Aboriginal, defence and public requirements; and the remaining 30.1 per cent. was unoccupied and unreserved.

The following shows the mode of occupancy of areas at 30th June, 1962:—alienated, 333,045 acres; leased—pastoral leases, 152,479,094 acres; other leases, licences and mission stations, 21,623,149 acres; total leased, 174,102,243 acres; reserved for Aboriginal, defence and public requirements, 59,594,723 acres; unoccupied and unreserved, 101,086,789 acres; total, 335,116,800 acres.

9. Australian Capital Territory.—Alienated land of the Territory at the end of 1962 comprised 11.0 per cent. of the total area; land in process of alienation 6.8 per cent.; land held under lease and licence, including city tenures, 56.9 per cent.; land otherwise occupied and unoccupied 25.3 per cent.

The following are the particulars of land areas in the Australian Capital Territory at the end of 1962:—alienated 65,857 acres; in process of alienation 41,224 acres; leased—grazing, agricultural, etc., leases, 274,291 acres; grazing licences, 11,100 acres; otherwise occupied, including city area leases, 49,771 acres; total leased, 335,162 acres; unoccupied, 140,686 acres; total, 582,929 acres. Including the Jervis Bay area of 18,000 acres—6,266 acres leased and 11,734 acres otherwise occupied—the grand total for the whole Territory is 600,929 acres.

10. Summary.—The following table provides a summary for each State and Territory, and for Australia as a whole, of the alienation and occupation of Crown lands in 1962.

ALIENATION AND OCCUPATION OF CROWN LANDS, 1962

State or Territory	Private lands				Crown lands				Total area '000 acres
	Alienated		In process of alienation		Leased or licensed		Other (a)		
	'000 acres	Per cent.	'000 acres	Per cent.	'000 acres	Per cent.	'000 acres	Per cent.	
N.S.W.(b) ..	56,799	28.7	9,504	4.8	113,779	57.4	17,955	9.1	198,037
Victoria(c) ..	31,635	56.2	2,380	4.2	5,542	9.9	16,689	29.7	56,246
Queensland(c) ..	26,176	6.1	2,203	0.5	367,105	86.0	31,396	7.4	426,880
S. Aust.(b) ..	15,751	6.5	479	0.2	145,796	59.9	81,219	33.4	243,245
W. Aust.(b) ..	28,227	4.5	13,241	2.1	240,036	38.4	343,084	55.0	624,588
Tasmania(b) ..	6,417	38.2	197	1.2	1,763	10.5	8,401	50.1	16,778
Nor. Terr.(b) ..	333	0.1	..	..	174,102	52.0	160,682	47.9	335,117
A.C.T.(c)(d) ..	66	11.0	41	6.8	342	56.9	152	25.3	601
Australia ..	165,404	8.7	28,045	1.5	1,048,465	55.1	659,578	34.7	1,901,492

(a) Occupied by Crown; reserved; unoccupied; unreserved. (b) At 30th June. (c) At 31st December. (d) Includes Jervis Bay area.

§ 4. Advances to Settlers

1. General.—A detailed statement regarding the terms and conditions governing advances to settlers in the several States and the Northern Territory may be found in earlier issues of the Year Book (see List of Special Articles, etc., preceding General Index to this issue).

The summaries of loans and advances under State authorities in the following paragraphs are compiled from returns supplied by the various State government lending agencies in the several States. They include transactions in lands acquired under closer and soldier settlement schemes, but exclude balances owing on former Crown lands sold on the conditional purchase, etc., system. Advances made by general banking institutions in the course of their ordinary business are not included. For information on such advances see Chapter XXI. Private Finance.

The amounts outstanding do not represent the actual differences between the total advances and settlers' repayments, for considerable remissions of indebtedness have been made in all States as a result of re-appraisements of land values and the writing down of debts. In general, they include both principal and interest outstanding.

A summary for Western Australia is not included, as practically the only governmental funds being made available are Commonwealth (see § 2, p. 88).

In New South Wales and Victoria, expenditure on the acquisition, development and improvement of land for war service land settlement is provided for by the States, and particulars thereof are included in the respective summaries. In Queensland, no money is paid for the value of the land acquired, most land being occupied on lease from the Government, but advances in respect of improvements are included. In the other States, this expenditure is provided for by the Commonwealth, and particulars are included in § 2, page 88.

Loans (Agricultural Occupations) under the *Commonwealth Re-establishment and Employment Act 1945* and certain advances for the purchase of wire-netting and for other purposes made from finance provided by the Commonwealth are included in the summaries following.

2. New South Wales.—The following table shows particulars respecting advances, etc., under State authorities to 30th June, 1962.

## ADVANCES TO SETTLERS, ETC.: NEW SOUTH WALES

Advances, etc.	Advances, etc., made during 1961-62	Total advances, etc., to 30th June, 1962	Balances outstanding at 30th June, 1962	
			Number	Amount
	£	£		£
<i>Department of Lands—</i>				
Closer land settlement .. .. .	808,600	16,934,663	6,335	(b) 1,510,678
Soldier settlers 1914-18 War .. .. .		3,196,005	36	10,639
1939-45 War .. .. .	63,834	14,656,301	3,818	3,878,465
Soldier land settlement—Acquisition, development and improvement of land, War Service Land Settlement Agreement Act .. .. .	41,189	28,790,401	2,313	c26,375,040
Wire netting .. .. .		1,494,653	3	226
Prickly pear .. .. .	38,234	482,912	288	32,503
<i>Rural Bank—</i>				
<i>General Bank Department—</i>				
Commonwealth Re-establishment and Employment Act 1945 .. .. .		4,239,659	937	433,284
Other .. .. .	4,708,191	103,887,548	7,277	20,553,461
<i>Government Agency Department—</i>				
Rural industries .. .. .	132,832	9,375,625	623	291,272
Unemployment relief and dairy promotion .. .. .	293,705	4,710,563	2,078	1,200,413
Rural reconstruction(d) .. .. .	468,157	15,467,495	772	2,619,620
Shallow boring .. .. .	138,660	2,201,848	482	561,190
Farm water supplies .. .. .	208,600	1,228,859	942	799,053
Soil conservation .. .. .	37,065	152,911	205	121,449
Rivers and foreshores improvement .. .. .		4,916	23	726
Irrigation areas .. .. .	382,329	(e)	13,511	4,525,996
Government Guarantee Agency .. .. .		225,475		
Closer Settlement Agency .. .. .		167,914	31	33,078
Total .. .. .	7,321,396	f207,217,748	39,674	62,947,093

(a) In addition, the sum of £1,927,953 had been expended to 30th June, 1962, on subdivision maintenance, improvement and disposal of land acquired for closer settlement. (b) Excludes an amount of £4,691,779 capitalized to 30th June, 1962, on conversion into leasehold under the Closer Settlement Amendment (Conversion) Act 1943. (c) Includes capital value of 2,603 Closer Settlement Leases, £19,502,497, and unpaid balances on 2,313 Structural Improvement Accounts, £6,872,543. (d) Includes Debt Adjustment, Drought Relief, and Marginal Wheat Areas Scheme Advances (Commonwealth and State Moneys), amount outstanding £1,721,766. (e) Not available. (f) Incomplete.

3. Victoria.—The following table shows particulars respecting advances, etc., under State authorities to 30th June, 1962.

## ADVANCES TO SETTLERS, ETC.: VICTORIA

Advances, etc.	Advances, etc., made during 1961-62	Total advances, etc., to 30th June, 1962	Balances outstanding at 30th June, 1962	
			Number	Amount
	£	£		£
<i>State Savings Bank, Crédit Foncier—</i>				
Civilians .. .. .	61,780	12,122,788	407	458,583
Discharged soldiers .. .. .		848,567	6	1,730
<i>Treasurer—</i>				
Cool stores, canneries, etc. .. .. .		1,842,783	(a) 2	795,243
<i>Department of Lands and Survey—</i>				
Closer settlement settlers and soldier settlers .. .. .		b 46,904,855	1,512	2,021,565
Cultivators of land .. .. .		2,463,557	37	8,929
Wire netting .. .. .	929	736,981	39	6,960
<i>Soldier Settlement Commission—</i>				
<i>For Soldier Settlement—</i>				
Purchase of land .. .. .	12,632	19,714,913	(c)	} 4,763,073
Development and improvement of holdings .. .. .	219,420	27,142,300	(c)	
Advances for—				
Settlers' lease liability .. .. .	1,747,179	26,109,700	2,489	22,382,137
Development of single unit farms .. .. .	5,613	11,948,492	1,671	6,359,223
Improvement stock, etc. .. .. .	163,201	6,050,882	370	744,674
Other advances .. .. .	9,650	3,451,374	415	403,082
<i>For general land settlement—</i>				
Purchase of land .. .. .	(e) 51,740	619,275	(c)	} 5,315,088
Development and improvement of holdings .. .. .	(e) 1,387,123	4,746,669	(c)	
Advances for sale of land not required for land settlement .. .. .	2,119	23,925	1	7,534
Total .. .. .	3,661,386	164,727,061	(f) 6,949	43,267,821

(a) Number of companies. (b) Represents consolidated debts of settlers (Section 30, Act 4091). (c) Not available. (d) After allowing an amount of £13,790,021, representing excess acquisition, development and improvement costs, which has been written off. (e) Includes amounts transferred from Soldier Settlement at 1st July, 1959. (f) Incomplete.

4. Queensland.—The following table shows particulars of advances, etc., to 30th June, 1962. The figures exclude transactions in land.

ADVANCES TO SETTLERS, ETC.: QUEENSLAND

Advances, etc.	Advances, etc., made during 1961-62	Total advances, etc., to 30th June, 1962	Balances outstanding at 30th June, 1962	
			Number	Amount
	£	£		£
Co-ordination of Rural Advances and Agricultural Bank Acts	3,355,766	40,577,586	5,618	16,702,524
Discharged soldiers' settlement(a)	.. .. .	2,467,913	158	30,747
Water facilities	.. .. .	58,079	..	..
Wire netting, etc.	.. .. .	1,019,403	6	365
Seed wheat and barley	6,474 (b)	170,411	(c)	13,678
Drought relief	54,474	1,413,908	123	140,069
War Service Land Settlement	167,792	4,781,741	230	1,219,071
Income (Unemployment Relief and State Development) Tax Acts(d)	.. .. .	1,183,891	(e) 41	3,537
Irrigation	.. .. .	54,914	..	..
Farmers' Assistance (Debt Adjustment Acts)	.. .. .	1,055,590	17	28,444
Commonwealth Re-establishment and Employment Act 1945	.. .. .	874,155	52	13,225
Water Supplies Assistance Act	245,070	492,557	279	486,716
<b>Total</b>	<b>5,829,576</b>	<b>54,150,148</b>	<b>(e)6,524</b>	<b>18,638,376</b>

(a) Includes advances to group settlers through the Lands Department, as well as advances through the Agricultural Bank. (b) Includes accrued interest. (c) Not available. (d) Largely for relief to cotton and tobacco growers and for rural development (ringbarking, clearing, fencing, etc.). (e) Incomplete.

5. South Australia.—The following table shows particulars respecting advances, etc., under State authorities to 30th June, 1962.

ADVANCES TO SETTLERS, ETC.: SOUTH AUSTRALIA

Advances, etc.	Advances, etc., made during 1961-62	Total advances, etc., to 30th June, 1962	Balances outstanding at 30th June, 1962	
			Number	Amount
	£	£		£
<i>Department of Lands—</i>				
Advances to soldier settlers	.. .. .	5,071,780	28	985,464
Advances to blockholders	.. .. .	41,451	..	..
Advances under Closer Settlement Acts	.. .. .	2,730,516	500	530,461
Advances under Agricultural Graduates Settlement Act	.. .. .	62,258	..	..
Settlement of Returned Service Personnel, 1939-45	.. .. .	..	..	..
War	1,692,902	9,657,722	1,034	5,885,505
Advances under Crown Lands Development Act	44,503	407,846	51	331,872
<i>Primary Producers Assistance Department—</i>				
Advances in drought-affected areas	.. .. .	2,146,768	4	1,088
Advances under Farmers Relief Acts	.. .. .	4,435,509	2	413
<i>Irrigation Branch—</i>				
Advances to civilians	.. .. .	291,443	15	6,450
Advances to soldier settlers	.. .. .	1,048,174	185	206,600
<i>State Bank of South Australia—</i>				
Advances to settlers for improvements	96,013	1,384,739	302	386,385
Advances under Vermin and Fencing Acts	18,341	1,430,921	93	49,289
Advances under Loans to Producers Act	445,136 (a)	3,114,473	138	2,216,576
Commonwealth Re-establishment and Employment Act 1945	.. .. .	827,486	235	122,758
<b>Total</b>	<b>2,296,895</b>	<b>32,651,086</b>	<b>2,587</b>	<b>10,722,861</b>

(a) Includes transferred liability, £28,861.

6. Western Australia.—The operations prior to 1945 covered in this section related to moneys made available through, or by, the old Agricultural Bank and other Government Departments for the purpose of agricultural development. On 1st October, 1945, however, the Agricultural Bank was reconstituted as the Rural and Industries Bank of Western Australia, and was given authority to operate in similar manner to the associated banks. Certain securities in the books of the old bank were taken over by the general banking division of the new bank, and the clients concerned then operated with privileges and obligations similar to those provided by other banking institutions. The majority of the remaining securities, also, were eventually transferred.

At present, very limited funds are being made available by the State Government for advances for agricultural development, the bulk of the moneys for this purpose being provided by the Commonwealth Government under the War Service Land Settlement and Commonwealth Re-establishment and Employment Acts. Particulars of this expenditure are shown in § 2, page 88.

7. *Tasmania*.—The following table shows particulars of advances under State authorities to 30th June, 1962. Although advances made for the purchase of land for closer and soldier land settlement are not regarded as outstanding advances by the Department of Agriculture, the figures have been included in the table for comparative purposes; the areas so purchased have been leased on 99-year terms with an option of purchase which the leaseholder may exercise at any time.

ADVANCES TO SETTLERS, ETC.: TASMANIA

Advances, etc.	Advances, etc., made during 1961-62	Total advances, etc., to 30th June, 1962	Balances outstanding at 30th June, 1962	
			Number	Amount
<i>Agricultural Bank—</i>	£	£		£
State Advances Act and Rural Credits .. .. .	325,650	4,399,825	970	1,249,876
Commonwealth Re-establishment and Employment Act 1945 .. .. .	..	407,429	115	66,992
Primary Producers' Relief Act 1947 .. .. .	..	297,846	46	9,088
<i>Minister for Agriculture—</i>				
<i>Soldier Settlers—</i>				
Advances .. .. .	1,619	1,023,877	..	14,158
Purchase of estates, etc. .. .. .	5,917	2,588,406	242	251,306
<i>Closer Settlers—</i>				
Advances .. .. .	19,237	136,644	10	38,869
Purchase of estates, etc. .. .. .	2,340	534,372	54	257,588
<b>Total</b> .. .. .	<b>354,763</b>	<b>9,388,399</b>	<b>1,437</b>	<b>1,887,877</b>

8. *Northern Territory*.—During the year 1961-62, fifteen advances totalling £22,051 were approved and advances made totalled £23,976. At 30th June, 1962, the balance outstanding from 110 settlers, including interest, was £182,147.

## CHAPTER V

### THE TERRITORIES OF AUSTRALIA

**NOTE.**—The internal Territories of Australia are the Northern Territory and the Australian Capital Territory. External Territories under the control of Australia are:—Norfolk Island; Papua (formerly British New Guinea); the Territory of New Guinea (under Trusteeship Agreement with the United Nations); Nauru (under Trusteeship Agreement with the United Nations); the Territory of Heard and McDonald Islands; the Australian Antarctic Territory; the Territory of Cocos (Keeling) Islands; and the Territory of Christmas Island. There is also the Territory of Ashmore and Cartier Islands, to which the laws, ordinances and regulations of the Northern Territory, of which it is deemed to form part, apply wherever applicable. Information on all except Ashmore and Cartier Islands is contained in the following pages, and details of the acquisition of all the Territories will be found on pages 5, 23 and 24 of Chapter I.

A summary of the results of the Population Census of 30th June, 1961, for each of the external Territories of Norfolk Island, Papua, New Guinea, Nauru, Cocos (Keeling) Islands and Christmas Island is given on pages 164–78 of Year Book No. 49. Corresponding information for the internal Territories is contained in Chapter IX. Population.

#### THE NORTHERN TERRITORY

##### § 1. Area and Population

**1. Area.**—Upon the extension of New South Wales westward to the 129th east meridian in 1825, the Northern Territory was incorporated in that colony, but in 1863 it was annexed by Royal Letters Patent to the province of South Australia. With the adjacent islands, it was transferred to the Commonwealth on 1st January, 1911. The total area is 523,620 square miles.

**2. Population.**—(i) *Population, excluding Full-blood Aborigines.* At the Census of 30th June, 1961, the population of the Territory, excluding full-blood Aborigines, was 16,206 males, 10,889 females, 27,095 persons. Corresponding figures at the Census of 30th June, 1954, were 10,288, 6,181 and 16,469 respectively.

The European population of the Territory increased slowly from 670 at the Census of 1881 to 3,767 in 1918. By 1921, it had decreased to 2,458, and in 1933 was still only 3,306. It had risen to 9,116 at the Census of 1947, to 14,031 at the Census of 1954 and to 23,599 at the Census of 1961.

(ii) *The Aborigines.* For particulars relating to the Aboriginal population, see Chapter IX. Population. All Aborigines, by virtue of the *Nationality and Citizenship Act* 1948–1960, are British subjects and Australian citizens. Northern Territory Aborigines are not subject to special legislation, but the special welfare needs of individuals are met by the *Welfare Ordinance* 1953–1963 (see § 9 below, p. 104). Reserves for Aborigines comprise an area of 93,390 square miles.

##### § 2. Legislation and Administration

On 1st January, 1911, the Territory was transferred from South Australia to the Commonwealth. The terms were outlined in Official Year Book No. 15, page 940. For particulars of the administration up to the *Northern Territory (Administration) Act* 1931, by which it was, for the second time, placed in the hands of an Administrator, see Official Year Book No. 38 and earlier issues.

The *Northern Territory (Administration) Act* 1910–1962 provides for the constitution of a Legislative Council consisting of the Administrator as President, six official members, three nominated non-official members and eight elected members. The Council makes ordinances for the Territory, which must be submitted to the Administrator for assent. The Administrator may or may not assent to them, or he may reserve them for the Governor-General. The Governor-General may disallow any ordinance assented to by the



Administrator within six months from the date of assent, and the operation of ordinances relating to certain matters, including Crown lands and Aboriginal affairs, is dependent on his approval. Money votes may be proposed in the Council only by the Administrator himself, or by his permission or direction.

The Territory elects a member to the House of Representatives, who has the right to take part in debates, but may vote only on matters that relate solely to the Northern Territory.

### § 3. Physiography

The Territory is within the torrid zone, with the exception of a strip about 180 miles wide which lies south of the Tropic of Capricorn.

The low flat coast-line seldom reaches a height of 100 feet. Sandy beaches and mud flats, thickly fringed with mangroves, prevail. Sandstone, marl and laterite form the occasional cliffy headlands. The sea frontage of more than 1,000 miles is indented by bays and inlets and intersected by numerous rivers, many of which are navigable for considerable distances from their estuaries. The only practicable deep-water port, however, is Darwin.

Inland, the country generally is destitute of conspicuous landmarks. From the coast, there is a general rise southwards to the vicinity of the 17th or 18th parallel of south latitude, where the higher lands form the watershed between the rivers that flow northwards to the sea and those that form the scanty supply for the interior systems. Towards the centre of the continent, the land over a wide area is of considerable elevation, and there are several mountain ranges, generally with an east and west trend.

### § 4. Climate, Fauna and Flora

1. **The Seasons.**—There are two main climatic divisions, the wet season, November to April, and the dry season, May to October, with uniform and regular changes of weather. Nearly the whole of the rainfall occurs in the summer months. Further particulars appear in Official Year Book No. 6, page 1116.

2. **Fauna.**—The ordinary types of native Australian fauna inhabit the Territory. As elsewhere on the continent, the higher *Theria* are rare, but marsupials, birds, crocodiles, fresh-water tortoises, snakes (mostly non-venomous) and frogs abound. There are many varieties of fresh-water fish and littoral *Mollusca*. Butterflies and beetles are strongly represented. The termite is a pest which is capable of serious damage to wooden buildings unless special preventive measures are taken. A species of the ant builds anthills which sometimes attain great dimensions. Mosquitoes and sandflies are very troublesome, particularly in the wet season. Some types of native fauna are protected. Buffalo formerly existed in large herds, but their number has been reduced by indiscriminate shooting. Buffalo shooting is, however, now controlled by Ordinance.

3. **Flora.**—The vegetation is north Australian in type, but a number of the forms belong to the Malayan and Oceanic regions. In the coastal regions, tropical vegetation grows luxuriantly to the water's edge. In the north, cypress pine, bloodwood and paper-bark timbers are now cut and milled for local building purposes. Cypress pine is resistant to termites. On the wide expanses of plain country in the interior, there is little vegetation, the principal orders represented being:—*Euphorbiaceae*, *Compositae*, *Convolvulaceae*, *Rubiaceae*, *Goodeniaceae*, *Leguminosae*, *Utricaceae*.

### § 5. Production

1. **Agriculture.**—Up to the present, agriculture has made little progress in the Territory, although rice, peanuts, tobacco, grain sorghum, bananas, pineapples, citrus fruits, cashew nuts, mangoes, papaws, vegetables, fodder plants and improved pastures can be grown in certain areas. At the present time, commercial agricultural production is practically confined to vegetables and small-scale fruit production (mainly pineapple and citrus) for local consumption. A small industry is being developed in Townsville lucerne seed production and in the production of hay.

In 1946, the Commonwealth Scientific and Industrial Research Organization commenced scientific surveys to determine more accurately the potentialities of the Territory. Surveys have been completed of the Katherine-Darwin, Barkly Tableland, Victoria River, and Alice Springs Regions. The survey of the Katherine-Darwin Region indicated that further investigations into agricultural possibilities were warranted. As a result, the C.S.I.R.O. established an agricultural research station at Katherine to investigate the possibilities of dry farming in a land system covering an area of about 7,000 square miles in the Katherine-Daly River basin. The research work at this station was sufficiently encouraging in respect of the production of peanuts, grain sorghum, and pastures to warrant investigations into the application of the findings on a commercial scale. To further the investigations, the Commonwealth Government approved of the establishment by the Northern Territory Administration, in 1952, of an experimental farm at Katherine for the purpose of carrying out trials with these crops to determine the requirements for farming them on a commercial scale. In 1956, the Administration established an experimental farm at Berrimah, near Darwin. Investigations into fruit and vegetable growing and pasture production are being carried out under both dry land and irrigated conditions.

The survey of the Katherine-Darwin Region also indicated various soil types in other parts of the Region on which agricultural production tests would be worthwhile. Trials on soil types are carried out by agricultural field officers of the Administration in various areas of the Territory considered potentially suitable for agriculture.

Prospects for rice growing were indicated by the survey, and in 1952, the Administration established rice research stations at Humpty Doo and at a location known as Sixty Mile, on the Stuart Highway, 60 miles from Darwin. Since the 1959-60 season, rice research work on the sub-coastal plains has been carried out in the Territory by the C.S.I.R.O. at its Coastal Plains Research Station at Middle Point, near Humpty Doo. The Administration carries out rice investigational work outside the coastal plains at the Upper Adelaide River Agricultural Experiment Station. At the rice research stations, it has been demonstrated that rice can be grown in the Territory, but that the main problems are adequate water control and drainage, determination of cultivation techniques in the soil conditions, and the production of suitable rice varieties. Territory Rice Limited, a firm with Australian and American capital, carried out commercial scale operations near Humpty Doo from the 1954-55 season until the 1959-60 season. Under arrangements with the company, four former employees grew rice crops in the 1960-61, 1961-62 and 1962-63 seasons.

On 25th July, 1959, the Minister for Territories appointed an expert committee to investigate the prospects of promoting agricultural settlement in the Northern Territory on an economic basis and the major factors to be considered in shaping an agricultural policy for the Territory, including the areas best suited to agricultural settlement; the crops most likely to prove economic: the relationship of agriculture to the expansion of the pastoral industry: the availability of land and the distribution and tenure of land; credit and other forms of assistance to primary producers; marketing opportunities; research and agricultural extension work; and water use and conservation. The committee has presented its report, and some of its recommendations have been accepted and implemented, while others are under consideration.

A scientific liaison conference, convened jointly by the C.S.I.R.O. and the Northern Territory Administration, was held in Darwin during February, 1961. This conference was attended by various Commonwealth departments, universities, and the Australian Meat Board. Fifty-eight papers were presented to the conference, and all aspects of rural and pastoral activities in the Territory were covered.

Early in 1964, three pilot farms commenced operations in the Marrakai area, two being mixed farms based on rice growing and cattle fattening, and one on cattle fattening on native and improved pastures.

**2. Pastoral Industry.**—The pastoral possibilities of certain parts of the Territory were recognized at an early date, and both cattle and sheep raising have been attempted. For various reasons, sheep-raising has not been very successful, but the cattle industry has progressed steadily and is continuing to expand.

Cattle exported during 1962-63 numbered 124,616—82,919 to Queensland, 29,231 to South Australia, 4,796 to Western Australia and 7,670 to Hong Kong. Other livestock exports included 1,002 horses and 91 buffaloes. Imports of livestock were—bulls, 1,332; other cattle, 7,028; horses, 61; sheep, 5,360; pigs, 6; and poultry, 17,136.

The estimated numbers of livestock in the Territory at 30th June, 1959 to 1963, are given in the following table.

NORTHERN TERRITORY: LIVESTOCK

At 30th June—	Horses	Cattle	Sheep	Pigs	Goats	Mules
1959 .. ..	38,882	1,099,014	18,731	3,802	9,126	200
1960 .. ..	38,340	1,110,520	14,960	4,400	9,440	318
1961 .. ..	40,054	1,154,656	16,089	2,845	5,958	367
1962 .. ..	40,809	1,063,528	10,388	2,762	4,949	195
1963 .. ..	38,191	1,086,627	9,469	1,842	4,275	168

3. **Hides and Skins.**—The numbers of hides and skins exported from the Territory during 1962–63 were as follows: sheep, 2,868; crocodile, 12,746; cattle, 5,072; and buffalo 811.

4. **Mining.**—During 1962, the value of output of the mining industry in the Territory, excluding uranium mining, was £2,524,000.

The mining of copper ores and concentrates is the most important in terms of value of output, and accounts for more than two-thirds of the Territory's total recorded production. Prior to 1956, gold minerals, first mined in 1869, accounted for most of the value of output, but from 1956 onwards gold production has remained relatively constant while copper production has increased considerably. The bulk of the copper and gold is won at Tennant Creek, where, in 1958, the government battery was re-opened to encourage gold mining by smaller operators.

Although some overseas contracts held by uranium producers have recently terminated, the Moline mine operated by a private company and the Rum Jungle mine operated on behalf of the Commonwealth continue to produce, the uranium product from the latter mine being stockpiled at present. Prospecting and survey programmes are being continued by the Commonwealth Bureau of Mineral Resources. An important incidental outcome of this work was the discovery during 1962 of a large deposit of rock phosphate near Castlemaine Hill.

Production of mica and wolfram concentrates, both of which were important in the past, is now negligible. Increasing interest is being shown in tin mining, and production is expanding.

Plans are now being put into operation to work large bauxite deposits at Gove Peninsula.

The following table shows the value of output of the mining industry in the Territory for the years 1958 to 1962. Particulars of the value of output from quarries are not included.

NORTHERN TERRITORY: VALUE OF OUTPUT<sup>(a)</sup> OF THE MINING INDUSTRY  
(EXCLUDING URANIUM)  
(£'000)

Year	Copper ore and concentrate	Gold (b)	Manganese ore	Mica	Other	Total, all minerals
1958 .. ..	1,286	895	70	47	16	2,314
1959 .. ..	1,455	901	37	45	33	2,471
1960 .. ..	2,080	881	41	17	54	3,073
1961 .. ..	2,063	895	1	1	27	2,987
1962 .. ..	1,632	842	2	..	48	2,524

(a) Selling value at point of sale of mine products less transport costs from mine to point of sale..

(b) Ore, concentrate, bullion, alluvial gold, etc.

5. **Forestry.**—In August, 1958, the Commonwealth Government approved a six-year programme of forestry improvement and development to preserve existing forest areas and increase possible timber resources. The programme is being carried out by the Forestry and Timber Bureau. Experimental work in reforestation is being carried out in small plantation areas. Cypress pine appears the most promising species for large-scale commercial plantings. Local production of log timber, mainly cypress pine, amounted to 1,028,067 super. feet in 1962–63, but this was insufficient to meet local requirements, and about 2,350,000 super. feet of timber was imported from the States and overseas.

6. **Pearl Fisheries.**—In 1884, mother-of-pearl-shell was discovered in the harbour of Port Darwin. Since that time, the areas fished have extended to the various banks to seaward and coastwise along the Northern Territory coast. Figures for production and value of shell for the seasons ended January, 1959 to 1963, are shown in the following table.

NORTHERN TERRITORY: PEARL FISHING(a)

Season ended January—	Boats engaged	Pearl-shell taken	
		Quantity ('000 lb.)	Value (£'000)
1959.. .. .	5	314	57
1960.. .. .	5	188	36
1961.. .. .	5	222	45
1962.. .. .	3	147	29
1963.. .. .	2	114	20

(a) Excludes operations of Queensland and Japanese pearlers operating in Northern Territory waters.

Competition from plastic materials has reduced the price being paid for pearl-shell to a low level, and pearling has declined in recent years. Experimental work is being conducted on pearl culture operations in territorial waters, and it is hoped that a new industry will be established to replace the old pearling industry.

7. **Secondary Industries.**—The secondary industries that have so far been established in the Territory have been largely the service industries normally associated with a developing area, for example, home building, electrical repairs, printing, motor and marine engineering, plumbing, welding, joinery, sheet metal work, and blue metal crushing. Major industrial investments by private interests in recent years include two breweries and a factory for the manufacture of milk products, ice cream, and aerated waters. The total number of factories (i.e., establishments in which four or more persons are employed or where power—other than manual—is used in any manufacturing process) in 1962–63 was 141; the average number of employees, 967; the value of production (value added), £2,246,000; and the value of output, £3,964,000.

## § 6. Land Tenure

Almost half the land in the Territory is reserved or unoccupied and unreserved, the remainder, apart from a very small proportion alienated, being held under various forms of lease or licence, which are described in Official Year Book No. 48, pages 111–12, and in more detail in Official Year Book No. 39, pages 329–30. Chapter IV. Land Tenure and Settlement of this issue contains up-to-date statistical information concerning areas occupied under various forms of tenure.

## § 7. Trade, Transport and Communication

1. **Trade.**—No record is kept of the trade between the States and the Territory. The following table shows the values of the total direct overseas trade into and from the Northern Territory during the years 1958–59 to 1962–63.

## NORTHERN TERRITORY: OVERSEA TRADE

(£ )

Year	Imports	Exports
1958-59 .. .. .	1,058,998	360,682
1959-60 .. .. .	1,484,791	551,199
1960-61 .. .. .	1,206,246	435,069
1961-62 .. .. .	2,084,216	611,722
1962-63 .. .. .	1,192,321	544,462

2. **Shipping.**—Shipping services to Darwin are provided from the eastern States at intervals of about four weeks by ships of the Australian National Line, and from Western Australia by three to four ships a month of the Western Australian State Shipping Service. Oversea tankers visit Darwin approximately ten times annually with supplies of aircraft fuel and other petroleum products. Other oversea vessels call at irregular intervals. During 1962-63, approximately 140,000 tons of merchandise were discharged at Darwin. A vessel operated from Thursday Island serves settlements on the Gulf of Carpentaria, and some mission-owned boats carry cargo from Darwin to mission stations and government settlements along the coast.

3. **Air Services.**—At 30th June, 1963, there were 13 government aerodromes and 114 licensed aerodromes in the Territory. The oversea passenger services using the Darwin international airport are Air India; Qantas/B.O.A.C. (Sydney to London); B.O.A.C. (Sydney to Hong Kong); and K.L.M. (Sydney to Amsterdam). Qantas also conducts a freight service from Sydney to London. Regular inland services to Darwin, with, in some cases, intermediate stops at Territory centres, are operated by Trans-Australia Airlines and Ansett-A.N.A. (from Adelaide, Melbourne, Sydney and Brisbane), and MacRobertson-Miller Airways Ltd. (from Perth and Derby). MacRobertson-Miller Airways Ltd., and Connellan Airways Ltd. operate a network of air services throughout the Territory, the latter company's base being at Alice Springs. The Royal Flying Doctor Service also operates aircraft, while charter services can be secured at Darwin and Alice Springs.

4. **Railways.**—The Commonwealth Railways Commissioner operates the Central Australia Railway from Port Augusta in South Australia to Alice Springs over a distance of more than 750 miles, of which about 200 are in the Northern Territory. The line is standard gauge from Port Augusta to Maree, a distance of 217 miles, and 3 ft. 6 in. from Maree to Alice Springs. The Commissioner also operates the North Australia Railway between Darwin and Birdum on a 3 ft. 6 in. gauge over a distance of 317 miles. The two inland terminals, Alice Springs and Birdum, are about 630 miles apart and are connected by road transport along the Stuart Highway. Larrimah, on the highway and 6 miles north of Birdum, is the point of trans-shipment for passengers and goods and is, at present, the effective terminal. A road-rail freight service operates between Adelaide and Darwin via Alice Springs.

5. **Roads.**—The Stuart Highway, 954 miles long, connects Alice Springs with Darwin and runs via Larrimah and Tennant Creek. The Barkly Highway, 403 miles long, connects Mount Isa (Queensland) with Tennant Creek and joins the Stuart Highway some 16 miles north of Tennant Creek. These highways are used for carrying various freights including cattle, particularly to and from the railheads at Alice Springs, Larrimah and Mount Isa. The routes are used also for overland tourists and travellers from the southern States to Darwin. With the further development of the pastoral and mining industries in the Territory, road trains are now being used on both highways for the export of cattle and ore. Both roads have good water bores and communications. There are now approximately 10,700 miles of road in the Territory of which 1,430 miles are sealed.

Work on a programme for reconstruction of beef cattle roads, estimated to cost £4,570,000 over a period of three to four years, commenced in 1961-62. Expenditure to 30th June, 1963, was £1,534,953. The transport of cattle by road is expected to increase the number and value of cattle turned off.

6. Posts, Telegraphs, Telephones and Wireless.—Postal communication is maintained by road, rail and air transport between Darwin and the capital cities of Australia. In addition, vessels belonging to the Western Australian State Shipping Service provide a regular service between Fremantle and Darwin. Inland, the northern part of the Territory receives its mail via Darwin or by means of the aerial services, and the southern districts are served via Adelaide.

The overland telegraph line, covering a length of 2,230 miles, runs from Adelaide to Darwin, and links Darwin in telegraphic communication with other parts of the world.

Long-distance telephone communication is established between Darwin and the capital cities of Australia, and oversea telephone communication through Sydney or Perth is also available.

Regional national broadcasting stations are situated at Darwin, Alice Springs, Tennant Creek and Katherine. and there is a commercial station at Darwin. The majority of homesteads on pastoral leases are equipped with radio transceivers operated under licence from the Postmaster-General's Department. These stations are in daily communication with Flying Doctor bases situated at Alice Springs (Northern Territory), Wyndham (Western Australia), Broken Hill (New South Wales), and Cloncurry (Queensland), and are used for transmission of radio-telegrams and other communications.

## § 8. Education

1. European.—Schools for European and part-European children in the Territory are conducted for the Commonwealth, on an agreed basis of reimbursement, by the South Australian Department of Education, which is represented in Darwin by an Assistant Supervisor of Education, Northern Territory Schools.

At 30th June, 1961, there were 19 government schools in the Territory, with 3,592 pupils, and three private schools, with 838 pupils, providing instruction according to the South Australian curriculum. High schools with classes up to the Leaving Certificate level have been established at both Alice Springs and Darwin.

All children who live more than 10 miles from an established school receive an allowance of up to £140 (£80 plus £60 on a graduated scale according to family income) per annum plus fare concessions if they board away from home in order to attend school. Twelve exhibitions on the results of the Intermediate Certificate are available annually, and carry benefits up to £50. An allowance of £100 (plus up to £100 on a graduated scale according to family income) with return fares once a year, is payable to Leaving Honours students.

Approximately 148 children receive correspondence education under the South Australian Correspondence School system. The radio session "School of the Air" supplements normal correspondence instruction for certain children in isolated areas.

Sixteen pre-school centres are in operation in the Territory, three of which are on Government settlements, the staff of all except one being officers of the Northern Territory Administration. A number of scholarships are offered each year for Territory girls to qualify as pre-school teachers.

2. Special Aboriginal Schools.—The social, cultural, and educational background of the Aborigines has made necessary the establishment of special schools for them. It is envisaged that this necessity will ultimately pass. As from the beginning of the 1956 school year, control of these schools passed from the Commonwealth Office of Education to the Welfare Branch of the Administration. Seventeen schools have so far been established. A special syllabus and series of readers have been prepared for use in these schools. Free mid-day meals, milk, and school clothes are supplied to the pupils. In addition to the seventeen Administration schools, sixteen schools for Aboriginal children are conducted by missions with the aid of Government subsidies. Also, five schools aided by Government subsidies have been established on pastoral properties, and the establishment of others along similar lines is planned. Three pre-school centres are operated by the Administration for Aboriginal children.

3. **Theoretical Training of Apprentices.**—The recognition that technical school training is an extension of workshop training has led to the introduction of day-time classes which apprentices attend without loss of pay. Apprentices are directed by the Apprentices Board to undertake correspondence courses conducted by the Technical Correspondence School of the South Australian Education Department and the Sydney Technical College, these courses covering the work prescribed for the various trades in South Australia and New South Wales.

### § 9. Aboriginal Welfare

The Commonwealth and State Governments have adopted a common policy of assimilation for the Aborigines. This means that all Aborigines and part-Aborigines may attain the same manner of living as other Australians and live as members of a single Australian community, enjoying the same rights and privileges, accepting the same responsibilities, observing the same customs and influenced by the same beliefs, hopes and loyalties as other Australians. In the Northern Territory, Aborigines, as such, are not subject to special conditions, but the *Welfare Ordinance* 1953–1963 provides that any person, regardless of race, may be declared a ward if by any reason of his manner of living, his inability without assistance to manage his own affairs, his standard of social habits and behaviour, and his personal associations, he stands in need of the special care and assistance the Ordinance provides. An intensive welfare programme to prepare Aboriginal wards for the demands of modern living is being carried out, and 13 Government settlements and 14 mission stations have been established, where Aborigines are encouraged to adopt a settled way of life, and health services, particularly child welfare services, education, housing, vocational training and employment are provided. Aborigines are also encouraged to take part in the social activities of the community.

### § 10. Finance

Details of revenue and expenditure of the Territory for the years 1958–59 to 1962–63 are shown below. The information given covers the transactions of the Commonwealth Consolidated Revenue Fund relating to the Northern Territory. Transactions of the North Australia Railway, formerly included, are now excluded from this table.

#### NORTHERN TERRITORY: REVENUE AND EXPENDITURE (£)

Particulars	1958–59	1959–60	1960–61	1961–62	1962–63
REVENUE					
Taxation—					
Probate and stamp duties ..	14,271	15,177	20,923	24,656	38,092
Motor registration ..	52,610	60,429	70,602	75,360	81,374
<i>Total</i> ..	<i>66,881</i>	<i>75,606</i>	<i>91,525</i>	<i>100,016</i>	<i>119,466</i>
Business undertakings—					
Electricity supply ..	448,536	532,915	573,875	687,252	731,867
Other—					
Rent .. .. .	} 341,894	} 394,651	} 418,299	289,940	292,442
Rates .. .. .				212,620	198,453
Housing .. .. .	} (a)	} (a)	} (a)	111,511	122,190
Mining .. .. .				40,462	64,932
Harbour and wharf ..				60,448	87,782
Health .. .. .				135,528	184,005
Attorney-General ..	17,314	16,640	27,905	31,685	24,386
Miscellaneous .. ..	352,804	406,558	628,334	330,864	279,189
<i>Grand Total</i> ..	<i>1,227,429</i>	<i>1,426,370</i>	<i>1,739,938</i>	<i>2,000,326</i>	<i>2,104,712</i>

(a) Not available separately; included in Miscellaneous.

NORTHERN TERRITORY: REVENUE AND EXPENDITURE—*continued*

(£ )

Particulars	1958-59	1959-60	1960-61	1961-62	1962-63
<b>EXPENDITURE</b>					
<b>Business undertakings—</b>					
Electricity supply .. ..	335,769	363,378	351,020	401,215	469,743
Water supply .. ..	106,105	101,783	115,861	167,930	199,578
Hostels' loss .. ..	38,000	42,738	18,000	14,000	14,000
<i>Total</i> .. ..	<i>479,874</i>	<i>507,899</i>	<i>484,881</i>	<i>583,145</i>	<i>683,321</i>
<b>Social expenditure—</b>					
Aboriginal affairs .. ..	719,695	979,984	965,227	1,011,983	1,297,386
Educational services .. ..	243,327	278,096	352,993	437,201	483,149
Public health, recreation and charitable .. ..	854,843	857,423	1,049,686	1,322,833	1,366,474
Law, order and public safety .. ..	103,984	118,831	123,735	129,860	135,906
<i>Total</i> .. ..	<i>1,921,849</i>	<i>2,234,334</i>	<i>2,491,641</i>	<i>2,901,877</i>	<i>3,282,915</i>
<b>Capital works and services—</b>					
Water supplies, roads, stock routes, etc. .. ..	500,395	386,583	509,516	751,580	1,652,949
Buildings, works, sites, etc. ..	2,638,159	2,705,798	2,967,054	4,015,773	3,830,763
Plant and equipment .. ..	212,164	322,440	348,552	1,013,264	1,072,141
Loans for housing .. ..	166,000	379,298	617,953	575,798	556,205
Loans for encouragement of primary production .. ..	71,244	10,038	23,315	23,863	21,996
Other .. ..	89,820	69,730	65,000	..	44,712
<i>Total</i> .. ..	<i>3,677,782</i>	<i>3,873,887</i>	<i>4,531,390</i>	<i>6,380,278</i>	<i>7,178,766</i>
<b>All other—</b>					
Territory administration .. ..	1,767,085	2,159,480	2,448,306	2,840,989	3,248,114
Developmental services .. ..	183,984	221,600	219,997	243,610	274,694
Municipal, sanitary and garbage services .. ..	190,260	223,632	206,710	228,900	270,026
Shipping subsidy .. ..	2,000	2,333	2,563	4,250	4,250
Railway freight subsidy .. ..	30,850	35,615	33,149	36,013	40,225
Airmail service subsidy .. ..	24,424	22,500	22,845	33,311	36,250
Rent, repairs and maintenance, n.e.i. .. ..	276,169	(a)837,021	(a)942,535	(a)885,408	(a)929,278
<i>Total</i> .. ..	<i>2,474,722</i>	<i>3,502,181</i>	<i>3,876,105</i>	<i>4,272,481</i>	<i>4,802,837</i>
<b>Grand Total</b> .. ..	<b>8,554,277</b>	<b>10,118,301</b>	<b>11,384,017</b>	<b>14,137,781</b>	<b>15,947,839</b>

(a) Includes expenditure on Stuart and Barkly Highways: 1959-60, £499,900; 1960-61, £515,892; 1961-62, £499,997; 1962-63, £498,364.



## THE AUSTRALIAN CAPITAL TERRITORY

NOTE.—A special article *Canberra: Fifty Years of Development*, prepared by the National Capital Development Commission, is included on pages 122–32 of Official Year Book No. 49.

## § 1. Population, Works and Services

1. **Population.**—From 1911 until 1921, the population of the Australian Capital Territory remained at about 2,000 persons. In 1922, it commenced to rise, and by 1927 was nearing 6,000. The following year, with the transfer of departments from Melbourne, it passed 8,000.

Little growth was made thereafter until the later 'thirties, and at the outbreak of the 1939–45 War the population had reached just under 13,000 persons. During the war, growth was again slow, and at the Census of 30th June, 1947, the population was 16,905 persons. Subsequently, the population showed steady increases and at the Census of 30th June, 1954, it was 30,315 persons. With further transfers of departments from Melbourne, the population reached 58,828 persons (including 527 in Jervis Bay) at the Census of 30th June, 1961. At 1st July, 1963, the population was 73,453, made up of 70,775 in Canberra City and 2,678 in rural areas (including 601 at Jervis Bay).

2. **Progress of Works.**—(i) *National Capital Development Commission.* The *National Capital Development Commission Act 1957–1960* provides for a Commission to undertake and carry out the planning, development and construction of the City of Canberra as the National Capital of the Commonwealth. The year 1962–63 was the fifth year of the Commission's operations. Construction work was carried out by means of agency arrangements with the Department of Works and private consultants.

Details of expenditure by the Commission in each year from 1958–59 to 1962–63 are included in the table on page 110.

(ii) *Department of Works.* Apart from the work it carries out for the National Capital Development Commission, the Department of Works acts as design and supervision agent for other Commonwealth departments and instrumentalities. Total expenditure during 1962–63 on all operations amounted to £5,125,084 (£4,122,928 in 1961–62), comprising:—Building Works—Housing, £55,913, Other Building, £3,117,061; Engineering Works, £172,915; Repairs and Maintenance—Building, £759,641, Engineering, £836,127; Purchase of Plant, £183,427.

(iii) *Major Works.* The following major works were completed during 1963. *National Capital Development Commission.* Law Courts of the Australian Capital Territory; Schools of Engineering and Building, Canberra Technical College; Chemistry Building, Mathematics Building, Geology Building and School of General Studies Library, Australian National University; Commonwealth Avenue Bridge; Scrivener Dam; Dickson High School; primary schools at Watson, Narrabundah, and Hughes; Lawley House extensions; 144 flats at O'Connor; and lake margins and roads.

*Department of Works.* New Government Printing Office; Nurses' Home, Canberra Community Hospital; Deakin Telephone Exchange; and Manuka Post Office.

Works under construction at the beginning of 1964 included the following projects. *National Capital Development Commission.* Further buildings in the Defence Office Group at Russell, and at the Canberra Technical College; Administration Building and Zoology Building, Australian National University; Australian National Mint; Civic Auditorium; Commonwealth Avenue Offices; Bureau of Mineral Resources Building; foreshore improvements, Lake Burley Griffin; Campbell High School; Curtin Primary School; Watson Infants' School; Anzac Parade; Bachelor Flats (106 units); new reservoir at Hackett; and Hackett Primary School.

*Department of Works.* A.B.C. Studios, Dickson; and additions and alterations to Canberra Community Hospital.

(iv) *Roads and Water Supply.* The total length of roads in the Territory at 30th June, 1963 was:—bitumen and concrete—352 miles; gravel—169 miles; and other formed roads—64 miles; total—585 miles.

At 30th June, 1963, 15,690 homes were connected to the city water supply, drawn through nine service reservoirs from two storages on the Cotter River with a total capacity of nearly 3,500 million gallons. A third storage dam site is currently being investigated.

Treatment works at Weston Creek dispose of Canberra sewage. At 30th June, 1963, 243 miles of sewers were laid.

(v) *Housing Development.* To provide for additional home development three new suburbs are being opened in Yarralumla Creek Valley, south-west of the existing city area. The first of these, Hughes, is well advanced and 247 homes were completed by the end of 1963. In all parts of Canberra 1,857 houses and 229 flats were completed during 1963.

3. *Transport and Communication.*—Canberra is connected with the railway system of New South Wales at Queanbeyan by a line  $4\frac{1}{2}$  miles long. This line was opened for goods traffic on 25th May, 1914, and for passenger traffic on 15th October, 1923. Direct or linking services operate between Canberra and Sydney and Canberra and Melbourne.

Two airlines provide several services daily each way on the Sydney—Canberra—Melbourne route.

Regular motor-coach services link Canberra with towns in New South Wales, Victoria and South Australia.

There are three radio broadcasting stations in the Territory, 2CY and 2CN of the national broadcasting system, and 2CA, a commercial station, and two television stations, ABC Channel 3 of the national broadcasting system, and CTC Channel 7, a commercial station.

4. *Education, Health and Justice.*—The *Education Ordinance 1937–1959* provides for the compulsory attendance at school of children between the ages of six and fifteen years. The Commonwealth Department of the Interior is primarily responsible for the education of children in the Australian Capital Territory. By agreement, however, the New South Wales Department of Education arranges the teaching programme in accordance with its own curriculum and provides the teaching staff. It is reimbursed for expenses incurred.

At 31st December, 1963, there were three public secondary schools in Canberra providing courses to the Leaving Certificate standard—Canberra High School, Telopea Park High School, and Lyneham High School, and two which will annually extend their courses, reaching the Leaving Certificate standard by 1964 and 1965 respectively—Narrabundah High School and Dickson High School. Seventeen schools provided courses for children in infants and primary classes, including two in the Jervis Bay area and three in rural districts. There were also a school for mentally handicapped children; a therapy clinic for children suffering from speech defects; a clinic for educational guidance; and a class for deaf children.

At the same date, there were sixteen private schools in Canberra. Of these, St. Edmund's Christian Brothers' College, the Catholic Girls' High School, the Canberra Grammar School (Boys), and the Canberra Church of England Girls' Grammar School provide courses leading to the Leaving Certificate Examination. A fifth private secondary school, Daramalan College, will annually extend its courses to reach Leaving Certificate standard in 1966.

Twenty-four pre-school centres, including two occasional care centres and a mobile unit which visits outlying areas, provide pre-school facilities for approximately 1,900 children between the ages of three and five years.

The Canberra Technical College, which follows the curriculum set by the New South Wales Technical Education Department, provides trades courses for apprentices; vocational (non-trades) courses including accountancy, women's handicrafts, and sheep and wool courses; hobbies courses including ceramics, dressmaking, art, woodwork and motor maintenance; and courses for Commonwealth authorities. In addition, the Technical College undertakes the trade testing of migrants seeking to enter skilled trades.

An area of about 250 acres has been set aside at Acton for the Australian National University. Provision has been made for the University to establish such research schools as may be thought desirable, including a School of Medical Research, and Research Schools of Physical Sciences, Social Sciences and Pacific Studies. Provision for undergraduate studies and some post-graduate study is made by the School of General Studies.

Further reference to education in the Australian Capital Territory appears in Chapter XIX. Education, Cultural Activities and Research.

The Canberra Community Hospital serves the population of Canberra and surrounding districts. At 30th June, 1962, it had 318 beds, an honorary medical staff of 80, six salaried medical staff, and a nursing staff of 287. Extensions are being made to the hospital to enable it to cope better with the needs of Canberra's growing population. For further information see Chapter XVIII. Public Health.

The Australian Capital Territory has a Supreme Court and a Court of Petty Sessions. There is an Australian Capital Territory Police Force, which at the end of 1961–62 numbered 101, including two policewomen.

## § 2. Production

1. **Lands.**—Reference has been made in previous issues of the Official Year Book to the general conditions of land tenure in the Territory and to the area of alienated and leased land, and Chapter IV. Land Tenure and Settlement of this issue contains statistical information on the subject. (See also § 1. Canberra, Fifty Years of Development, p. 123 of Year Book No. 49.)

Under the *Seat of Government (Administration) Act* 1910, Crown lands in the Territory may not be sold or disposed of for any estate in freehold except in pursuance of some contract entered into before the commencement of the Act. Leases of land in the city area are granted under the *City Area Leases Ordinance* 1936–1961, and leases of other lands under the *Leases Ordinance* 1918–1958. Land is also leased for various purposes in the city area under the *Church Lands Leases Ordinance* 1924–1932 and the *Leases (Special Purposes) Ordinance* 1925–1943, while one lease under the *Church of England Lands Ordinance* 1926 has been granted for church purposes. As considerable portions of the Territory lands are not immediately required in connexion with the establishment of the city, large areas have been leased for agricultural or grazing purposes.

The Commonwealth acquired from the State of New South Wales sovereign rights over the area comprising about 28 square miles of land and water at Jervis Bay for possible use as a port in connexion with the Australian Capital Territory. The Royal Australian Naval College is situated in this area. Some 5,000 acres of land in the area, mostly of little value agriculturally, are used for grazing purposes. The natural forest is being utilized for the production of hardwood building material and the area treated is being reforested with softwoods on an experimental basis.

2. **Forestry.**—A considerable amount of reforestation work has been undertaken, and plantations (mainly *Pinus radiata*) have been established at Uriarra, Mount Stromlo, Pierce's Creek, Green Hills and Kowen. Experimental plots have been established in the Brindabella mountains, and soil conservation areas at various locations throughout the Territory.

The total area of softwood plantations at 30th June, 1963, was 26,289 acres, of which 23,942 acres were *Pinus radiata*, the balance consisting of other softwood species, chiefly *Pinus ponderosa* and *Pinus nigra*, and 273 acres of experimental planting at Jervis Bay, mainly *Pinus radiata* and *Pinus elliottii*.

Forestry operations in the Territory were begun on Mount Stromlo in 1915. Plantings up to 1925 were chiefly on decorative lines, but since then a much wider programme has been undertaken. Sawmill timber is now being obtained, mainly from thinning operations. The yearly output of pine logs has increased from 2,500 cubic feet in 1930–31 to about one million cubic feet at the present time, the total amount cut to date being about 16.4 million cubic feet. The present output consists of approximately 40 per cent. logs yielding building material, 49 per cent. case-making material, and 11 per cent. cordwood and pulpwood.

In 1926, a comprehensive review was undertaken of the Territory's potentialities for forest development. The existing forest area has been placed under management and a considerable amount of survey and assessment work has been completed, resulting in the extension of operations, including fire protection, to 100,000 acres of hardwood forests in the Cotter catchment area. Hardwood log production during 1963 was 113,691 cubic feet, the greater part being cut in Jervis Bay and used in New South Wales. The total amount of hardwood cut from Australian Capital Territory forests to date is about 3,967,691 cubic feet and only small quantities now remain unexploited.

3. **Production.**—During 1962–63, the production of the more important items of the agricultural and pastoral industry was—wheat, 70,413 bushels; wool, 2,343,000 lb.; whole milk, 1,116,000 gallons; meat (carcass weight, fresh), 3,694 tons. The numbers of livestock depastured at 31st March, 1963, were—horses, 653; cattle, 14,155; sheep, 279,206; and pigs, 92.

As in the Northern Territory, the secondary industries established in the Australian Capital Territory are largely the service industries associated with the growth of the Territory. For the year 1961–62, factories (i.e. establishments in which four or more persons are employed or where power—other than manual—is used in any manufacturing process) numbered 140, the average number of employees was 2,232; the value of production (value added) was £3,768,000; and the value of output, £6,592,000.

## § 3. Finance

Details of revenue and expenditure for the years 1958-59 to 1962-63 as recorded in the Commonwealth Consolidated Revenue Fund are given in the following table. Particulars of railways operations, formerly included, have now been excluded from this table.

**AUSTRALIAN CAPITAL TERRITORY: REVENUE AND EXPENDITURE**  
(£)

Particulars	1958-59	1959-60	1960-61	1961-62	1962-63
<b>REVENUE</b>					
<b>Taxation—</b>					
Motor registration ..	121,567	143,884	161,421	185,297	203,797
Liquor .. .. .	36,150	39,783	47,534	52,048	55,706
Department of Health licences .. .. .	238	257	362	353	421
Medical, dental, pharmacy and nursing registrations	109	102	103	110	135
Stock rates .. .. .	2,735	1,732	1,851	2,079	2,067
Rates .. .. .	100,554	173,540	176,912	204,122	254,480
<i>Total</i> .. .. .	<i>261,353</i>	<i>359,298</i>	<i>388,183</i>	<i>444,009</i>	<i>516,606</i>
<b>Business undertakings(a)—</b>					
Abattoirs .. .. .	44,662	33,498	34,884	39,225	56,087
<b>Rent—</b>					
Housing .. .. .	822,743	1,052,792	1,185,673	1,584,078	1,740,093
Land .. .. .	159,553	214,920	259,986	278,079	336,568
Miscellaneous .. .. .	11,384	17,146	25,217	33,326	20,978
<i>Total, Rent</i> .. .. .	<i>993,680</i>	<i>1,284,858</i>	<i>1,470,876</i>	<i>1,895,483</i>	<i>2,097,639</i>
Fees for services and fines ..	81,351	120,397	245,481	283,305	297,978
Housing—interest and principal repayments ..	314,795	309,586	424,225	687,292	1,006,240
Premiums on lease sales ..	(b)	519,696	1,037,160	511,970	1,439,916
Other .. .. .	251,268	139,081	110,951	130,934	210,287
<b>Grand Total</b> .. .. .	<b>1,947,109</b>	<b>2,766,414</b>	<b>3,711,760</b>	<b>3,992,218</b>	<b>5,624,753</b>
<b>EXPENDITURE</b>					
<b>Business undertakings(a)(c)—</b>					
Water supply and sewerage ..	231,860	254,884	328,109	372,233	415,908
Abattoirs .. .. .	33,170	32,010	35,698	35,629	39,806
Transport services(d) .. .. .	62,000	62,000	60,000	62,000	58,000
Other .. .. .	32,840	..	10,359	..	..
<i>Total</i> .. .. .	<i>359,870</i>	<i>348,894</i>	<i>434,166</i>	<i>469,862</i>	<i>513,714</i>
<b>Social expenditure—</b>					
<b>Education—</b>					
Primary and secondary ..	519,732	601,130	805,795	936,106	1,143,049
Technical college .. .. .	56,115	68,719	75,687	84,545	97,541
University scholarships ..	7,600	11,000	10,723	13,756	15,426
Art, community activities, etc. . . . .	7,906	8,445	23,419	16,632	23,246
Nursery schools and pre-school centres .. .. .	30,175	32,861	38,196	49,483	51,033
Public health and recreation	127,124	132,261	160,926	187,426	215,153

NOTE.—For footnotes see end of table, page 110.

## AUSTRALIAN CAPITAL TERRITORY: REVENUE AND EXPENDITURE

—continued

(£ )

Particulars	1958-59	1959-60	1960-61	1961-62	1962-63
<b>EXPENDITURE—continued</b>					
Charitable—					
Hospital—general ..	356,819	396,250	408,800	457,400	536,600
Relief of aged, indigent, etc.	4,687	5,102	12,485	13,672	15,340
Other ..	64,749	38,674	51,805	51,271	59,451
Law, order and public safety—					
Justice ..	38,570	45,942	53,428	67,404	95,455
Police ..	137,894	168,952	197,275	215,921	263,148
Public safety ..	63,834	68,523	79,880	92,395	120,772
<i>Total</i> ..	<i>1,415,205</i>	<i>1,577,859</i>	<i>1,918,419</i>	<i>2,186,011</i>	<i>2,636,214</i>
Works and services(e)—					
National Capital Development Commission—					
National works ..	..	75,075	156,054	815,718	1,573,742
Commonwealth offices ..	527,555	738,121	1,391,219	1,119,074	831,952
Territory works—					
Education ..	634,724	1,036,265	1,500,804	1,103,433	782,808
Housing ..	5,836,083	4,616,827	3,426,679	3,247,651	3,440,502
Main roads, bridges, water, sewerage and storm water ..	1,264,137	1,487,460	1,505,599	1,991,431	1,823,032
Other buildings ..	137,901	463,979	333,866	248,347	370,390
City works ..	594,187	865,280	683,860	337,766	948,401
Land development ..	190,439	835,183	1,099,250	1,153,011	1,199,490
Minor works ..	169,925	197,047	254,684	264,673	250,520
Other ..	645,049	684,763	597,985	718,896	929,163
<i>Total</i> ..	<i>10,000,000</i>	<i>11,000,000</i>	<i>10,950,000</i>	<i>11,000,000</i>	<i>12,150,000</i>
Other Authorities—					
Electricity ..	347,153	494,788	629,251	461,729	524,776
Transport services ..	61,818	67,406	79,500	243,717	79,500
Health buildings ..	91,302	52,498	284,881	316,495	797,615
Housing ..	170,000	317,000	350,000	275,000	1,240,000
Forestry ..	70,000	70,000	70,000	84,000	105,000
Loans to co-operative building societies ..	..	17,500	500,000	1,000,000	650,000
Public works, n.e.i. ..	357,880	392,182	293,470	430,152	927,118
<i>Total</i> ..	<i>1,098,153</i>	<i>1,411,374</i>	<i>2,207,102</i>	<i>2,811,093</i>	<i>4,324,009</i>
<i>Total, Works and Services</i>	<i>11,098,153</i>	<i>12,411,374</i>	<i>13,157,102</i>	<i>13,811,093</i>	<i>16,474,009</i>
All other—					
Roads and bridges ..	321,342	329,955	378,255	378,942	379,910
Parks and gardens, etc. ..	319,108	350,396	459,721	522,076	607,531
Surveys, land services, etc. ..	83,673	176,471	180,474	210,153	220,578
Legislative and general administration ..	469,683	658,043	590,257	595,082	780,422
Miscellaneous ..	389,316	507,996	687,700	658,056	686,964
<i>Total</i> ..	<i>1,583,122</i>	<i>2,022,861</i>	<i>2,296,407</i>	<i>2,364,309</i>	<i>2,675,405</i>
<i>Grand Total</i> ..	<i>14,456,350</i>	<i>16,360,988</i>	<i>17,806,094</i>	<i>18,831,275</i>	<i>22,299,342</i>

(a) Excludes electricity transactions in Australian Capital Territory Electricity Supply Trust Account. Revenue excludes particulars of water supply and sewerage, which are not available separately and are included in rates. (b) Not available. (c) Other than Works and services. (d) Payment to Australian Capital Territory Transport Trust Account (loss on omnibus service). (e) Excludes repairs and maintenance.



Aerial view of Lake Burley Griffin showing Commonwealth Avenue Bridge, West Basin, the Canberra Community Hospital on its peninsula, West Lake and the western reach of the lake to the Scrivener Dam. (The lake is seven miles long, is 22 miles in circumference, has an average depth of 15 feet and has a surface area of 1,740 acres.)

Photograph by courtesy of Australian News and Information Bureau.



**The Governor-General of Australia, Viscount De L'Isle, opens the Papua-New Guinea new House of Assembly on 8th June, 1964.**

**Photograph by courtesy of Australian News and Information Bureau.**

## NORFOLK ISLAND

1. **General.**—Norfolk Island, discovered by Captain Cook in 1774, is situated in latitude 29° 3' 30" S., longitude 167° 57' 5" E. Its total area is 8,528 acres, the island being about 5 miles long and 3 miles wide. It is 930 miles distant from Sydney and 660 miles from Auckland. The length of the coast line is 20 miles, and its form that of an irregular ellipse. Except for a portion on the south side and the landing place at Cascade on the northern side, almost inaccessible cliffs rise from the water's edge. The climate is equable, the temperature ranging between 49° and 85° F. with a mean of 68° F. The average annual rainfall is 53 inches.

Having served as a penal station from 1788 to 1813 and from 1826 to 1855, Norfolk Island in 1856 became the home of the remaining descendants of the *Bounty* mutineers. At the Census of 30th June, 1961, the population was 844, consisting of 421 males and 423 females. Total population at 30th June, 1962, was 877.

2. **Administration.**—In 1856, the island was created a distinct and separate settlement under the jurisdiction of New South Wales. In 1896, it was made a dependency under the Governor of that Colony, and finally, by the passage of the *Norfolk Island Act* 1913, it was accepted by the Commonwealth Parliament as a territory of Australia. It is controlled by the Minister for Territories through an Administrator. The *Norfolk Island Act* 1957 provided for a local government body, the Norfolk Island Council, which replaced the former advisory council, retaining its advisory functions, but in addition having a certain autonomy in local government matters on the island. The Council did not in fact exercise its local government powers, and at its request the Act was again amended in 1963 to make it once more a purely advisory body. The amendment provided, however, for fuller consultation with the Council in the administration of the Territory, particularly in regard to the raising and spending of revenues. At the end of 1963, the amendment had not been brought into operation pending the making of the Ordinances needed to give full effect to its provisions.

3. **Economic Activity.**—The major economic activities of the island are primary production, the tourist trade and Government instrumentalities.

(i) **Primary Industries.** The soil on the island is particularly fertile, the climate equable, and the rainfall fairly evenly distributed except for a pronounced dry period in November. This enables a wide range of temperate and semi-tropical products to be cultivated. However, the island's comparative isolation presents trading difficulties.

Bean seed is the main export industry. Export figures for the five years to 1961–62 were 3,299, 2,568, 1,342, 1,319, and 2,184 bushels. However, wide fluctuations in prices, as in recent years, react unfavourably against the industry. The conditions on Norfolk Island also favour the production of other types of seed. Some hides and wool are also exported.

Fish abound off the island. In the past, a number of ventures have been formed to exploit this resource. They have been short-lived owing, for the most part, to the lack of a sheltered harbour. A modern whaling station was started on the island in 1955, and production commenced during the second half of 1956. The quota of 150 humpback whales in 1956, 120 in 1957 and in 1958, 150 in 1959, and 170 in 1960 and 1961, was caught and processed at the station. However, owing to a marked scarcity of whales, only four were caught in 1962, and the station has been closed down.

An active forestry programme is being carried out to increase the resources of Norfolk Island pine and to introduce suitable types of eucalypts. Logs suitable for the manufacture of plywood are exported in limited quantities to Australia.

(ii) **Tourists.** The unique history and unusual beauty of the island have always attracted a number of tourists. Before the 1939–45 War, the only means of transport to the island was by ship, but the building of the aerodrome in 1943 made the island far more accessible for tourists and the number of tourists has increased steadily during recent years. There are at present two licensed residential hotels and five guest houses; additional accommodation is being planned.



(iii) *Government Instrumentalities.* A large proportion of the population is employed by Commonwealth Government instrumentalities, namely:—Department of Civil Aviation, Norfolk Island Administration, Overseas Telecommunications Commission, and Department of the Interior (Meteorological Branch). The bulk of the finance for the operation of these instrumentalities is supplied by the Commonwealth Government and this greatly increases the income of the island.

4. *Trade, Transport and Communication.*—Imports to Norfolk Island since the 1939–45 War have risen from £32,402 in 1945–46 to £484,563 in 1962–63. In 1962–63, the major proportion (£320,381 or 66 per cent.) came from Australia, while New Zealand and Pacific Islands supplied £12,696 or 2.6 per cent. Exports rose from £9,024 in 1945–46 to £210,182 in 1960–61, but declined to £93,672 in 1962–63, when the whaling industry ceased operations. Australia was the principal market, exports thereto amounting to £75,364 in 1962–63, while exports to New Zealand and to Pacific Islands amounted to £17,786.

No duties are chargeable on goods imported into Australia from Norfolk Island if the goods are the produce or manufacture of Norfolk Island, shipped direct to Australia, and not goods which if manufactured or produced in Australia would be subject to excise duty.

A shipping service to the island is maintained at approximately seven-week intervals, from Sydney via Norfolk Island to the New Hebrides, Solomon Islands and other island groups and thence back to Sydney, while other vessels plying between Sydney and Noumea call at Norfolk Island about every three weeks. Shipping between the island and New Zealand is infrequent.

A fortnightly passenger and air freight service between Sydney and Norfolk Island, maintained by Qantas Empire Airways Ltd., extends to New Zealand under charter to Tasman Empire Airways Ltd.

There are approximately 50 miles of usable road on the island. As a substantial section of the population possesses private motor cars, and taxi-cab and bus services are available, transport is almost exclusively by motor vehicle.

5. *Education.*—Education is free and compulsory up to the age of fifteen years. The school conforms to the Australian standard of public education, ranging from kindergarten to the intermediate certificate, with a two years' super-primary course of instruction in cultural subjects and in woodwork, needlework, leatherwork, basketry and hat-making. The teachers are provided by the New South Wales Education Department, but they are paid by the Norfolk Island Administration. The number of scholars enrolled at 30th June, 1962, was 67.

6. *Judiciary.*—The judicial system of the Territory was reconstituted by the *Norfolk Island Act 1957* which was proclaimed in the Territory on 7th April, 1960. There is now a *Supreme Court of Norfolk Island* and a *Court of Petty Sessions*, which replaced the *Court of Norfolk Island* in its full and limited jurisdictions. The Supreme Court is the highest judicial authority in the Territory with original criminal and civil jurisdiction. The jurisdiction of this Court is exercised by a judge sitting in Court to the extent provided by the *Supreme Court Ordinance 1960* or any other Ordinance or by rules of Court, and in all matters of practice and procedure by a judge sitting in Chambers. The jurisdiction of the *Court of Petty Sessions* is exercised by a Chief Magistrate or any three Magistrates other than the Chief Magistrate. This Court has jurisdiction to hear and determine in a summary manner, under the provisions of the *Court of Petty Sessions Ordinance 1960*, cases arising under a law in force in the Territory where, under the law, an offence is punishable by summary conviction, a person is made liable to a penalty or punishment or to pay a sum of money for any offence, and no other provision is made for the trial of the person committing the offence, or jurisdiction is conferred upon a Court of Petty Sessions. The Court can also hear and determine civil claims in respect of a sum or matter or issue that does not exceed, or the value of which does not exceed, £200. There is right of appeal to the Supreme Court from the Court of Petty Sessions, and, in certain circumstances, a right of appeal to the High Court of Australia from judgments of the Supreme Court.

7. *Finance.*—The revenue of the Territory, together with an annual grant from the Commonwealth Government for administrative expenses, is paid to the credit of the Norfolk Island Trust Fund, and advances for administrative and developmental expenses are drawn from the account. The principal items of revenue and expenditure for the five years 1958–59 to 1962–63 were as follows.

**NORFOLK ISLAND: REVENUE AND EXPENDITURE**  
(£)

Item	1958-59	1959-60	1960-61	1961-62	1962-63
<b>REVENUE</b>					
Commonwealth subsidy .. ..	31,000	32,000	32,000	32,000	32,000
Customs duties .. ..	13,045	12,884	14,474	15,305	17,805
Sale of liquor .. ..	8,418	9,021	9,627	11,091	12,993
Post office .. ..	7,853	16,620	43,930	38,505	24,195
All other .. ..	12,785	11,479	8,806	11,565	11,476
<b>Total Revenue .. ..</b>	<b>73,101</b>	<b>82,004</b>	<b>108,837</b>	<b>108,466</b>	<b>98,469</b>
<b>EXPENDITURE</b>					
Administrative .. ..	23,091	24,196	23,643	27,758	28,181
Miscellaneous services .. ..	29,012	26,915	22,855	27,193	31,832
Repairs and maintenance .. ..	10,381	10,406	8,715	9,195	8,176
Capital works and services .. ..	19,901	12,748	7,010	21,093	23,014
Postal services .. ..	3,055	5,211	14,722	7,449	7,653
Other business undertakings .. ..	..	..	299	287	467
<b>Total Expenditure .. ..</b>	<b>85,440</b>	<b>79,476</b>	<b>77,244</b>	<b>92,975</b>	<b>99,323</b>

**PAPUA AND NEW GUINEA**

NOTE.—The information under this heading is applicable to both the Territory of Papua and the Trust Territory of New Guinea. For details of the respective Territories see pages 122 (Papua) and 127 (New Guinea) and following pages.

**§ 1. Administration**

The *Papua-New Guinea Provisional Administration Act 1945-1946*, which provided for the transfer back of control from the military authorities to civil authorities after the 1939-45 War, was repealed by the *Papua and New Guinea Act 1949* which came into force on 1st July, 1949. The latter Act approved the placing of the Territory of New Guinea under the International Trusteeship system and provided for an Administrative Union of the Territory of Papua and the Territory of New Guinea with one Administrator, one Supreme Court and one Public Service.

Provision was made for an Executive Council of not less than nine officers of the Territory, to be appointed by the Governor-General, and a Legislative Council consisting of twenty-nine members:—the Administrator; sixteen officers of the Territory (to be known as official members); three non-official members possessing such qualifications as are provided by Ordinance and elected, as provided by Ordinance, by electors of the Territory; three non-official members representing the interests of the Christian missions in the Territory; three non-official native members; and three other non-official members.

The Legislative Council was inaugurated on 26th November, 1951, by His Excellency Sir John Northcott, while Administrator of Australia.

In October, 1960, the Commonwealth Parliament passed amendments to the Papua and New Guinea Act to change the composition of the Legislative Council, the new Council consisting of 37 members, namely:—the Administrator; 14 official members (to be either indigenous or non-indigenous); 12 elected members (six elected by the native people); and 10 nominated members, of whom at least five will be indigenes. The Executive Council was replaced by the Administrator's Council, consisting of the Administrator and six persons, appointed from the Legislative Council by the Minister for Territories, on the recommendation of the Administrator.

In May, 1963, the Commonwealth Government passed a further amendment to the Act, which made provision for a House of Assembly to replace the Legislative Council. The House now consists of 64 members—10 official members appointed by the Governor-General on the advice of the Administrator; 44 members elected by the people of the Territory on a common roll in 44 open electorates; and 10 non-indigenous persons elected on a common roll in 10 special electorates comprising one or more open electorates.

The first elections for the House of Assembly were held in February-March, 1964.

The 1963 Act also provides for membership of the Administrator's Council to be increased from 7 to 11, seven of whom must be elected members of the House of Assembly.

## § 2. Judiciary

The courts which exercise jurisdiction within the Territory are:—

- (i) The Supreme Court of the Territory of Papua and New Guinea;
- (ii) Courts of Petty Sessions (Papua), District Courts (New Guinea);
- (iii) Courts for Native Matters (Papua), Courts for Native Affairs (New Guinea); and
- (iv) Warden's Courts.

The Supreme Court is the highest judicial authority in the Territory and has unlimited criminal and civil jurisdiction. Courts of Petty Sessions and District Courts have criminal jurisdiction over the less serious offences which are punishable on summary conviction, but have no jurisdiction to try treason crimes, misdemeanours and other indictable offences. They also exercise a limited civil jurisdiction. The jurisdiction of the Courts for Native Matters and Native Affairs covers offences by indigenous inhabitants against the Native Administration Regulations, and civil actions of any kind other than matters relating to the ownership of land or water if all parties are indigenes. The Administrator has power to establish, in respect of each gold field or mineral field, warden's courts with jurisdiction over civil cases respecting mining or mining lands held under the *Mining Ordinance 1937-1959* and offences against the mining laws of the Territory.

In addition, there are the Native Land Commission set up under the *Native Land Registration Ordinance 1952* and the Commissioner of Titles appointed under the *New Guinea Land Titles Restoration Ordinance 1951-1955*, whose function is to inquire into and determine what land in the Territory is the rightful and hereditary property of persons or communities by customary right; and the persons or communities by whom, and the shares in which, that land is owned.

## § 3. Agriculture and Animal Industry

1. **Soils.**—Although a large part of Papua and New Guinea is covered by skeletal soils unsuitable for agriculture, there are extensive areas in all districts where fertile soils occur, suitable for growing a wide range of crops. Most of the agriculture of the Territory up to the present has been on soils on the coastal plains, which, apart from the swamp soils, consist mainly of alluvium and podsolized alluvium. So far, these have been mostly under coconut plantations, although other crops such as rubber and cocoa have also been grown. The swamp soils, of which there are extensive areas in the delta plains and other parts of the Gulf of Papua and in smaller areas, are found intermittently around the coasts and along the lower reaches of the rivers, and are in general quite unsuited to any form of agricultural development.

Volcanic soils probably offer the greatest prospects for development. They are found mostly on the central plateau and southern foothills of the main island, but there are also areas in New Britain (particularly in the Gazelle and Willaumez Peninsulas), Bougainville and New Ireland, as well as in numbers of smaller islands. Other rich soils are the alluvials of the river valleys. The largest single area of this type is in the trough occupied by the Ramul and Markham Rivers.

2. **Climate.**—The climate, particularly the rainfall, over so wide an area as Papua and New Guinea, with its numerous islands and varying elevations, naturally presents many variations. Generally speaking, the climate is moist and tropical, except at high altitudes. There are only small differences in both daily and seasonal extremes. The Territory has no winter and summer, and no great variation in day-length over the year. The two seasons which are experienced are generally described as the "south-east" and the "north-west", corresponding with the periods of the year when the south-east trade winds and the north-west monsoons direct the main Territory air-flow. The south-east season prevails approximately from May to October, the trade winds attaining maximum velocities during July and August. The north-west monsoon operates over a considerably shorter period, from the end of December to about March. During the periods between these seasons, November and early December, and about March to April, there are two short spells of calm weather.

Rainfall varies considerably, from an average annual rainfall of 245 inches at Gasmata in New Britain and 231 inches at Kikori in Papua, to about 88 inches at Wewak in New Guinea and 40 inches at Port Moresby.

Although the Territory has no summer and winter, it has a wide temperature range, due to differences in altitude, varying from an absolute highest temperature of about 100° F. along the coast to freezing point on its highest peak, Mt. Wilhelm (15,400 ft.).

Humidity in the Territory is very high throughout the year. Some coastal stations register an average relative humidity of more than 90 per cent. Humidities below 60 per cent. are rare at coastal stations, average figures varying from 80 per cent. at 9 a.m. to 65 per cent. at noon and 75 per cent. at 3 p.m. Humidity in mid-mountain forests appears to be higher than in the lowlands, while in the mossy forests there are periods when the whole belt is saturated.

3. **Land Tenure.**—There is considerable variation throughout the Territory in the nature of customary ownership of land. In most areas, some rights remain in the landholding group, and individuals within the group have limited rights of use, either for life or for a shorter period. Thus the normal system by which the rights of ownership in land use are acquired is by birth to a landholding group. Transfer of rights between individuals by sale and purchase appears to have been unusual in the past, but this practice is now an established custom in some localities and appears to be increasing. Inheritance may be based on either patrilineal or matrilineal descent, or both. In parts of the Territory, however, there is a tendency for the whole inheritance system to change, particularly in communities where it is based on matrilineal descent. Following a close study of the problems in relation to land holdings by indigenes, the Government has laid down the following broad principles of policy.

The ultimate and long-term objective in Papua and New Guinea is to introduce throughout the Territory a single system of land holding regulated by the central Government by statute, administered by the Department of Lands of the central Government, and providing for secure individual registered titles after the pattern of the Australian system.

Only the central Government (i.e., the Administration working through the Department of Lands and the Registrar of Titles) may issue and register land titles.

Land subject to native custom remains subject to native custom only until it is taken out of custom either by acquisition by the Administration or by a process, to be provided for by Ordinance of the Territory, of conversion of title to an individual registered title.

Upon either acquisition or conversion of title, compensation is to be provided in respect of extinction of rights under native custom.

Land held under native custom may not be acquired outside of native custom by other than the Administration.

For the time being, land may not be acquired by the Administration unless the native owners are willing to sell and in the opinion of the Administration the land is not required by them; and conversion of title from native custom to individual registered title may take place only if the majority of those interested in the land under native custom consent to conversion and the method of conversion.

The services of Commissioners under the *Land Titles Commission Ordinance 1962*, which came into operation on 23rd May, 1963, are to be used, as a first priority, on investigations into claims by the Administration that land is ownerless and may therefore be declared administration land, on investigation into the ownership under native custom of land proposed to be acquired by the Administration, on settlement of disputes about the ownership of land held under native custom, and, when legislative provision has been made, on investigations into the rights held under native custom in land proposed to be converted to individual registered title. The aim is that all the time of the Commissioners should be taken up with this work. To the extent that at any time it is not, the Commissioners should continue investigations into the holding of land under native custom; the results of such investigations are to be recorded for use in connexion with future acquisitions or conversions of title, but are no longer to be registered.

The legislation and administrative steps necessary to put the remainder of this policy into effect are well advanced.

4. **Suitable Crops.**—The crops which can be grown in Papua and New Guinea include coconuts, rubber, tea, coffee, cocoa, fibres, rice, pepper, tobacco, peanuts, kapok, cassava, ginger, cinchona, nutmeg, vanilla, tropical fruits and vegetables, sago and tung oil, but of these, the only crops of any commercial importance are coconuts, cocoa, rubber, coffee, peanuts and passion fruit.

5. **Plantation Agriculture.**—*Coconuts.* Territory coconut plantations suffered severely from damage and neglect during the 1939–45 War. Rehabilitation was rapid, however, and in 1961–62 about 680 plantations, together with native coconut stands, produced 112,349 tons of copra and exported 74,839 tons valued at £4,610,423. In addition, 19,625 tons of coconut oil, valued at £1,969,389, and about 11,506 tons of copra oilcake and meal, valued at £260,474, were exported in 1961–62. A copra crushing mill was established at Rabaul in 1952. Native stands produce about 25 per cent. of the copra exported.

*Rubber.* Exports of rubber have increased from 1,952 tons, valued at £802,177, in 1950–51 to 4,682 tons, valued at £1,210,722, in 1961–62.

*Cocoa.* Exports of cocoa beans increased from 317 tons, valued at £92,181, in 1950–51 to 10,015 tons, valued at £1,982,563, in 1961–62. Nearly 50 per cent. of the exports go to Australia. At present, native growers produce about 25 per cent. of the cocoa production in the Territory.

*Coffee.* Exports of coffee rose from 33 tons, valued at £8,359, in 1950–51, to 3,444 tons, valued at £1,557,306, in 1961–62. Of the 20,300 acres planted to coffee in the Territory, about 60 per cent. is in native-owned groves and the rest grown by Europeans in plantations. More than half of the Territory coffee production is marketed in Australia.

6. **Native Agriculture.**—Most of the indigenous inhabitants of Papua and New Guinea are agriculturalists producing fruit and vegetables for their own consumption. The crops grown vary according to environment and altitude, and include yams, taro and sweet potatoes, coconuts, bananas, papaws, maize, sugar-cane, cassava, beans, peanuts, rice, cucurbits and tobacco. Sago is the staple food in the extensive semi-inundated areas which occur along the lower valleys of the major rivers. In these areas, it is cut largely from naturally occurring stands. In other parts of the country, small areas of sago are grown along stream banks and in swampy patches, and are regarded as a reserve in times of poor harvest. In recent years, the indigenes have taken up the production of introduced crops such as peanuts, rice, cucurbits, and maize for their own consumption and cocoa and coffee for export. Some small-scale rubber growing is now being undertaken. In coconut areas, large quantities of copra are produced. In 1961–62, native production of copra was 28,879 tons, and that of cocoa and coffee 2,167 tons and 1,489 tons respectively. In many localities, the indigenes follow a farming system known as bush fallowing rotation, which is described in Year Book No. 48 and previous issues.

The growing of food is done by both the men and women. The division of work is usually clearly defined within the village itself, but this division is not necessarily the same in all areas. Generally it is found that felling the forests is always done by the men, and carrying the harvested food home to the village is nearly always done by the women. Other work, however, such as cultivating, planting and weeding may be done by either men or women according to the customs of the particular village or area.

The advancement of native agriculture for local food supply and improved land use in village gardens, as well as for economic production of crops for sale, have a high priority in Government policy for the Territory. A five-year (1962-63 to 1966-67) programme for intensification of agricultural work among the indigenous inhabitants of the Territory is being implemented.

7. **Animal Industry.**—Livestock in the Territory as at 31st March, 1963, included cattle, sheep, goats and pigs, approximate figures for each species being:—cattle, 27,120; sheep, 334; goats, 2,525; and pigs, 5,015. Other livestock includes horses, mules and poultry. These figures represent European-owned livestock only; native-owned livestock consists almost entirely of pigs and poultry.

A number of British breeds of cattle are represented in Territory herds. For dairying, Jersey and Australian Illawarra Shorthorns are most popular; Black Polled, Polled and Horned Shorthorns, and Red Polled cattle are raised for meat production. Under good management these breeds have done well in the Territory. There are a small number of Romney Marsh sheep at Nondugl in the highlands of New Guinea.

A central abattoir controlled by the Administration is under construction at Lae to provide slaughtering facilities for beef producers in the Wau-Bulolo Area, the Markham and Ramu Valleys, and part of the Eastern Highlands District. At first, provision will be made only for immediate needs, but the design and layout will make it possible to expand the abattoir to handle smallgoods manufacture, snap freezing, and canning as the need develops.

8. **Co-operative Societies.**—Co-operatives are under the supervision and guidance of a Registry of Co-operatives within the Department of Trade and Industry, and trained staff are stationed in districts throughout the Territory. Societies fall into two main categories, primary and secondary. The primary consist of marketing and consumer retailing bodies dealing directly with individual members. A society which combines both these activities is termed a dual purpose primary. Secondary organization is represented by associations of societies, formed to achieve an amalgamation of purchasing power in retail consumer store operation and marketing volume in relation to agricultural production, and to concentrate capital to facilitate the purchase of large assets such as shipping, land transport, agricultural machinery, etc.

For the year ended 31st March, 1963, primary societies numbered 271, with a membership of 85,458, a total capital of £618,215, and a turnover of £1,143,887. Secondary organizations numbered 13, with 226 member societies, a total capital of £295,082, and a turnover of £565,851.

#### § 4. Native Labour

Most of the indigenous inhabitants are farmers who are comparatively free of economic or other pressures forcing them into wage employment. At 31st March, 1963, approximately 77,000 indigenous persons were engaged in wage employment, 56,000 of these being employed by private enterprise.

The basic legislation governing terms and conditions of employment is the *Native Employment Ordinance* 1958-1963 which prescribes the minimum wages and hours of work for indigenous workers and the standards of accommodation, food, clothing and other issues, which must be provided by an employer. Wages vary from the legal minimum cash wage of £19 10s. a year plus accommodation and prescribed issues of food, clothing and other articles, up to £850 a year and above for more highly skilled workers. Industrial agreements provide an all-cash minimum wage of £3 a week for the majority of unskilled workers in the towns of Port Moresby, Rabaul, Lae and Madang. Modern standards of industrial safety are prescribed by legislation, and provision is made under the *Workers' Compensation Ordinance* 1958-1961 for compensation in the case of injury or death.

Workers may be employed as agreement workers, entering into an agreement to work with an employer for a specified period of time, or as casual workers without an agreement or any time limitation on their employment. Casual workers who have reached a certain level of advancement may be employed as advanced workers on an all cash wage anywhere in the Territory.

Legislation providing for the right of association of persons for industrial purposes and establishing industrial relations machinery for the Territory came into operation in March, 1963. Workers' associations with a membership of about 2,500 have been formed in Port Moresby, Rabaul, Lae and Madang.

A local apprenticeship scheme was inaugurated in 1955. An Apprenticeship Board, comprising representatives of private enterprise and government, advises the Administrator on apprenticeship matters, the standard of practical work is at Australian level and the standard of theoretical work is being raised steadily to this level. A total of 139 apprentices have already received trade certificates and over 350 are currently being trained.

A separate Department of Labour was created in 1961 to enable labour matters to be handled as far as possible by one specialist organization. The Department handles matters relating to industrial organizations, industrial relations, industrial safety and workers' compensation, and carries out industrial services, labour inspections and research and training in industrial fields.

### § 5. Secondary Industries

Secondary industries which have been established in the Territory are most frequently of the type associated with the elementary processing for export of local products such as copra, rubber, cocoa, coffee, passion-fruit and timber on or near the plantations. There has been a gradual growth in the manufacture of more highly processed products, and industries already established include a paint factory, cigarette factory, twist tobacco factories, a copra crushing mill, a plywood factory, bakeries, biscuit factories, soft drink factories and breweries. Large service industries already well established include air, sea, and land transport services, and the building industry, which is serviced by sawmilling, joinery, furniture and metal industries, concrete products manufactures, brickworks, etc.

A wide variety of maintenance facilities is also available to service the various Territory industries, including engineering workshops, slipways, etc.

The following table shows details of factory operations for the year ended 30th June, 1962.

#### TERRITORY OF PAPUA AND NEW GUINEA: FACTORY OPERATIONS, 1961-62

Particulars	Class of industry				
	Industrial metals, machines and conveyances	Food, drink and tobacco	Sawmills, plywood and joinery	Other industries (a)	Total
Number of factories .. ..	122	39	83	34	278
Employees—					
Non-indigenous .. ..	604	103	354	157	1,218
Indigenous .. ..	1,034	766	2,215	521	4,536
<i>Total</i> .. ..	<i>1,638</i>	<i>869</i>	<i>2,569</i>	<i>678</i>	<i>5,754</i>
	£'000	£'000	£'000	£'000	£'000
Salaries and wages paid .. ..	915	221	732	353	2,221
Value of output .. ..	2,505	1,637	3,288	3,497	10,927
power, fuel and light, etc. . .	40	61	88	202	391
materials and fuel used .. ..	1,071	897	1,561	2,444	5,973
production(b) .. ..	1,434	740	1,727	1,053	4,954

(a) Includes coconut oil processing, tyre retreading, paint manufacture, printing, powerhouses, etc.

(b) Value added.

## § 6. Finance

1. General.—The following table shows particulars of the financial operations of the Papua and New Guinea Administration for the years 1958–59 to 1962–63. Further information on each Territory will be found on pages 127 and 133.

## TERRITORY OF PAPUA AND NEW GUINEA: REVENUE AND EXPENDITURE (£)

Particulars	1958–59	1959–60	1960–61	1961–62	1962–63
<b>REVENUE</b>					
<b>Taxation—</b>					
Income tax .. .. .		1,812,963	2,347,978	2,211,929	2,578,706
Customs duties .. .. .	3,373,528	2,411,529	2,433,732	2,678,514	3,053,995
Motor registration .. .. .	71,733	77,770	87,768	102,380	112,648
Stamp duties .. .. .	68,357	81,672	86,489	123,169	119,582
Licences .. .. .	30,082	31,497	34,251	38,644	45,092
Personal .. .. .	153,772	175,489	146,867	111,174	94,830
<b>Business undertakings—</b>					
Post office .. .. .	354,272	412,428	496,256	580,911	658,479
Harbour dues, wharfage, etc. .. .. .	155,082	156,323	189,211	192,108	203,061
Electricity supply .. .. .	436,863	471,060	521,673	576,628	670,966
Sale of timber .. .. .	126,768	128,497	129,326	74,258	23,305
Copra and rubber production .. .. .	26,321	43,762	29,721	25,215	5,814
Other agricultural production .. .. .	56,714	84,857	74,025	155,472	139,897
Water supply .. .. .	17,876	22,800	27,301	32,846	42,631
Transport .. .. .	43,029	40,795	22,277	..	..
<b>Lands—</b>					
<b>Mining—</b>					
Royalties .. .. .	6,438	9,230	7,417	7,942	6,913
Other .. .. .	9,612	8,650	9,418	8,814	9,062
Forestry .. .. .	81,529	101,415	121,394	147,078	159,939
Land sales, rents, etc. .. .. .	109,800	99,515	127,328	113,191	145,107
Commonwealth grant .. .. .	11,478,910	12,808,282	14,796,648	17,293,398	20,000,207
Fees and fines .. .. .	155,565	159,940	166,949	185,429	215,391
All other .. .. .	327,406	263,736	392,719	340,097	738,923
<b>Total .. .. .</b>	<b>17,083,657</b>	<b>19,402,210</b>	<b>22,248,748</b>	<b>24,999,197</b>	<b>29,024,568</b>
<b>EXPENDITURE</b>					
<b>Business undertakings—</b>					
Post office .. .. .	696,001	815,305	881,968	1,031,191	1,160,622
Harbours .. .. .	133,579	138,773	122,411	142,422	137,526
Electricity supply .. .. .	380,226	409,070	447,354	511,092	570,864
Saw-mill .. .. .	90,370	84,397	76,678	43,577	..
Water supply and sewerage .. .. .	124,116	120,416	128,107	139,039	149,881
<b>Social expenditure—</b>					
Education .. .. .	1,035,945	1,290,592	1,641,296	2,138,048	2,763,260
Grants to missions for education .. .. .	194,689	261,093	405,260	341,272	374,233
Public health, hospitals, etc. .. .. .	1,735,857	2,113,460	2,401,447	2,783,561	3,236,629
Mission medical services—grants .. .. .	267,061	286,233	305,264	304,583	240,487
Law, order and public safety .. .. .	627,094	862,115	1,023,707	1,234,428	1,407,992
District services and native affairs .. .. .	1,106,568	1,246,727	1,372,150	1,465,154	1,470,207
Capital works and services .. .. .	4,608,033	4,822,424	5,133,965	5,381,834	6,584,986
All other .. .. .	6,077,898	6,882,042	8,391,451	9,484,599	10,941,229
<b>Total .. .. .</b>	<b>17,077,437</b>	<b>19,332,647</b>	<b>22,331,058</b>	<b>25,000,800</b>	<b>29,037,916</b>

2. Taxation.—The main forms of taxation are income tax, personal tax and import duties.

*Income Tax* was imposed on 1st August, 1959, to operate from 1st July, 1959. The scale of taxation is about 50 per cent. of the tax payable on the same taxable income in Australia. Deductions for dependants the taxpayer is maintaining, and maximum deductions for medical, dental and educational expenses, are considerably higher than those allowed in Australia. The tax on public companies is at a flat rate of 4s. in the £1, which is a little over half the predominant rate of company tax in Australia, while on private companies the rate is 2s. 6d. in the £1 for the first £5,000 and 3s. 6d. for the remainder,



and generally comparable deductions are allowed. On 1st January, 1958, a Personal Tax was introduced for all males (including non-indigenous) of 18 years of age and over in Papua and New Guinea. The maximum tax is £2 per annum; the tax assessed is subject to the taxpayers' ability to pay, and consequently large areas have been exempted. Native Local Government Councils (which are formed voluntarily by the indigenes) are, however, empowered to levy taxes on villagers for the purpose of providing for local services carried out by the Councils. These taxes are set off against the indigene's Personal Taxation.

The present Customs Tariff provides high revenue rates on imports of ale, spirits, tobacco and cigarettes, timepieces, cigarette papers, fancy goods and jewellery, but allows entry of most necessities affecting living and building costs duty free, or at a low rate of duty. There is a by-law provision under the Customs Tariff to enable duty-free admission to be granted for plant, machinery and chemicals to be used mainly for industrial and developmental purposes and for goods imported by passengers. No preferential rates are specified in the schedule. Export duties imposed on copra, cocoa, rubber, mother-of-pearl, trochus and burgos shell, and gold were repealed in July, 1959.

Provision is made in the *Australian Customs Tariff (Papua and New Guinea Preference)* 1936 for the free entry into Australia of certain goods produced in and imported direct from the Territory (see Chapter XIV. Oversea Trade), and a proclamation of 25th September, 1935, exempted from primage duty goods produced or manufactured in the Territory.

## PAPUA

### § 1. General Description

1. *Area, etc.*—Papua lies wholly within the tropics. The northernmost point touches 5° S. latitude; its southernmost portion, comprising Tagula and Rossel Islands, lies between 11° S. and 12° S. latitude. It is separated from Australia by Torres Strait. The length of Papua from east to west is upwards of 920 miles; towards either end the breadth from north to south is about 200 miles, but about the centre it is considerable narrower. The Territory comprises also the islands of the Trobriand, Woodlark, D'Entrecasteaux and Louisiade groups. The length of coast-line is estimated at 3,664 miles—1,728 on the mainland, and 1,936 on the islands. The total area is 90,540 square miles, of which 87,540 are on the mainland, and 3,000 on the islands. A description of the physical characteristics of the Territory appears in previous issues of the Year Book (see No. 18, p. 633).

2. *Administration.*—Particulars of the early administration of Papua are given in Official Year Book No. 19, page 576. The Territory was placed under the authority of the Commonwealth on 1st September, 1906, by proclamation issued in pursuance of Letters Patent of 18th March, 1902, and was accepted by the Commonwealth by the *Papua Act*, 1905, which came into force by virtue of the aforesaid proclamation. The transfer was made under the authority of Section 122 of the Constitution. The Territory is under the control of the Commonwealth, but not included within it, and is divided into six magisterial districts, Southern Highlands, Western, Gulf, Central, Milne Bay and Northern.

### § 2. Population

1. *Non-indigenous Population.*—At the Census of 30th June, 1961, the non-indigenous population of Papua was 5,490 males, 4,304 females, 9,794 persons. The total non-indigenous population at the Censuses of 1921, 1933, 1947 and 1954 was, respectively, 2,078, 2,173, 3,239 and 6,313 persons. At 30th June, 1962, the total non-indigenous population was 10,697.

The European population of Papua increased slowly, and with some reversals in trend, from less than 700 in 1906, the year in which the Territory came under Commonwealth control, to 1,343 at the Census of 1921. At the 1961 Census, it amounted to 8,260 persons.

2. *Indigenous Population.*—It is not possible to give exact data regarding the number of indigenes because part of the interior is not as yet under complete Government control. However, the enumerated and estimated population of the Territory of Papua at 30th June, 1962, numbered 528,856 persons. This comprised 481,256 enumerated persons (253,996 males and 227,260 females) and 47,600 estimated. The total number was distributed through districts as follows:—Southern Highlands, 160,678; Western, 68,736; Gulf (including the former Delta district), 55,403; Central, 105,056; Milne Bay, 88,509; and Northern, 50,474.

### § 3. Land Tenure

The basic principle of the land laws of Papua is that all land not specifically alienated by due process from the native people, or established to be vacant and ownerless, is native land. At 30th June, 1963, of the total area of Papua, approximately 58,000,000 acres, only 1,885,177 acres had been alienated. The distribution of alienated land at 30th June, 1963, according to tenure, was as follows:—held by private non-indigenous inhabitants, freehold, 24,280 acres, leasehold, 368,239 acres; native reserves, 68,192 acres; other, including public reserves and land available for leasing, 1,424,466 acres.

Although a small amount of freehold land exists in Papua, no further estates in freehold can be granted under the provisions of the *Land Ordinance* 1911–1961 of Papua. Leases of various kinds may be granted by the Administration. The principal types of leases available are agricultural leases, pastoral leases, leases of town allotments, business leases and residence leases of other than town allotments, and various forms of special leases and licences over land. Leasehold terms are liberal, and, in general, leases may be granted for periods of up to 99 years. Rent is based on the unimproved value of the land.

Leases of Crown land are granted by the Administrator following a land use examination, advertisement of leases available and consideration of applications by the Land Board. Dealings in privately-owned land are a matter for private treaty. Native-owned land, however, cannot be acquired or leased from the native owners by private individuals. The Administration alone may purchase native-owned land, and then only if the owners are willing to sell and the Administration is satisfied that the owners do not require, and are not likely to require, the land.

The registration of titles, interests and dealings in alienated land is provided for under the *Real Property Ordinance* 1913–1955 modelled on the Torrens system of land registration.

### § 4. Production

1. **General.**—The products of the Territory are obtained principally from its agricultural, forestry, mining and fishing industries. Native subsistence agriculture, fishing, and hunting produce most of the food requirements of the indigenous population. The main native agricultural products are taro, yams, sweet potatoes, bananas and papaws. Peanuts are becoming of increasing importance in native diet. Non-indigenous enterprise produces most of the commodities exported. Indigenes, however, do produce copra for export, while native enterprise in other fields of agricultural production for export purposes, e.g., cocoa and coffee, is undertaken. The principal agricultural products of Papua for the export trade are copra and rubber. Native production of copra is increasing. Practically all the timber milled during 1960–61 was absorbed by local building requirements. The main products of fisheries exported from Papua are trochus and green snail shell. Gold, manganese, zinc-lead and copper ores have been mined in commercial quantities in the past, but current production is limited.

For the sake of convenience, agricultural and pastoral conditions in Papua and New Guinea have been dealt with as a whole, and reference should be made to pages 116–19 for information on the soils, climate, crops, methods of cultivation, etc., throughout both Territories. The following paragraphs relate to forestry, mining, fisheries and water-power resources in Papua.

2. **Forestry.**—A general description of the forest policy which applies in Papua as well as in the Trust Territory of New Guinea is given under the heading, Timber, on pages 129–30.

Mixed species tropical rain forest covers most of Papua, although north-east of Port Moresby there is an area of monsoonal savannah country. Because of the mixed nature of the timbers in any one area, their utilization on an economical basis is somewhat difficult. Mangroves occur in large areas fringing the Gulf of Papua. Forestry field work is carried out in Papua with a view to assessing the forest resources available and also to survey areas subsequently made available for cutting.

At 30th June, 1963, 19 permits and 15 licences were current. The total areas of forest involved were 230,722 acres and 34,023 acres respectively. The total number of mills was 21, and the total sawn-timber produced for the year was 3.7 million super. feet, most of which was used locally.

3. **Mining.**—Although a large number of minerals have been found in Papua, including platinum, gold, silver, copper, tin, lead, zinc, cinnabar, iron, osmiridium, manganese, sulphur, chromite, gypsum, and lignite, current mineral production is not of economic importance.

Gold was discovered in 1888 and has been found since in many parts of Papua. Before the 1939–45 War, gold was an important item in the Territory's production, but it has since dwindled to insignificance.

Large quantities of copper ore were mined and exported up to 1940. Good samples of galena (sulphide of lead) have been obtained, but other minerals are not found in commercial quantities.

Since the search for oil began in Papua in 1911, approximately £36 million has been spent. The existence of petroleum has been proved at scattered intervals over a large area, but commercial quantities have not been discovered. At 30th June, 1963, eight companies held interests in petroleum prospecting permits and licences under the provisions of the *Petroleum (Prospecting and Mining) Ordinance 1951–1962*. Oil prospecting is confined mainly to the Gulf and Western Districts, including off-shore areas in the Gulf of Papua.

4. **Fisheries.**—Surveys have been carried out of the fisheries resources of Papua. These have been demonstrated to be considerable, and efforts are being made to increase the present small degree of utilization. Assistance is also being given by the Administration in improving the indigenous methods of fishing, and the use of improved gear is being encouraged by extension workers. Shell fishing, particularly trochus, provides the main cash return, exports being valued at £10,000 in 1962–63.

5. **Water Power.**—Most of the rivers in Papua carry a large volume of water from a great height over a relatively short distance, thereby offering opportunities for the installation of hydro-electric power plants. It is estimated that there is at least 10 million horse-power available for this purpose.

## § 5. Trade, Transport and Communication

1. **Imports and Exports.**—(i) *Total Values.* The table below summarizes the values of imports and exports for the years 1957–58 to 1961–62.

### TERRITORY OF PAPUA: IMPORTS AND EXPORTS

(£)

Particulars	1957–58	1958–59	1959–60	1960–61	1961–62
<i>Imports(a)</i> .. ..	8,850,437	8,324,388	8,409,546	9,935,271	9,850,986
<b>Exports—</b>					
Domestic exports .. ..	2,082,667	2,564,551	2,986,448	2,468,161	2,389,825
Re-exports .. ..	693,385	1,040,909	871,111	1,420,992	729,892
<i>Total Exports</i> .. ..	2,776,052	3,605,460	3,857,559	3,889,153	3,119,717

(a) Includes outside packages.

(ii) *Imports.* The following table shows the countries of origin of imports.

**TERRITORY OF PAPUA: COUNTRY OF ORIGIN OF IMPORTS**

(£)

Country of origin	1957-58	1958-59	1959-60 (a)	1960-61 (a)	1961-62 (a)
Australia .. .. .	5,632,004	5,684,265	5,439,082	6,496,989	6,071,044
Canada .. .. .	101,575	4,871	6,991	8,801	33,501
Germany (Federal Republic) ..	141,409	135,715	140,250	168,359	186,745
Hong Kong .. .. .	209,398	193,364	278,796	335,999	416,614
Indonesia .. .. .	239,206	353,697	365,920	332,358	320,979
Japan .. .. .	190,702	234,419	407,997	502,695	523,660
United Kingdom .. .. .	689,640	562,596	552,241	738,164	723,205
United States of America .. ..	1,219,289	749,079	754,548	697,646	676,974
Other countries .. .. .	363,535	331,900	463,721	654,260	898,264
<b>Total .. .. .</b>	<b>8,786,758</b>	<b>8,249,906</b>	<b>8,409,546</b>	<b>9,935,271</b>	<b>9,850,986</b>

(a) Includes outside packages.

(iii) *Exports.* (a) *Countries of Destination.* The countries of destination of exports from Papua are shown below.

**TERRITORY OF PAPUA: COUNTRY OF DESTINATION OF EXPORTS**

(£)

Country of destination	1957-58	1958-59	1959-60	1960-61	1961-62
Australia .. .. .	2,200,285	2,982,549	3,102,673	2,894,485	2,428,595
United Kingdom .. .. .	386,532	485,833	603,453	447,368	423,097
Other countries .. .. .	189,235	137,078	151,433	547,300	268,025
<b>Total .. .. .</b>	<b>2,776,052</b>	<b>3,605,460</b>	<b>3,857,559</b>	<b>3,889,153</b>	<b>3,119,717</b>

(b) *Principal Commodities.* The following table provides details of the value of the principal domestic exports for the same years.

**TERRITORY OF PAPUA: PRINCIPAL DOMESTIC EXPORTS**

(£)

Commodity	1957-58	1958-59	1959-60	1960-61	1961-62
Rubber .. .. .	1,114,716	1,151,871	1,500,197	1,292,151	1,203,786
Copra .. .. .	847,472	1,303,017	1,362,650	1,032,724	945,578
Cocoa beans .. .. .	13,825	23,275	19,185	30,264	22,127
Gold .. .. .	7,093	6,408	2,003	1,171	295
Shell (marine) .. .. .	43,276	26,580	37,970	19,556	27,486
Crocodile skins .. .. .	35,579	15,345	21,360	51,577	126,962
Other .. .. .	20,706	38,055	43,083	40,718	63,591
<b>Total .. .. .</b>	<b>2,082,667</b>	<b>2,564,551</b>	<b>2,986,448</b>	<b>2,468,161</b>	<b>2,389,825</b>

2. **Shipping.**—In 1962–63, 221 British vessels and 50 of other nationalities called at Territory ports and discharged 129,553 tons of cargo and loaded 39,402 tons.

Regular passenger and freight services operate between Australia, New Guinea and Papua. Vessels trading between Australia and the East also call at Territory ports, and there are monthly services from continental and United Kingdom ports. Coastal and inter-island shipping services are maintained by vessels operating from the two principal ports of Port Moresby and Samarai.

3. **Other Forms of Transport and Communication.**—Scheduled flights provide a network of air transport throughout Papua and regular air services link the Territory with Australia and neighbouring Territories. There were 91 aerodromes and seaplane alighting areas in Papua at 30th June, 1963, and of these 14 were the responsibility of the Department of Civil Aviation, 43 were operated and maintained by the Administration, and 34 owned and maintained by Missions, plantation and mining interests. Much of the internal traffic and freight is carried on a charter basis.

At 30th June, 1963, there were 1,810 miles of road in Papua, of which 768 miles were suitable for medium and heavy traffic, the greater proportion being located in the Central, Milne Bay, and Northern Districts.

Telephone services operate in the main centres. The radio station at Port Moresby for both transmission and reception is jointly shared by the Overseas Telecommunications Commission and the Administration. The former provides a service between Papua, Australia and the Territory of New Guinea, while the latter operates radio telephone and radio telegraph services from Port Moresby, Samarai and Daru to 125 outstations. A direct telegraph service operated by the Overseas Telecommunications Commission, on a schedule basis, is in operation between Port Moresby and West New Guinea.

Medium and short-wave programmes are broadcast from the Australian Broadcasting Commission stations 9PA and VLT6 located at Port Moresby.

## § 6. Education and Health

1. **Education.**—Education in the Territory is provided by the Administration and various Mission Organizations. Schools for indigenes have also been established by Native Village Councils. The *Education Ordinance 1952-1957* enables the Administration to establish an education advisory board, district education committees and European and native schools, and to grant financial aid for educational purposes. European teachers are recruited from Australia and overseas, and native teachers are trained in the Territory by the Administration and Missions. During the year ended 30th June, 1962, 147 schools were maintained by the Administration for 14,443 children, of whom 917 were Europeans, 110 Asian or of mixed race, and 13,416 indigenes, a further 905 children, all indigenes were receiving tuition by correspondence. The total number of pupils in the various grades of mission schools was 47,203, of whom there were 257 Europeans, and 494 Asian or of mixed race. To assist the educational work of the Missions, the Administration provides expert advice, educational equipment, and text-books. In addition, the sum of £102,932 was distributed among the Missions as grants-in-aid during the year ended 30th June, 1962.

2. **Health.**—The Department of Public Health of the Territory of Papua and New Guinea has the general oversight of all dental and medical services. The Department has the following seven functional divisions: medical services; preventive medicine; medical training; infant, child and maternal health; medical research; administration; and mental health. The services for the Territory of Papua are under the administrative control of a regional medical officer, with headquarters staff at Port Moresby.

At 30th June, 1962, the Administration had established 27 general hospitals, two special hospitals for the treatment of tuberculosis, two hospitals (together with special wards in four general hospitals) for the treatment of Hansen's disease, one Hansenide-tuberculosis hospital and one mental hospital; the Missions had established 30 general hospitals, with special wards at Eroro, Sideia and Orokolo for the treatment of Hansen's disease and two Hansenide hospitals. There were 418 village aid posts or medical centres (121 Mission) and 97 maternal and child welfare clinics (50 Mission). School medical examinations, immunization, ante-natal and post-natal care and pre-school services are also provided. The Missions employ their own doctors and nurses in their medical establishments.

For some years, suitably qualified indigenes attended the Central Medical School at Suva, Fiji, to be trained as Assistant Medical Officers. In 1959, the Administration began training to a similar standard at the Papuan Medical College which is associated with the Port Moresby General Hospital. The College, planned to accommodate 600 students eventually, is being built in stages. The course consists of a preliminary year and five years further study. Training for nurses and medical auxiliaries in many categories is also being provided.

The cases treated in hospital are mainly malaria, tropical ulcers, pneumonia, tubercular infections and tuberculosis, bronchitis, and confinements.

### § 7. Finance

The following table shows the principal items of revenue and expenditure for the Territory for each year from 1958-59 to 1962-63.

#### TERRITORY OF PAPUA: REVENUE AND EXPENDITURE (£)

Item	1958-59	1959-60	1960-61	1961-62	1962-63
<b>REVENUE</b>					
Commonwealth grant ..	4,772,537	4,948,361	5,515,054	7,179,031	7,864,056
Customs duties(a) ..	1,135,095	868,813	1,023,644	1,089,571	1,269,993
Income tax ..	..	882,558	1,136,394	1,248,973	1,434,735
All other ..	914,279	1,017,446	1,162,620	1,173,730	1,499,561
<b>Total Revenue ..</b>	<b>6,821,911</b>	<b>7,717,178</b>	<b>8,837,712</b>	<b>10,691,305</b>	<b>12,068,345</b>
<b>EXPENDITURE</b>					
Public health ..	709,654	899,370	1,004,342	1,166,258	1,243,088
Native affairs ..	396,939	446,895	490,154	519,225	521,818
Education ..	450,961	672,504	754,051	913,156	1,166,377
Maintenance ..	784,932	862,487	1,026,019	1,252,818	1,320,114
Capital works and assets ..	2,041,676	1,996,824	2,277,046	2,662,845	3,490,684
All other ..	2,431,529	2,769,535	3,368,410	4,178,606	4,339,612
<b>Total Expenditure ..</b>	<b>6,815,691</b>	<b>7,647,615</b>	<b>8,920,022</b>	<b>10,692,908</b>	<b>12,081,693</b>

(a) Includes Harbour Dues and Wharfrage.

For particulars of the finances of the combined Territory administration, see page 121.

#### TRUST TERRITORY OF NEW GUINEA

### § 1. General Description

1. Area, etc.—The land area of the Territory of New Guinea is about 93,000 square miles, and the area, including the sea, within the lines drawn through its extreme outer points is more than one million square miles. As the coastlines have not been completely surveyed, the areas of the various islands are known only approximately.

The approximate areas of the principal islands, together with the small islands adjacent thereto, are as follows:—North-East New Guinea, also called the mainland, 70,200 sq. miles; Bismarck Archipelago—New Britain, 14,100 sq. miles, New Ireland, 3,340 sq. miles, Lavongai, 460 sq. miles, Admiralty Islands, 800 sq. miles, total Bismarck Archipelago, 18,700 sq. miles; Solomon Islands—Bougainville, 3,880 sq. miles, Buka, 220 sq. miles, total Solomon Islands, 4,100 sq. miles; grand total, 93,000 sq. miles.

Information regarding physiography and climate will be found in Official Year Book No. 22, page 613, and in the *Official Handbook of the Territory of New Guinea*.

2. **Early Administration.**—On 17th September, 1914, the Acting Governor of German New Guinea signed terms of capitulation with the officer commanding a Naval and Military Expedition sent from Australia, and thereafter the Territory was under military administration until the establishment of Civil Government on 9th May, 1921.

In 1919, it was decided by the Principal Allied and Associated Powers that the Territory of New Guinea, which Germany gave up as one of the terms of peace, should be entrusted to the Government of the Commonwealth under Mandate from the League of Nations. However, the issuing of the Mandate was delayed, and it was not until 17th December, 1920, that its terms were settled, and the Mandate itself did not reach Australia until April, 1921.

The terms of the Mandate are given in Year Book No. 33 (*see p. 264*).

For particulars of the administration of the Territory of New Guinea prior to the setting-up of the Papua and New Guinea Administration, *see Official Year Book No. 36* and earlier issues, and for events following the outbreak of the Pacific War *see Official Year Book No. 37* and subsequent issues.

3. **Trusteeship (1946).**—The Commonwealth Government undertook to place the Territory of New Guinea under the Trusteeship System established under the Charter of the United Nations. The Trusteeship Agreement for the Territory, under which the Government of Australia is the sole administering authority, was approved by the General Assembly of the United Nations Organization on 13th December, 1946. The terms of the Agreement are shown in Year Book No. 39, pages 355–7.

For administrative purposes, the Territory is divided into the following nine districts:—New Britain, comprising New Britain and adjacent islands; Morobe, Madang, Eastern Highlands, Western Highlands, and Sepik on the mainland; New Ireland, comprising New Ireland, Lavongai and adjacent islands; Manus, comprising the Admiralty Group; and Bougainville in the Solomon Islands. Each district is administered by a District Commissioner.

## § 2. Population

1. **Non-indigenous Population.**—At the Census of 30th June, 1961, the non-indigenous population of the Territory was 9,158 males, 6,378 females, 15,536 persons. The total non-indigenous population at the Censuses of 1921, 1933, 1947 and 1954 was, respectively, 3,173, 5,216, 6,200 and 11,442 persons. At the 1961 Census, the European population numbered 11,702 persons. At 30th June, 1962, the total non-indigenous population was estimated to be 15,847.

2. **Indigenous Population.**—The indigenes are divided into two main groups—Melanesian and Papuan—the former, with a few exceptions, constituting the population of the Bismarck Archipelago, the Solomon Islands, and the coastal districts of the New Guinea mainland, the latter inhabiting the interior of the mainland. Some tribes of Negritos exist in the mountains of New Guinea. There is a strain of Papuan, and, possibly, of Polynesian blood in the Admiralty Islanders, while the Western Islanders and the inhabitants of the small islands east and south-east of New Ireland are Micronesians. (*See Official Year Book No. 16, p. 670, and Official Handbook of the Territory of New Guinea, Pt. V.*)

The enumerated and estimated indigenous population of the Territory as at 30th June, 1962, numbered 1,469,320 persons, comprising enumerated, 1,421,090 (748,773 males and 672,317 females), and estimated, 48,230. The total population was distributed throughout the several districts as follows:—Eastern Highlands, 351,825 persons; Western Highlands, 280,246; Sepik, 260,116; Madang, 141,601; Morobe, 201,798; New Britain, 115,021; New Ireland, 40,659; Bougainville, 59,619; Manus, 18,435.

## § 3. Land Tenure

The principles governing the acquisition and ownership of land and types of tenure available in New Guinea are in general similar to those which obtain in Papua, and although, under the *Land Ordinance 1922–1961*, grants of freehold estates may be made, as a matter of policy all grants are now restricted to leaseholds. In New Guinea, however, the amount of freehold land of earlier origin held by private non-indigenous owners amounts to more than half a million acres. Freehold titles to this land, which includes a good deal of plantation land, may be transferred by purchase, subject only to the general provision that dealings in land require the approval of the Administrator.

The area of the Territory of New Guinea is estimated at 59,520,000 acres, of which at 30th June, 1963, only 1,468,702 acres were alienated. The following was the distribution of alienated land according to tenure at 30th June, 1963:—held by private non-indigenous inhabitants—freehold, 537,401 acres, leasehold, 361,059 acres; held by Administration, 535,716 acres; held by New Guineans 6,860 acres; native reserves, 27,666 acres.

Under German law there was a system of registration of titles in a Ground Book, but registration did not confer an indefeasible title. The German system has been replaced by one modelled on the Torrens plan, embodied in the *Lands Registration Ordinance* 1924–1955. The land registers were lost during the 1939–1945 War, but provision for restoration of the lost titles is made in the *New Guinea Land Titles Restoration Ordinance* 1951–1955. A start has been made on the recording of native land interests under the *Native Land Registration Ordinance* 1952.

#### § 4. Production

1. **General.**—The products of the Territory are obtained principally from its agricultural, mining, fishing and forestry industries. A copra crushing mill near Rabaul, established in 1952, commenced crushing at about 18,000 tons of copra per annum, and its capacity is now about 60,000 tons of copra per annum. Crushing of about 40,000 tons of copra was in view for 1964. At Bulolo, a company is producing high quality moisture-proof plywood in a factory whose capacity is 40 million square feet, on a  $\frac{3}{8}$ -in. basis, per annum. Native subsistence agriculture, fishing, and hunting produce most of the food requirements of the indigenous population. The main native agricultural products are taro, yams, sweet potatoes, coconuts, bananas and papaw. Non-indigenous enterprise produces most of the commodities exported. Indigenes, however, produce copra for export, and in recent years have taken up the production of introduced crops such as peanuts, rice, cucurbits and maize for their own consumption and cocoa and coffee for export. The principal agricultural products of New Guinea for the export trade are copra and coconut oil, cocoa, and coffee. Most of the timber milled during 1961–62 was absorbed by the local market, but exports remained at a high level (*see* para. 2 below). The main products of fisheries exported from New Guinea are trochus and green snail shell, including that collected by indigenes. Gold is the principal mineral mined. Indigenes are taking an increasing interest in mining for alluvial gold on their own account, and production from this source is continually rising, in contrast to falling European production.

For information on the agricultural and pastoral industries, which for the sake of convenience covers the Territory of Papua and New Guinea as a whole, *see* pages 116–19. The following paragraphs relate to the timber, fishing and mining industries in the Territory of New Guinea alone.

2. **Timber.**—Various species of timber are found in the Territory, and one accessible pure stand is the valuable pine forests of the Bulolo Valley. This timber is used mainly for the production of plywood and veneer by Commonwealth-New Guinea Timbers Ltd., which has an annual cut of about 10 million super. feet of logs. About 32.0 million square feet of plywood, on a  $\frac{3}{8}$ -in. basis, was produced by the company in 1960–61 from these logs and from veneer produced by South Pacific Timbers Limited at Lae. Exports of plywood in 1961–62 were 26.4 million square feet, valued at £935,000, and 5.1 million square feet of veneer, on a  $\frac{1}{8}$ -in. basis, valued at £32,000. During the year, 1.7 million super. feet of logs, valued at £41,000, and 2.7 million super. feet of sawn timber, valued at £188,000, were also exported from the Territory. The Territory forests also provided fitches, battery veneer and egg-case parts for export.

The Administration operates a training centre for forestry workers, nurseries and a herbarium, and is establishing a research institute in Port Moresby.

The *Forestry Ordinance* 1936–1951 provides for the issue of permits and licences to cut timber. Present policy calls for the orderly development of the timber industry on sound forestry principles to ensure no waste of the resources and no over-exploitation; the grant of emergency timber permits for limited quantities to assist in providing timber for Territory requirements; the disposal by public tender of timber areas designated by forest officials of the Territory; and the development of the pine stand in the Bulolo Valley by Commonwealth-New Guinea Timbers Ltd. Timber growing on native lands cannot be acquired



by private purchasers direct from the native people, but must be obtained through the Administration. Royalty is payable on all forest produce taken under permit or licence. Reforestation of areas dedicated for forestry in perpetuity is carried out by the Administration.

At 30th June, 1963, 34 permits and nine licences were current, the total area of forest involved being 356,492 acres and 15,794 acres respectively. The Administration was also exploiting 28,000 acres.

3. Fisheries.—The wealth of the waters of the Territory has been little exploited, but as the result of surveys and the development of the Administration fisheries service, action is being taken to promote increased use of the resources. Fish are caught at many places along the coast to supply the small local demand of the natives and of Europeans. Trochus shell to the value of £21,712 and green snail shell to the value of £6,877 were exported during 1961–62.

4. Mining.—The production of gold and associated silver is the most important mining activity in New Guinea. Gold has been discovered on the Waria, the Ramu, the Francisco, and the Markham Rivers, and in tributaries of the Sepik River. Rich gold deposits were first discovered in the Morobe District in 1926. The field is situated about 80 miles (40 by air) inland from Lae, the nearest coastal port. Communication is established with the coast by regular air service and by road transport. Silver is usually found associated with the gold in these deposits. Osmiridium is reported to have been found on the upper tributaries of the Ramu, and platinum on the Kabenau River. Copper has been discovered in the form of chalcopyrite and malachite in the Baining District. Iron ore occurs as magnetite and haematite in the Baining District. Sulphur occurs in several localities in the volcanic regions of the Territory. Brown coal has been found on the mainland in the vicinity of Astrolabe Bay, and in the southern portion of New Ireland. The commercial production of minerals other than gold and associated silver has not been undertaken.

The granting of rights, leases and claims for mining purposes is provided for in the *Mining Ordinance 1928–1962* and regulations thereunder.

The production of gold in New Guinea since the 1939–45 War has been on a much smaller scale than before the war, averaging less than £800,000 in value per annum for the last five years. The 1962–63 production was valued at only £666,787.

The *Petroleum (Prospecting and Mining) Ordinance 1951–1961* has facilitated the carrying out of geological surveys and prospecting activities generally. There are, however, no prospecting permits for oil current at the present time.

## § 5. Trade, Transport and Communication

1. Imports and Exports.—(i) *Total Values.* The table below summarizes the values of imports and exports for the years 1957–58 to 1961–62.

### TERRITORY OF NEW GUINEA: IMPORTS AND EXPORTS

(£)

Particulars	1957–58	1958–59	1959–60	1960–61	1961–62
<i>Imports(a)</i> .. ..	11,545,880	11,938,628	12,622,354	16,803,152	16,078,490
<i>Exports—</i>					
Domestic exports .. ..	8,815,592	11,903,187	14,117,463	11,788,503	11,932,091
Re-exports .. ..	812,456	788,690	844,893	928,386	849,235
<i>Total Exports</i> .. ..	9,628,048	12,691,877	14,962,356	12,716,889	12,781,326

(a) Includes outside packages.

(ii) *Imports.* The following table summarizes the countries of origin of imports.

**TERRITORY OF NEW GUINEA: COUNTRY OF ORIGIN OF IMPORTS**  
(£)

Country of origin	1957-58	1958-59	1959-60 (a)	1960-61 (a)	1961-62 (a)
Australia .. .. .	7,051,240	7,721,687	7,836,181	9,741,714	8,710,921
Germany (Federal Republic) ..	245,260	296,007	286,545	511,325	615,541
Hong Kong .. .. .	482,085	521,455	745,040	1,050,158	1,053,324
India .. .. .	145,865	170,687	139,720	257,170	146,957
Indonesia .. .. .	632,274	500,814	629,332	788,183	649,482
Japan .. .. .	790,436	703,058	945,853	1,246,878	1,406,688
United Kingdom .. .. .	766,091	775,654	857,968	1,451,073	1,191,493
United States of America .. ..	790,151	651,024	688,035	965,060	1,142,092
Other countries .. .. .	548,610	478,206	493,680	791,591	1,161,992
<b>Total .. .. .</b>	<b>11,452,012</b>	<b>11,818,592</b>	<b>12,622,354</b>	<b>16,803,152</b>	<b>16,078,490</b>

(a) Includes outside packages.

(iii) *Exports.* (a) *Countries of Destination.* The countries of destination of exports from New Guinea are shown below.

**TERRITORY OF NEW GUINEA: COUNTRY OF DESTINATION OF EXPORTS**  
(£)

Country of destination	1957-58	1958-59	1959-60	1960-61	1961-62
Australia .. .. .	4,956,187	5,806,798	6,150,483	5,494,956	5,544,437
United Kingdom .. .. .	3,686,900	4,435,284	5,371,634	5,013,038	4,594,178
Other countries .. .. .	984,961	2,449,795	3,440,239	2,208,895	2,642,711
<b>Total .. .. .</b>	<b>9,628,048</b>	<b>12,691,877</b>	<b>14,962,356</b>	<b>12,716,889</b>	<b>12,781,326</b>

(b) *Principal Commodities.* The following table provides details of the value of the principal domestic exports for the same years.

**TERRITORY OF NEW GUINEA: PRINCIPAL DOMESTIC EXPORTS**  
(£)

Commodity	1957-58	1958-59	1959-60	1960-61	1961-62
Copra .. .. .	3,673,687	4,451,148	4,763,793	4,080,590	3,664,845
Other coconut products .. .. .	1,649,503	2,933,110	4,160,072	2,644,813	2,238,451
Cocoa beans .. .. .	814,633	1,468,572	1,652,132	1,636,060	1,960,436
Coffee beans .. .. .	222,794	448,869	709,445	1,094,104	1,546,263
Peanuts .. .. .	138,146	286,684	273,797	278,691	303,866
Gold .. .. .	851,506	736,354	632,729	680,224	717,596
Shell (marine) .. .. .	68,460	68,174	71,609	34,427	28,589
Timber .. .. .	235,247	316,292	360,769	260,496	229,070
Plywood .. .. .	1,023,365	1,027,748	1,254,734	865,610	935,100
Veneer .. .. .	6,649	3,299	41,136	38,051	31,574
Other .. .. .	131,602	162,937	197,247	175,437	276,301
<b>Total .. .. .</b>	<b>8,815,592</b>	<b>11,903,187</b>	<b>14,117,463</b>	<b>11,788,503</b>	<b>11,932,091</b>

2. **Shipping.**—Regular passenger and freight services operate between Australia, Papua and the Territory of New Guinea. Vessels trading between the East and Australia and the Pacific Islands call at Territory ports, and there are monthly services from continental and United Kingdom ports. Coastal and inter-island shipping services are maintained by vessels operating from the principal ports of the Territory. Shipping within the Territory is regulated by the *Shipping Ordinance* 1951–1960 and the Coastal Shipping, Ports and Harbours Regulations.

Main ports of call for oversea vessels are Lae, Madang, Alexishafen, and Wewak (mainland), Rabaul (New Britain), Kavieng (New Ireland), Lorengau (Manus), and Kieta (Bougainville). Ports proclaimed under the Coastal Shipping, Ports and Harbours Regulations for the service of local vessels are, in addition to the main ports above-mentioned, Salamaua, Aitape and Vanimo (mainland), Gasmata and Talasea (New Britain), Nama-tanai (New Ireland), and Buka Passage (Bougainville).

There are no inland waterways and the natural river system is not generally suitable for vessels except those of small tonnage.

In 1962–63, 268 British vessels and 111 vessels of other nationalities called at Territory ports and discharged 199,509 tons of cargo and loaded 177,524 tons. Corresponding figures for 1961–62 were 280, 122, 198,017 and 151,411 respectively.

3. **Other Forms of Transport and Communication.**—There are no railways in New Guinea, but a road construction programme is being undertaken progressively to assist the economic development of the Territory. Road transport services operate in the main towns and on the trunk roads linking Rabaul and Kokopo; Lae, Bulolo and Wau; Kavieng and Namatanai; and on the network in the Eastern and Western Highland Districts centred on Goroka and Mt. Hagen. The total mileage of roads in the Territory of New Guinea at 30th June, 1963, was 5,281, of which 3,549 were suitable for heavy and medium traffic.

Scheduled flights provide a network of air transport throughout New Guinea and regular air services link the Territory with Australia and neighbouring territories. There were 181 aerodromes and seaplane alighting areas in New Guinea at 30th June, 1963, and of these 15 were controlled by the Department of Civil Aviation, 62 by the Administration, and 104 by private interests.

Telephone services operate in the main centres. Radio telephone trunk circuits link Port Moresby with Lae, Rabaul and Madang, and service is available from subscribers' telephones in Port Moresby, Lae and Rabaul, and from the Post Office at Madang. Nine zone or group centres for radio telegraph communication with out-stations have been established at Lae, Rabaul, Kavieng, Lorengau, Madang, Mt. Hagen, Wewak, Sohano and Goroka. From these centres, radio telegraph services are also available to 278 out-stations.

## § 6. Education and Health

1. **Education.**—Education in the Territory is provided by the Administration and various Mission organizations. Schools for indigenes have also been established by Native Village Councils. The *Education Ordinance* 1952–1957 enables the Administrator to establish an education advisory board, district education committees and European and native schools, and to grant financial aid for educational purposes. European teachers are recruited from Australia and overseas, and native teachers are trained in the Territory by the Administration and the Missions. During the year ended 30th June, 1962, 284 schools were maintained by the Administration for 26,593 children, of whom 1,233 were Europeans, 372 Asians, 176 of mixed race and 24,812 indigenes. The total number of pupils in the various grades of mission schools was 120,882, of whom there were 219 Europeans, 155 Asians and 260 of mixed race. To assist the educational work of the Missions, the Administration provides expert advice, educational equipment, and text-books. In addition, the sum of £238,340 was distributed among the Missions as grants-in-aid during the year ended 30th June, 1962.

For details of the missions operating in the Territory, see *Official Year Book* No. 48 and earlier issues.

2. Health.—The cases treated in hospital are mainly malaria, pneumonia, tropical ulcers, bronchitis, tubercular infections and tuberculosis, skin infections and confinements. The Department of Public Health is engaged in combating diseases with a staff of fully-trained medical officers, medical assistants and orderlies in native hospitals. Its staff also supervises hospitals on plantations. It has facilities for research in tropical medicine, and schemes for training indigenes as medical orderlies and nurses. At 30th June, 1962, there were 67 Administration hospitals, including three Hansende colonies, two tuberculosis hospitals and one Hansende and tuberculosis hospital. The Missions have established an additional 80 hospitals, including two Hansende colonies and one Hansende and tuberculosis hospital. There are 1,214 village aid posts or medical centres (182 conducted by Missions) and 480 maternity and child welfare centres (87 provided by Missions). The Missions staff their own medical establishments but receive financial assistance from the Administration, which also provides much of their medical stores and supplies.

### § 7. Finance

The principal items of revenue and expenditure for the Territory of New Guinea during the years 1958–59 to 1962–63 are shown in the following table.

#### TRUST TERRITORY OF NEW GUINEA: REVENUE AND EXPENDITURE (£)

Item	1958–59	1959–60	1960–61	1961–62	1962–63
REVENUE					
Commonwealth grant ..	6,706,373	7,859,921	9,281,595	10,114,366	12,136,151
Customs duties(a) ..	2,415,514	1,699,039	1,599,298	1,781,050	1,987,063
Income tax ..	..	930,405	1,211,584	962,956	1,143,972
All other ..	1,139,859	1,195,667	1,318,559	1,449,520	1,689,038
<b>Total Revenue ..</b>	<b>10,261,746</b>	<b>11,685,032</b>	<b>13,411,036</b>	<b>14,307,892</b>	<b>16,956,224</b>
EXPENDITURE					
Public health .. ..	1,256,924	1,449,560	1,644,306	1,844,215	2,159,662
Native affairs .. ..	713,902	801,832	871,085	948,503	948,390
Education .. ..	775,429	873,159	1,286,235	1,560,054	1,968,847
Police .. ..	264,751	404,793	459,703	535,688	619,389
Agriculture, stock and fisheries	449,334	552,375	627,431	680,851	777,753
Posts and telegraphs ..	395,679	446,519	516,499	563,253	663,270
Trade and industry ..	141,369	144,569	168,722	179,437	276,469
Forestry .. ..	257,112	282,786	310,435	305,161	320,017
Public works department ..	248,561	253,472	315,503	256,538	373,236
Maintenance .. ..	955,891	1,204,329	1,319,104	1,551,346	1,814,699
Capital works and assets ..	2,566,358	2,825,600	b 3,122,576	b 2,803,782	b 3,550,982
Other .. ..	2,236,436	2,446,038	3,129,769	3,369,500	4,004,985
<b>Total Expenditure ..</b>	<b>10,261,746</b>	<b>11,685,032</b>	<b>b 13,771,368</b>	<b>b 14,598,328</b>	<b>b 17,477,699</b>

(a) Includes Harbour Dues and Wharfrage. (b) Includes expenditure chargeable to Loan Fund, £360,332 in 1960–61, £290,436 in 1961–62 and £521,475 in 1962–63.

For information on the finances of the combined Territory administration see Papua and New Guinea, § 6, page 121.

## TRUST TERRITORY OF NAURU

1. **General.**—Nauru is an oval-shaped atoll about 12 miles in circumference, having an area of about 5,263 acres, of which approximately two-thirds is phosphate-bearing. It is situated in latitude 0° 32' S. and longitude 166° 55' E. Portion of the island between the sandy beach and the coral cliffs is comparatively fertile, and it is there that most of the Nauruans reside. With the exception of a small fringe around an inland lagoon, the plateau which contains the phosphate deposits possesses few food plants and is uninhabited, but portion of the area has been planted with fruit trees. The system of land tenure is governed by an old custom, and, with the exception of small allotments held by the Government, the British Phosphate Commissioners, and the Missions, the whole of the island is owned by individual natives. The temperature range is from 76° F. at night to 94° F. during the day and the average humidity about 80 per cent. Normally the rainfall is comparatively low for islands of the Pacific, the annual average for twenty years from 1920 to 1940 being 80.5 inches. However, falls as high as 181.76 inches during 1940 and as low as 12.29 inches during 1950 have been recorded.

2. **History.**—The island, discovered by Captain Fearn in 1798, was annexed by Germany in 1888, and prior to 1914 was part of the protectorate of German New Guinea.

In November, 1914, Nauru was occupied by a detachment from the Australian Naval and Military Expedition at Rabaul, and it was included in the cession of colonies made by Germany in 1919 to the Allied and Associated Powers, whose representatives agreed that a mandate for its administration should be conferred upon His Britannic Majesty. The mandate was confirmed by the Council of the League of Nations on 17th December, 1920. On 2nd July, 1919, the British, Australian and New Zealand Governments agreed that the administration (which, since 1915, had been in the charge of an official appointed by the British Colonial Office) should be vested in an Administrator, who took up duty in June, 1921. The agreement between the three Governments was approved by the Commonwealth Parliament in the *Nauru Island Agreement Act 1919* and is shown in the Schedule to that Act. A supplementary agreement concerning Nauru was drafted in May, 1923, and ratified by the Commonwealth Parliament by the *Nauru Island Agreement Act 1932*.

On 25th August, 1942, nine months after the outbreak of the war in the Pacific, the island was occupied by Japanese forces and communications with Nauru ceased. It was re-occupied by a joint Australian Naval and Military Force on 14th September, 1945, and civil administration was re-established on 1st November, 1945.

3. **Trusteeship Agreement.**—On 1st November, 1947, the General Assembly of the United Nations approved a Trusteeship Agreement for the Territory of Nauru submitted by the Governments of Australia, New Zealand, and the United Kingdom in substitution for the terms of the mandate under which the Territory had been administered. This Agreement designates the Governments of Australia, New Zealand, and the United Kingdom as the Joint Administering Authority, with the Government of Australia continuing, on behalf of the Administering Authority, to exercise full powers of legislation, administration and jurisdiction in and over the Territory. The terms of the Agreement were given in Official Year Book No. 39, pages 370-1.

4. **Administration.**—The administration of the island is vested in an Administrator, who is obliged to conform to instructions issued by the Government which appointed him. The Administrator is advised on matters affecting the Nauruan community by the Nauru Local Council, consisting of nine Nauruan Councillors elected by adult suffrage. This Council also carries out works and supplies certain services for the Nauruan community, and acts as the Board of Directors of the Nauru Co-operative Society. Until the Government of Australia ceases to exercise full powers of legislation, administration, and jurisdiction in and over the Territory on behalf of the Administering Authority in pursuance of Article 4 of the Trusteeship Agreement, all ordinances made by the Administrator are subject to confirmation or disallowance by the Governor-General of Australia acting on the advice of the Federal Executive Council. All administration expenses are met from local revenue and phosphate royalties.

5. *Population.*—The Nauruan component of the population numbered about 1,100 in 1921, but had grown to more than 1,800 before the Japanese invasion in August, 1942. In 1946, it numbered less than 1,400, but by 30th June, 1963, had risen to 2,558. Chinese have, for many years, formed a considerable part of the population of Nauru, but their numbers are not as great as formerly, and at 30th June, 1963, they amounted to 697. The number of other Pacific Islanders in the early 1920's was almost 300, but they subsequently decreased, then rose again, and at 30th June, 1963, there were 1,077. The European population after 1921 fluctuated, but with a generally upward trend, between one and two hundred, and in recent years has gradually increased, reaching 469 at 30th June, 1963. The total population of Nauru at the Census of 30th June, 1961, was 3,019 males, 1,594 females, 4,613 persons.

6. *Phosphate Deposits.*—(i) *General.* From 1906 to 1919, the deposits were worked by the Pacific Phosphate Company, which also worked the deposits on Ocean Island (about 165 miles east of Nauru and part of the Gilbert and Ellice Islands Colony administered by the Colonial Office). The quantity remaining on Nauru has been estimated at about 64 million tons, and the exports average 85 per cent. to 88 per cent. of tricalcium phosphate.

The interests of the Pacific Phosphate Company in the two islands (though not in other islands in the Pacific in which it had workings) were bought by the British, Australian and New Zealand Governments on 25th June, 1920, for £3,500,000, the purchase money being contributed in the proportions of 42, 42 and 16 per cent. respectively. The Agreement of 2nd July, 1919, provides for the working of the deposits by three British Phosphate Commissioners, one appointed by each Government, and the three countries are entitled to receive the output in the same proportions of 42, 42 and 16 per cent.

(ii) *Royalty on Phosphate.* Under an agreement between the British Phosphate Commissioners and the Nauruan landowners, a royalty has been payable since 1st July, 1953, for each ton of phosphate exported. As from 1st July, 1962, the rate was increased to 3s. 8d. a ton made up as follows:—

- 10d. to the Nauru Royalty Trust Fund to be used for the benefit of Nauruans;
- 1s. 10d. to the landowner, being an immediate payment of 1s. 2d. a ton, and 8d. a ton to be invested on his account;
- 1s. to the Nauruan Community Long Term Investment Fund.

From 1st July, 1962, the lump sums payable to landowners from whom phosphate-bearing lands are leased were also increased to £120 an acre in respect of land above the 80 ft. contour line.

(iii) *Phosphate Industry.* Exports of phosphate from Nauru in 1962–63 amounted to 1,608,750 tons, valued at £3,981,656, 61 per cent. to Australia, 25 per cent. to New Zealand and 14 per cent. to the United Kingdom. During the five years ended 30th June, 1963, 6,218,262 tons of phosphate were exported.

Apart from a limited number of Europeans, the employees of the Commissioners are Chinese and Pacific Islanders engaged under one year contracts. Increasing numbers of Nauruans are being employed, mainly in trade capacities.

7. *Trade.*—The *Customs Tariff* of Nauru provides for the free admission of all goods other than cigars, cigarettes, tobacco, spirits, wines, beer, cider and perry. Articles imported by the Administration for its own use and spirits for scientific purposes are exempt. The tariff rates apply to all countries alike. In 1962–63, imports were valued at £2,138,822 and exports, 1,608,750 tons of phosphate, at £3,981,656. Of the total imports in 1962–63, Australia supplied 88 per cent. valued at £2,049,181; the balance came mainly from Hong Kong, New Zealand and the United Kingdom.

In 1962–63, 981,550 tons of phosphate were exported to Australia, 399,300 tons to New Zealand and 227,900 tons to the United Kingdom.

8. *Transport.*—There is no regular air service to Nauru, but when the need arises charter flights are made to the island.

There is relatively frequent communication by sea with the island. Most of the vessels are run or chartered by the British Phosphate Commissioners for the carriage of phosphate. Many of them also provide for the carriage of passengers and other cargo as required. The total calls by vessels were 165 in 1962-63.

9. **Health.**—Cases of the usual diseases known in the Pacific occur, but the health of all sections of the population is generally satisfactory. An area has been set apart for the segregation of sufferers from Hansen's disease, and the latest methods of treatment are applied. The total number of persons receiving treatment at 30th June, 1963, was 46, of whom, however, only three were in segregation at the Hansenide colony. Three hospitals are maintained on the island, one by the Administration for Nauruans, and two by the British Phosphate Commissioners, one for European and one for non-European employees. The Administration also conducts eleven maternity and child health centres. A regular anti-mosquito campaign is conducted. Steps have been taken by the authorities to improve the water supply and to provide efficient sanitation generally. Every Nauruan is required to undergo medical examination at intervals of three months.

10. **Education.**—The Administration assumed full responsibility for education on 1st October, 1923. Prior to that date, the education of native children was undertaken by the Missions, which were subsidized by the Administration. There are four infant schools, three primary schools, one Nauruan secondary school and one mission school providing primary and secondary classes. At 30th June, 1963, 740 Nauruans, 99 other Pacific Islanders, 15 Chinese and 79 Europeans were enrolled in the infant and primary schools, and 264 at the two secondary schools.

The curriculum is based generally on that used in Victorian schools, and the teaching is generally in English. Education is compulsory for Nauruan children from six to seventeen years of age. At 30th June, 1963, 58 Nauruans were studying in Australia. Of these, 44 were at secondary schools, and the remainder were receiving vocational training. Thirty-five held Administration scholarships, 12 were Administration cadets, and the remaining 11 were privately sponsored. In addition to these, there were three students at the Central Medical School, Suva, one at the Papuan Medical College, Port Moresby, and two apprentices and one tradesman in Victoria.

11. **Judiciary.**—The District Court is a court of record and consists of such magistrates as the Administrator appoints. Additionally, there is the Central Court which, as a superior court of record, consists of such judges or magistrates as are appointed and which, *inter alia*, may hear and determine appeals from judgments of the District Court. A Court of Appeal comprising a judge appointed by the Administrator has also been constituted with jurisdiction to hear and determine appeals from judgments of the Central Court.

12. **Revenue and Expenditure.**—The revenue of the Administration for the year 1962-63 amounted to £559,253 and expenditure to £658,676.

Of the revenue, payments by the British Phosphate Commissioners amounted to £530,525, post office and radio receipts, £14,647, and import duties, £5,592. Main items of expenditure were administration, £267,349, miscellaneous services (health, education, etc.), £237,187, and capital works and services, £96,087.

#### HEARD ISLAND AND McDONALD ISLANDS

These islands, about 2,500 miles south-west of Fremantle, were transferred from the United Kingdom to Australia as from 26th December, 1947. The laws of the Australian Capital Territory were declared to be in force in the Territory of Heard Island and McDonald Islands by the *Heard and McDonald Islands Act 1953*.

In December, 1947, an Australian scientific station was established on Heard Island, and meteorological investigations were conducted until the station was closed in March, 1955, following the establishment of Mawson station on the Antarctic mainland. Heard Island is about 27 miles long and 13 miles wide. The McDonald Islands are 26 miles to the west of Heard Island. They are small, rocky and precipitous.

## AUSTRALIAN ANTARCTIC TERRITORY

An Imperial Order in Council of 7th February, 1933, placed under Australian authority all the islands and territories other than Adelie Land situated south of 60° S. lat. and lying between 160° E. long. and 45° E. long. The Order came into force with a Proclamation issued by the Governor-General on 24th August, 1936, after the passage of the *Australian Antarctic Territory Acceptance Act 1933*. The boundaries of Adelie Land were definitively fixed by a French Decree of 1st April, 1938, as the islands and territories south of 60° S. lat. lying between 136° E. long. and 142° E. long. The *Australian Antarctic Territory Act 1954* declared that the laws in force in the Australian Capital Territory are, so far as they are applicable and are not inconsistent with any ordinance made under the Act, in force in the Australian Antarctic Territory.

On 13th February, 1954, the Australian National Antarctic Research Expeditions (A.N.A.R.E.) established a base on MacRobertson Land at latitude 67° 36' S. and longitude 62° 53' E. The base was named Mawson in honour of the late Sir Douglas Mawson and was the first permanent Australian station to be set up on the Antarctic continent. Meteorological and other scientific research is conducted at Mawson, which is the centre for coastal and inland survey expeditions.

A second Australian scientific research station was established on the coast of Princess Elizabeth Land on 13th January, 1957, at latitude 68° 34' 36" S. and longitude 77° 58' 36" E. The station was named Davis in honour of Captain John King Davis of Melbourne, who commanded a number of famous Antarctic ships. In February, 1959, the Australian Government accepted from the United States Government custody of Wilkes Station, which was established by the United States on 16th January, 1957, on Vincennes Bay, at latitude 66° 15' S. and longitude 110° 33' E. The station was named in honour of Lieut. Charles Wilkes, who commanded the 1838-40 United States expedition to the area. Scientists from both countries participate in the programme of research at Wilkes. A.N.A.R.E. have also operated a station, since the 1947-48 Antarctic season, at Macquarie Island, approximately 850 miles south-east of Hobart. Macquarie Island is a dependency of the State of Tasmania.

On 1st December, 1959, Australia signed the Antarctic Treaty with Argentina, Belgium, Chile, France, Japan, New Zealand, Norway, South Africa, U.S.S.R., United Kingdom and the United States of America. The Treaty reserves the Antarctic area south of 60° S. latitude for peaceful purposes, provides for international co-operation in scientific investigation and research, and preserves, for the duration of the Treaty, the *status quo* with regard to territorial sovereignty, rights and claims. The Treaty entered into force on 23rd June, 1961. Since then, the 12 Antarctic Treaty powers have held two consultative meetings under the Treaty, the first at Canberra in July, 1961, and the second at Buenos Aires in July, 1962. The third will be held in Brussels in June, 1964.

## COCOS (KEELING) ISLANDS

1. General.—The Cocos (Keeling) Islands, two separate atolls comprising some 27 small coral islands with a total area of about five square miles, are situated in the Indian Ocean in latitude 12° 5' S. and longitude 96° 53' E. They lie some 1,720 miles north-west of Perth and 2,290 miles almost due west of Darwin, while Johannesburg is some 3,800 miles further distant to the south-west, and Colombo is 1,400 miles to the north-west of the group.

The main islands of the Territory are West Island, the largest, about 6 miles from north to south, on which is the aerodrome and most of the European community; Home Island, the head-quarters of the Clunies-Ross Estate; Direction Island, on which is situated the Cable and Wireless Station and the Department of Civil Aviation's Marine Base; and Horsburgh Island. North Keeling Island, which forms part of the Territory, lies about 15 miles to the north of the group and has no inhabitants.

Main settlements are on West Island, Home Island and Direction Island. The group of atolls is low-lying, flat and thickly covered by coconut palms, and surrounds a lagoon which has a harbour in the northern part but which is extremely difficult for navigation.



The climate is equable and pleasant, usually being under the influence of the south-east trade winds for about three-quarters of the year. However, the winds vary at times, and meteorological reports from the Territory are particularly valuable to those engaged in forecasting for the eastern Indian Ocean. The temperature varies between 70° and 89° F., and the average rainfall is 80 inches. There are occasional violent storms. The worst cyclone in the recorded history of the islands was in 1909, when about 400,000 coconut palms were uprooted or decapitated and the accompanying tidal wave left only five buildings standing.

The population at 30th June, 1963, was 664 (367 males and 297 females).

2. **History.**—The islands were discovered in 1609 by Captain William Keeling of the East India Company. They were uninhabited and remained so until 1826 when the first settlement was established on the main atoll by an Englishman, Alexander Hare, who quitted the islands in about 1831. In the meantime, a second settlement was formed on the main atoll by John Clunies-Ross, a Scottish seaman and adventurer, who landed with several boat-loads of Malay seamen. In 1857, the islands were annexed to the Crown and formally declared part of the British Dominions, and in 1878 responsibility for their supervision was transferred from the Colonial Office to the Government of Ceylon, and subsequently, in 1882, to the Government of the Straits Settlements. By indenture in 1886, Queen Victoria granted the land comprised by the islands to John Clunies-Ross in perpetuity, and until 1946 the patriarchal rule of the head of the Clunies-Ross family was recognized. The head of the family had semi-official status as resident magistrate and representative of the Government. However, in 1946, when the islands became a dependency of the Colony of Singapore, a Resident Administrator responsible to the Governor of Singapore was appointed.

On 23rd November, 1955, the Cocos Islands ceased to form part of the Colony of Singapore and were placed under the authority of the Commonwealth of Australia. The transfer was effected by an Order in Council made by Her Majesty Queen Elizabeth the Second under the Imperial Act entitled the *Cocos Islands Act 1955* and by the *Cocos (Keeling) Islands Act 1955* of the Commonwealth whereby the islands were declared to be accepted by the Commonwealth as a Territory under the authority of the Commonwealth to be known as the Territory of Cocos (Keeling) Islands.

3. **Administration.**—Responsibility for the administration of the Territory rests with the Minister for Territories. The first Official Representative was appointed on 23rd November, 1955, to take charge of the local administration of the Territory. Under the *Official Representative Ordinance 1955-1961* of the Territory, the Official Representative is given such powers and functions in relation to the Territory as are delegated to him by the Minister under the *Cocos (Keeling) Islands Act 1955-1958* or are otherwise conferred on him under that Act or by or under any other law of the Territory. The laws of the Colony of Singapore which were in force in the islands immediately before the date of the transfer were, with certain exceptions, continued in force by the *Cocos (Keeling) Islands Act 1955-1958*. They may be amended or repealed by Ordinances made under the provisions of that Act which empower the Governor-General to make Ordinances for the peace, order and good government of the Territory.

4. **Transport.**—There is an international airport at West Island under the control of the Department of Civil Aviation. This is a re-fuelling point for aircraft of Qantas Empire Airways Ltd., which operates a fortnightly service between Australia and South Africa, and also for South African Airways which operates a fortnightly service on the same route. Although there is no regular shipping service, vessels from Australia and Singapore call at intervals.

## CHRISTMAS ISLAND

1. **General.**—Christmas Island is an isolated bank, situated in the Indian Ocean in latitude 10° 25' 19" S., longitude 105° 42' 57" E. It is approximately 220 miles south from Java Head, at the south entrance to Sunda Strait, 810 miles from Singapore and 1,625 miles from Fremantle. Christmas Island covers an area of about 55 square miles. It:

consists of a central plateau at about 600 to 800 feet with several prominent rises up to 1,170 feet. The plateau descends to the sea in a series of steep slopes alternating with terraces, the last dropping in a cliff of 200 to 300 feet to a shore terrace, terminating in a sea cliff of 10 to 150 feet, which is continuous round the island except in a few places, the chief of which is Flying Fish Cove where the shore is formed of coral shingles.

The principal settlement is at Flying Fish Cove which is also the only known anchorage. Vessels are moored close inshore opposite two piers with extension conveyors, by which means direct loading to ships is carried out. The main installations of the phosphate industry are located here, together with the European married quarters and the Chinese and Malay settlements. There is a secondary settlement with maintenance shops, etc., at South Point, and several other small settlements or camps across the central plateau and at the small pumping plants at springs and wells. A stream at Waterfall Beach feeds a dam which supplies the settlement at Flying Fish Cove.

The climate is healthy and pleasant, the prevailing winds being from the south-east to east-south-east from May to December, but from then to April (the wet season) they occasionally shift round from north to north-east. The average yearly rainfall is about 80 inches with a marked summer incidence. The porous nature of the ground prevents the formation of pools of water, but there are several good springs which maintain an adequate supply of fresh water for the small population and the installations. The mean average temperature is about 80° and does not vary greatly throughout the year.

The population of Christmas Island at 30th June, 1961, was 3,099 (1,963 males and 1,136 females). At 30th June, 1963, the total population was 3,349.

2. **Education.**—At 30th June, 1963, there were two school systems on the Island—the Christmas Island school system which serves the majority of the children, and a European school which serves a small number of children. The Christmas Island school system follows the Singapore curriculum, with 23 teachers, mostly Singapore trained, and 742 pupils (624 primary and 118 secondary). The European school follows the Western Australian primary school syllabus, with one teacher seconded from the Western Australian Department of Education, and 23 pupils.

Four Administration scholarships are available each year for Asian students who have completed a three year secondary course to enable them to receive further secondary education at Singapore or Malaya up to University Matriculation level. An education allowance of £145 per annum, plus annual return fare for the scholar, is paid to Europeans resident in the Territory who send their children to Australia for secondary education. The British Phosphate Commission awards scholarships from time to time.

3. **History and Administration.**—The first mention of Christmas Island appears in a map published in Holland in 1666, in which it is called Moni Island, although it is believed that Captain William Mynors of the East India Company had sighted the island on Christmas Day in 1643 and had named it accordingly.

In June, 1888, it was annexed by Captain H. W. May of H.M.S. *Imperieuse* as part of the British Dominions and placed under the supervision of the Straits Settlements Government for administrative purposes. Following upon this, a small settlement was established at Flying Fish Cove by Mr. G. Clunies-Ross of Cocos (Keeling) Islands. In February, 1891, Sir John Murray and Mr. Clunies-Ross were granted a 99-year lease of the Island. This lease was transferred to the Christmas Island Phosphate Co. Ltd. in 1897, following the discovery of large deposits of phosphate of lime on the Island. In 1900, Christmas Island was incorporated for administrative purposes with the Settlement of Singapore and the laws of Singapore were generally applied to the Island.

The *Straits Settlements (Repeal) Act* 1946, passed by the United Kingdom, repealed the Act establishing the whole of the Straits Settlements as a single colony. Subsequently, the Singapore Colony Order in Council, in 1946, decreed that the Island of Singapore and its dependencies, the Cocos or Keeling Islands and Christmas Island should be governed and administered as a separate Colony and called the Colony of Singapore. From 1st January, 1958, pending transfer to Australia, Christmas Island was administered by the United Kingdom as a separate Crown Colony. The Island was transferred to the Commonwealth of Australia on 1st October, 1958, by the *Christmas Island Act* 1958, and is now administered as a Territory under the authority of the Commonwealth.

Responsibility for the administration and government of the Territory rests with the Minister for Territories, and day to day affairs on the Island are administered by an Official Representative under delegation from the Minister. The laws which were in force in the Island at 30th September, 1958, were continued as the laws of the Territory after its transfer to Australia on 1st October.

**4. Phosphate Deposits.**—The only commercial activity carried out is the mining of phosphate. The British Phosphate Commissioners act as managing agents for the Christmas Island Phosphate Commission.

There are three principal phosphate deposits on the islands of which the largest is that now being worked at South Point. This field is situated on the 600 feet to 800 feet level and is approximately 11 miles from the drying and shipping plant at Flying Fish Cove. During 1962–63, 546,603 tons of phosphate ore were mined and exported to Australia; 4,156 tons of phosphate dust were shipped to Australia and 76,625 tons to Malaya. The extraction rate is being progressively increased.

There is little prospect of any economic development outside the phosphate industry.

**5. Transport.**—Transport to and from the island is maintained by vessels operated under charter by the Christmas Island Phosphate Commission. One vessel makes regular trips between Christmas Island and Singapore, and other vessels carry phosphate to Fremantle and other Australian ports.

#### EXTERNAL TERRITORIES: RESULTS OF 1961 CENSUS OF POPULATION

Detailed information obtained from the results of the Population Census of 30th June, 1961, was given on pages 165–78 of Year Book No. 49.

## CHAPTER VI

### MANUFACTURING INDUSTRY

NOTE.—Further detail on the subjects dealt with in this chapter is contained in the annual printed bulletins *Secondary Industries*, Parts I and II. Information is also published, as soon as the data can be prepared, in a series of 35 annual mimeographed bulletins, *Manufacturing Industries*, each relating to a particular industry or group of industries. Details of the industries covered are contained in Statistical Publications of Australia, of the Miscellaneous chapter. Advance annual information is published in mimeographed form in *A Summary of Principal Statistics of Factories* and in *Principal Factory Products*. Current information on factory products is available in the *Quarterly Summary of Australian Statistics*, the *Monthly Review of Business Statistics*, the *Digest of Current Economic Statistics*, and the *Monthly Bulletin of Production Statistics*. A preliminary annual statement (*Factory Statistics*) and monthly statement (*Production Statistics*) are also issued.

In addition to the above-mentioned publications, there is also a series of 46 monthly *Production Summaries*, each relating to the production of a particular commodity or group of commodities (see reference above to Statistical Publications).

#### § 1. General

1. **Introduction.**—A complete statistical account of the growth of the manufacturing industry in Australia cannot be given, as the necessary statistics were not collected by the several States on a definite and uniform basis prior to 1906. A standard classification of manufacturing industries was formulated at a conference of Australian statisticians in 1902 and adopted by all States in 1906, and figures on this basis were prepared for 1907 and subsequent years.

Prior to the federation of the Australian States in 1901, the manufacturing industry in Australia was engaged primarily in the production of goods for local use, mainly food commodities, furniture, bricks, clothing made from imported materials, printing, the repair rather than the manufacture of machinery, and the preliminary treatment of primary products, such as wool-scouring and sawmilling.

After federation, steady expansion of the manufacturing industry resulted from the removal of interstate trade barriers and the operation of a uniform protective tariff. This expansion was quickened as a result of the demands created by the 1914-18 War, the curtailment of imports, and the rapid growth of spending power within the community. New and more advanced development took place, iron and steel works and many related and subsidiary industries were established, extensive manufacture of machinery was begun, and a wide range of high-grade products—textiles, metal manufactures, electrical goods, etc.—was added to the list of commodities made in Australia. A factor in the post-war growth of manufacturing industry in Australia was the creation in 1921 of the Tariff Board (see Chapter XIV. Oversea Trade). As well as encouraging primary industries, the Board, by means of protective tariffs, assisted new manufacturing industries until they were soundly established, and local manufacturers who had been adversely affected by overseas competition.

This expansion was checked by the world-wide economic depression of 1929-33, but in 1933 returning general prosperity and the opportunities opened to local manufacturers by import restrictions, together with depreciation of Australian currency, gave renewed

stimulus to manufacturing enterprise. As economic conditions improved, the tariff, revenue duties and primage were reduced, but without materially prejudicing the progress of local manufactures.

When war broke out in September, 1939, Australia became a major source of supply for British countries east of Suez, and in meeting their demands, as well as those arising locally because of interruption of oversea imports, existing manufacturing industries expanded, and new enterprises were developed rapidly for the production of all classes of munitions, aircraft, ships, many new kinds of machinery and metal manufactures, scientific equipment, textiles, chemicals, etc. The outbreak of war with Japan, the basing of Allied armed forces in Australia, and Australian responsibility for supplies in the South-west Pacific Area, gave added impetus to these developments, and manufacturing in Australia outstripped all previous levels.

The cessation of war production and the transition of industry to a peace-time basis temporarily retarded progress, but from 1945-46 onward there has been renewed expansion of the manufacturing industries to which an inflow of capital from overseas contributed.

**2. Decentralization of Manufacturing Industries.**—Following upon a report by the Secondary Industries Commission, the Commonwealth Government called a conference of Commonwealth and State Ministers in August, 1945, to formulate a national policy for the decentralization of secondary industries. It was agreed that the State Governments should seek to promote decentralization along the lines appropriate to each, providing necessary services, assistance and concessions to the full extent of State resources. The Commonwealth undertook to collaborate in all matters of Commonwealth industrial policy affecting the development and location of industry, to investigate, in association with the States, the prospects of developing secondary industries in selected areas, to advise the States of developments desirable for defence purposes, and to provide financial assistance for projects of national importance where the cost would be great relative to the State's resources.

The Commonwealth assisted decentralization by allocating munitions and other defence buildings in decentralized areas to private industry and by accommodating migrants in provincial centres with prospects of development. Oversea firms contemplating establishment in Australia are encouraged to select locations in rural areas or the less industrialized States.

**3. Customs and Excise Tariffs and Bounties on Manufactures.**—Particulars of Australian customs and excise tariffs, and the constitution and functions of the Australian Tariff Board in relation to matters affecting the industrial development of Australia, are given in Chapter XIV. Oversea Trade.

Bounties are paid by the Commonwealth Government to encourage local manufacture of certain products. The statutory provisions usually fix a term of operation of the bounty, provide for payment at a rate varying according to changes in the corresponding customs duty, specify the annual maximum amount of bounty payable and require the bounty to be withheld or reduced if a manufacturer's net profit in production of the commodity exceeds a certain rate, or if rates of wages and conditions of employment in production of the commodity do not conform to prescribed standards.

**4. Scientific Research and Standardization.**—(i) *The Commonwealth Scientific and Industrial Research Organization.* The function of this Organization is to initiate and conduct research in connexion with industries in Australia, to train research workers, to establish industrial research studentships and fellowships, to make grants in aid of pure scientific research, to establish industrial research associations in various industries, to provide for testing and standardization of scientific equipment, to conduct an information service relating to scientific and industrial matters, and to act for Australia in liaison with other countries in matters of scientific research. For further information concerning the work of the Organization, see Chapter XIX. Education, Cultural Activities and Research, of this Year Book.

(ii) *The Standards Association of Australia.* The Standards Association of Australia is the national standardizing organization of Australia, and issues Australian standard specifications for materials and codes of practice. For further information on this organization see Chapter XIX. Education, Cultural Activities and Research.

(iii) *The National Association of Testing Authorities.* The National Association of Testing Authorities organizes testing facilities throughout Australia to serve private and governmental needs. For further information on this organization see Chapter XIX. Education, Cultural Activities and Research.

(iv) *Industrial Design Council of Australia.* The Industrial Design Council of Australia was established in June, 1958, for the purpose of encouraging better design in Australian-made goods and fostering an appreciation of good design throughout the community. The decision to set up the Council arose from a realization on the part of representatives of industry and government, designers and educationists, that there was a pressing need in Australia for an independent and authoritative body to promote better design in the interests of trade development.

The Council has a membership fully representative of industry, commerce and government, together with designers and educationists. It is financed by donations from industry and by Commonwealth grants. In 1962, the Commonwealth Government announced a grant to the Council of up to £20,000 per year for the next three years. State Committees for Industrial Design are being set up in order to extend the Council's activities throughout Australia and to co-ordinate efforts for the promotion of better design.

As part of its programme of assisting industry, the Council conducts lecture series dealing with various aspects of product design. Design counselling is available to manufacturing companies on request, and manufacturers seeking the services of designers are put in touch with qualified people.

Other projects include the setting-up of a Design Index, providing a photographic catalogue of well designed Australian goods, for reference by manufacturers, retailers, architects, designers and the public; a Register of Designers, providing a comprehensive reference to Australian designers to assist those seeking their services; displays and exhibitions of well designed goods, both local and overseas; design training—the council is aware of the urgent need to raise the standard of training in industrial design and is co-operating with education authorities to this end; information services—it is intended to establish information offices in all capital cities, to provide information on matters concerned with design.

5. **Definitions in Factory Statistics.**—The statistics relating to factories have been compiled from tabulations made by the Deputy Commonwealth Statisticians in the several States, from returns supplied to them annually by manufacturers in accordance with the statistical acts of the States and the Commonwealth. A return must be supplied in respect of every *factory*, which is defined for this purpose as an establishment where four or more persons are employed or where power (other than manual) is used in any manufacturing process. This definition includes factories in educational and charitable institutions, reformatories, and other public institutions (except penitentiaries), but does not cover small-goods makers, laundries, photography studios, florists and seedsmen, or most abattoirs. It should be noted that details relating to small establishments not classified for statistical purposes as factories are not included in the figures contained in this chapter.

If a manufacturing business is conducted in conjunction with any other activity, particulars relating to the manufacturing section only are included in the statistics. Where two or more industries are conducted in the same establishment, a separate return is obtained for each industry if practicable.

Manufacturers are requested to state in their returns particulars as to the number, age, wages, etc., of their employees, the value of premises and equipment, the horse-power of machinery, the value, and in most cases the quantities, of raw materials (including containers, tools replaced, etc.) and fuel used, and quantities and values of principal materials

and articles produced. The returns obtained from manufacturers are not intended to show a complete record of the income and expenditure of factories nor to show the profits or losses of factories collectively or individually.

All *persons employed* in the manufacturing activities of a factory are counted as factory employees including working proprietors and "out-workers".

The *average number of persons* employed is quoted on two different bases, the average during the period of operation and the average over the whole year. Of these, the former is simply the aggregate of the average number of persons employed in each factory during its period of operation (whether the whole or only part of the year). This average is used only in respect of details relating to classification according to the number of persons employed. The latter, which is used in all other instances, is calculated by reducing the average number working in the factories (irrespective of period of operation) to the equivalent number working for a full year.

*Working proprietors* are included in all employment figures other than those relating to monthly employment and age dissections, but salaries and wages paid in all cases exclude drawings by working proprietors.

*Value of materials used* includes the value, in the usual sense, of the materials used, stores used, containers, tools replaced, and materials used in repairs to plant.

*Value of fuel, etc., used* includes also the cost of power and light used, of lubricants and of water.

The *value of factory output* is the value of the goods manufactured or their value after passing through the particular process of manufacture concerned, and includes the amount received for repair work, work done on commission and receipts for other factory work. The basis of valuation of the output is the selling value of the goods at the factory, exclusive of all delivery costs and charges and excise duties, but inclusive of bounty and subsidy payments to the manufacturer of the finished article.

The *value of production* is the value added to raw materials by the process of manufacture. It is calculated by deducting from the value of factory output the value (at the factory) of the materials used, containers and packing, power, fuel and light used, tools replaced, and materials used in repairs to plant (but not depreciation charges).

In the process of manufacture, many goods are treated in several industries, the output of one becoming the raw material of another, so that such commodities are counted more than once in the aggregate value of output and of raw materials. Examples are raw sugar passing from the mills to the refinery, metals from the smelters which become raw materials in establishments concerned in the production of metal goods, and timber from the sawmills used in furniture factories and in joinery. On the other hand, the aggregate value of production is assessed without duplication, the value added by each industry being taken into account once only. For this reason, the value of production, and not the value of the output, is used as a measure of activity in the manufacturing industries as a whole.

In the special case of government factories and workshops, the value of output is, in most cases, estimated by adding 10 per cent. to the value of materials and fuel used and other factory costs, including salaries and wages paid.

The *rated horse-power of engines used* for factories other than central electric stations relates to the rated horse-power of engines ordinarily in use.

Statistics relating to factory activity in the Australian Capital Territory and Northern Territory are not included in the figures contained in this chapter.

**6. Classification of Factories.**—In the compilation of statistical data relating to factories in Australia, a standard classification of manufacturing industries, formulated at a conference of Australian statisticians in 1902 and revised from time to time, was used until the year 1929–30. A new classification was introduced in 1930–31, and this in turn was revised and extended (principally in respect of the placement and composition of sub-classes) in accordance with decisions of the 1945 Conference of Statisticians.

Owing to limitations of space, details published in general tables in this chapter are confined either to the sixteen classes of industry or to total factory activity. Some particulars of certain of the sub-classes shown below are published in the latter portion of this chapter, and full details for all sub-classes may be found in the bulletin *Secondary Industries, Part I.—Factory and Building Operations*, published annually.

The classes and sub-classes in the current classification of factories are as follows.

### CLASSIFICATION OF FACTORIES

#### CLASS I.—TREATMENT OF NON-METALLIFEROUS MINE AND QUARRY PRODUCTS

Coke works  
Briquetting and pulverized coal  
Carbide  
Lime, plaster of paris, asphalt  
Fibrous plaster and products  
Marble, slate, etc.  
Cement, portland  
Asbestos cement sheets and mouldings  
Other cement goods  
Other

#### CLASS II.—BRICKS, POTTERY, GLASS, ETC.

Bricks and tiles  
Earthenware, china, porcelain and terracotta  
Glass (other than bottles)  
Glass bottles  
Other

#### CLASS III.—CHEMICALS, DYES, EXPLOSIVES, PAINTS, OILS, GREASE

Industrial and heavy chemicals and acids  
Pharmaceutical and toilet preparations  
Explosives (including fireworks)  
White lead, paints and varnish  
Oils, vegetable  
Oils, mineral  
Oils, animal  
Boiling-down, tallow-refining  
Soap and candles.  
Chemical fertilizers  
Inks, polishes, etc.  
Matches  
Other

#### CLASS IV.—INDUSTRIAL METALS, MACHINES, CONVEYANCES

Smelting, converting, refining, rolling of iron and steel  
Foundries (ferrous)  
Plant, equipment and machinery, including machine tools  
Other engineering  
Extracting and refining of other metals; alloys  
Electrical machinery, cables and apparatus  
Construction and repair of vehicles (10 groups)  
Ship and boat building and repairing, marine engineering (government and other)  
Cutlery and small hand tools  
Agricultural machines and implements  
Non-ferrous metals—  
Rolling and extrusion  
Founding, casting, etc.  
Iron and steel sheets  
Sheet metal working, pressing, and stamping  
Pipes, tubes and fittings—ferrous  
Wire and wire working (including nails)  
Stoves, ovens and ranges  
Gas fittings and meters  
Lead mills  
Sewing machines

#### CLASS IV.—INDUSTRIAL METALS, MACHINES, CONVEYANCES—continued

Arms, ammunition (excluding explosives)  
Wireless and amplifying apparatus  
Other metal works

#### CLASS V.—PRECIOUS METALS, JEWELLERY, PLATE

Jewellery  
Watches and clocks (including repairs)  
Electroplating (gold, silver, chromium, etc.)

#### CLASS VI.—TEXTILES AND TEXTILE GOODS (NOT DRESS)

Cotton ginning  
Cotton spinning and weaving  
Wool—carding, spinning, weaving  
Hosiery and other knitted goods  
Silk, natural  
Rayon, nylon and other synthetic fibres  
Flax mills  
Rope and cordage  
Canvas goods, tents, tarpaulins, etc.  
Bags and sacks  
Textile dyeing, printing and finishing  
Other

#### CLASS VII.—SKINS AND LEATHER (NOT CLOTHING OR FOOTWEAR)

Furriers and fur-dressing  
Woolscouring and fellmongery  
Tanning, currying and leather-dressing  
Saddlery, harness and whips  
Machine belting (leather or other)  
Bags, trunks and other goods of leather and leather substitutes

#### CLASS VIII.—CLOTHING (EXCEPT KNITTED)

Tailoring and ready-made clothing  
Waterproof and oilskin clothing  
Dressmaking, hemstitching  
Millinery  
Shirts, collars, underclothing  
Foundation garments  
Handkerchiefs, ties and scarves  
Hats and caps  
Gloves  
Boots and shoes (not rubber)  
Boot and shoe repairing  
Boot and shoe accessories  
Umbrellas and walking sticks  
Dyeworks and cleaning, etc.  
Other

#### CLASS IX.—FOOD, DRINK AND TOBACCO

Flour-milling  
Cereal foods and starch  
Animal and bird foods  
Chaffcutting and corncrushing  
Bakeries (including cakes and pastry)  
Biscuits  
Sugar-mills  
Sugar-refining



**CLASS IX.—FOOD, DRINK AND TOBACCO—**  
*continued*  
Confectionery (including chocolate and icing sugar)  
Jam, fruit and vegetable canning  
Pickles, sauces, vinegar  
Bacon curing  
Butter factories  
Cheese factories  
Condensed and processed milk factories  
Margarine  
Meat and fish preserving  
Condiments, coffee, spices  
Ice and refrigerating  
Salt  
Aerated waters, cordials, etc.  
Breweries  
Distilleries  
Wine-making  
Cider and perry  
Malting  
Bottling  
Tobacco, cigars, cigarettes, snuff  
Dehydrated fruit and vegetables  
Ice cream  
Sausage casings  
Arrowroot  
Other

**CLASS X.—SAWMILLS, JOINERY, BOXES, ETC.,**  
WOOD TURNING AND CARVING

Sawmills  
Plywood mills (including veneers)  
Bark mills  
Joinery  
Cooperage  
Boxes and cases  
Woodturning, woodcarving, etc.  
Basketware and wickerware (including sea-grass and bamboo furniture)  
Perambulators (including pushers and strollers)  
Wall and ceiling boards (not plaster or cement)  
Other

**CLASS XI.—FURNITURE OF WOOD, BEDDING, ETC.**  
Cabinet and furniture making (including billiard tables and upholstery)  
Bedding and mattresses (not wire)  
Furnishing drapery

**CLASS XII.—FURNITURE OF WOOD, BEDDING, ETC.—**  
*continued*

Picture frames  
Blinds

**CLASS XIII.—PAPER, STATIONERY, PRINTING,**  
BOOKBINDING, ETC.

Newspapers and periodicals  
Printing—  
Government  
General, including bookbinding  
Manufactured stationery  
Stereotyping, electrotyping  
Process and photo engraving  
Cardboard boxes, cartons and containers  
Paper bags  
Paper-making  
Pencils, penholders, chalks, crayons  
Other

**CLASS XIII.—RUBBER**

Rubber goods (including tyres made)  
Tyre retreading and repairing

**CLASS XIV.—MUSICAL INSTRUMENTS**

Gramophones and gramophone records  
Pianos, piano-players, organs  
Other

**CLASS XV.—MISCELLANEOUS PRODUCTS**

Linoleum, leather-cloth, oil-cloth, etc.  
Bone, horn, ivory and shell  
Plastic moulding and products  
Brooms and brushes  
Optical instruments and appliances  
Surgical and other scientific instruments and appliances  
Photographic material (including developing and printing)  
Toys, games and sports requisites  
Artificial flowers  
Other

**CLASS XVI.—HEAT, LIGHT, AND POWER**

Electric light and power  
Gas works

7. Factory Development since 1901, Australia.—The development of the manufacturing industries in Australia at intervals since 1901 is summarized in the following table.

**FACTORIES: AUSTRALIA**

Year	Fac- to- ries	Em- ploy- ment(a)	Salaries and wages paid(b)	Value of—				
				Materials and fuel used	Output	Pro- duction (c)	Land and build- ings	Plant and ma- chinery
	No.	'000.	£'000.	£'000.	£'000.	£'000.	£'000.	£'000.
1901 ..	11,143	198	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
1911 ..	14,455	312	27,528	81,763	133,022	51,259	32,701	31,516
1920-21 ..	17,113	367	62,932	213,559	323,993	110,434	60,831	68,655
1930-31 ..	21,751	339	62,455	172,489	290,799	118,310	112,211	124,498
1940-41 ..	27,300	650	137,919	386,881	644,795	257,914	144,094	161,356
1950-51 ..	43,147	969	491,718	1,306,963	2,150,835	843,872	302,785	336,615
1957-58 ..	53,988	1,074	929,290	2,545,159	4,273,882	1,728,723	849,036	1,012,735
1958-59 ..	54,888	1,088	970,553	2,649,331	4,491,932	1,842,601	947,899	1,108,385
1959-60 ..	56,657	1,132	1,086,359	2,948,813	5,023,696	2,074,883	1,063,852	1,220,064
1960-61 ..	57,782	1,145	1,143,836	3,047,344	5,217,148	2,169,804	1,193,590	1,391,490
1961-62 ..	58,450	1,121	1,142,519	3,047,151	5,242,089	2,194,938	1,403,838	1,524,787
1962-63p ..	59,127	1,167	1,223,233	3,332,261	5,730,593	2,398,332	1,502,076	1,644,104

(a) 1901 and 1911—average employment during period of operation. Later years relate to average employment over whole year. Working proprietors are included in all years. (b) Excludes drawings by working proprietors. (c) Value added in process of manufacture (i.e., value of output less value of materials and fuel, etc., used).

## § 2. Number of Factories

1. Number of Factories in each State.—The following table shows the number of factories operating in each State in the years 1957–58 to 1961–62.

## FACTORIES: NUMBER

Year	N.S.W.	Vic.	Q'land	S. Aust.	W. Aust.	Tas.	Aust.
1957–58 .. ..	22,270	16,426	5,528	4,168	3,941	1,655	53,988
1958–59 .. ..	22,684	16,527	5,651	4,235	4,125	1,666	54,888
1959–60 .. ..	23,274	16,979	5,758	4,684	4,279	1,683	56,657
1960–61 .. ..	23,585	17,173	5,882	5,042	4,334	1,766	57,782
1961–62 .. ..	23,629	17,300	5,824	5,519	4,418	1,760	58,450

2. Number of Factories in Industrial Classes.—(i) *Australia*. The next table shows the number of factories in Australia during 1957–58 to 1961–62 classified to the industrial classes agreed upon by the Conference of Statisticians in 1930. Details of some of the principal industries included in the table will be found in § 11.

## FACTORIES: NUMBER IN INDUSTRIAL CLASSES, AUSTRALIA

Class of industry	1957–58	1958–59	1959–60	1960–61	1961–62
I. Treatment of non-metalliferous mine and quarry products .. ..	1,328	1,344	1,374	1,434	1,454
II. Bricks, pottery, glass, etc. .. ..	660	663	682	694	694
III. Chemicals, dyes, explosives, paints, oils, grease .. ..	1,184	1,218	1,248	1,258	1,285
IV. Industrial metals, machines, conveyances .. ..	20,518	21,254	22,622	23,512	24,193
V. Precious metals, jewellery, plate .. ..	808	818	823	859	911
VI. Textiles and textile goods (not dress) .. ..	1,364	1,373	1,435	1,421	1,386
VII. Skins and leather (not clothing or footwear) .. ..	761	729	727	703	671
VIII. Clothing (except knitted) .. ..	7,266	7,195	7,267	7,493	7,561
IX. Food, drink and tobacco .. ..	7,455	7,580	7,449	7,331	7,251
X. Sawmills, joinery, boxes, etc., wood turning and carving .. ..	5,764	5,676	5,771	5,732	5,634
XI. Furniture of wood, bedding, etc. .. ..	2,200	2,184	2,211	2,176	2,157
XII. Paper, stationery, printing, bookbinding, etc. .. ..	2,413	2,518	2,619	2,688	2,739
XIII. Rubber .. ..	565	606	620	629	650
XIV. Musical instruments .. ..	88	86	87	88	85
XV. Miscellaneous products .. ..	1,207	1,251	1,330	1,370	1,409
<i>Total, Classes I. to XV.</i> .. ..	<i>53,581</i>	<i>54,495</i>	<i>56,265</i>	<i>57,408</i>	<i>58,080</i>
XVI. Heat, light and power .. ..	407	393	392	374	370
<b>Grand Total</b> .. ..	<b>53,988</b>	<b>54,888</b>	<b>56,657</b>	<b>57,782</b>	<b>58,450</b>

(ii) *States*, 1961–62. The following table shows the number of factories in each State classified by nature of industry.

## FACTORIES: NUMBER IN INDUSTRIAL CLASSES, 1961-62

Class of industry	N.S.W.	Vic.	Q'land	S. Aust.	W. Aust.	Tas.	Aust.
I. Treatment of non-ferrous mine and quarry products ..	493	470	118	185	140	48	1,454
II. Bricks, pottery, glass, etc. ..	314	177	57	76	52	18	694
III. Chemicals, dyes, explosives, paints, oils, grease ..	624	381	83	95	73	29	1,285
IV. Industrial metals, machines, conveyances ..	9,896	6,779	2,365	2,545	2,006	602	24,193
V. Precious metals, jewellery, plate	366	245	43	164	74	19	911
VI. Textiles and textile goods (not dress) ..	453	785	30	59	40	19	1,386
VII. Skins and leather (not clothing or footwear) ..	305	245	48	41	25	7	671
VIII. Clothing (except knitted) ..	3,413	2,514	554	591	394	95	7,561
IX. Food, drink and tobacco ..	2,557	2,030	991	756	624	293	7,251
X. Sawmills, joinery, boxes, etc., wood turning and carving ..	2,152	1,342	809	406	457	468	5,634
XI. Furniture of wood, bedding, etc. ..	814	626	256	220	174	67	2,157
XII. Paper, stationery, printing, bookbinding, etc. ..	1,190	965	214	190	139	41	2,739
XIII. Rubber ..	235	171	114	62	46	22	650
XIV. Musical instruments ..	35	24	7	11	8	..	85
XV. Miscellaneous products ..	692	479	67	81	74	16	1,409
<i>Total Classes I. to XV. ..</i>	<i>23,539</i>	<i>17,233</i>	<i>5,756</i>	<i>5,482</i>	<i>4,326</i>	<i>1,744</i>	<i>58,080</i>
XVI. Heat, light and power ..	90	67	68	37	92	16	370
<b>Grand Total ..</b>	<b>23,629</b>	<b>17,300</b>	<b>5,824</b>	<b>5,519</b>	<b>4,418</b>	<b>1,760</b>	<b>58,450</b>

## § 3. Classification of Factories by Number of Persons Employed

NOTE.—The size classification of factories is based on the average weekly number of persons employed during the period of operation (including working proprietors).

1. States, 1961-62.—The following table shows, for each State, the number of factories classified by the average number of persons employed.

## FACTORIES: CLASSIFICATION BY SIZE OF FACTORY, 1961-62

Size of factory (Persons employed)	N.S.W.	Vic.	Q'land	S. Aust.	W. Aust.	Tas.	Aust.
NUMBER OF FACTORIES							
Under 4 ..	10,226	6,262	2,167	2,543	2,201	790	24,189
4 ..	1,872	1,387	553	467	404	153	4,836
5 to 10 ..	5,359	4,109	1,537	1,174	904	423	13,506
11 to 20 ..	2,761	2,369	693	589	420	183	7,015
21 to 50 ..	1,986	1,817	527	434	315	127	5,206
51 to 100 ..	744	686	164	169	101	41	1,905
101 to 200 ..	364	389	101	80	48	25	1,007
201 to 300 ..	124	115	46	22	12	5	324
301 to 400 ..	50	44	16	15	6	4	135
401 to 500 ..	41	34	8	3	4	1	91
501 to 750 ..	44	58	5	10	1	2	120
751 to 1,000 ..	24	13	4	5	1	2	49
Over 1,000 ..	34	17	3	8	1	4	67
<b>Total ..</b>	<b>23,629</b>	<b>17,300</b>	<b>5,824</b>	<b>5,519</b>	<b>4,418</b>	<b>1,760</b>	<b>58,450</b>

The relative importance of large and small factories is illustrated by the following classification of the average number of persons employed by the size of factory in which they worked.

**FACTORIES: AVERAGE NUMBER OF PERSONS EMPLOYED BY SIZE OF FACTORY, 1961-62**

Size of factory (Persons employed)	N.S.W.	Vic.	Q'land	S. Aust.	W. Aust.	Tas.	Aust.
AVERAGE NUMBER EMPLOYED DURING PERIOD WORKED							
Under 4 .. ..	18,914	12,450	4,440	4,636	4,053	1,556	46,049
4 .. ..	7,488	5,548	2,212	1,868	1,616	612	19,344
5 to 10 .. ..	37,104	28,781	10,563	8,125	6,195	2,937	93,705
11 to 20 .. ..	40,247	35,072	9,951	8,611	6,027	2,673	102,581
21 to 50 .. ..	62,074	57,664	16,591	13,864	9,847	3,977	164,017
51 to 100 .. ..	51,800	47,988	11,537	11,866	6,900	2,799	132,890
101 to 200 .. ..	50,755	55,111	14,467	11,455	6,595	3,323	141,706
201 to 300 .. ..	30,201	28,498	11,015	5,416	2,744	1,245	79,119
301 to 400 .. ..	17,020	15,521	5,696	5,141	1,933	1,347	46,658
401 to 500 .. ..	18,024	15,350	3,641	1,384	1,733	418	40,550
501 to 750 .. ..	27,203	35,050	3,042	6,174	749	1,296	73,514
751 to 1,000 .. ..	20,887	11,335	3,435	4,317	783	1,531	42,288
Over 1,000 .. ..	83,199	31,251	5,519	16,737	2,701	6,734	146,141
<b>Total .. ..</b>	<b>464,916</b>	<b>379,619</b>	<b>102,109</b>	<b>99,594</b>	<b>51,876</b>	<b>30,448</b>	<b>1,128,562</b>
Average per factory .. ..	19.68	21.94	17.53	18.04	11.74	17.30	19.31

2. Australia, 1957-58 to 1961-62.—In the following table, factories in Australia in each each year from 1957-58 to 1961-62 are classified in broad groups by the number of persons employed.

**FACTORIES: CLASSIFICATION BY NUMBER OF PERSONS EMPLOYED, AUSTRALIA**

Year	Establishments employing on the average—							
	20 and under		21 to 100		101 and upwards		Total	
	Es- tablish- ments	Persons em- ployed	Es- tablish- ments	Persons em- ployed	Es- tablish- ments	Persons em- ployed	Es- tablish- ments	Persons em- ployed
1957-58—								
Number .. ..	45,569	250,748	6,730	279,750	1,689	550,777	53,988	1,081,275
Average per establish- ment .. ..	..	5.50	..	41.57	..	326.10	..	20.03
1958-59—								
Number .. ..	46,345	253,375	6,825	282,735	1,718	560,553	54,888	1,096,663
Average per establish- ment .. ..	..	5.47	..	41.43	..	326.28	..	19.98
1959-60—								
Number .. ..	47,791	258,162	7,078	293,400	1,788	587,832	56,657	1,139,394
Average per establish- ment .. ..	..	5.40	..	41.45	..	328.77	..	20.11
1960-61—								
Number .. ..	48,728	260,276	7,241	301,251	1,813	591,808	57,782	1,153,335
Average per establish- ment .. ..	..	5.34	..	41.60	..	326.42	..	19.96
1961-62—								
Number .. ..	49,546	261,679	7,111	296,907	1,793	569,976	58,450	1,128,562
Average per establish- ment .. ..	..	5.28	..	41.75	..	317.89	..	19.31

### § 4. Power Equipment in Factories

1. General.—Since 1936-37, statistics of power equipment in factories relate to the "rated horse-power" of engines ordinarily in use and engines in reserve or idle, omitting obsolete engines. In addition, particulars of the power equipment of central electric stations are collected in greater detail. To avoid duplication, it is essential that some distinction should be made between central electric stations and other classes of industries. In the following tables, central electric stations have been treated separately from other factories.

2. Rated Horse-power of Engines in Factories other than Central Electric Stations.—The following table shows the total number of factories and the total rated horse-power of engines and electric motors ordinarily in use and in reserve or idle during 1961-62.

#### FACTORIES(a): TOTAL RATED HORSE-POWER OF ENGINES AND ELECTRIC MOTORS, 1961-62

State	Factories(a)	Rated horse-power of engines and motors	
		Ordinarily in use(b)	In reserve or idle (omitting obsolete)
New South Wales	23,574	2,559,208	390,044
Victoria .. .. .	17,259	1,574,269	213,743
Queensland .. .. .	5,772	584,617	88,855
South Australia .. .. .	5,485	471,775	56,995
Western Australia .. .. .	4,329	276,186	39,348
Tasmania .. .. .	1,746	281,743	40,439
<b>Australia .. .. .</b>	<b>58,165</b>	<b>5,747,798</b>	<b>829,424</b>

(a) Includes gas works but excludes central electric stations, details of which are shown on p. 152.

(b) Excludes motors driven by electricity generated in factories not classified as central electric stations.

3. Rated Horse-power of Engines and Electric Motors Ordinarily in Use.—(i) *According to Type, States.* Particulars of the types and the total rated horse-power of engines, etc., ordinarily in use in each State are given below.

#### FACTORIES(a): TOTAL RATED HORSE-POWER OF ENGINES AND ELECTRIC MOTORS ORDINARILY IN USE, 1961-62

State	Steam		Internal combustion			Water	Motors driven by electricity		Total (b)(c)
	Reciprocating	Turbine	Gas	Petrol or other light oils	Heavy oils		Purchased	Own generation (d)	
N.S.W. ..	59,105	186,049	3,634	40,096	17,619	..	2,252,705	112,399	2,559,208
Victoria ..	23,172	83,512	1,771	43,628	..	890	1,421,296	57,156	1,574,269
Queensland ..	72,652	66,899	1,996	17,427	10,426	..	415,217	112,222	584,617
S. Australia ..	3,880	11,535	890	8,670	4,653	10	442,137	20,728	471,775
W. Australia ..	9,430	11,615	3,395	17,269	7,271	..	227,206	6,235	276,186
Tasmania ..	1,048	21	1	10,728	173	192	269,580	..	281,743
<b>Australia ..</b>	<b>169,287</b>	<b>359,631</b>	<b>11,687</b>	<b>137,818</b>	<b>40,142</b>	<b>1,092</b>	<b>5,028,141</b>	<b>308,740</b>	<b>5,747,798</b>

(a) Includes gas works but excludes central electric stations, details of which are shown on p. 152.

(b) Excludes motors driven by electricity generated in factories not classified as central electric stations.

(c) Excludes particulars in column (d).

(ii) *According to Type, Australia.* In the following table, details of the total rated horse-power of the various types of engines in use are given for Australia for the years 1957-58 to 1961-62.

**FACTORIES(a): TYPES AND TOTAL RATED HORSE-POWER OF ENGINES AND ELECTRIC MOTORS ORDINARILY IN USE, AUSTRALIA**

Year	Steam		Internal combustion			Water	Motors driven by electricity		Total (b)(c)
	Reciprocating	Turbine	Gas	Petrol or other light oils	Heavy oils		Purchased	Own generation (d)	
1957-58 ..	204,854	266,659	9,487	118,106	64,498	1,770	4,062,006	274,287	4,727,380
1958-59 ..	190,905	302,594	10,821	122,916	56,503	1,271	4,310,456	270,981	4,995,466
1959-60 ..	188,892	328,116	9,484	137,835	48,441	1,092	4,558,175	302,091	5,272,035
1960-61 ..	178,074	334,908	9,045	140,384	42,238	1,092	4,862,080	293,051	5,567,821
1961-62 ..	169,287	359,631	11,687	137,818	40,142	1,092	5,028,141	308,740	5,747,798

(a) Includes gas works but excludes central electric stations, details of which are shown on p. 152.

(b) Excludes motors driven by electricity generated in factories not classified as central electric stations.

(c) Excludes particulars in column (d).

(iii) *In Classes of Industry, 1961-62.* The next table shows the total rated horse-power of engines and electric motors ordinarily in use in the various classes of industry in each State.

**FACTORIES(a): TOTAL RATED HORSE-POWER OF ENGINES AND ELECTRIC MOTORS ORDINARILY IN USE(b), 1961-62**

Class of industry	N.S.W.	Vic.	Q'land	S. Aust.	W. Aust.	Tas.	Aust.
I. Treatment of non-metalliferous mine and quarry products ..	105,653	94,846	27,305	34,268	20,076	20,487	302,635
II. Bricks, pottery, glass, etc. ..	63,531	41,941	12,524	11,971	12,427	2,859	145,253
III. Chemicals, dyes, explosives, paints, oils, grease ..	219,554	171,188	12,755	27,308	44,783	14,149	489,737
IV. Industrial metals, machines, conveyances ..	1,399,383	523,523	117,663	211,538	77,802	65,968	2,395,877
V. Precious metals, jewellery, plate ..	5,060	3,862	530	1,078	685	91	11,307
VI. Textiles and textile goods (not dress) ..	59,880	108,329	7,033	7,955	3,001	9,875	196,073
VII. Skins and leather (not clothing or footwear) ..	18,865	16,836	6,782	5,628	3,408	520	52,039
VIII. Clothing (except knitted) ..	26,793	27,950	4,929	4,224	2,634	793	67,323
IX. Food, drink and tobacco ..	224,280	214,126	235,081	68,425	44,837	26,452	813,201
X. Sawmills, joinery, boxes, etc., wood turning and carving ..	194,084	126,087	113,950	49,804	51,404	48,575	583,904
XI. Furniture of wood, bedding, etc. ..	21,003	14,214	7,279	7,143	4,393	1,480	55,512
XII. Paper, stationery, printing, bookbinding, etc. ..	103,421	109,223	23,352	23,814	6,753	89,262	355,825
XIII. Rubber ..	59,799	66,781	11,519	7,542	1,220	646	147,507
XIV. Musical instruments ..	1,194	316	48	13	11	..	1,582
XV. Miscellaneous products ..	39,464	33,221	930	2,516	1,395	460	77,986
<i>Total, Classes I. to XV. ..</i>	<i>2,541,964</i>	<i>1,552,443</i>	<i>581,680</i>	<i>463,227</i>	<i>274,830</i>	<i>281,617</i>	<i>5,695,761</i>
XVI. Gas works ..	17,244	21,826	2,937	8,548	1,356	126	52,037
<b>Grand Total ..</b>	<b>2,559,208</b>	<b>1,574,269</b>	<b>584,617</b>	<b>471,775</b>	<b>276,186</b>	<b>281,743</b>	<b>5,747,798</b>

(a) Excludes central electric stations, details of which are shown on p. 152.

(b) Excludes motors driven by electricity generated in factories not classified as central electric stations.

4. Capacity of Engines and Generators installed in Central Electric Stations.—(i) *According to Type, Australia.* Particulars of the type and the capacity of engines and generators installed in Central Electric Stations in Australia in 1961–62 are given in the following table.

**CENTRAL ELECTRIC STATIONS: POWER EQUIPMENT, AUSTRALIA, 1961-62**

Particulars	Capacity of engines and generators						Water	Total
	Steam		Internal combustion					
	Reciprocating	Turbine	Gas	Petrol or other light oils	Heavy oils			
Engines installed .. Rated H.P.	2,350	6,990,352	9,290	37,849	282,128	2,523,215	9,845,184	
Generators installed—								
Kilowatt capacity—								
Total installed .. kW.	1,760	5,163,122	6,383	26,186	191,682	1,826,310	7,215,443	
Effective capacity .. ..	1,700	4,937,818	3,945	23,424	173,810	1,820,801	6,961,498	
Horse-power equivalent—								
Total installed .. H.P.	2,360	6,921,062	8,556	35,102	256,946	2,448,131	9,672,157	
Effective capacity .. ..	2,279	6,619,047	5,288	31,400	232,988	2,440,748	9,331,750	

NOTE.—There were 285 establishments classified as central electric stations in 1961–62.

(ii) *States.* Details of the capacity of engines and generators installed in Central Electric Stations in each State in 1961–62 are given in the next table.

**CENTRAL ELECTRIC STATIONS: NUMBER AND POWER EQUIPMENT, 1961-62**

Particulars	N.S.W.	Vic.	Q'land	S. Aust.	W. Aust.	Tas.	Aust.
Central electric stations .. No.	55	41	52	34	89	14	285
Engines installed .. Rated H.P.	4,285,824	2,242,796	1,092,416	(a)	547,972	(a)	9,845,184
Generators installed—							
Kilowatt capacity—							
Total installed .. kW.	3,165,674	1,660,281	797,123	(a)	374,567	(a)	7,215,443
Effective capacity .. ..	3,062,277	1,666,050	655,301	(a)	369,658	(a)	6,961,498
Horse-power equivalent—							
Total installed .. H.P.	4,243,523	2,225,573	1,068,527	(a)	502,100	(a)	9,672,157
Effective capacity .. ..	4,104,921	2,233,307	878,418	(a)	495,519	(a)	9,331,750

(a) Not available for publication; figures are included in total for Australia.

**§ 5. Employment in Factories**

1. **Number Employed.**—(i) *General.* All persons employed in the manufacturing activities of a factory, including proprietors who work in their own business and “out-workers” (see para. 4, p. 156), are counted as factory employees, while those employed in selling and distributing, such as salesmen, travellers, collectors, carters employed solely on outward delivery of manufactured goods and retailing storemen, are excluded. From 1945–46 the occupational groupings collected were—(i) working proprietors; (ii) managerial and clerical staff including salaried managers and working directors; (iii) chemists, draftsmen and other laboratory and research staff; (iv) foremen and overseers; (v) skilled and unskilled workers; (vi) carters (excluding delivery only), messengers and persons working regularly at home; but from 1960–61 the last three categories were amalgamated into one group—(iv) foremen and overseers, workers in factory and others.

Statistics of factory employment represent the equivalent average number employed over a full year of fifty-two weeks except for the classification of factories according to the number of persons employed (*see* § 3, p. 148), which is based on the average number employed over the period worked.

(ii) *Australia.* Particulars of the numbers employed, the increase in employment and the rate per cent. of such increase are given for the years 1957-58 to 1961-62 in the following table.

## FACTORIES: EMPLOYMENT, AUSTRALIA

Year	Males			Females			Persons		
	Number employed	Increase on preceding year		Number employed	Increase on preceding year		Number employed	Increase on preceding year	
		Number	Per cent.		Number	Per cent.		Number	Per cent.
1957-58 ..	822,515	8,964	1.10	251,292	1,445	0.58	1,073,807	10,409	0.98
1958-59 ..	834,940	12,425	1.51	253,316	2,024	0.81	1,088,256	14,449	1.35
1959-60 ..	862,185	27,245	3.26	269,492	16,176	6.39	1,131,677	43,421	3.99
1960-61 ..	872,100	9,915	1.15	272,632	3,140	1.17	1,144,732	13,055	1.15
1961-62 ..	857,457	-14,643	-1.68	263,209	-9,423	-3.46	1,120,666	-24,066	-2.10

NOTE.—Minus sign (-) indicates decrease.

(iii) *States.* The following table shows, for the same years, the average number of persons employed in manufacturing industries in each State; the percentage for each State of the total number employed in factories in Australia; and the number so employed per thousand of mean population in each State and Australia.

## FACTORIES: EMPLOYMENT

Year	N.S.W.	Vic.	Q'land	S. Aust.	W. Aust.	Tas.	Aust.
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## AVERAGE NUMBER EMPLOYED DURING FULL YEAR (52 WEEKS)

1957-58 ..	445,802	357,143	101,844	92,472	48,462	28,084	1,073,807
1958-59 ..	449,518	362,979	104,753	94,165	48,417	28,424	1,088,256
1959-60 ..	467,139	381,514	104,693	99,018	49,651	29,662	1,131,677
1960-61 ..	472,061	387,430	104,462	99,955	50,666	30,158	1,144,732
1961-62 ..	461,087	377,745	101,637	99,094	51,033	30,070	1,120,666

## PERCENTAGE OF AUSTRALIAN TOTAL

1957-58 ..	41.51	33.26	9.48	8.61	4.52	2.62	100
1958-59 ..	41.31	33.35	9.63	8.65	4.45	2.61	100
1959-60 ..	41.28	33.71	9.25	8.75	4.39	2.62	100
1960-61 ..	41.24	33.85	9.13	8.73	4.43	2.62	100
1961-62 ..	41.14	33.71	9.07	8.84	4.56	2.68	100



FACTORIES: EMPLOYMENT—*continued*

Year	N.S.W.	Vic.	Q'land	S. Aust.	W. Aust.	Tas.	Aust.
PER 1,000 OF POPULATION							
1957-58 ..	122	133	72	104	70	85	110
1958-59 ..	121	132	72	104	69	84	109
1959-60 ..	123	135	71	106	69	86	111
1960-61 ..	120	131	68	102	68	85	108
1961-62 ..	117	128	67	101	68	84	106

2. Rates of Increase, 1957-58 to 1961-62.—The percentage increase on the average number of persons employed in the preceding year is shown below for each State.

## FACTORIES: ANNUAL PERCENTAGE INCREASE OF PERSONS EMPLOYED

Year	N.S.W.	Vic.	Q'land	S. Aust.	W. Aust.	Tas.	Aust.
1957-58 ..	2.18	0.55	-1.53	0.53	-0.59	1.50	0.98
1958-59 ..	0.83	1.63	2.86	1.83	-0.09	1.21	1.35
1959-60 ..	3.92	5.11	-0.06	5.15	2.55	4.36	3.99
1960-61 ..	1.05	1.55	-0.22	0.95	2.04	1.67	1.15
1961-62 ..	-2.32	-2.50	-2.70	-0.86	3.22	-0.29	-2.10

NOTE.—Minus sign (—) indicates decrease.

3. Persons Employed in Industrial Classes.—(i) *Australia*. The following table shows the average number of persons employed in factories in each industrial class in Australia for the years 1957-58 to 1961-62.

## FACTORIES: PERSONS EMPLOYED IN INDUSTRIAL CLASSES, AUSTRALIA

Class of industry	1957-58	1958-59	1959-60	1960-61	1961-62
I. Treatment of non-metalliferous mine and quarry products .. .. .	20,883	21,093	21,778	23,363	23,182
II. Bricks, pottery, glass, etc. .. .. .	22,448	23,093	24,308	24,612	24,108
III. Chemicals, dyes, explosives, paints, oils, grease .. .. .	46,986	47,876	47,617	46,833	46,830
IV. Industrial metals, machines, conveyances .. .. .	459,345	469,446	498,192	509,939	496,975
V. Precious metals, jewellery, plate .. .. .	5,905	5,483	5,308	5,342	5,226
VI. Textiles and textile goods (not dress) .. .. .	68,875	67,467	72,263	71,092	67,949
VII. Skins and leather (not clothing or footwear) .. .. .	13,171	12,935	12,952	12,310	11,955
VIII. Clothing (except knitted) .. .. .	106,947	106,098	106,830	107,158	104,655
IX. Food, drink and tobacco .. .. .	123,471	125,408	126,154	126,477	128,590
X. Sawmills, joinery, boxes, etc., wood turning and carving .. .. .	59,238	60,101	61,651	60,810	57,279
XI. Furniture of wood, bedding, etc. .. .. .	22,099	22,110	22,902	22,219	21,374
XII. Paper stationery, printing, bookbinding, etc. .. .. .	66,285	68,327	71,672	74,582	73,839
XIII. Rubber .. .. .	18,105	18,467	18,663	18,395	17,174
XIV. Musical instruments .. .. .	1,101	1,025	936	812	733
XV. Miscellaneous products .. .. .	22,332	22,286	23,851	24,757	24,682
<i>Total, Classes I. to XV.</i> .. .. .	<i>1,057,191</i>	<i>1,071,215</i>	<i>1,115,077</i>	<i>1,128,707</i>	<i>1,104,551</i>
XVI. Heat, light and power .. .. .	16,616	17,041	16,600	16,031	16,115
<b>Grand Total</b> .. .. .	<b>1,073,807</b>	<b>1,088,256</b>	<b>1,131,677</b>	<b>1,144,732</b>	<b>1,120,666</b>

(ii) *States.* Particulars of the numbers employed in each industrial class are shown for each State in the following table.

**FACTORIES: PERSONS EMPLOYED IN INDUSTRIAL CLASSES, 1961-62**

Class of industry	N.S.W.	Vic.	Q'land	S. Aust.	W. Aust.	Tas.	Aust.
I. Treatment of non-metalliferous mine and quarry products	9,467	6,972	2,166	2,173	1,667	737	23,182
II. Bricks, pottery, glass, etc.	12,298	6,494	1,352	2,124	1,451	389	24,108
III. Chemicals, dyes, explosives, paints, oils, grease	22,751	15,763	1,801	2,942	2,663	910	46,830
IV. Industrial metals, machines, conveyances	221,660	151,336	37,217	55,245	21,528	9,989	496,975
V. Precious metals, jewellery, plate	2,176	1,959	307	536	208	40	5,226
VI. Textiles and textile goods (not dress)	20,241	39,100	2,063	2,520	902	3,123	67,949
VII. Skins and leather (not clothing or footwear)	5,160	3,781	1,190	1,133	628	63	11,955
VIII. Clothing (except knitted)	43,500	44,712	7,493	5,023	3,096	831	104,655
IX. Food, drink and tobacco	40,202	38,999	25,895	11,362	7,132	5,000	128,590
X. Sawmills, joinery, boxes, etc., wood turning and carving	19,208	14,595	9,148	5,256	5,438	3,634	57,279
XI. Furniture of wood, bedding, etc.	8,898	6,126	2,501	2,069	1,342	438	21,374
XII. Paper, stationery, printing, bookbinding, etc.	31,006	24,940	6,031	4,698	2,906	4,258	73,839
XIII. Rubber	6,907	6,998	1,791	1,074	264	140	17,174
XIV. Musical instruments	448	183	33	37	32	..	733
XV. Miscellaneous products	11,520	10,787	669	1,012	555	139	24,682
<i>Total, Classes I. to XV.</i>	<i>455,442</i>	<i>372,745</i>	<i>99,657</i>	<i>97,204</i>	<i>49,812</i>	<i>29,691</i>	<i>1,104,557</i>
XVI. Heat, light and power	5,645	5,000	1,980	1,890	1,221	379	16,115
<b>Grand Total</b>	<b>461,087</b>	<b>377,745</b>	<b>101,637</b>	<b>99,094</b>	<b>51,033</b>	<b>30,070</b>	<b>1,120,666</b>

4. **Persons Employed According to Occupational Grouping.**—In the following table, the average number of persons employed in each State during 1961-62 is classified according to occupational grouping. As stated in para. 1 of this section (*see p. 152*), persons employed in factories are now classified on a basis different from that adopted prior to 1960-61.

**FACTORIES: PERSONS EMPLOYED—OCCUPATIONAL GROUPING, 1961-62**

State	Average number of persons employed				
	Working proprietors	Managerial and clerical staff, etc.(a)	Chemists, draftsmen, etc.	Foremen and overseers, workers in factory and others(b)	Total
New South Wales .. ..	14,292	60,754	8,509	377,532	461,087
Victoria .. ..	12,772	48,446	7,538	308,989	377,745
Queensland .. ..	4,790	11,355	1,293	84,199	101,637
South Australia .. ..	4,082	12,605	1,835	80,572	99,094
Western Australia .. ..	2,808	4,925	572	42,728	51,033
Tasmania .. ..	1,015	3,314	638	25,103	30,070
<i>Total Males</i> .. ..	<i>33,910</i>	<i>87,462</i>	<i>18,378</i>	<i>717,707</i>	<i>857,457</i>
<i>Total Females</i> .. ..	<i>5,849</i>	<i>53,937</i>	<i>2,007</i>	<i>201,416</i>	<i>263,209</i>
<b>Total Persons</b> .. ..	<b>39,759</b>	<b>141,399</b>	<b>20,385</b>	<b>919,123</b>	<b>1,120,666</b>

(a) Includes salaried managers and working directors.

(b) Includes persons working regularly at home.

The term "outworker" or "homeworker" has acquired a special meaning in connexion with manufacturing industries, and includes only persons to whom work is given out by factories to be done at home. Persons working regularly at home for factories are included in the group foremen, overseers, workers in factory and others, and separate details are not available.

5. Monthly Employment, 1957-58 to 1961-62.—(i) *Australia*. The following table shows the number of persons (excluding working proprietors) employed in factories on the last pay-day of the month during the years 1957-58 to 1961-62.

**FACTORIES: MONTHLY EMPLOYMENT, AUSTRALIA**  
(EXCLUDING WORKING PROPRIETORS)

Month	1957-58	1958-59	1959-60	1960-61	1961-62
<b>MALES</b>					
July .. ..	781,156	794,374	811,912	844,659	809,433
August .. ..	780,630	794,537	814,297	846,325	810,822
September .. ..	782,988	795,464	817,277	848,593	806,514
October .. ..	785,289	796,964	820,178	849,211	816,327
November .. ..	785,825	799,368	821,316	849,265	820,488
December .. ..	781,054	792,351	817,217	843,037	816,602
January .. ..	786,520	794,996	824,919	843,995	822,210
February .. ..	790,835	800,208	831,022	838,482	830,641
March .. ..	793,327	802,408	835,371	829,781	834,926
April .. ..	791,617	804,259	835,236	823,500	832,434
May .. ..	791,403	804,691	839,084	818,065	837,001
June .. ..	791,098	805,641	840,832	810,295	839,177
<b>FEMALES</b>					
July .. ..	242,399	244,610	251,512	270,302	243,839
August .. ..	243,489	245,349	253,864	272,491	245,882
September .. ..	245,019	245,882	257,906	274,698	248,688
October .. ..	246,360	246,199	260,105	275,647	253,485
November .. ..	247,805	247,098	262,514	276,226	256,261
December .. ..	244,653	244,235	259,753	271,401	255,779
January .. ..	245,340	243,625	260,749	267,386	257,742
February .. ..	250,891	249,847	267,234	269,012	263,919
March .. ..	252,918	250,384	270,364	263,623	266,971
April .. ..	247,439	249,209	267,916	256,478	261,519
May .. ..	245,855	248,365	269,200	250,137	264,039
June .. ..	244,052	248,915	270,402	245,088	264,374
<b>PERSONS</b>					
July .. ..	1,023,555	1,038,984	1,063,424	1,114,961	1,053,272
August .. ..	1,024,119	1,039,886	1,068,161	1,118,816	1,056,704
September .. ..	1,028,007	1,041,346	1,075,183	1,123,291	1,055,202
October .. ..	1,031,649	1,043,163	1,080,283	1,124,858	1,069,812
November .. ..	1,033,630	1,046,466	1,083,830	1,125,491	1,076,749
December .. ..	1,025,707	1,036,586	1,076,970	1,114,438	1,072,381
January .. ..	1,031,860	1,038,621	1,085,668	1,111,381	1,079,952
February .. ..	1,041,726	1,050,055	1,098,256	1,107,494	1,094,560
March .. ..	1,046,245	1,052,792	1,105,735	1,093,404	1,101,897
April .. ..	1,039,056	1,053,468	1,103,152	1,079,978	1,093,953
May .. ..	1,037,258	1,053,056	1,108,284	1,068,202	1,101,040
June .. ..	1,035,150	1,054,556	1,111,234	1,055,383	1,103,551

(ii) *States.* Particulars of the numbers employed in each State on the last pay-day of each month in 1961-62 are shown in the following table.

**FACTORIES: MONTHLY EMPLOYMENT, 1961-62**  
(EXCLUDING WORKING PROPRIETORS)

Month	N.S.W.	Vic.	Q'land	S. Aust.	W. Aust.	Tas.	Aust.
<b>MALES</b>							
July .. ..	330,062	255,447	83,983	76,271	40,392	23,278	809,433
August .. ..	330,783	256,566	83,350	76,307	40,682	23,134	810,822
September .. ..	332,483	254,666	82,117	73,120	40,990	23,138	806,514
October .. ..	335,051	259,585	80,206	77,144	41,148	23,193	816,327
November .. ..	336,751	261,751	79,179	77,916	41,376	23,515	820,488
December .. ..	336,001	262,060	75,212	78,065	41,316	23,948	816,602
January .. ..	337,818	264,157	75,698	78,874	41,547	24,116	822,210
February .. ..	340,520	266,558	78,026	79,580	41,923	24,034	830,641
March .. ..	341,572	267,703	78,734	80,549	42,273	24,095	834,926
April .. ..	341,279	266,058	78,711	80,342	42,070	23,974	832,434
May .. ..	342,484	266,724	80,666	80,926	42,225	23,976	837,001
June .. ..	342,564	266,796	82,894	80,975	42,082	23,866	839,177
<b>FEMALES</b>							
July .. ..	105,127	95,591	16,471	15,510	6,183	4,957	243,839
August .. ..	106,088	96,467	16,725	15,490	6,339	4,773	245,882
September .. ..	107,501	97,709	16,724	15,441	6,491	4,822	248,688
October .. ..	109,559	100,122	16,694	15,782	6,572	4,756	253,485
November .. ..	110,604	101,570	16,545	16,087	6,651	4,804	256,261
December .. ..	109,198	101,461	16,474	16,774	6,688	5,184	255,779
January .. ..	109,367	102,931	16,315	17,296	6,519	5,314	257,742
February .. ..	111,396	105,882	17,118	17,429	6,640	5,454	263,919
March .. ..	112,354	106,950	17,096	17,856	6,812	5,903	266,971
April .. ..	111,277	103,955	16,611	17,111	6,775	5,790	261,519
May .. ..	112,647	104,671	16,979	17,193	6,751	5,798	264,039
June .. ..	112,877	104,533	17,386	17,268	6,584	5,726	264,374
<b>PERSONS</b>							
July .. ..	435,189	351,038	100,454	91,781	46,575	28,235	1,053,272
August .. ..	436,871	353,033	100,075	91,797	47,021	27,907	1,056,704
September .. ..	439,984	352,375	98,841	88,561	47,481	27,960	1,055,202
October .. ..	444,610	359,707	96,900	92,926	47,720	27,949	1,069,812
November .. ..	447,355	363,321	95,724	94,003	48,027	28,319	1,076,749
December .. ..	445,199	363,521	91,686	94,839	48,004	29,132	1,072,381
January .. ..	447,185	367,088	92,013	96,170	48,066	29,430	1,079,952
February .. ..	451,916	372,440	95,144	97,009	48,563	29,488	1,094,560
March .. ..	453,926	374,653	95,830	98,405	49,085	29,998	1,101,897
April .. ..	452,556	370,013	95,322	97,453	48,845	29,764	1,093,953
May .. ..	455,131	371,395	97,645	98,119	48,976	29,774	1,101,040
June .. ..	455,441	371,329	100,280	98,243	48,666	29,592	1,103,551

6. **Distribution of Employees According to Age.**—The extension of statistics of employment in factories, decided upon at the Conference of Australian Statisticians held in 1945, provided for a distribution of employees (excluding working proprietors) into seven age-groups from 1945–46 onwards, instead of three as in previous years. From 1960–61, however, the distribution into three groups was re-introduced. The numbers employed in each age-group on the last pay-day in June, 1961 and 1962, are given below.

**FACTORIES: DISTRIBUTION OF EMPLOYEES BY AGE**  
(EXCLUDING WORKING PROPRIETORS)

Age group	June, 1961			June, 1962		
	Males	Females	Persons	Males	Females	Persons
Under 16 years ..	8,849	7,162	16,011	9,176	8,764	17,940
16 to 20 years ..	79,941	44,432	124,373	86,498	48,817	135,315
21 years and over ..	721,505	193,494	914,999	743,503	206,793	950,296
<b>Total .. ..</b>	<b>810,295</b>	<b>245,088</b>	<b>1,055,383</b>	<b>839,177</b>	<b>264,374</b>	<b>1,103,551</b>

The following table shows the age distribution in sexes for Australia in June in the years 1958 to 1962.

**FACTORIES: DISTRIBUTION OF EMPLOYEES BY AGE, AUSTRALIA**  
(EXCLUDING WORKING PROPRIETORS)

June—	Under 16 years	16 years	17 years	18 years	19 years	20 years	21 years and over	Total
<b>MALES</b>								
1958 ..	8,710	13,817	16,347	16,802	16,337	15,315	703,770	791,098
1959 ..	8,411	13,556	16,532	17,085	16,099	15,189	718,769	805,641
1960 ..	8,627	14,475	16,846	17,963	16,993	15,739	750,189	840,832
1961 ..	8,849	79,941					721,505	810,295
1962 ..	9,176	86,498					743,503	839,177

<b>FEMALES</b>								
1958 ..	6,924	9,180	9,790	10,025	9,421	8,737	189,975	244,052
1959 ..	7,234	8,957	9,878	9,639	9,069	8,468	195,670	248,915
1960 ..	7,457	9,800	10,411	10,370	9,446	8,818	214,100	270,402
1961 ..	7,162	44,432					193,494	245,088
1962 ..	8,764	48,817					206,793	264,374

<b>PERSONS</b>								
1958 ..	15,634	22,997	26,137	26,827	25,758	24,052	893,745	1,035,150
1959 ..	15,645	22,513	26,410	26,724	25,168	23,657	914,439	1,054,556
1960 ..	16,084	24,275	27,257	28,333	26,439	24,557	964,289	1,111,234
1961 ..	16,011	124,373					914,999	1,055,383
1962 ..	17,940	135,315					950,296	1,103,551

## § 6. Sex Distribution in Factories

1. Average Number of Males and Females Employed.—The following table shows the average number of males and females employed in factories in each State for the years 1957–58 to 1961–62.

## FACTORIES: MALES AND FEMALES EMPLOYED

State	1957–58	1958–59	1959–60	1960–61	1961–62
MALES					
New South Wales .. ..	337,211	340,757	351,208	355,392	349,154
Victoria .. ..	259,404	263,847	275,315	279,675	273,435
Queensland .. ..	84,871	87,454	86,985	86,488	84,130
South Australia .. ..	75,909	77,427	81,312	81,898	81,803
Western Australia .. ..	42,039	41,951	42,957	43,836	44,193
Tasmania .. ..	23,081	23,504	24,408	24,811	24,742
<b>Australia .. ..</b>	<b>822,515</b>	<b>834,940</b>	<b>862,185</b>	<b>872,100</b>	<b>857,457</b>
FEMALES					
New South Wales .. ..	108,591	108,761	115,931	116,669	111,933
Victoria .. ..	97,739	99,132	106,199	107,755	104,310
Queensland .. ..	16,973	17,299	17,708	17,974	17,507
South Australia .. ..	16,563	16,738	17,706	18,057	17,291
Western Australia .. ..	6,423	6,466	6,694	6,830	6,840
Tasmania .. ..	5,003	4,920	5,254	5,347	5,328
<b>Australia .. ..</b>	<b>251,292</b>	<b>253,316</b>	<b>269,492</b>	<b>272,632</b>	<b>263,209</b>

2. Rate of Variation for each Sex.—The percentages of increase or decrease on the average numbers of males and females employed in the preceding year are shown below for the years 1957–58 to 1961–62.

## FACTORIES: ANNUAL PERCENTAGE INCREASES OF MALES AND FEMALES EMPLOYED

State	1957–58	1958–59	1959–60	1960–61	1961–62
MALES					
New South Wales .. ..	2.38	1.05	3.07	1.19	-1.76
Victoria .. ..	0.50	1.71	4.35	1.58	-2.23
Queensland .. ..	-1.20	3.04	-0.54	-0.57	-2.73
South Australia .. ..	0.48	2.00	5.02	0.72	-0.12
Western Australia .. ..	-0.20	-0.21	2.40	2.05	-0.81
Tasmania .. ..	2.66	1.83	3.85	1.65	-0.28
<b>Australia .. ..</b>	<b>1.10</b>	<b>1.51</b>	<b>3.26</b>	<b>1.15</b>	<b>-1.68</b>
FEMALES					
New South Wales .. ..	1.50	0.16	6.59	0.64	-4.06
Victoria .. ..	0.88	1.43	7.13	1.47	-3.20
Queensland .. ..	-3.16	1.92	2.36	1.50	-2.66
South Australia .. ..	0.76	1.06	5.78	1.98	-4.24
Western Australia .. ..	-3.06	0.67	3.53	2.03	0.15
Tasmania .. ..	-3.57	-1.66	6.79	1.77	-0.36
<b>Australia .. ..</b>	<b>0.58</b>	<b>0.81</b>	<b>6.39</b>	<b>1.17</b>	<b>-3.46</b>

NOTE.—Minus sign (—) indicates decrease.

3. **Masculinity of Persons Employed in Factories.**—The following table shows, for the years 1957–58 to 1961–62, the proportion of males to females employed in factories in each State.

**FACTORIES: MASCULINITY<sup>(a)</sup> OF PERSONS EMPLOYED**

Year	N.S.W.	Vic.	Q'land	S. Aust.	W. Aust.	Tas.	Aust.
1957–58 .. ..	311	265	500	458	655	461	327
1958–59 .. ..	313	266	506	463	649	478	330
1959–60 .. ..	303	259	491	459	642	465	320
1960–61 .. ..	305	260	481	454	642	464	320
1961–62 .. ..	312	262	481	473	650	467	326

(a) Number of males per 100 females.

4. **Employment of Females in Particular Industries.**—(i) *General.* The majority of females in manufacturing industries are employed in four classes, namely:—IV., Industrial Metals, Machines, etc.; VI., Textiles; VIII., Clothing; and IX., Food, Drink and Tobacco. In 1961–62, these industries accounted for 78.03 per cent. of all females in factories. In two classes only did the number of females exceed the number of males, namely, in Class VI., Textiles, where there were 135 females to every 100 males, and in Class VIII., Clothing, with 242 females to every 100 males. The following table shows the average number of males and females employed in each of the four classes in 1961–62.

**MALES AND FEMALES EMPLOYED IN PARTICULAR INDUSTRIES, 1961-62**

Class	N.S.W.	Vic.	Q'land	S. Aust.	W. Aust.	Tas.	Aust.
<b>MALES</b>							
IV. Industrial metals, etc. ..	194,022	132,581	34,756	49,354	20,440	9,469	440,622
VI. Textiles and textile goods (not dress) ..	8,489	16,393	829	1,245	490	1,411	28,857
VIII. Clothing (except knitted) ..	11,645	13,674	2,026	1,816	1,010	351	30,522
IX. Food, drink and tobacco ..	27,527	26,958	21,367	7,984	5,566	3,380	92,782
All other classes ..	107,471	83,829	25,152	21,404	16,687	10,131	264,674
<b>Total .. ..</b>	<b>349,154</b>	<b>273,435</b>	<b>84,130</b>	<b>81,803</b>	<b>44,193</b>	<b>24,742</b>	<b>857,457</b>

<b>FEMALES</b>							
IV. Industrial metals, etc. ..	27,638	18,755	2,461	5,891	1,088	520	56,353
VI. Textiles and textile goods (not dress) ..	11,752	22,707	1,234	1,275	412	1,712	39,092
VIII. Clothing (except knitted) ..	31,855	31,038	5,467	3,207	2,086	480	74,133
IX. Food, drink and tobacco ..	12,675	12,041	4,528	3,378	1,566	1,620	35,808
All other classes ..	28,013	19,769	3,817	3,540	1,688	996	57,823
<b>Total .. ..</b>	<b>111,933</b>	<b>104,310</b>	<b>17,507</b>	<b>17,291</b>	<b>6,840</b>	<b>5,328</b>	<b>263,209</b>

(ii) *Females Employed in Clothing Manufacture.* The employment of females in the several industries of Class VIII., Clothing, the class in which the largest number of females is employed, and the relation of their number to that of the males so employed, are shown in the following table.

## EMPLOYMENT IN CLOTHING INDUSTRIES: FEMININITY(a), 1961-62

Industry	New South Wales			Victoria			Other States		
	Males	Fe- males	Femi- ninity (a)	Males	Fe- males	Femi- ninity (a)	Males	Fe- males	Femi- ninity (a)
Tailoring and ready-made clothing .. .. .	3,088	15,249	494	2,720	7,691	283	937	2,811	300
Waterproof and oilskin clothing .. .. .	126	509	404	164	418	255	4	12	300
Dressmaking, hemstitching .. .. .	114	994	872	1,041	7,093	681	147	2,432	1,654
Millinery .. .. .	214	1,189	556	154	608	395	43	437	1,016
Shirts, collars, underclothing .. .. .	453	4,596	1,014	556	4,636	834	153	1,882	1,230
Foundation garments .. .. .	133	1,558	1,171	275	1,710	622	23	282	1,226
Handkerchiefs, ties and scarves .. .. .	153	995	650	56	265	473	28	172	614
Hats and caps .. .. .	376	385	102	29	94	324	22	114	518
Gloves .. .. .	119	368	309	42	119	283	46	113	246
Boots and shoes (not rubber) .. .. .	2,848	3,060	107	5,291	6,219	118	1,501	1,165	78
Boot and shoe repairing .. .. .	1,460	181	12	990	119	12	766	82	11
Boot and shoe accessories .. .. .	255	157	62	779	354	45	71	25	35
Umbrellas and walking sticks .. .. .	34	74	218	30	78	260	23	46	200
Dyeworks and cleaning (including renovating and repairing) .. .. .	2,232	2,258	101	1,475	1,385	94	1,436	1,657	115
Other .. .. .	40	282	705	72	249	346	3	10	333
<b>Total .. .. .</b>	<b>11,645</b>	<b>31,855</b>	<b>274</b>	<b>13,674</b>	<b>31,038</b>	<b>227</b>	<b>5,203</b>	<b>11,240</b>	<b>216</b>

(a) Number of females per 100 males.

## § 7. Children Employed in Factories

1. Number of Children Employed, 1960 to 1962.—In the returns for the various States, the term "child" denotes any person under sixteen years of age. The following table shows the number of children of each sex employed in manufacturing industries in June of the years 1960 to 1962.

## FACTORIES: CHILDREN(a) EMPLOYED

State	June, 1960			June, 1961			June, 1962		
	Males	Females	Persons	Males	Females	Persons	Males	Females	Persons
New South Wales	2,625	2,219	4,844	2,710	2,009	4,719	2,955	2,646	5,601
Victoria .. .. .	2,573	2,664	5,237	2,707	2,586	5,293	2,625	3,049	5,674
Queensland .. .. .	1,592	1,271	2,863	1,478	1,318	2,796	1,521	1,564	3,085
South Australia .. .. .	883	883	1,766	878	804	1,682	953	993	1,946
Western Australia .. .. .	863	332	1,195	947	350	1,297	1,031	411	1,442
Tasmania .. .. .	91	88	179	129	95	224	91	101	192
<b>Australia .. .. .</b>	<b>8,627</b>	<b>7,457</b>	<b>16,084</b>	<b>8,849</b>	<b>7,162</b>	<b>16,011</b>	<b>9,176</b>	<b>8,764</b>	<b>17,940</b>

(a) Under sixteen years of age.



2. **Industries Employing Children.**—The distribution of children employed in factories in June, 1962, and the proportion of children employed to total employees are shown in the following table by the main classes of industry employing persons under sixteen years of age.

**FACTORIES: CHILDREN(a) EMPLOYED, BY CLASSES, AUSTRALIA, JUNE, 1962**

Class of industry	Children employed (a)		Total employees (b)		Proportion (per cent.) of children employed to total employees (b)	
	Males	Females	Males	Females	Males	Females
Industrial metals, machines, conveyances .. . . .	4,112	818	436,791	59,012	0.94	1.39
Textiles and textile goods (not dress)	484	1,537	29,582	41,095	1.64	3.74
Clothing (except knitted) .. ..	650	3,909	25,655	73,116	2.53	5.35
Food, drink and tobacco .. ..	1,103	990	88,951	33,524	1.24	2.95
Sawmills, joinery, boxes, etc. ..	756	86	50,548	3,302	1.50	2.60
Furniture of wood, bedding, etc. ..	422	123	15,811	4,215	2.67	2.92
Paper, stationery, printing, bookbinding, etc. .. ..	658	714	53,716	19,209	1.22	3.72
All other industries .. .. .	991	587	138,123	30,901	0.74	1.90
<b>Total .. .. .</b>	<b>9,176</b>	<b>8,764</b>	<b>839,177</b>	<b>264,374</b>	<b>1.09</b>	<b>3.32</b>

(a) Under sixteen years of age.

(b) Excludes working proprietors.

3. **Apprenticeship.**—Acts are in force in all States for the regulation of the age at which children may be employed in gainful occupations. Legislative provision is also made for the regulation of apprenticeship under the various State Factories Acts or Arbitration Acts. These Acts, while laying down general principles, leave to the wages tribunals the actual determination of the conditions under which apprentices may be employed.

### § 8. Value of Production, Materials Used, Salaries and Wages

*Note.*—In all tables relating to salaries and wages paid in factories, the amounts drawn by working proprietors are excluded.

1. **General.**—The gross value of factory output for 1961–62 was £5,242 million, of which £2,855 million was the value of the materials used, including containers, etc., tools replaced, and repairs to plant and buildings, and £192 million the value of the power, fuel, light, water and lubricating oil used. The difference between the sum of the last two amounts and the gross value of output, namely, £2,195 million, represents the net value of factory production, defined as “the value of consumable commodities produced during the year, deducting, so far as possible, the value of goods consumed in process of production”. Depreciation, however, is not deducted (*see* para. 6 of this section, p. 169). The gross value of factory output and the value of materials used each contain inherent elements of duplication, as the output of some factories becomes the materials used in other factories. They have, therefore, little statistical significance. The net value of factory production indicates the relative importance of manufacturing in the Australian economy in current money terms. The total amount of salaries and wages paid in factories in 1961–62 was £1,143 million, excluding amounts drawn by working proprietors.

2. **Salaries and Wages Paid.**—(i) *In Classes of Industry, 1961–62.* The amounts of salaries and wages paid in the various classes of industry in each State are shown in the following table.

FACTORIES: SALARIES AND WAGES PAID, 1961-62

(£'000)

Class of industry	N.S.W.	Vic.	Q'land	S. Aust.	W. Aust.	Tas.	Aust.
I. Treatment of non-metalliferous mine and quarry products .. .. .	11,427	8,230	2,396	2,332	1,681	825	26,891
II. Bricks, pottery, glass, etc. . . . .	14,333	7,008	1,341	2,317	1,452	426	26,877
III. Chemicals, dyes, explosives, paints, oils, grease .. . . .	27,039	19,281	1,843	3,274	3,087	1,194	55,718
IV. Industrial metals, machines, conveyances .. . . .	249,401	163,877	34,415	58,566	19,618	10,875	536,752
V. Precious metals, jewellery, plate .. . . .	2,001	1,853	239	388	153	30	4,664
VI. Textiles and textile goods (not dress) .. . . .	17,749	33,960	1,503	2,201	723	2,687	58,823
VII. Skins and leather (not clothing or footwear) .. . . .	5,024	3,587	1,130	1,154	604	66	11,565
VIII. Clothing (except knitted) .. . . .	30,965	33,805	4,362	3,225	1,732	569	74,658
IX. Food, drink and tobacco .. . . .	40,213	39,209	25,661	10,302	6,525	4,764	126,674
X. Sawmills, joinery, boxes, etc., wood turning and carving .. . . .	18,913	14,564	7,824	4,767	4,795	3,240	54,103
XI. Furniture of wood, bedding, etc. . . . .	8,712	5,531	2,035	1,670	1,021	340	19,309
XII. Paper, stationery, printing, bookbinding, etc. . . . .	35,054	28,116	6,115	4,919	2,854	4,960	82,018
XIII. Rubber .. . . .	7,881	7,668	1,596	1,258	244	133	18,780
XIV. Musical instruments .. . . .	463	181	23	28	22		717
XV. Miscellaneous products .. . . .	11,698	10,857	534	823	405	107	24,424
<i>Total, Classes I. to XV.</i>	<i>480,873</i>	<i>377,727</i>	<i>91,017</i>	<i>97,224</i>	<i>44,916</i>	<i>30,216</i>	<i>1,121,973</i>
XVI. Heat, light and power .. . . .	7,197	6,706	2,328	2,307	1,504	504	20,546
<b>Grand Total .. . . .</b>	<b>488,070</b>	<b>384,433</b>	<b>93,345</b>	<b>99,531</b>	<b>46,420</b>	<b>30,720</b>	<b>1,142,519</b>

(ii) *Totals and Averages, 1957-58 to 1961-62.* The following table shows the total amount of salaries and wages paid, and the average amount paid per employee in each State, for each year. The figures exclude working proprietors and the amounts drawn by them.

In comparing the figures in the following table, regard should be paid to the nature of certain industries which are carried on to a greater extent in some States than in others. In Victoria, for instance, a large number of hands are employed in Class VIII., Clothing, comprising a relatively high percentage of women and children.

FACTORIES: TOTAL AND AVERAGE SALARIES AND WAGES PAID

Year	N.S.W.	Vic.	Q'land	S. Aust.	W. Aust.	Tas.	Aust.
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TOTAL AMOUNT PAID (£'000)

1957-58 .. .. .	396,692	310,540	78,953	79,844	37,935	25,321	929,290
1958-59 .. .. .	413,015	324,336	85,497	83,145	38,732	25,828	970,553
1959-60 .. .. .	461,144	370,181	89,367	95,238	41,643	28,786	1,086,359
1960-61 .. .. .	490,016	387,221	92,159	98,983	45,127	30,330	1,143,836
1961-62 .. .. .	488,070	384,433	93,345	99,531	46,420	30,720	1,142,519

AVERAGE PER EMPLOYEE (£)

1957-58 .. .. .	923.40	904.81	814.86	891.80	829.22	936.70	900.46
1958-59 .. .. .	952.82	928.60	856.33	911.89	947.81	942.94	927.13
1959-60 .. .. .	1021.03	1005.62	896.09	995.96	890.43	1004.27	996.16
1960-61 .. .. .	1072.15	1034.77	927.20	1028.33	942.04	1041.07	1036.14
1961-62 .. .. .	1092.38	1053.31	963.84	1047.56	962.57	1057.29	1057.00

(iii) *Total and Average Earnings of Males and Females, 1957-58 to 1961-62.* Particulars for these years are given in the following table.

**FACTORIES: TOTAL AND AVERAGE SALARIES AND WAGES—MALES AND FEMALES**

Year	N.S.W.	Vic.	Q'land	S. Aust.	W. Aust.	Tas.	Aust.
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**MALES**

**TOTAL AMOUNT PAID (£'000)**

1957-58 .. ..	334,245	253,342	70,954	71,153	34,938	22,516	787,148
1958-59 .. ..	348,302	265,615	77,049	74,268	35,647	23,138	824,019
1959-60 .. ..	387,166	302,678	80,345	85,333	38,276	25,618	919,416
1960-61 .. ..	412,360	317,907	82,669	88,623	41,474	26,952	970,185
1961-62 .. ..	411,835	314,959	83,763	89,385	42,703	27,248	969,893

**AVERAGE PER MALE EMPLOYEE (£)**

1957-58 .. ..	1,034.19	1,023.48	881.32	970.33	884.66	1,018.45	1,001.28
1958-59 .. ..	1,065.21	1,052.69	926.77	992.28	905.12	1,026.66	1,031.05
1959-60 .. ..	1,145.65	1,145.80	971.95	1,088.21	950.85	1,091.42	1,111.86
1960-61 .. ..	1,204.20	1,183.16	1,006.38	1,125.21	1,005.06	1,130.89	1,158.71
1961-62 .. ..	1,222.45	1,198.21	1,046.50	1,140.33	1,026.38	1,146.51	1,177.70

**FEMALES**

**TOTAL AMOUNT PAID (£'000)**

1957-58 .. ..	62,447	57,198	8,004	8,691	2,997	2,805	142,142
1958-59 .. ..	64,713	58,721	8,448	8,877	3,085	2,690	146,534
1959-60 .. ..	73,978	67,503	9,022	9,905	3,367	3,168	166,943
1960-61 .. ..	77,456	69,314	9,490	10,360	3,653	3,378	173,651
1961-62 .. ..	76,235	69,474	9,582	10,146	3,717	3,472	172,626

**AVERAGE PER FEMALE EMPLOYEE (£)**

1957-58 .. ..	586.89	597.81	487.69	536.42	479.14	569.66	578.10
1958-59 .. ..	607.71	605.66	505.75	543.49	489.60	554.24	591.74
1959-60 .. ..	650.82	649.38	528.65	575.58	516.95	610.25	633.25
1960-61 .. ..	676.83	656.91	550.13	592.18	550.25	637.26	651.26
1961-62 .. ..	693.66	670.55	570.16	610.23	561.55	656.42	670.76

(iv) *Managers, Clerical Staff and Other Employees.* The following table shows, for 1961-62, the amounts paid to managerial and clerical staff, including salaried managers and working directors, chemists, draftsmen and other laboratory and research staff, and those paid to other employees. Amounts drawn by working proprietors are excluded in all cases.

**FACTORIES: SALARIES AND WAGES PAID TO MANAGERS, CLERICAL STAFF, ETC., AND OTHER EMPLOYEES, AUSTRALIA, 1961-62**

Class of industry	Managers, clerical staff, chemists, draftsmen, etc.		All other employees	
	Males	Females	Males	Females
	£'000	£'000	£'000	£'000
I. Treatment of non-metalliferous mine and quarry products .. .. .	3,963	707	22,090	131
II. Bricks, pottery, glass, etc. .. .. .	2,634	615	22,658	969
III. Chemicals, dyes, explosives, paints, oils, grease ..	14,273	3,230	34,038	4,177
IV. Industrial metals, machines, conveyances .. .. .	86,663	17,149	411,585	21,354
V. Precious metals, jewellery, plate .. .. .	625	221	3,405	413
VI. Textiles and textile goods (not dress) .. .. .	6,138	2,507	26,782	23,396
VII. Skins and leather (not clothing or footwear) .. ..	1,364	303	8,090	1,808
VIII. Clothing (except knitted) .. .. .	5,830	3,130	22,708	42,990
IX. Food, drink and tobacco .. .. .	18,326	5,481	84,912	17,954
X. Sawmills, joinery, boxes, etc., wood turning and carving .. .. .	6,550	1,397	45,447	709
XI. Furniture of wood, bedding, etc. .. .. .	2,213	767	14,298	2,030
XII. Paper, stationery, printing, bookbinding, etc. ..	12,267	3,839	57,022	8,890
XIII. Rubber .. .. .	3,087	682	13,232	1,779
XIV. Musical instruments .. .. .	91	23	534	70
XV. Miscellaneous products .. .. .	3,959	1,309	14,678	4,480
<i>Total, Classes I. to XV. .. .. .</i>	<i>167,983</i>	<i>41,360</i>	<i>781,479</i>	<i>131,150</i>
XVI. Heat, light and power .. .. .	1,969	81	18,462	35
<b>Grand Total .. .. .</b>	<b>169,952</b>	<b>41,441</b>	<b>799,941</b>	<b>131,185</b>
Average paid per employee .. .. .	£ 1,605.75	£ 740.75	£ 1,114.58	£ 651.32

3. Power, Fuel and Light Used.—(i) *In Classes of Industry, 1961-62.* The expenditure by factories on power, fuel and light, including the value of lubricants and water, is shown in the following table for each State and Australia for 1961-62.

**FACTORIES: VALUE OF POWER, FUEL AND LIGHT USED(a), 1961-62 (£'000)**

Class of industry	N.S.W.	Vic.	Q'land	S. Aust.	W. Aust.	Tas.	Aust.
I. Treatment of non-metalliferous mine and quarry products .. .. .	5,761	2,909	874	993	513	386	11,436
II. Bricks, pottery, glass, etc. .. .. .	3,998	2,215	501	671	529	170	8,084
III. Chemicals, dyes, explosives, paints, oils, grease ..	7,679	6,792	305	801	2,228	611	18,416
IV. Industrial metals, machines, conveyances .. .. .	43,810	9,331	2,389	5,510	1,457	2,469	65,016
V. Precious metals, jewellery, plate .. .. .	166	149	14	39	12	2	382
VI. Textiles and textile goods (not dress) .. .. .	1,633	2,605	88	222	52	256	4,856
VII. Skins and leather (not clothing or footwear) .. ..	427	419	97	141	65	6	1,155
VIII. Clothing (except knitted) .. .. .	1,040	955	188	154	83	40	2,460
IX. Food, drink and tobacco .. .. .	6,617	6,235	3,165	1,459	1,120	635	19,231
X. Sawmills, joinery, boxes, etc., wood turning and carving ..	1,558	827	635	357	358	349	4,084
XI. Furniture of wood, bedding, etc. .. .. .	236	125	50	46	24	8	489
XII. Paper, stationery, printing, bookbinding, etc. .. ..	1,920	2,174	362	492	118	1,599	6,665
XIII. Rubber .. .. .	1,094	1,228	199	154	30	19	2,724
XIV. Musical instruments .. .. .	33	9	1	1	1	..	45
XV. Miscellaneous products .. .. .	824	1,042	17	54	23	2	1,962
<i>Total, Classes I. to XV. .. .. .</i>	<i>76,796</i>	<i>37,065</i>	<i>8,885</i>	<i>11,094</i>	<i>6,613</i>	<i>6,552</i>	<i>147,005</i>
XVI. Heat, light and power .. .. .	17,115	12,464	7,181	4,229	3,755	16	44,760
<b>Grand Total .. .. .</b>	<b>93,911</b>	<b>49,529</b>	<b>16,066</b>	<b>15,323</b>	<b>10,368</b>	<b>6,568</b>	<b>191,765</b>

(a) Includes value of lubricants and water.

(ii) *Values of Items, 1961-62.* The following table shows the values of the various items of power, fuel and light used in factories in each State during the year.

**FACTORIES: VALUE OF ITEMS OF POWER, FUEL AND LIGHT USED(a), 1961-62**  
(£'000)

Particulars	N.S.W.	Vic.	Q'land	S. Aust.	W. Aust.	Tas.	Aust.
Coal, black .. .. .	18,962	1,923	8,635	(b) 3,496	2,352	1,116	36,484
.. brown .. .. .	..	6,352	..	..	..	..	6,352
Brown coal briquettes .. .. .	..	7,453	..	..	..	..	7,453
Coke .. .. .	15,321	625	313	2,603	222	370	19,454
Wood .. .. .	358	489	313	359	383	106	2,038
Fuel oil .. .. .	10,222	9,604	1,449	2,911	3,924	942	29,052
Tar (fuel) .. .. .	1,594	135	26	98	14	10	1,867
Electricity .. .. .	27,432	17,679	4,078	4,376	2,290	3,463	59,318
Gas .. .. .	10,772	1,426	222	262	92	43	12,817
Other (charcoal, etc.) .. .. .	4,157	653	122	429	475	303	6,139
Water .. .. .	3,629	2,274	498	513	349	137	7,400
Lubricating oils .. .. .	1,434	926	410	276	267	78	3,391
<b>Total .. .. .</b>	<b>93,911</b>	<b>49,529</b>	<b>16,066</b>	<b>15,323</b>	<b>10,368</b>	<b>6,568</b>	<b>191,765</b>

(a) Includes value of lubricants and water.  
of sub-bituminous Leigh Creek coal.

(b) Includes £2,319,521 the value of 1,264,002 tons

(iii) *Quantities of Fuel Used, 1961-62.* The following table shows the quantities of fuel used in factories in each State during the year.

**FACTORIES: QUANTITIES OF FUEL USED, 1961-62**

Particulars	Unit	N.S.W.	Vic.	Q'land	S. Aust.	W. Aust.	Tas.	Aust.
Coal, black .. .. .	'000 tons	6,206	315	1,871	(a) 1,482	622	219	10,715
.. brown .. .. .	"	..	11,841	..	..	..	..	11,841
Brown coal briquettes .. .. .	"	..	1,280	..	..	..	..	1,280
Coke .. .. .	"	2,577	57	20	292	18	20	2,984
Wood .. .. .	"	174	270	164	225	250	52	1,333
Fuel oil .. .. .	'000 gals.	223,809	226,509	19,459	61,471	92,953	16,200	640,401
Tar (fuel) .. .. .	"	36,223	2,434	556	2,605	710	197	42,725

(a) Includes 1,264,002 tons of Leigh Creek coal.

(iv) *Total Value, 1957-58 to 1961-62.* The next table shows the amounts expended on power, fuel and light during these years.

**FACTORIES: VALUE OF POWER, FUEL AND LIGHT USED(a)**  
(£'000)

Year	N.S.W.	Victoria	Q'land	S. Aust.	W. Aust.	Tas.	Australia
1957-58 .. .. .	73,452	42,762	13,152	14,933	9,425	5,074	158,798
1958-59 .. .. .	76,275	43,377	14,964	14,590	9,587	5,459	164,252
1959-60 .. .. .	87,108	47,140	15,183	15,093	10,071	6,220	180,815
1960-61 .. .. .	92,262	49,201	15,544	15,183	10,616	6,437	189,243
1961-62 .. .. .	93,911	49,529	16,066	15,323	10,368	6,568	191,765

(a) Includes value of lubricants and water.

4. *Value of Materials Used.*—(i) *In Classes of Industry, 1961-62.* The value of materials used (which includes the value of containers, packing, etc., the cost of tools replaced and repairs to plant) in factories in Australia in 1961-62 reached £2,855 million, or 54.4 per

cent. of the value of the final output (see para. 5). The following table shows the value of the materials used in various classes of industry in each State.

FACTORIES: VALUE OF MATERIALS USED, 1961-62(a)  
(£'000)

Class of industry	N.S.W.	Vic.	Q'land	S. Aust.	W. Aust.	Tas.	Aust.
I. Treatment of non-ferrous metal and quarry products .. .. .	40,270	20,646	5,327	6,647	3,336	1,587	77,813
II. Bricks, pottery, glass, etc. .. .. .	12,729	7,173	1,099	2,574	977	292	24,844
III. Chemicals, dyes, explosives, paints, oils, grease .. .. .	144,106	109,977	10,124	11,143	38,238	2,730	316,318
IV. Industrial metals, machines, conveyances .. .. .	543,073	261,948	69,622	100,755	33,827	21,765	1,030,990
V. Precious metals, jewellery, plate .. .. .	2,134	1,808	116	412	85	13	4,568
VI. Textiles and textile goods (not dress) .. .. .	41,722	83,110	4,155	5,133	3,402	6,130	143,652
VII. Skins and leather (not clothing or footwear) .. .. .	15,849	9,560	3,323	5,460	826	349	35,367
VIII. Clothing (except knitted) .. .. .	55,562	54,371	4,853	3,763	2,049	507	121,105
IX. Food, drink and tobacco .. .. .	196,622	211,362	170,659	47,736	35,297	20,831	682,507
X. Sawmills, joinery, boxes, etc., wood turning and carving .. .. .	43,826	29,976	14,492	12,584	8,379	7,442	116,699
XI. Furniture of wood, bedding, etc. .. .. .	18,104	12,043	4,790	3,429	2,338	634	41,338
XII. Paper, stationery, printing, bookbinding, etc. .. .. .	63,710	58,974	9,594	7,463	4,157	8,348	152,246
XIII. Rubber .. .. .	17,700	18,846	3,604	1,858	613	213	42,834
XIV. Musical instruments .. .. .	1,026	162	26	13	16	..	1,243
XV. Miscellaneous products .. .. .	19,555	22,207	611	1,321	640	61	44,395
<i>Total, Classes I. to XV.</i>	<i>1,215,988</i>	<i>902,163</i>	<i>302,395</i>	<i>210,291</i>	<i>134,180</i>	<i>70,902</i>	<i>2,835,919</i>
XVI. Heat, light and power .. .. .	7,678	5,641	2,608	2,269	905	366	19,467
<b>Grand Total .. .. .</b>	<b>1,223,666</b>	<b>907,804</b>	<b>305,003</b>	<b>212,560</b>	<b>135,085</b>	<b>71,268</b>	<b>2,855,386</b>

(a) See para. 1 of this section, p. 162.

(ii) *Total Amounts, 1957-58 to 1961-62.* The following table shows the value of materials used in factories for these years.

FACTORIES: VALUE OF MATERIALS USED(a)  
(£'000)

Year	N.S.W.	Vic.	Q'land	S. Aust.	W. Aust.	Tas.	Aust.
1957-58 .. .. .	1,016,928	768,459	248,647	183,880	111,525	56,922	2,386,361
1958-59 .. .. .	1,070,862	778,716	280,757	188,358	107,853	58,533	2,485,079
1959-60 .. .. .	1,206,255	875,973	291,388	207,636	119,138	67,609	2,767,999
1960-61 .. .. .	1,236,484	897,167	305,677	216,382	133,324	69,067	2,858,101
1961-62 .. .. .	1,223,666	907,804	305,003	212,560	135,085	71,268	2,855,386

(a) See para. 1 of this section, p. 162.

5. Value of Output.—(i) *In Classes of Industry, 1961-62.* The value of the output of factories in the various classes in each State in 1961-62 is shown in the following table. It represents the selling value at the factory (excluding delivery costs and charges) of goods made or processed during the year, including by-products. In addition, it includes the amount received for other work done such as repair work, assembling and making up for customers. The difference between the sum of the values of the materials and of the power, fuel and light used, and the value of output is the net value of factory production (see paras. 1 and 6 of this section).

## FACTORIES: VALUE OF OUTPUT, 1961-62(a)

(£'000)

Class of industry	N.S.W.	Vic.	Q'land	S. Aust.	W. Aust.	Tas.	Aust.
I. Treatment of non-metalliferous mine and quarry products .. .. .	70,843	42,436	11,825	13,739	7,914	3,729	150,486
II. Bricks, pottery, glass, etc. .. .	41,413	21,329	4,070	7,380	4,196	1,149	79,537
III. Chemicals, dyes, explosives paints, oils, grease .. .	241,524	176,246	16,631	20,926	55,300	6,279	516,906
IV. Industrial metals, machines, conveyances .. .	1,011,624	531,938	126,938	197,594	68,683	43,979	1,980,756
V. Precious metals, jewellery, plate .. .	5,751	4,956	519	1,156	402	66	12,850
VI. Textiles and textile goods (not dress) .. .	76,841	145,544	6,650	9,343	4,732	11,006	254,116
VII. Skins and leather (not cloth- ing or footwear) .. .	24,325	15,954	5,364	7,123	1,879	474	55,119
VIII. Clothing (except knitted) .. .	109,849	111,931	12,275	9,207	5,048	1,430	249,740
IX. Food, drink and tobacco .. .	307,983	310,667	227,589	70,282	51,319	31,628	999,468
X. Sawmills, joinery, boxes, etc., wood turning and carving .. .	78,842	54,625	28,478	21,541	17,641	13,740	214,867
XI. Furniture of wood, bedding, etc. .. .	33,293	22,272	8,288	6,560	4,269	1,219	75,901
XII. Paper, stationery, printing, bookbinding, etc. .. .	135,882	117,865	21,228	16,822	9,860	20,727	322,384
XIII. Rubber .. .	30,501	35,847	7,143	4,554	1,297	503	79,845
XIV. Musical instruments .. .	2,723	444	71	61	53	..	3,352
XV. Miscellaneous products .. .	42,551	43,244	1,495	3,009	1,394	209	91,902
<i>Total, Classes I. to XV.</i> .. .	<i>2,213,945</i>	<i>1,635,298</i>	<i>478,564</i>	<i>389,297</i>	<i>233,987</i>	<i>136,138</i>	<i>5,087,229</i>
XVI. Heat, light and power .. .	70,053	39,362	17,803	12,500	9,507	5,635	154,860
<b>Grand Total</b> .. .	<b>2,283,998</b>	<b>1,674,660</b>	<b>496,367</b>	<b>401,797</b>	<b>243,494</b>	<b>141,773</b>	<b>5,242,089</b>

(a) See para. 1 of this section, p. 162.

(ii) *Totals, 1957-58 to 1961-62.* The following table shows the value of output in each State during these years.

## FACTORIES: VALUE OF OUTPUT(a)

(£'000)

Year	N.S.W.	Vic.	Q'land	S. Aust.	W. Aust.	Tas.	Aust.
1957-58 .. .	1,848,242	1,377,697	405,757	332,098	196,262	113,826	4,273,882
1958-59 .. .	1,952,452	1,431,041	451,186	342,758	196,202	118,293	4,491,932
1959-60 .. .	2,209,809	1,609,614	468,963	385,702	215,583	134,025	5,023,696
1960-61 .. .	2,295,502	1,649,650	491,848	401,627	240,570	137,951	5,217,148
1961-62 .. .	2,283,998	1,674,660	496,367	401,797	243,494	141,773	5,242,089

(a) See para. 1 of this section p. 162.

6. *Value of Production.*—(i) *In Classes of Industry, 1961-62.* The value of production for any industry was defined at the Conference of Statisticians at Sydney in 1925 as "the value of consumable commodities produced during the year, deducting, so far as possible, the value of goods consumed in process of production".

In accordance with this definition, it was agreed that a deduction consisting of the costs of raw material, containers, power, fuel, light, lubricants, water, tools replaced, repairs to plant and depreciation should be made from the "value of output". Because of the difficulty experienced in securing accurate figures for depreciation, however, it was subsequently decided that no deduction should be made on this account. All the deductions mentioned above, with the exception of depreciation, are included in the items "value of materials used" and "value of fuel used" as defined above. The net value of production as given in the following tables is obtained, therefore, by deducting only "value of materials used" and "value of fuel used" from the "value of output". The value of factory production, therefore, approximates "net value added" in the manufacturing process.

Only certain selected items of costs are recorded in the annual census of production. It must not, therefore, be inferred that, when wages and salaries are deducted from the value of production, the whole of the "surplus" is available for interest and profit, as many miscellaneous expenses such as taxation, insurance, advertising and other overhead charges, as well as depreciation, also have to be taken into account.

The following table shows, for 1961-62, the value of production in each State for the various classes of industry.

FACTORIES: VALUE OF PRODUCTION, 1961-62(a)

(£'000)

Class of industry	N.S.W.	Vic.	Q'land	S. Aust.	W. Aust.	Tas.	Aust.
I. Treatment of non-metalliferous mine and quarry products .. .. .	24,812	18,881	5,624	6,099	4,065	1,756	61,237
II. Bricks, pottery, glass, etc. .. .. .	24,686	11,941	2,470	4,134	2,691	687	46,609
III. Chemicals, dyes, explosives, paints, oils, grease .. .. .	89,739	59,477	6,202	8,982	14,834	2,938	182,172
IV. Industrial metals, machines, conveyances .. .. .	424,741	260,609	54,927	91,329	33,399	19,745	884,750
V. Precious metals, jewellery, plate .. .. .	3,450	2,999	389	705	306	51	7,900
VI. Textiles and textile goods (not dress) .. .. .	33,486	59,828	2,407	3,988	1,278	4,621	105,608
VII. Skins and leather (not clothing or footwear) .. .. .	8,049	5,975	1,944	1,522	988	119	18,597
VIII. Clothing (except knitted) .. .. .	53,247	56,605	7,234	5,290	2,916	883	126,175
IX. Food, drink and tobacco .. .. .	104,744	93,070	53,765	21,087	14,902	10,162	297,730
X. Sawmills, joinery, boxes, etc., wood turning and carving .. .. .	33,458	23,822	13,351	8,600	8,904	5,949	94,084
XI. Furniture of wood, bedding, etc. .. .. .	14,953	10,104	3,448	3,085	1,907	577	34,074
XII. Paper, stationery, printing, bookbinding, etc. .. .. .	70,252	56,717	11,272	8,867	5,585	10,780	163,473
XIII. Rubber .. .. .	11,707	15,773	3,340	2,542	654	271	34,287
XIV. Musical instruments .. .. .	1,664	273	44	47	36	..	2,064
XV. Miscellaneous products .. .. .	22,173	19,996	867	1,635	729	145	45,545
<i>Total, Classes I. to XV.</i> .. .. .	<i>921,161</i>	<i>696,070</i>	<i>167,284</i>	<i>167,912</i>	<i>93,194</i>	<i>58,684</i>	<i>2,104,305</i>
XVI. Heat, light and power .. .. .	45,260	21,257	8,014	6,002	4,847	5,253	90,633
<b>Grand Total</b> .. .. .	<b>966,421</b>	<b>717,327</b>	<b>175,298</b>	<b>173,914</b>	<b>98,041</b>	<b>63,937</b>	<b>2,194,938</b>

(a) See para. 1 of this section, p. 162.

(ii) *Totals and Averages, 1957-58 to 1961-62.* The value of production and the amount per person employed and per head of population are shown in the following table.



**FACTORIES: VALUE OF PRODUCTION(a)**

Year	N.S.W.	Vic.	Q'land	S. Aust.	W. Aust.	Tas.	Aust.
VALUE (£'000)							
1957-58 .. ..	757,862	566,476	143,958	133,285	75,312	51,830	1,728,723
1958-59 .. ..	805,315	608,948	155,465	139,810	78,762	54,301	1,842,601
1959-60 .. ..	916,446	686,501	162,392	162,973	86,374	60,196	2,074,882
1960-61 .. ..	966,756	703,282	170,627	170,062	96,631	62,446	2,169,804
1961-62 .. ..	966,421	717,327	175,298	173,914	98,041	63,937	2,194,938

PER PERSON EMPLOYED (£)

1957-58 .. ..	1,700	1,586	1,414	1,441	1,554	1,846	1,610
1958-59 .. ..	1,792	1,678	1,484	1,485	1,627	1,910	1,693
1959-60 .. ..	1,962	1,799	1,551	1,646	1,740	2,029	1,833
1960-61 .. ..	2,048	1,815	1,633	1,701	1,907	2,071	1,895
1961-62 .. ..	2,096	1,899	1,725	1,755	1,921	2,162	1,959

PER HEAD OF POPULATION (£)

1957-58 .. ..	207.02	210.81	101.21	150.43	108.59	156.09	178.55
1958-59 .. ..	215.96	221.44	107.18	153.92	111.58	160.36	186.45
1959-60 .. ..	241.40	243.47	109.86	174.56	120.41	174.93	205.65
1960-61 .. ..	249.43	243.06	111.74	173.51	129.57	175.07	208.82
1961-62 .. ..	244.76	242.41	114.80	177.44	131.46	179.25	206.95

(a) See para. 1 of this section, p. 162.

**§ 9. Value of Land, Buildings, Plant and Machinery**

1. General.—The following statement shows the value of land and buildings and of plant and machinery used in connexion with manufacturing industries during the year 1961-62.

**FACTORIES: VALUE OF LAND, BUILDINGS, PLANT AND MACHINERY(a), 1961-62**  
(£'000)

Value of—	N S.W.	Vic.	Q'land	S. Aust.	W. Aust.	Tas.	Aust.
Land and buildings	643,483	443,683	89,632	98,297	49,168	79,575	1,403,838
Plant and machinery	670,635	467,887	137,251	126,503	61,716	60,795	1,524,787
<b>Total ..</b>	<b>1,314,118</b>	<b>911,570</b>	<b>226,883</b>	<b>224,800</b>	<b>110,884</b>	<b>140,370</b>	<b>2,928,625</b>

(a) Includes estimated value of rented premises and plant.

The values recorded in this section are generally the values apportioned in the books of the individual firms after allowance has been made for depreciation, but they include estimates of the capital value of premises and plant rented. Consequently, the totals shown in the table do not represent the actual amount of capital invested in the items specified.

2. Value of Land and Buildings.—(i) *Totals for Australia.* The following table shows, for Australia as a whole, the approximate value of land and buildings occupied in connexion with manufacturing industries for 1957-58 to 1961-62.

**FACTORIES: VALUE OF LAND AND BUILDINGS(a), AUSTRALIA (£'000)**

Class of industry	1957-58	1958-59	1959-60	1960-61	1961-62
I. Treatment of non-metalliferous mine and quarry products .. .. .	13,714	15,175	22,325	27,330	31,132
II. Bricks, pottery, glass, etc. .. ..	14,986	16,580	19,616	22,249	26,099
III. Chemicals, dyes, explosives, paints, oils, grease .. .. .	70,090	76,645	80,477	87,052	95,874
IV. Industrial metals, machines, conveyances .. .. .	300,343	336,282	387,934	455,442	505,778
V. Precious metals, jewellery, plate .. ..	3,777	3,845	3,955	4,516	4,984
VI. Textiles and textile goods (not dress)	40,199	46,671	48,379	53,313	57,791
VII. Skins and leather (not clothing or footwear) .. .. .	7,221	7,702	9,166	9,333	10,000
VIII. Clothing (except knitted) .. .. .	39,855	43,203	47,762	53,776	57,964
IX. Food, drink and tobacco .. .. .	129,073	138,625	149,341	160,716	172,358
X. Sawmills, joinery, boxes, etc., wood turning and carving .. .. .	28,464	30,656	34,903	40,283	41,088
XI. Furniture of wood, bedding, etc. .. ..	12,992	14,677	16,251	17,884	18,881
XII. Paper, stationery, printing, book-binding, etc. .. .. .	52,854	61,059	68,997	77,498	85,219
XIII. Rubber .. .. .	11,688	12,821	13,439	15,532	16,875
XIV. Musical instruments .. .. .	636	730	930	922	796
XV. Miscellaneous products .. .. .	12,922	14,688	18,345	20,720	26,092
<i>Total, Classes I. to XV.</i> .. .. .	<i>738,814</i>	<i>819,359</i>	<i>921,820</i>	<i>1,046,566</i>	<i>1,150,931</i>
XVI. Heat, light and power .. .. .	110,222	128,540	142,032	147,024	252,907
<b>Grand Total .. .. .</b>	<b>849,036</b>	<b>947,899</b>	<b>1,063,852</b>	<b>1,193,590</b>	<b>1,403,838</b>

(a) Includes estimated value of rented premises.

(ii) *In Classes of Industry in States, 1961-62.* The following table gives particulars of the various classes of industry in each State.

**FACTORIES: VALUE OF LAND AND BUILDINGS(a), 1961-62 (£'000)**

Class of industry	N.S.W.	Vic.	Q'land	S. Aust.	W. Aust.	Tas.	Aust.
I. Treatment of non-metalliferous mine and quarry products .. .. .	10,842	12,011	1,949	3,262	2,325	743	31,132
II. Bricks, pottery, glass, etc. .. ..	14,061	6,994	1,607	1,769	1,284	384	26,099
III. Chemicals, dyes, explosives, paints, oils, grease .. .. .	47,377	36,053	1,901	4,229	5,009	1,305	95,874
IV. Industrial metals, machines, conveyances .. .. .	241,140	165,801	26,628	44,092	16,272	11,845	505,778
V. Precious metals, jewellery, plate .. .. .	2,142	1,842	142	586	203	69	4,984
VI. Textiles and textile goods (not dress) .. .. .	18,260	34,532	1,020	1,804	602	1,573	57,791
VII. Skins and leather (not clothing or footwear) .. .. .	4,397	4,156	386	692	328	41	10,000
VIII. Clothing (except knitted) .. .. .	23,903	25,208	2,858	3,411	1,813	771	57,964
IX. Food, drink and tobacco .. .. .	53,230	60,918	26,614	14,680	9,863	7,053	172,358
X. Sawmills, joinery, boxes, etc., wood turning and carving .. .. .	16,181	13,043	3,704	4,224	2,140	1,796	41,088
XI. Furniture of wood, bedding, etc. .. .. .	8,059	5,749	2,062	1,616	1,011	384	18,881
XII. Paper, stationery, printing, bookbinding, etc. .. .. .	37,116	28,447	5,167	5,547	2,799	6,143	85,219
XIII. Rubber .. .. .	5,673	6,922	2,113	1,321	541	305	16,875
XIV. Musical instruments .. .. .	424	233	35	70	34	..	796
XV. Miscellaneous products .. .. .	10,521	13,769	427	762	473	140	26,092
<i>Total, Classes I. to XV.</i> .. .. .	<i>493,326</i>	<i>415,678</i>	<i>76,613</i>	<i>88,065</i>	<i>44,697</i>	<i>32,552</i>	<i>1,150,931</i>
XVI. Heat, light and power .. .. .	150,157	28,005	13,019	10,232	4,471	47,023	252,907
<b>Grand Total .. .. .</b>	<b>643,483</b>	<b>443,683</b>	<b>89,632</b>	<b>98,297</b>	<b>49,168</b>	<b>79,575</b>	<b>1,403,838</b>

(a) Includes estimated value of rented premises.

(iii) *Totals in each State.* The following table shows the value of land and buildings in each State for the years 1957-58 to 1961-62.

**FACTORIES: VALUE OF LAND AND BUILDINGS(a)**

(£'000)

Year	N.S.W.	Vic.	Q'land	S. Aust.	W. Aust.	Tas.	Aust.
1957-58 .. ..	350,169	277,557	63,927	61,084	36,846	59,453	849,036
1958-59 .. ..	400,273	309,833	68,995	66,278	40,690	61,830	947,899
1959-60 .. ..	440,548	353,735	76,352	77,632	43,573	72,012	1,063,852
1960-61 .. ..	501,793	400,751	84,158	87,729	45,610	73,549	1,193,590
1961-62 .. ..	643,483	443,683	89,632	98,297	49,168	79,575	1,403,838

(a) Includes estimated value of rented premises.

3. *Value of Plant and Machinery.*—(i) *Totals for Australia, 1957-58 to 1961-62.* The following table shows for Australia the approximate value of plant and machinery used in factories.

**FACTORIES: VALUE OF PLANT AND MACHINERY(a), AUSTRALIA**

(£'000)

Class of industry	1957-58	1958-59	1959-60	1960-61	1961-62
I. Treatment of non-metalliferous mine and quarry products .. ..	30,623	35,099	49,658	68,426	74,431
II. Bricks, pottery, glass, etc. .. ..	13,443	14,564	16,286	20,076	23,944
III. Chemicals, dyes, explosives, paints, oils, grease .. ..	137,520	153,820	157,731	162,695	199,211
IV. Industrial metals, machines, conveyances .. ..	289,969	319,665	358,039	448,825	501,731
V. Precious metals, jewellery, plate .. ..	1,388	1,348	1,541	1,572	1,448
VI. Textiles and textile goods (not dress)	36,040	41,380	42,775	45,749	48,315
VII. Skins and leather (not clothing or footwear) .. ..	4,240	4,348	4,216	4,491	4,516
VIII. Clothing (except knitted) .. ..	15,621	16,407	17,244	18,659	19,167
IX. Food, drink and tobacco .. ..	131,708	138,940	147,262	159,600	168,620
X. Sawmills, joinery, boxes, etc., wood turning and carving .. ..	27,043	29,121	30,841	33,264	34,197
XI. Furniture of wood, bedding, etc. .. ..	3,802	4,130	4,369	4,544	4,774
XII. Paper, stationery, printing, book-binding, etc. .. ..	59,509	63,757	74,776	86,988	91,862
XIII. Rubber .. ..	10,234	10,333	12,240	12,990	13,074
XIV. Musical instruments .. ..	429	426	386	354	349
XV. Miscellaneous products .. ..	10,417	11,077	13,455	15,904	17,766
<i>Total, Classes I. to XV.</i> .. ..	<i>771,986</i>	<i>844,415</i>	<i>930,819</i>	<i>1,084,137</i>	<i>1,203,405</i>
XVI. Heat, light and power .. ..	240,749	263,970	289,245	307,353	321,382
<b>Grand Total .. ..</b>	<b>1,012,735</b>	<b>1,108,385</b>	<b>1,220,064</b>	<b>1,391,490</b>	<b>1,524,787</b>

(a) Includes estimated value of rented plant and machinery.

(ii) *In Classes of Industry in States, 1961-1962.* The following table shows the value of plant and machinery used in factories in each State during 1961-62 according to class of industry.

FACTORIES: VALUE OF PLANT AND MACHINERY(a), 1961-62

(£'000)

Class of industry	N.S.W.	Vic.	Q'land	S. Aust.	W. Aust.	Tas.	Aust.
I. Treatment of non-metalliferous mine and quarry products ..	35,331	22,714	4,764	7,915	2,521	1,186	74,431
II. Bricks, pottery, glass, etc. ..	13,064	6,004	2,122	1,501	894	359	23,944
III. Chemicals, dyes, explosives, paints, oils, grease ..	91,474	76,465	2,748	8,810	17,676	2,038	199,211
IV. Industrial metals, machines, conveyances ..	298,977	112,418	19,761	46,317	10,076	14,182	501,731
V. Precious metals, jewellery, plate ..	651	553	51	131	48	14	1,448
VI. Textiles and textile goods (not dress) ..	15,663	26,321	1,249	1,989	452	2,641	48,315
VII. Skins and leather (not clothing or footwear) ..	1,810	1,636	432	395	217	26	4,516
VIII. Clothing (except knitted) ..	6,757	8,941	1,227	1,298	584	360	19,167
IX. Food, drink and tobacco ..	46,738	51,581	45,264	11,486	7,166	6,385	168,620
X. Sawmills, joinery, boxes, etc., wood turning and carving ..	12,128	7,928	5,279	4,503	2,030	2,329	34,197
XI. Furniture of wood, bedding, etc. ..	2,065	1,265	537	520	308	79	4,774
XII. Paper, stationery, printing, bookbinding, etc. ..	34,594	28,323	8,012	6,845	2,031	12,057	91,862
XIII. Rubber ..	3,439	7,648	951	694	217	125	13,074
XIV. Musical instruments ..	258	72	4	12	3	..	349
XV. Miscellaneous products ..	7,550	9,131	219	573	259	34	17,766
<i>Total, Classes I. to XV.</i>	<i>570,499</i>	<i>361,000</i>	<i>92,620</i>	<i>92,989</i>	<i>44,482</i>	<i>41,815</i>	<i>1,203,405</i>
XVI. Heat, light and power ..	100,136	106,887	44,631	33,514	17,234	18,980	321,382
<b>Grand Total ..</b>	<b>670,635</b>	<b>467,887</b>	<b>137,251</b>	<b>126,503</b>	<b>61,716</b>	<b>60,795</b>	<b>1,524,787</b>

(a) Includes estimated value of rented plant and machinery.

(iii) *Totals in each State.* The following table shows the value of plant and machinery in each State during the years 1957-58 to 1961-62.

FACTORIES: VALUE OF PLANT AND MACHINERY(a)

(£'000)

Year	N.S.W.	Vic.	Q'land	S. Aust.	W. Aust.	Tas.	Aust.
1957-58 ..	415,838	302,263	104,598	79,336	63,840	46,860	1,012,735
1958-59 ..	459,678	337,107	112,528	84,749	66,097	48,226	1,108,385
1959-60 ..	506,638	377,092	120,211	98,240	64,225	53,658	1,220,064
1960-61 ..	607,281	417,918	132,569	113,100	64,306	56,316	1,391,490
1961-62 ..	670,635	467,887	137,251	126,503	61,716	60,795	1,524,787

(a) Includes estimated value of rented plant and machinery.

4. **Depreciation of Land and Buildings and Plant and Machinery, 1961-62.**—The following table shows the allowance made for the depreciation of land and buildings and plant and machinery used in connexion with the manufacturing industries in each State as recorded by factory proprietors at the annual census of factory production.

**FACTORIES: ALLOWANCE FOR DEPRECIATION OF LAND AND BUILDINGS  
AND PLANT AND MACHINERY, 1961-62**  
(£'000)

Class of industry	N.S.W.	Vic.	Q'land	S. Aust.	W. Aust.	Tas.	Aust.
I. Treatment of non-metalliferous mine and quarry products .. .. .	4,344	1,896	704	688	283	143	8,058
II. Bricks, pottery, glass, etc. .. .. .	1,469	732	215	179	126	44	2,765
III. Chemicals, dyes, explosives, paints, oils, grease .. .. .	8,849	8,553	344	794	2,637	640	21,817
IV. Industrial metals, machines, conveyances .. .. .	33,577	13,310	2,080	6,106	1,118	1,266	57,457
V. Precious metals, jewellery, plate .. .. .	65	47	6	12	4	1	135
VI. Textiles and textile goods (not dress) .. .. .	1,775	3,247	190	178	57	323	5,770
VII. Skins and leather (not clothing or footwear) .. .. .	168	156	40	51	29	4	448
VIII. Clothing (except knitted) .. .. .	726	808	115	102	74	32	1,857
IX. Food, drink and tobacco .. .. .	5,174	6,113	4,354	1,342	923	700	18,606
X. Sawmills, joinery, boxes, etc., wood turning and carving .. .. .	1,228	785	616	430	267	365	3,691
XI. Furniture of wood, bedding, etc. .. .. .	224	133	63	52	30	5	507
XII. Paper, stationery, printing, bookbinding, etc. .. .. .	3,499	4,064	705	662	296	1,132	10,358
XIII. Rubber .. .. .	902	1,238	153	154	52	28	2,527
XIV. Musical instruments .. .. .	42	7	1	..	..	..	50
XV. Miscellaneous products .. .. .	980	1,417	22	60	28	3	2,510
<i>Total, Classes I. to XV.</i>	<i>63,022</i>	<i>42,506</i>	<i>9,608</i>	<i>10,810</i>	<i>5,924</i>	<i>4,686</i>	<i>136,556</i>
XVI. Heat, light and power .. .. .	11,295	4,495	2,603	1,177	1,333	751	21,654
<b>Grand Total .. .. .</b>	<b>74,317</b>	<b>47,001</b>	<b>12,211</b>	<b>11,987</b>	<b>7,257</b>	<b>5,437</b>	<b>158,210</b>

5. Land and Buildings, Plant and Machinery—Values, Additions and Replacements, Depreciation, 1957-58 to 1961-62.—The following table summarizes the recorded totals for Australia in this section and also includes particulars of additions and replacements.

**FACTORIES: VALUE OF LAND AND BUILDINGS, PLANT AND MACHINERY,  
AUSTRALIA**  
(£'000)

Year	Book values at 30th June(a)		Additions and replacements during year(a)		Depreciation allowed during year	
	Land and buildings	Plant and machinery	Land and buildings	Plant and machinery	Land and buildings	Plant and machinery
1957-58.. .. .	849,036	1,012,735	75,762	176,903	10,899	85,818
1958-59.. .. .	947,899	1,108,385	94,823	197,566	13,000	96,752
1959-60.. .. .	1,063,852	1,220,064	101,971	231,162	13,303	108,486
1960-61.. .. .	1,193,590	1,391,490	90,018	244,048	16,902	125,269
1961-62.. .. .	1,403,838	1,524,787	179,861	280,466	18,446	139,764

(a) Includes estimated value of rented premises, plant and machinery.

### § 10. Principal Factory Products

The factory production of certain commodities is shown in the monthly and quarterly publications of this Bureau, in the series *Manufacturing Industries*, and in the bulletin *Secondary Industries, Part II.—Materials Used and Articles Produced in Factories* (see NOTE at beginning of this chapter).

The following table shows the total recorded production of some of the principal articles manufactured in Australia during the years ended 30th June, 1960 to 1963. A more complete list, together with values, where available, is published in the bulletin *Secondary Industries, Part II.—Materials Used and Articles Produced in Factories.*

Preliminary figures for a restricted number of major commodities for the year 1963-64 are shown in the Appendix to this volume.

QUANTITY OF PRINCIPAL ARTICLES PRODUCED IN FACTORIES: AUSTRALIA

Article	1959-60	1960-61	1961-62	1962-63(a)
<b>Acid—</b>				
Nitric .. .. .	tons 16,807	16,986	17,885	19,848
Sulphuric .. .. .	" 1,071,128	1,122,193	1,136,227	1,248,927
Aerated and carbonated waters .. .. .	'000 gals. 75,834	80,983	83,223	85,047
Asbestos cement building sheets .. .. .	'000 sq. yds. 29,646	28,522	25,778	27,700
<b>Bacon and ham (cured weight) .. .. .</b>	'000 lb. 72,992	72,938	76,195	(b)
<b>Bags, leather, fibre, etc.—</b>				
<b>Handbags—</b>				
Leather .. .. .	no. 792,854	777,283	643,991	(b)
Plastic .. .. .	" 1,700,176	1,809,128	1,876,832	(b)
Other .. .. .	" 102,612	108,117	158,133	(b)
Hessian and calico bags .. .. .	doz. 2,810,957	2,936,354	3,213,791	(b)
Suitcases (c) .. .. .	no. 1,410,563	1,334,594	1,229,784	(b)
All other (d) .. .. .	" 1,839,705	1,901,734	2,036,572	(b)
Baking powder .. .. .	lb. 819,937	584,824	761,969	(b)
<b>Bath heaters—</b>				
Electric .. .. .	no. 12,313	14,016	14,828	11,632
Gas .. .. .	" 21,301	17,186	18,006	14,219
Solid fuel .. .. .	" 28,625	23,775	20,987	19,872
Bathing suits .. .. .	doz. 194,114	223,487	190,992	210,109
Baths, C.I.P.E. .. .. .	no. 91,591	84,848	78,351	75,445
<b>Batteries, wet cell type—</b>				
Auto (S.L.I.), 6 Volts .. .. .	no. 701,011	604,419	555,334	591,583
" 12 Volts .. .. .	" 823,832	839,343	887,512	1,099,689
Radio, homelight, fencer .. .. .	no. of 2 Volt cells 216,405	207,709	185,884	193,721
Traction .. .. .	" 34,856	33,218	36,646	41,691
Other .. .. .	" 39,519	24,894	17,404	20,375
Beer (excluding waste beer) .. .. .	'000 gals. 231,675	236,408	241,636	(e) 256,044
Biscuits .. .. .	'000 lb. 177,579	181,324	199,959	186,154
Blankets .. .. .	'000 1,934	1,903	2,409	1,840
<b>Boots and shoes (see Footwear).</b>				
Bran (wheat) .. .. .	tons (2,000 lb.) 248,137	250,372	236,272	221,815
Brassieres .. .. .	doz. 521,146	516,691	571,465	615,852
Bread (2 lb. loaf equivalent) .. .. .	'000 757,693	761,496	760,002	(b)
Bricks, clay .. .. .	" 1,030,444	1,060,887	992,410	1,054,882
Brooms .. .. .	gross 20,503	21,060	23,411	(b)
Brushes (f) .. .. .	" 105,948	108,600	95,046	(b)
Butter .. .. .	tons 195,007	179,209	197,256	201,273
<b>Candles .. .. .</b>	cwt. 9,472	9,845	8,020	(b)
Cardigans, sweaters, etc. .. .. .	doz. 1,436,548	1,273,814	1,147,693	1,228,043
Casein .. .. .	'000 lb. 23,369	26,344	31,521	35,202
Cement, portland .. .. .	tons 2,631,599	2,859,738	2,808,794	2,944,534
Cheese (green weight) .. .. .	" 44,758	46,804	55,252	57,906
Chutney .. .. .	'000 pints 1,690	1,817	2,052	(b)
Cigarettes .. .. .	'000 lb. 39,391	42,844	42,378	44,007
Cigars .. .. .	lb. 105,982	131,804	161,051	149,146
<b>Cleansing and scouring powders—</b>				
Soap based (including sand soap) .. .. .	cwt. 65,927	62,509	61,287	62,221
Other .. .. .	" 136,054	145,043	125,640	145,320
<b>Cloth (g)—</b>				
Cotton (excludes towelling) .. .. .	'000 sq. yds. 44,964	44,177	46,093	47,570
Woollen and worsted .. .. .	" 30,235	26,466	24,991	28,018
<b>Coke—</b>				
Metallurgical .. .. .	tons 2,376,097	2,738,505	2,662,739	2,805,972
Other .. .. .	" 758,668	764,626	815,510	(b)
<b>Confectionery—</b>				
Chocolate .. .. .	'000 lb. 73,275	79,316	77,562	83,784
Other .. .. .	" 95,536	94,674	97,563	98,771
<b>Coppers—</b>				
Electric .. .. .	no. 19,461	15,437	13,188	(b)
Gas .. .. .	" 20,110	15,282	14,405	(b)
Inserts (all types) .. .. .	" 37,343	24,627	19,008	(b)
Cordials and syrups .. .. .	'000 gals. 4,972	5,289	5,448	5,995
Corsets and corselets .. .. .	doz. 193,760	217,278	237,555	276,217

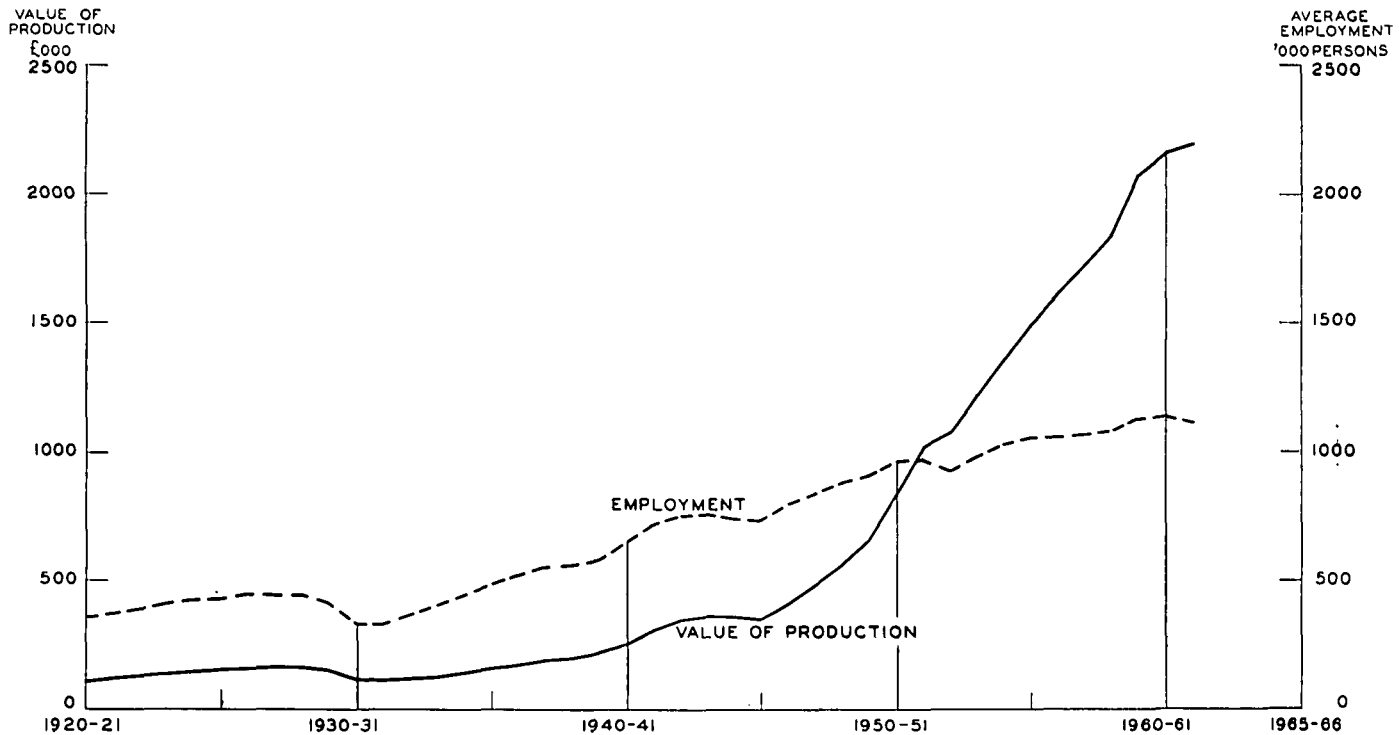
(a) Subject to revision. (b) Not yet available. (c) Includes kitbags and trunks. (d) Excludes canvas waterbags. (e) As reported by Department of Customs and Excise; includes waste. (f) Excludes tooth and industrial metal and bristle brushes. (g) Includes mixtures.

QUANTITY OF PRINCIPAL ARTICLES PRODUCED IN FACTORIES:  
AUSTRALIA—continued

Article	1959-60	1960-61	1961-62	1962-63(a)
Custard powder .. .. . '000 lb.	5,577	5,559	5,770	(b)
Cycles, assembled .. .. . no.	69,835	64,384	55,065	59,446
Dynamos—				
Alternators .. .. . no.	611	582	687	(b)
Generators .. .. . "	4,836	5,381	3,825	(b)
Electricity .. .. . mill. kWh	23,199	24,814	26,275	29,215
Engines—				
Diesel, other than marine .. .. . no.	3,216	3,072	2,450	2,548
Petrol—				
Marine .. .. . "	5,174	9,120	6,137	5,874
Other (c) .. .. . "	291,909	183,731	203,495	267,622
Essences, flavouring—				
Culinary .. .. . gals.	108,158	101,445	131,281	(b)
Industrial .. .. . "	379,774	447,779	480,951	(b)
Face powder .. .. . cwt.	2,974	2,180	2,279	(b)
Fans, electric .. .. . no.	208,671	267,520	183,819	146,400
Fats, edible .. .. . '000 lb.	52,075	66,710	75,963	55,248
Felt .. .. . sq. yds.	11,556,810	10,972,314	11,373,294	(b)
Fence posts .. .. . tons	43,397	54,820	37,397	53,474
Fibrous plaster sheets .. .. . '000 sq. yds.	18,598	17,176	15,332	15,291
Fish, canned (including fish loaf) .. .. . '000 lb.	8,018	8,260	12,089	10,343
Floorboards—				
Australian timber .. .. . '000 super. ft.	151,867	144,817	135,063	(b)
Imported timber .. .. . "	2,181	1,178	733	(b)
Flour, self-raising .. .. . cwt.	983,622	955,417	1,038,898	(b)
wheaten (d) .. .. . tons (2,000 lb.)	1,507,213	1,563,503	1,505,546	1,445,774
Footwear (not rubber)—				
Boots, shoes and sandals .. .. . '000 pairs	25,629	24,307	25,995	26,433
Slippers .. .. . "	9,752	10,308	9,827	10,445
Fruit juices, natural .. .. . '000 gals.	5,143	4,889	6,837	(b)
Gas (town) .. .. . mill. cubic ft.	49,593	50,684	50,246	51,040
Gloves—				
Dress—				
Leather .. .. . doz. pairs	930	330	527	249
Other .. .. . "	58,304	43,013	27,161	27,336
Work, all types .. .. . "	371,011	400,690	861,841	1,003,440
Golf clubs .. .. . doz.	16,007	27,002	36,173	29,549
Handkerchiefs—				
Men's .. .. . "	1,276,622	1,595,645	1,552,687	(b)
Women's .. .. . "	1,617,728	1,685,630	1,455,530	(b)
Hats and caps (excluding berets) (e) .. .. . "	561,323	548,745	575,133	(b)
Hose, rubber, garden .. .. . '000 lin. ft.	2,494	2,179	2,152	(b)
other .. .. . "	11,706	11,840	10,644	(b)
Plastic, garden .. .. . "	33,743	36,408	36,296	(b)
Ice .. .. . tons	326,098	278,848	252,669	(b)
Ice cream .. .. . '000 gals.	16,524	17,770	19,221	20,509
Ice cream mix powder .. .. . tons	743	557	607	569
Infants' and invalids' foods (f) .. .. . "	15,985	16,257	17,025	18,226
Iron and steel—				
Pig iron .. .. . '000 tons	2,655	3,002	3,380	3,399
Steel ingots .. .. . "	3,520	3,748	4,076	4,265
Blooms and slabs .. .. . "	3,022	3,193	3,326	3,709
Irons, electric (hand, domestic) .. .. . no.	334,247	286,359	305,374	353,485
Jams .. .. . '000 lb.	84,702	83,080	98,313	90,788
Jelly crystals .. .. . "	12,551	12,679	13,656	(b)
Lacquer, clear and colours .. .. . gals.	1,794,192	1,366,721	1,309,553	1,433,348
Lard .. .. . cwt.	43,137	50,094	47,463	(b)
Lawn mowers—				
Petrol .. .. . no.	246,721	199,295	202,577	218,328
Hand .. .. . "	11,642	8,684	6,178	8,035
Leather—				
Dressed from hides, sold by measurement .. .. . '000 sq. ft.	59,597	54,826	62,357	(b)
sold by weight .. .. . '000 lb.	199	140	122	(b)
skins .. .. . '000 sq. ft.	17,723	18,854	15,920	(b)
Harness, skirt, belting, etc. .. .. . '000 lb.	1,121	1,131	1,205	(b)
Sole .. .. . "	22,432	23,355	20,137	(b)
Upholstery .. .. . '000 sq. ft.	1,276	863	736	(b)
Lime, crushed .. .. . tons	149,137	161,632	191,501	(b)
Hydrated .. .. . "	56,846	62,317	85,126	(b)
Quick .. .. . "	98,262	98,425	96,792	(b)

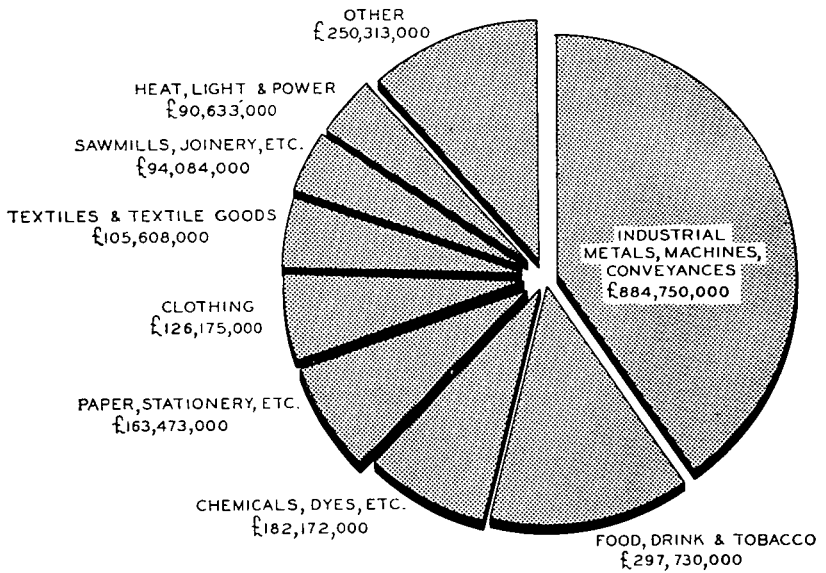
(a) Subject to revision. (b) Not yet available. (c) Excludes motor car, motor cycle, tractor and aero engines. (d) Includes wheatmeal for baking and sharps. (e) Includes hoods and capelines. (f) Includes malted milk and milk sugar (lactose).

# VALUE OF PRODUCTION AND AVERAGE EMPLOYMENT IN AUSTRALIAN FACTORIES, 1920-21 TO 1961-62





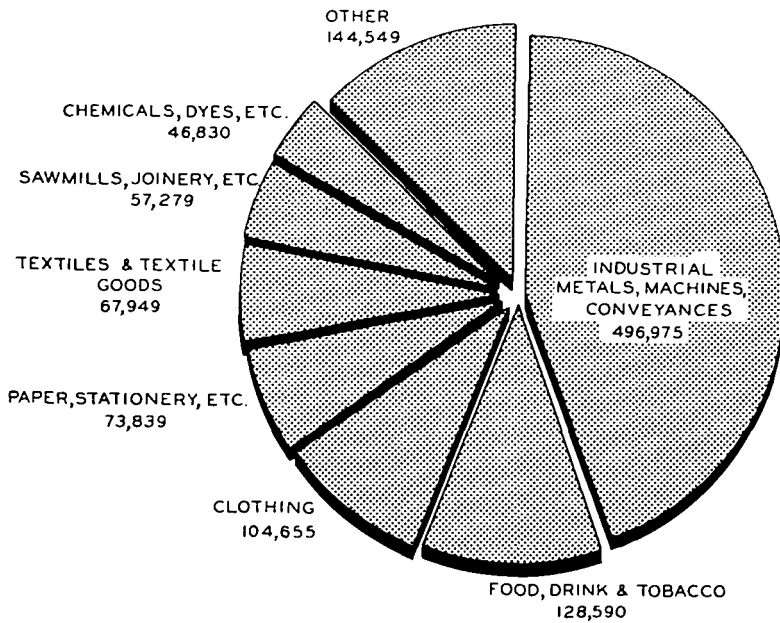
VALUE OF PRODUCTION\*  
OF AUSTRALIAN FACTORIES  
BY INDUSTRIAL CLASS, 1961-62



\*"VALUE OF PRODUCTION" IS THE VALUE ADDED IN THE PROCESS OF MANUFACTURE

ALL CLASSES- £2,194,938,000

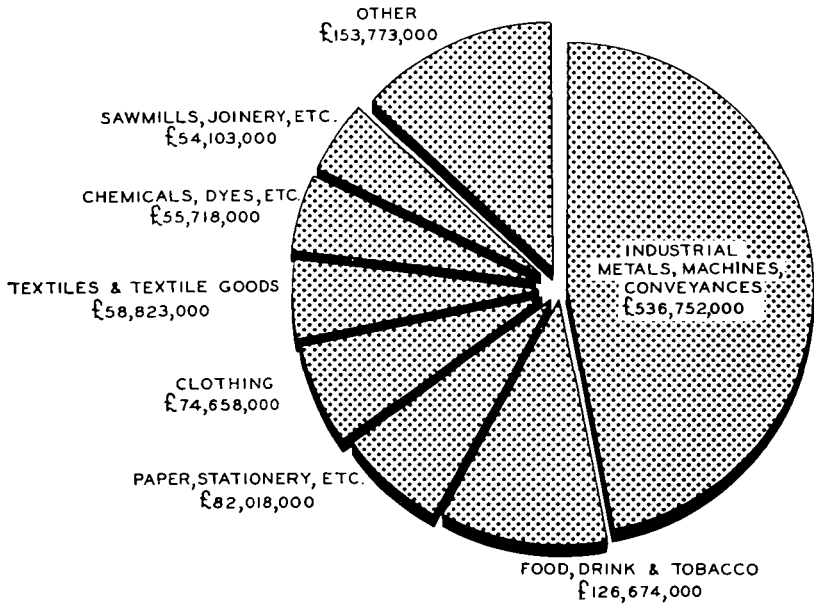
AVERAGE NUMBER OF PERSONS EMPLOYED\*  
 IN AUSTRALIAN FACTORIES  
 BY INDUSTRIAL CLASS, 1961-62



\* AVERAGE OVER WHOLE YEAR INCLUDING WORKING PROPRIETORS

ALL CLASSES - 1,120,666

TOTAL SALARIES AND WAGES PAID\*  
BY AUSTRALIAN FACTORIES  
BY INDUSTRIAL CLASS, 1961-62



\* AMOUNTS DRAWN BY WORKING PROPRIETORS ARE EXCLUDED

ALL CLASSES - £1,142,519,000

QUANTITY OF PRINCIPAL ARTICLES PRODUCED IN FACTORIES:  
AUSTRALIA—continued

Article	1959-60	1960-61	1961-62	1962-63(a)
Linseed oil, extracted from local crushing from treatment of unrefined .. '000 gals.	1,235	1,995	1,048	(b)
Lubricating oil .. .. . "	2,317	1,767	2,145	(b)
.. .. . "	13,694	13,720	13,123	(b)
Malt, barley .. .. . '000 bus.	8,435	9,015	10,207	10,377
Margarine—				
Table .. .. . '000 lb.	35,810	36,117	35,262	36,052
Other .. .. . "	58,784	61,307	65,066	67,827
Mattresses, wire .. .. . no.	389,208	390,831	429,588	419,964
Inner spring .. .. . "	619,165	593,779	635,298	643,600
Soft filled, etc. .. .. . "	294,224	288,733	286,163	255,794
Meat, canned .. .. . '000 lb.	156,594	111,440	117,088	95,748
Milk—condensed, concentrated and evaporated—				
Full cream—sweetened .. .. . '000 lb.	75,862	66,156	63,299	78,808
Unsweetened(c) .. .. . "	73,990	71,830	77,144	76,703
Skim and/or buttermilk .. .. . "	9,992	10,044	12,004	19,251
Milk powder—				
Full cream .. .. . tons	19,591	18,555	20,234	17,578
Skim .. .. . "	41,204	36,952	37,696	42,580
Buttermilk and whey .. .. . "	7,215	7,828	8,445	9,561
Mops, floor .. .. . gross	15,426	16,116	17,449	(b)
Motor bodies .. .. . no.	303,020	300,136	261,059	262,257
Motor spirit (including benzol) .. .. . '000 gals.	1,079,380	1,142,359	1,222,702	1,262,767
Motors, electric .. .. . no.	1,684,833	1,862,112	1,699,865	1,910,040
Mustard .. .. . lb.	959,522	881,922	949,522	(b)
Nails .. .. . tons	25,858	25,138	22,186	23,536
Neckties .. .. . doz.	497,457	492,268	516,975	(b)
Newsprint .. .. . tons	88,510	88,039	89,758	90,245
Oatmeal (including rolled oats) .. .. . cwt.	313,441	317,365	312,225	301,269
Paint—				
Ready-mixed—liquid and enamels .. .. . '000 gals.	12,880	12,729	13,290	12,890
Other than water, in paste form (heavy-bodied whites, etc.) .. .. . '000 lb.	3,957	3,322	3,160	3,082
Water—				
Emulsion type .. .. . '000 gals.	2,549	2,492	2,778	3,073
Powder (including kalsomine) .. .. . '000 lb.	2,793	2,736	2,540	2,228
Peanut butter and paste .. .. . "	6,406	6,976	7,488	(b)
Perambulators .. .. . no.	153,332	145,468	145,236	140,440
Pickles .. .. . '000 pints	8,470	9,324	6,038	(b)
Pigments, tinting colours ground in oil .. .. . gals.	37,842	38,897	53,859	(b)
Zinc oxide .. .. . cwt.	153,842	147,068	122,847	(b)
Other (synthetic or chemical) .. .. . "	867,150	1,402,761	1,420,338	(b)
Plywood, $\frac{1}{2}$ inch basis .. .. . '000 sq. ft.	242,099	223,383	202,807	(b)
Pollard .. .. . tons (2,000 lb.)	317,690	325,726	315,381	299,590
Preserves—				
Fruit preserved(d) .. .. . '000 lb.	344,294	307,866	450,484	429,370
Pulp and puree .. .. . cwt.	115,418	135,546	128,124	(b)
Vegetables preserved .. .. . '000 lb.	83,159	99,728	133,362	131,066
Pyjamas—				
Men's and boys' (suits only) .. .. . doz.	340,754	342,631	361,459	398,160
Women's and girls' (incl. nightdresses) .. .. . "	541,804	552,835	485,078	606,326
Racquet frames (all types) .. .. . "	17,463	12,673	12,538	14,958
Refrigerators, domestic .. .. . no.	237,328	219,506	219,415	204,805
Resins, plastic and synthetic .. .. . '000 cwt.	1,156	1,062	1,399	1,649
Rice (cleaned)(e) .. .. . cwt.	1,583,301	1,744,310	1,537,899	(b)
Ropes and cables (excluding wire) .. .. . "	145,658	141,396	139,789	143,026
Rugs .. .. . '000	179	183	161	194
Sauce .. .. . '000 pints	34,281	36,891	34,257	(b)
Semolina .. .. . tons (2,000 lb.)	8,492	11,453	11,385	10,136
Shirts (men's and boys') .. .. . doz.	1,838,603	1,818,528	1,619,864	1,954,306
Sink heaters .. .. . no.	17,094	15,901	15,195	13,239
Soap and detergents—				
Soap, personal toilet .. .. . cwt.	375,806	403,511	400,276	417,887
Household .. .. . "	727,135	711,127	683,834	699,279
Industrial (incl. wool scouring)(f) .. .. . "	153,960	125,382	92,224	75,035
Extracts and powders, household .. .. . "	731,054	594,035	562,196	593,847
Industrial .. .. . "	95,095	91,638	91,923	94,965
Detergents, personal toilet .. .. . "	12,108	13,664	18,467	17,662
Household .. .. . "	220,437	255,704	311,387	373,181
Industrial .. .. . "	36,057	36,068	37,707	44,797
Extracts and powders—				
Household .. .. . "	338,580	425,599	473,747	477,131
Industrial .. .. . "	64,523	73,804	72,500	88,105

(a) Subject to revision. (b) Not yet available. (c) Includes liquid ice-creams mix.  
(d) Includes canned apple, all types. (e) Polished, unpolished or broken. (f) Includes industrial flakes and chips.

QUANTITY OF PRINCIPAL ARTICLES PRODUCED IN FACTORIES:  
AUSTRALIA—continued

Article	1959-60	1960-61	1961-62	1962-63(a)
<b>Socks and stockings—</b>				
Men's and youths' .. .. . '000 doz. pairs	1,557	1,359	1,419	1,624
Women's and maids' .. .. . "	2,810	2,834	3,039	3,630
Children's and infants' .. .. . "	1,188	840	901	899
<b>Soup, canned .. .. . '000 pints</b>	41,138	49,071	44,650	(b)
dry-mix .. .. . '000 lb.	5,363	6,217	6,267	(b)
Spades and shovels .. .. . doz.	36,156	32,163	36,670	(b)
Starch .. .. . "	709,326	645,925	742,491	800,879
Stearine (stearic acid) .. .. . "	82,265	72,331	88,269	64,175
Steel, structural, fabricated .. .. . tons	324,729	379,553	401,440	(b)
<b>Stoves, ovens and ranges—</b>				
Domestic cooking—				
Electric(c) .. .. . no.	116,594	107,923	132,121	128,291
Gas .. .. . "	98,745	92,306	87,326	68,316
Solid fuel .. .. . "	36,855	31,722	28,712	26,883
Sugar, raw (94 net titre) .. .. . tons	1,287,546	1,382,611	1,382,841	1,849,817
Refined .. .. . "	540,087	524,784	553,472	564,534
Sulphate of ammonia .. .. . "	104,861	98,988	103,918	95,267
Superphosphate(d) .. .. . "	2,379,975	2,530,884	2,591,379	2,861,580
Talcum powder .. .. . cwt.	47,097	49,751	55,278	(b)
<b>Tallow—</b>				
Edible (including dripping) .. .. . "	1,040,059	1,032,534	1,348,635	(b)
Inedible .. .. . "	2,349,131	1,978,671	2,808,780	(b)
Television sets .. .. . no.	435,458	315,966	289,493	292,543
<b>Tiles, roofing—</b>				
Cement .. .. . '000	56,896	52,654	53,220	60,593
Terracotta .. .. . "	56,873	55,185	50,048	51,050
<b>Timber—</b>				
From native logs—				
Hardwood .. .. . '000 super. ft.	1,208,595	1,152,995	1,063,086	} 1,350,759
Softwood .. .. . "	312,451	264,838	289,117	
From imported logs—				
Hardwood .. .. . "	40,479	35,330	21,249	(b)
Softwood .. .. . "	2,902	2,999	6,685	(b)
Toasters, electric (domestic) .. .. . no.	211,152	235,158	216,923	285,354
Tobacco .. .. . '000 lb.	15,262	15,259	13,011	11,493
Tomato juice .. .. . gals.	1,298,088	2,082,245	2,354,954	2,029,489
Paste .. .. . '000 pints	6,568	14,067	12,357	(b)
Pulp .. .. . "	852,913	1,093,841	591,219	(b)
Towels .. .. . doz.	862,814	695,241	762,400	731,392
Tractors .. .. . no.	10,699	8,609	8,592	(b)
<b>Transformers, chokes and ballasts—</b>				
For distribution of power and light, etc. .. .. . "	63,314	75,730	17,693	(b)
For fluorescent lights and neon signs .. .. . "	1,732,313	2,153,124	1,766,410	(b)
For radio receivers, record players, etc. .. .. . "	334,818	310,603	325,157	(b)
For television receivers .. .. . "	325,097	186,038	185,666	(b)
For other purposes .. .. . "	99,266	171,865	212,236	(b)
Tubes, rubber .. .. . "	2,965,146	3,029,568	2,834,781	3,143,700
Twine (all types) .. .. . cwt.	156,963	213,278	142,142	164,189
<b>Tyres, pneumatic—</b>				
Motor car and motor cycle .. .. . no.	3,514,529	3,654,861	3,468,724	4,305,575
Truck and omnibus .. .. . "	472,147	470,244	354,124	480,427
Aero and tractor .. .. . "	212,224	199,916	179,401	228,133
Umbrellas .. .. . "	605,857	640,643	694,128	(b)
Underwear (men's, women's, children's) .. .. . '000 doz.	5,170	5,420	5,495	5,636
Vacuum cleaners (domestic) .. .. . no.	95,766	109,753	114,189	127,348
Washing machines, household, electric .. .. . "	201,873	195,541	220,102	213,763
<b>Weatherboards—</b>				
Australian timber .. .. . '000 super. ft.	27,635	26,743	25,146	(b)
Imported timber .. .. . "	1,181	930	1,378	(b)
Wheatmeal(e) .. .. . tons (2,000 lb.)	83,943	114,140	101,750	72,265
Wheelbarrows (metal) .. .. . no.	93,316	81,988	85,292	(b)
Wireless and television cabinets .. .. . "	653,058	533,022	433,463	478,281
Wireless receiving sets (incl. radiograms) .. .. . "	402,588	454,786	367,359	499,969
Wool scoured .. .. . '000 lb.	174,921	154,104	161,656	168,515
Wool tops .. .. . "	48,021	40,781	46,031	48,407
<b>Yarn(f)—</b>				
Cotton .. .. . "	45,682	42,276	42,473	46,788
Woolen .. .. . "	27,412	25,732	24,336	27,330
Worsted .. .. . "	23,885	23,347	22,519	24,527
Zinc oxide (see pigments)				

(a) Subject to revision. (b) Not yet available. (c) Includes stovettes, cookers, etc.  
(d) Supplied by Superphosphate Industry Committee. (e) Excludes wheatmeal for baking included with flour. (f) Includes mixtures predominantly of the fibre mentioned.

## § 11. Individual Industries

1. **General.**—Particulars on pages 147-174, §§ 2-9 afford a general view of the magnitude of industries, in the sixteen groups adopted by the Conference of Statisticians in 1930. While it is not possible, within the limits of this publication, to give a detailed account of each industry, particular industries dealt with hereunder are of special importance because of the employment which they provide for labour or capital, or for other features of special interest. Where there are only one or two establishments in a particular industry in the State or the Commonwealth, details of activities are not published, but are combined with some other factory group so that operations of individual concerns will not be disclosed.

Details of some of the principal articles produced in factories in Australia during the years 1959-60 to 1962-63 are shown in the table on the preceding pages (§ 10).

2. **Portland Cement and Cement Goods.**—The manufacture of portland cement and cement goods is an important industry included in Class I. Particulars for the three industries under this general heading are shown for 1961-62 and for a series of years in the following table.

**PORTLAND CEMENT, ASBESTOS CEMENT SHEETS, ETC., AND OTHER CEMENT GOODS**  
AUSTRALIA, 1961-62

Particulars	Portland cement	Asbestos cement sheets and mouldings	Other cement goods	Total
Number of factories .. .. .	15	15	570	600
Number of persons employed .. .. .	3,126	2,793	7,046	12,965
Salaries and wages paid .. .. . £'000	3,908	3,457	8,086	15,451
Value of power, fuel, etc., used .. .. . £'000	5,042	517	494	6,053
Value of materials used .. .. . £'000	7,522	6,572	26,399	40,493
Value of production .. .. . £'000	11,755	6,768	17,007	35,530
Total value of output .. .. . £'000	24,319	13,857	43,900	82,076
Value of land and buildings .. .. . £'000	4,622	3,840	7,310	15,772
Value of plant and machinery .. .. . £'000	21,144	4,580	9,399	35,123
Horse-power of engines ordinarily in use .. .. . h.p.	101,693	22,446	31,886	155,925

## AUSTRALIA

Particulars	1957-58	1958-59	1959-60	1960-61	1961-62
Number of factories .. .. .	481	499	523	577	600
Number of persons employed .. .. .	10,994	11,392	12,054	12,998	12,965
Salaries and wages paid .. .. . £'000	10,864	11,648	13,431	15,122	15,451
Value of power, fuel, etc., used .. .. . £'000	5,124	5,265	5,616	5,968	6,053
Value of materials used .. .. . £'000	25,579	28,739	33,394	40,326	40,493
Value of production .. .. . £'000	23,121	26,179	30,785	34,905	35,530
Total value of output .. .. . £'000	53,824	60,183	69,795	81,199	82,076
Value of land and buildings .. .. . £'000	7,407	8,308	10,614	13,549	15,772
Value of plant and machinery .. .. . £'000	19,823	21,754	24,274	31,683	35,123
Horse-power of engines ordinarily in use .. .. . h.p.	106,905	125,082	132,710	145,903	155,925

3. **Bricks, Tiles, Pottery and Earthenware.**—The following table shows particulars of this industry for each State for the year 1961-62 and for Australia for a series of years.

**BRICKS, TILES, POTTERY AND EARTHENWARE**  
1961-62

Particulars	N.S.W.	Vic.	Q'land	S. Aust.	W. Aust.	Tas.	Aust.
Number of factories .. .. .	182	105	45	52	31	12	427
Number of persons employed .. .. .	6,864	4,129	981	1,037	1,028	266	14,305
Salaries and wages paid .. .. . £'000	7,990	4,510	966	1,182	1,061	290	15,999
Value of power, fuel, etc., used .. .. . £'000	2,508	1,498	353	465	418	124	5,366
Value of materials used .. .. . £'000	4,030	2,900	351	586	430	127	8,424
Value of production .. .. . £'000	12,778	7,413	1,725	1,814	1,921	432	26,683
Total value of output .. .. . £'000	19,316	11,811	2,429	2,865	2,769	683	39,873
Value of land and buildings .. .. . £'000	7,132	3,734	778	691	662	154	13,151
Value of plant and machinery .. .. . £'000	8,969	4,157	1,462	1,163	753	288	16,792
Horse-power of engines ordinarily in use .. .. . h.p.	44,061	32,734	9,539	9,256	10,226	2,075	108,491

BRICKS, TILES, POTTERY AND EARTHENWARE—*continued*

## AUSTRALIA

Particulars	1957-58	1958-59	1959-60	1960-61	1961-62
Number of factories .. .. .	436	434	437	434	427
Number of persons employed .. .. .	13,887	14,276	14,980	15,012	14,305
Salaries and wages paid .. .. .	£'000 13,396	14,252	15,916	16,663	15,999
Value of power, fuel, etc., used .. .. .	£'000 4,693	4,983	5,312	5,509	5,366
Value of materials used .. .. .	£'000 5,990	6,665	7,856	8,495	8,424
Value of production .. .. .	£'000 20,924	22,934	26,384	27,244	26,083
Total value of output .. .. .	£'000 31,607	34,582	39,552	41,248	39,873
Value of land and buildings .. .. .	£'000 8,435	9,616	11,005	12,506	13,151
Value of plant and machinery .. .. .	£'000 9,348	10,509	11,688	14,376	16,792
Horse-power of engines ordinarily in use .. .. .	h.p. 93,891	93,403	97,471	101,389	108,491

4. **Industrial and Heavy Chemicals.**—The following table shows particulars of the Industrial and Heavy Chemical industry for each State during 1961-62 and for Australia for a series of years. In order to avoid the publication of confidential information, particulars relating to Industrial and Heavy Chemicals include details for the Explosives industry.

## INDUSTRIAL AND HEAVY CHEMICALS AND ACIDS (INCLUDING EXPLOSIVES)

## 1961-62

Particulars	N.S.W.	Vic.	Q'land	S. Aust.	W. Aust.	Tas.	Aust.
Number of factories .. .. .	157	91	27	16	15	2	308
Number of persons employed .. .. .	7,088	5,093	414	882	(a)	(a)	13,746
Salaries and wages paid .. .. .	£'000 9,077	6,813	405	1,198	(a)	(a)	17,724
Value of power, fuel, etc., used .. .. .	£'000 2,905	2,355	90	567	(a)	(a)	6,015
Value of materials used .. .. .	£'000 28,410	18,644	1,579	1,162	(a)	(a)	50,586
Value of production .. .. .	£'000 24,793	16,927	1,055	3,149	(a)	(a)	46,627
Total value of output .. .. .	£'000 56,108	37,926	2,724	4,878	(a)	(a)	103,228
Value of land and buildings .. .. .	£'000 15,899	15,418	611	1,698	(a)	(a)	34,059
Value of plant and machinery .. .. .	£'000 26,156	37,400	1,079	4,979	(a)	(a)	70,576
Horse-power of engines ordinarily in use .. .. .	h.p. 77,607	71,835	3,372	8,806	(a)	(a)	165,055

(a) Not available for publication; figures are included in the total for Australia.

## AUSTRALIA

Particulars	1957-58	1958-59	1959-60	1960-61	1961-62
Number of factories .. .. .	281	302	287	297	308
Number of persons employed .. .. .	15,085	15,813	14,423	13,945	13,746
Salaries and wages paid .. .. .	£'000 15,875	17,240	17,146	17,474	17,724
Value of power, fuel, etc., used .. .. .	£'000 4,208	4,616	4,874	4,652	6,015
Value of materials used .. .. .	£'000 43,497	46,605	46,212	43,811	50,586
Value of production .. .. .	£'000 35,930	42,512	43,497	41,065	46,627
Total value of output .. .. .	£'000 83,635	93,733	94,583	89,528	103,228
Value of land and buildings .. .. .	£'000 21,055	22,948	24,657	28,509	34,059
Value of plant and machinery .. .. .	£'000 36,157	38,137	41,326	44,518	70,576
Horse-power of engines ordinarily in use .. .. .	h.p. 121,393	130,928	117,311	124,629	165,055

5. **Pharmaceutical and Toilet Preparations.**—The following table shows particulars of the Pharmaceutical and Toilet Preparations industry for each State during 1961–62 and for Australia for a series of years.

## PHARMACEUTICAL AND TOILET PREPARATIONS

1961–62

Particulars	N.S.W.	Vic.	Q'land	S. Aust.	W. Aust.	Tas.	Aust.
Number of factories .. .. .	126	63	6	13	3	..	211
Number of persons employed .. .. .	4,214	3,066	(a)	473	(a)	..	7,910
Salaries and wages paid .. .. . £'000	4,046	3,295	(a)	401	(a)	..	7,864
Value of power, fuel, etc., used .. .. . £'000	204	556	(a)	33	(a)	..	797
Value of materials used .. .. . £'000	16,279	7,758	(a)	1,294	(a)	..	25,586
Value of production .. .. . £'000	23,747	8,299	(a)	767	(a)	..	33,129
Total value of output .. .. . £'000	40,230	16,613	(a)	2,094	(a)	..	59,512
Value of land and buildings .. .. . £'000	7,360	6,671	(a)	344	(a)	..	14,544
Value of plant and machinery .. .. . £'000	2,442	3,124	(a)	114	(a)	..	5,732
Horse-power of engines ordinarily in use .. .. . h.p.	7,115	11,375	(a)	1,653	(a)	..	20,322

(a) Not available for publication; figures are included in the total for Australia.

## AUSTRALIA

Particulars	1957–58	1958–59	1959–60	1960–61	1961–62
Number of factories .. .. .	212	210	216	212	211
Number of persons employed .. .. .	6,834	6,976	7,791	7,805	7,910
Salaries and wages paid .. .. . £'000	5,531	5,886	7,074	7,448	7,864
Value of power, fuel, etc., used .. .. . £'000	386	754	810	842	797
Value of materials used .. .. . £'000	18,226	19,575	23,311	23,629	25,586
Value of production .. .. . £'000	21,856	23,130	28,985	32,156	33,129
Total value of output .. .. . £'000	40,468	43,459	53,106	56,627	59,512
Value of land and buildings .. .. . £'000	9,677	10,750	11,528	13,431	14,544
Value of plant and machinery .. .. . £'000	3,262	4,519	5,347	6,003	5,732
Horse-power of engines ordinarily in use h.p.	14,962	16,702	18,084	19,237	20,322

6. **White Lead, Paints and Varnish.**—The following table shows particulars of this industry for each State during 1961–62 and for Australia for a series of years.

## WHITE LEAD, PAINTS AND VARNISH

1961–62

Particulars	N.S.W.	Vic.	Q'land	S. Aust.	W. Aust.	Tas.	Aust.
Number of factories .. .. .	84	52	17	18	14	3	188
Number of persons employed .. .. .	2,789	1,409	339	398	144	17	5,096
Salaries and wages paid .. .. . £'000	3,250	1,510	305	446	141	17	5,669
Value of power, fuel, etc., used .. .. . £'000	248	108	13	27	7	1	404
Value of materials used .. .. . £'000	14,039	8,030	1,816	1,954	805	118	26,762
Value of production .. .. . £'000	8,309	3,680	1,319	1,590	486	84	15,468
Total value of output .. .. . £'000	22,596	11,818	3,148	3,571	1,298	203	42,634
Value of land and buildings .. .. . £'000	3,537	2,829	358	653	320	48	7,745
Value of plant and machinery .. .. . £'000	2,085	2,731	128	382	99	15	5,440
Horse-power of engines ordinarily in use .. .. . h.p.	13,367	10,903	1,526	1,869	899	216	28,780

## AUSTRALIA

Particulars	1957–58	1958–59	1959–60	1960–61	1961–62
Number of factories .. .. .	184	188	181	182	188
Number of persons employed .. .. .	5,749	5,532	5,475	5,208	5,096
Salaries and wages paid .. .. . £'000	5,608	5,448	5,710	5,746	5,669
Value of power, fuel, etc., used .. .. . £'000	445	419	416	393	404
Value of materials used .. .. . £'000	24,619	25,448	26,892	24,924	26,762
Value of production .. .. . £'000	13,853	13,184	15,446	15,407	15,468
Total value of output .. .. . £'000	38,917	39,051	42,754	40,724	42,634
Value of land and buildings .. .. . £'000	6,397	6,327	6,942	7,736	7,745
Value of plant and machinery .. .. . £'000	3,986	3,696	4,219	4,177	5,440
Horse-power of engines ordinarily in use h.p.	25,443	25,093	25,879	27,952	28,780



7. Mineral Oil Extraction and Refining.—Particulars of factories engaged in the extraction and refining of mineral oil products are shown in the following table for each State for the year 1961-62 and for Australia for a series of years.

## MINERAL OILS

1961-62

Particulars	N.S.W.	Vic.	Q'land	S. Aust.	W. Aust.	Tas.	Aust.
Number of factories .. ..	35	20	7	9	6	..	77
Number of persons employed .. ..	2,703	1,341	102	(a)	(a)	..	5,028
Salaries and wages paid .. £'000	4,025	2,044	131	(a)	(a)	..	7,356
Value of power, fuel, etc., used .. £'000	3,315	2,755	51	(a)	(a)	..	7,990
Value of materials used .. ..	54,432	50,589	1,604	(a)	(a)	..	136,357
Value of production .. ..	£'000 9,212	15,682	1,009	(a)	(a)	..	36,338
Total value of output .. ..	£'000 66,959	69,076	2,664	(a)	(a)	..	180,685
Value of land and buildings .. £'000	12,486	5,116	213	(a)	(a)	..	19,517
Value of plant and machinery .. £'000	52,977	27,882	553	(a)	(a)	..	95,475
Horse-power of engines ordinarily in use .. .. . h.p.	79,436	38,492	791	(a)	(a)	..	145,383

(a) Not available for publication; figures are included in the total for Australia.

## AUSTRALIA

Particulars	1957-58	1958-59	1959-60	1960-61	1961-62
Number of factories .. ..	69	70	70	76	77
Number of persons employed .. ..	4,718	4,888	4,972	5,020	5,028
Salaries and wages paid .. .. £'000	5,617	5,990	6,514	7,062	7,356
Value of power, fuel, etc., used .. .. £'000	7,864	7,531	7,848	7,537	7,990
Value of materials used .. ..	£'000 122,798	123,526	133,417	136,503	136,357
Value of production .. ..	£'000 32,661	39,149	43,724	44,405	36,338
Total value of output .. ..	£'000 163,323	170,206	184,989	188,445	180,685
Value of land and buildings .. .. £'000	16,645	19,154	18,261	18,493	19,517
Value of plant and machinery .. .. £'000	73,072	85,504	84,954	86,755	95,475
Horse-power of engines ordinarily in use h.p.	90,977	106,771	108,231	132,640	145,383

8. Soap and Candle Factories.—The following table shows particulars of factories in the Soap and Candle industry in each State for 1961-62 and for Australia for a series of years.

## SOAP AND CANDLES

1961-62

Particulars	N.S.W.	Vic.	Q'land	S. Aust.	W. Aust.	Tas.	Aust.
Number of factories .. ..	60	31	10	7	6	3	117
Number of persons employed .. ..	2,012	903	236	44	(a)	(a)	3,290
Salaries and wages paid .. .. £'000	2,227	1,010	218	29	(a)	(a)	3,568
Value of power, fuel, etc., used .. .. £'000	174	218	20	4	(a)	(a)	421
Value of materials used .. ..	£'000 9,217	5,783	661	118	(a)	(a)	16,138
Value of production .. ..	£'000 9,607	4,615	533	81	(a)	(a)	15,022
Total value of output .. ..	£'000 18,998	10,616	1,214	203	(a)	(a)	31,561
Value of land and buildings .. .. £'000	1,389	1,312	162	36	(a)	(a)	3,000
Value of plant and machinery .. .. £'000	2,152	996	178	35	(a)	(a)	3,440
Horse-power of engines ordinarily in use .. .. . h.p.	7,796	4,985	924	329	(a)	(a)	14,495

(a) Not available for publication; figures are included in the total for Australia.

## SOAP AND CANDLES—continued

## AUSTRALIA

Particulars	1957-58	1958-59	1959-60	1960-61	1961-62
Number of factories .. ..	90	89	(a) 120	119	117
Number of persons employed .. ..	2,983	2,929	3,210	3,234	3,290
Salaries and wages paid .. .. £'000	2,830	2,822	3,220	3,538	3,568
Value of power, fuel, etc., used .. .. £'000	441	387	383	431	421
Value of materials used .. .. £'000	14,446	15,253	15,835	16,279	16,138
Value of production .. .. £'000	10,525	11,941	14,131	15,209	15,002
Total value of output .. .. £'000	25,412	27,581	30,349	31,919	31,561
Value of land and buildings .. .. £'000	1,871	2,039	2,652	2,965	3,000
Value of plant and machinery .. .. £'000	2,973	3,118	3,054	3,220	3,440
Horse-power of engines ordinarily in use .. .. h.p.	11,296	12,632	13,689	13,983	14,495

(a) The increase in the number of factories is due mainly to the reclassification of a number of factories in New South Wales.

9. Chemical Fertilizers.—The following table shows particulars of the factories engaged in the manufacture of chemical fertilizers in each State during 1961-62 and for Australia for a series of years.

## CHEMICAL FERTILIZERS

1961-62

Particulars	N.S.W.	Vic.	Q'land	S. Aust.	W. Aust.	Tas.	Aust.
Number of factories .. ..	12	6	4	10	7	8	47
Number of persons employed .. ..	578	1,446	(a)	825	986	(a)	4,525
Salaries and wages paid .. .. £'000	770	1,824	(a)	921	1,091	(a)	5,469
Value of power, fuel, etc., used .. .. £'000	121	225	(a)	82	154	(a)	970
Value of materials used .. .. £'000	4,289	8,068	(a)	4,466	6,484	(a)	27,717
Value of production .. .. £'000	2,094	3,677	(a)	2,032	2,595	(a)	12,334
Total value of output .. .. £'000	6,504	11,970	(a)	6,580	9,233	(a)	41,021
Value of land and buildings .. .. £'000	1,330	986	(a)	1,040	1,947	(a)	6,280
Value of plant and machinery .. .. £'000	1,771	1,564	(a)	2,711	1,921	(a)	8,734
Horse-power of engines ordinarily in use .. .. h.p.	7,709	15,283	(a)	11,170	9,676	(a)	55,089

(a) Not available for publication; figures are included in the total for Australia.

## AUSTRALIA

Particulars	1957-58	1958-59	1959-60	1960-61	1961-62
Number of factories .. ..	49	48	49	44	47
Number of persons employed .. ..	5,050	4,959	4,763	4,567	4,525
Salaries and wages paid .. .. £'000	5,309	5,207	5,369	5,475	5,469
Value of power, fuel, etc., used .. .. £'000	950	995	994	1,002	970
Value of materials used .. .. £'000	28,862	25,756	26,348	26,930	27,717
Value of production .. .. £'000	12,175	11,440	11,520	12,325	12,334
Total value of output .. .. £'000	41,987	38,191	38,862	40,257	41,021
Value of land and buildings .. .. £'000	7,583	7,633	7,508	6,072	6,280
Value of plant and machinery .. .. £'000	10,835	10,808	10,257	8,651	8,734
Horse-power of engines ordinarily in use .. .. h.p.	58,212	57,587	58,519	53,194	55,089

10. Iron and Steel Works and Engineering.—(i) *General.* The first group included under this heading (Smelting, Converting, Refining and Rolling of Iron and Steel) covers blast furnaces, steel works and rolling mills. The second group, Foundries (Ferrous), covers those engaged in the founding of iron and steel. The third group (Plant, Equipment and Machinery including Machine Tools) covers those industries engaged in the production of

boilers, engines, machines and machinery, machine tools, structural steel fabrications, steel furniture, etc. The fourth group (Other Engineering) includes jobbing and general engineers not elsewhere included. Detailed statistics for the four groups mentioned are shown in the following tables.

(ii) *Smelting, Converting, Refining and Rolling of Iron and Steel.* In the following table, particulars are shown for each State for 1961-62 and for Australia for a series of years for the group Smelting, Converting, Refining and Rolling of Iron and Steel.

**SMELTING, CONVERTING, REFINING AND ROLLING OF IRON AND STEEL**  
1961-62

Particulars	N.S.W.	Vic.	Q'land	S. Aust.	W. Aust.	Tas.	Aust.
Number of factories .. ..	17	11	..	4	2	..	34
Number of persons employed ..	32,235	1,301	..	(a)	(a)	..	34,504
Salaries and wages paid .. £'000	41,595	1,538	..	(a)	(a)	..	44,237
Value of power, fuel, etc., used .. £'000	31,105	384	..	(a)	(a)	..	33,953
Value of materials used .. £'000	156,690	2,095	..	(a)	(a)	..	163,778
Value of production .. £'000	89,346	1,986	..	(a)	(a)	..	97,653
Total value of output .. £'000	277,141	4,465	..	(a)	(a)	..	295,384
Value of land and buildings .. £'000	33,286	1,110	..	(a)	(a)	..	36,972
Value of plant and machinery .. £'000	167,531	1,687	..	(a)	(a)	..	180,428
Horse-power of engines ordinarily in use .. .. h.p.	747,561	11,747	..	(a)	(a)	..	778,470

**AUSTRALIA**

Particulars	1957-58	1958-59	1959-60	1960-61	1961-62
Number of factories .. ..	35	34	35	34	34
Number of persons employed ..	28,526	29,982	31,825	33,804	34,504
Salaries and wages paid .. £'000	31,469	34,220	38,793	45,721	44,237
Value of power, fuel, etc., used .. £'000	22,150	23,539	30,202	33,929	33,953
Value of materials used .. .. £'000	137,674	153,563	162,677	174,276	163,778
Value of production .. .. £'000	70,379	78,154	86,256	100,618	97,653
Total value of output .. .. £'000	230,203	255,256	279,135	308,823	295,384
Value of land and buildings .. .. £'000	9,953	11,400	14,417	31,660	36,972
Value of plant and machinery .. .. £'000	71,048	82,451	95,110	147,676	180,428
Horse-power of engines ordinarily in use h.p.	536,530	633,180	690,291	757,451	778,470

(a) Not available for publication; figures are included in the total for Australia.

Particulars of the production of pig-iron and steel will be found on page 176 and in Chapter XXVI. Mineral Industry.

(iii) *Foundries (Ferrous).* Particulars covering those industries classified as founding of iron and steel are shown for each State for 1961-62 and for Australia for a series of years in the following table.

**FOUNDRIES—FERROUS**

1961-62

Particulars	N.S.W.	Vic.	Q'land	S. Aust.	W. Aust.	Tas.	Aust.
Number of factories .. ..	79	95	26	22	17	..	239
Number of persons employed ..	2,570	2,278	1,032	720	583	..	7,183
Salaries and wages paid .. £'000	2,983	2,672	1,062	798	574	..	8,089
Value of power, fuel, etc., used .. £'000	349	365	92	88	122	..	1,016
Value of materials used .. .. £'000	2,344	2,233	1,313	937	571	..	7,398
Value of production .. .. £'000	3,911	3,835	1,575	1,089	833	..	11,243
Total value of output .. .. £'000	6,604	6,433	2,980	2,114	1,526	..	19,657
Value of land and buildings .. .. £'000	1,822	1,906	614	346	352	..	5,040
Value of plant and machinery .. .. £'000	1,213	1,276	458	366	266	..	3,579
Horse-power of engines ordinarily in use .. .. h.p.	11,332	9,800	3,708	3,900	2,766	..	31,506

FOUNDRIES—FERROUS—*continued*

## AUSTRALIA

Particulars	1957-58	1958-59	1959-60	1960-61	1961-62
Number of factories .. .. .	373	346	312	245	239
Number of persons employed .. .. .	7,801	7,376	7,853	7,797	7,183
Salaries and wages paid .. .. . £'000	7,548	7,293	8,504	8,776	8,089
Value of power, fuel, etc., used .. .. . £'000	997	955	1,121	1,114	1,016
Value of materials used .. .. . £'000	6,664	6,687	7,905	8,654	7,398
Value of production .. .. . £'000	11,237	10,615	12,325	12,756	11,243
Total value of output .. .. . £'000	18,898	18,257	21,351	22,524	19,657
Value of land and buildings .. .. . £'000	4,244	3,912	4,866	5,128	5,040
Value of plant and machinery .. .. . £'000	3,615	2,963	3,791	3,727	3,579
Horse-power of engines ordinarily in use h.p.	33,042	31,612	32,455	31,471	31,506

(iv) *Plant, Equipment and Machinery (including Machine Tools)*. The next table shows particulars for this group for each State during 1961-62 and for Australia for a series of years.

## PLANT, EQUIPMENT AND MACHINERY (INCLUDING MACHINE TOOLS)

## 1961-62

Particulars	N.S.W.	Vic.	Q'land	S. Aust.	W. Aust.	Tas.	Aust.
Number of factories .. .. .	1,268	829	202	252	168	25	2,744
Number of persons employed .. .. .	30,386	27,023	5,950	10,154	3,432	519	77,464
Salaries and wages paid .. .. . £'000	36,208	30,574	5,782	10,275	3,426	529	86,794
Value of power, fuel, etc., used .. .. . £'000	1,389	1,300	272	642	137	19	3,759
Value of materials used .. .. . £'000	63,763	48,463	8,701	20,658	6,199	680	148,464
Value of production .. .. . £'000	60,323	50,681	9,632	16,116	5,220	769	142,741
Total value of output .. .. . £'000	125,475	100,444	18,605	37,416	11,556	1,468	294,964
Value of land and buildings .. .. . £'000	30,977	29,122	3,876	6,702	2,741	590	74,008
Value of plant and machinery .. .. . £'000	17,850	18,077	2,869	5,229	1,746	407	46,178
Horse-power of engines ordinarily in use .. .. . h.p.	113,034	102,174	22,960	40,097	13,951	1,361	293,577

## AUSTRALIA

Particulars	1957-58	1958-59	1959-60	1960-61	1961-62
Number of factories .. .. .	2,240	2,345	2,518	2,587	2,744
Number of persons employed .. .. .	69,540	70,905	76,096	77,733	77,464
Salaries and wages paid .. .. . £'000	67,000	70,371	81,885	86,669	86,794
Value of power, fuel, etc., used .. .. . £'000	2,964	3,161	3,574	3,789	3,759
Value of materials used .. .. . £'000	114,716	122,408	144,405	152,329	148,464
Value of production .. .. . £'000	110,365	115,472	138,402	143,925	142,741
Total value of output .. .. . £'000	228,045	241,041	286,381	300,043	294,964
Value of land and buildings .. .. . £'000	45,592	49,927	56,116	66,337	74,008
Value of plant and machinery .. .. . £'000	32,805	36,400	39,407	43,122	46,178
Horse-power of engines ordinarily in use h.p.	236,230	250,580	267,497	278,138	293,577

(v) *Other Engineering*. Details covering jobbing and general engineering works not elsewhere included are shown for each State for 1961-62 and for Australia for a series of years in the following table.

## OTHER ENGINEERING

## 1961-62

Particulars	N.S.W.	Vic.	Q'land	S. Aust.	W. Aust.	Tas.	Aust.
Number of factories .. .. .	830	990	159	223	156	99	2,457
Number of persons employed .. .. .	7,583	11,400	1,595	4,721	936	1,662	27,897
Salaries and wages paid .. .. . £'000	8,306	12,347	1,473	4,908	802	1,725	29,561
Value of power, fuel, etc., used .. .. . £'000	359	485	45	122	39	61	1,111
Value of materials used .. .. . £'000	9,983	15,374	1,420	5,499	1,171	2,511	35,958
Value of production .. .. . £'000	13,612	20,079	2,220	7,031	1,420	2,830	47,192
Total value of output .. .. . £'000	23,954	35,938	3,685	12,652	2,630	5,402	84,261
Value of land and buildings .. .. . £'000	7,596	12,077	993	3,578	734	1,445	26,423
Value of plant and machinery .. .. . £'000	4,806	7,305	645	3,882	347	605	17,590
Horse-power of engines ordinarily in use .. .. . h.p.	28,498	39,253	5,490	17,836	4,372	5,796	101,245

## OTHER ENGINEERING—continued

## AUSTRALIA

Particulars	1957-58	1958-59	1959-60	1960-61	1961-62
Number of factories .. ..	2,223	2,220	2,318	2,439	2,457
Number of persons employed .. ..	23,370	23,467	25,780	27,997	27,897
Salaries and wages paid .. .. £'000	20,768	21,682	25,858	28,794	29,561
Value of power, fuel, etc., used .. .. £'000	699	806	1,018	1,048	1,111
Value of materials used .. .. £'000	23,780	26,059	31,110	35,141	35,958
Value of production .. .. £'000	34,274	34,829	42,264	47,369	47,192
Total value of output .. .. £'000	58,753	61,694	74,392	83,558	84,261
Value of land and buildings .. .. £'000	15,485	16,655	19,233	24,015	26,423
Value of plant and machinery .. .. £'000	10,746	12,201	13,782	16,441	17,590
Horse-power of engines ordinarily in use h.p.	76,500	76,109	89,374	93,019	101,245

11. Extracting and Refining of Non-ferrous Metals; Alloys.—The following table shows particulars of establishments engaged in metal extraction and ore reduction including secondary recovery of metals, but excluding blast furnaces engaged in production of pig iron from iron ore, for each State during 1961-62 and for Australia for a series of years.

EXTRACTING AND REFINING OF NON-FERROUS METALS: ALLOYS  
1961-62

Particulars	N.S.W.	Vic.	Q'land	S. Aust.	W. Aust. (a)	Tas.	Aust.
Number of factories .. ..	29	19	5	3	3	3	62
Number of persons employed .. ..	1,627	289	1,095	(b)	13	(b)	7,974
Salaries and wages paid .. .. £'000	2,175	370	1,261	(b)	13	(b)	10,642
Value of power, fuel, etc., used .. .. £'000	974	57	1,075	(b)	4	(b)	5,281
Value of materials used .. .. £'000	16,130	4,606	26,478	(b)	45	(b)	71,691
Value of production .. .. £'000	4,106	970	2,438	(b)	28	(b)	21,714
Total value of output .. .. £'000	21,210	5,633	29,991	(b)	77	(b)	98,686
Value of land and buildings .. .. £'000	1,938	486	3,264	(b)	2	(b)	11,956
Value of plant and machinery .. .. £'000	7,973	232	7,204	(b)	11	(b)	31,950
Horse-power of engines ordinarily in use .. .. h.p.	17,597	933	14,559	(b)	264	(b)	94,081

## AUSTRALIA

Particulars	1957-58	1958-59	1959-60	1960-61	1961-62
Number of factories .. ..	63	68	71	69	62
Number of persons employed .. ..	7,254	7,269	7,438	7,545	7,974
Salaries and wages paid .. .. £'000	8,667	8,880	9,535	9,842	10,642
Value of power, fuel, etc., used .. .. £'000	4,413	4,724	4,833	4,703	5,281
Value of materials used .. .. £'000	58,120	61,060	64,376	74,673	71,691
Value of production .. .. £'000	18,138	18,129	20,502	21,984	21,714
Total value of output .. .. £'000	80,671	83,913	89,711	101,360	98,686
Value of land and buildings .. .. £'000	6,907	7,326	10,105	10,724	11,956
Value of plant and machinery .. .. £'000	15,262	15,764	21,495	23,918	31,950
Horse-power of engines ordinarily in use h.p.	76,070	76,680	86,776	90,216	94,081

(a) In Western Australia the majority of the plants are worked at the mines and are therefore not included. (b) Not available for publication; figures are included in the total for Australia.

12. Electrical Machinery, Cables and Apparatus.—The following table shows particulars of this industry for each State during 1961-62 and for Australia for a series of years.

## ELECTRICAL MACHINERY, CABLES AND APPARATUS

## 1961-62

Particulars	N.S.W.	Vic.	Q'land	S. Aust.	W. Aust.	Tas.	Aust.
Number of factories .. ..	647	382	72	131	102	15	1,349
Number of persons employed .. ..	32,432	14,844	2,235	2,063	1,061	283	52,918
Salaries and wages paid .. .. £'000	35,634	15,954	2,152	2,069	931	280	57,020
Value of power, fuel, etc., used .. .. £'000	1,796	863	73	55	31	17	2,835
Value of materials used .. .. £'000	69,139	33,790	4,845	3,183	1,346	434	112,737
Value of production .. .. £'000	57,535	26,608	3,509	3,224	1,585	556	93,017
Total value of output .. .. £'000	128,470	61,261	8,427	6,462	2,962	1,007	208,589
Value of land and buildings .. .. £'000	27,243	14,404	1,576	1,532	1,074	178	46,007
Value of plant and machinery .. .. £'000	16,636	8,923	1,118	588	373	90	27,728
Horse-power of engines ordinarily in use .. .. h.p.	74,674	40,321	8,063	2,406	2,436	426	128,326

## ELECTRICAL MACHINERY, CABLES AND APPARATUS—continued

## AUSTRALIA

Particulars	1957-58	1958-59	1959-60	1960-61	1961-62
Number of factories .. ..	1,132	1,213	1,360	1,339	1,349
Number of persons employed .. ..	46,394	50,069	53,089	54,072	52,918
Salaries and wages paid .. £'000	41,892	46,979	54,011	57,179	57,020
Value of power, fuel, etc., used .. £'000	2,155	2,493	2,685	2,821	2,835
Value of materials used .. £'000	84,212	94,964	108,712	110,680	112,737
Value of production .. .. £'000	69,589	76,808	90,199	93,897	93,017
Total value of output .. .. £'000	155,956	174,265	201,596	207,398	208,589
Value of land and buildings .. £'000	28,316	32,958	38,679	42,775	46,007
Value of plant and machinery .. £'000	20,046	23,627	27,602	26,830	27,728
Horse-power of engines ordinarily in use h.p.	98,679	111,980	118,299	122,609	128,326

13. Railway and Tramway Workshops (Government and Local Authority).—The railway and tramway workshops, which form an important part of Class IV., are owned chiefly by State governments and local authorities. *Workshops (sixteen in 1961-62) controlled by non-public bodies are not included in the figures below.*

TRAMCARS AND RAILWAY ROLLING STOCK(a)  
1961-62

Particulars	N.S.W.	Vic.	Q'land	S. Aust.	W. Aust.	Tas.	Aust.
Number of factories .. ..	34	22	30	13	19	4	122
Number of persons employed .. ..	12,962	7,206	7,491	3,871	3,326	610	35,466
Salaries and wages paid .. £'000	13,873	7,325	7,274	3,872	3,068	583	35,995
Value of power, fuel, etc., used .. £'000	447	206	176	123	107	26	1,085
Value of materials used .. £'000	5,037	5,998	3,249	2,999	1,996	345	19,624
Value of production .. .. £'000	16,548	9,474	8,482	4,719	3,690	772	43,685
Total value of output .. .. £'000	22,032	15,678	11,907	7,841	5,793	1,143	64,394
Value of land and buildings .. £'000	6,276	3,446	1,824	1,789	630	689	14,654
Value of plant and machinery .. £'000	10,957	1,574	1,492	2,424	932	320	17,699
Horse-power of engines ordinarily in use .. .. h.p.	41,294	23,964	20,404	15,166	11,487	3,101	115,416

## AUSTRALIA

Particulars	1957-58	1958-59	1959-60	1960-61	1961-62
Number of factories .. ..	124	139	129	126	122
Number of persons employed .. ..	38,079	37,993	36,746	35,323	35,466
Salaries and wages paid .. £'000	32,946	33,599	34,208	34,795	35,995
Value of power, fuel, etc., used .. £'000	1,083	1,080	1,112	1,097	1,085
Value of materials used .. .. £'000	20,050	19,563	19,414	19,390	19,624
Value of production .. .. £'000	40,685	41,557	41,473	42,889	43,685
Total value of output .. .. £'000	61,818	62,200	61,999	63,376	64,394
Value of land and buildings .. .. £'000	11,775	12,374	12,761	13,681	14,654
Value of plant and machinery .. .. £'000	15,234	16,547	17,174	17,657	17,699
Horse-power of engines ordinarily in use h.p.	114,805	115,162	116,443	116,063	115,416

(a) Government and local authority only.

14. Motor Vehicles.—The industries catering for the motor trade are included in Class IV., Industrial Metals, Machines and Conveyances. In the following table, a summary is given of the principal statistics for 1961-62 for each branch of industry associated with the motor trade of Australia.

MOTOR VEHICLES: CONSTRUCTION, ASSEMBLY, REPAIRS, ETC., AUSTRALIA  
1961-62

Particulars	Construction and assembly	Repairs	Motor bodies (a)	Motor accessories	Total
Number of factories .. ..	49	10,635	2,151	300	13,135
Number of persons employed .. ..	18,422	62,786	27,324	12,273	120,805
Salaries and wages paid .. £'000	22,510	54,204	29,544	13,280	119,538
Value of power, fuel, etc., used .. £'000	1,934	1,787	1,183	959	5,863
Value of materials used .. .. £'000	42,280	58,127	57,695	19,878	177,980
Value of production .. .. £'000	40,990	85,049	43,962	24,570	194,571
Total value of output .. .. £'000	85,204	144,963	102,840	45,407	378,414
Value of land and buildings .. .. £'000	26,322	79,055	26,669	12,368	144,414
Value of plant and machinery .. .. £'000	20,607	14,730	18,706	14,348	68,391
Horse-power of engines ordinarily in use h.p.	77,377	75,248	74,721	48,947	276,293

(a) Includes motor body repairing, panel beating, duco spraying, etc.

In the next table, similar details are shown, on a State basis for 1961-62 and for Australia for a series of years, for these industries combined.

### MOTOR VEHICLES: CONSTRUCTION, ASSEMBLY, REPAIRS, ETC.

1961-62

Particulars	N.S.W.	Vic.	Q'land	S. Aust.	W. Aust.	Tas.	Aust.
Number of factories .. ..	5,387	3,200	1,495	1,481	1,187	385	13,135
Number of persons employed ..	39,996	42,553	10,228	18,179	7,365	2,484	120,805
Salaries and wages paid .. £'000	38,870	44,381	8,170	19,761	6,258	2,098	119,538
Value of power, fuel, etc., used .. £'000	1,804	2,665	276	822	226	70	5,863
Value of materials used .. £'000	71,938	52,798	9,974	30,967	9,993	2,310	177,980
Value of production .. £'000	66,131	71,289	15,569	27,152	10,638	3,792	194,571
Total value of output .. £'000	139,873	126,752	25,819	58,941	20,857	6,172	378,414
Value of land and buildings .. £'000	51,039	58,397	8,492	16,802	6,847	2,837	144,414
Value of plant and machinery .. £'000	17,769	33,240	2,456	12,309	1,962	655	68,391
Horse-power of engines ordinarily in use .. h.p.	77,618	106,397	14,811	58,821	15,245	3,401	276,293

### AUSTRALIA

Particulars	1957-58	1958-59	1959-60	1960-61	1961-62
	Number of factories .. ..	10,909	11,354	12,089	12,757
Number of persons employed ..	110,380	113,200	120,231	126,654	120,805
Salaries and wages paid .. £'000	91,886	97,078	113,849	123,607	119,538
Value of power, fuel, etc., used .. £'000	4,250	4,603	5,123	5,879	5,863
Value of materials used .. £'000	143,724	149,577	175,927	191,170	177,980
Value of production .. £'000	148,383	161,569	182,260	195,017	194,571
Total value of output .. £'000	296,357	315,749	363,310	392,066	378,414
Value of land and buildings .. £'000	89,561	99,734	113,762	128,005	144,414
Value of plant and machinery .. £'000	46,630	47,742	50,308	64,735	68,391
Horse-power of engines ordinarily in use h.p.	211,264	223,901	228,410	266,266	276,293

15. Agricultural Machines and Implements.—The following table shows details of establishments classified as agricultural implement works in each State for 1961-62 and for Australia for a series of years.

### AGRICULTURAL MACHINES AND IMPLEMENTS

1961-62

Particulars	N.S.W.	Vic.	Q'land	S. Aust.	W. Aust.	Tas.	Aust.
Number of factories .. ..	175	125	96	57	44	..	497
Number of persons employed ..	1,790	5,569	1,807	1,764	387	..	11,317
Salaries and wages paid .. £'000	1,814	5,906	1,628	1,741	361	..	11,450
Value of power, fuel, etc., used .. £'000	74	472	96	113	13	..	768
Value of materials used .. £'000	2,282	10,736	2,038	2,587	601	..	18,244
Value of production .. £'000	2,886	8,555	2,776	3,320	625	..	18,162
Total value of output .. £'000	5,242	19,763	4,910	6,020	1,239	..	37,174
Value of land and buildings .. £'000	2,242	4,715	1,252	1,000	378	..	9,587
Value of plant and machinery .. £'000	673	3,093	786	745	145	..	5,442
Horse-power of engines ordinarily in use .. h.p.	5,345	20,199	7,639	6,577	1,579	..	41,339

### AUSTRALIA

Particulars	1957-58	1958-59	1959-60	1960-61	1961-62
	Number of factories .. ..	370	358	404	450
Number of persons employed ..	10,449	10,727	11,359	11,307	11,317
Salaries and wages paid .. £'000	9,534	10,178	11,316	11,436	11,450
Value of power, fuel, etc., used .. £'000	638	674	722	737	768
Value of materials used .. £'000	13,438	14,162	17,607	17,324	18,244
Value of production .. £'000	15,599	15,426	16,847	16,870	18,162
Total value of output .. £'000	29,675	30,262	35,176	34,931	37,174
Value of land and buildings .. £'000	6,620	6,666	6,857	8,219	9,587
Value of plant and machinery .. £'000	4,537	4,418	4,725	5,245	5,442
Horse-power of engines ordinarily in use h.p.	39,652	39,201	42,922	39,648	41,339

16. **Wireless and Amplifying Apparatus.**—This industry is confined mainly to New South Wales, Victoria and South Australia.

## WIRELESS AND AMPLIFYING APPARATUS: AUSTRALIA

Particulars	1957-58	1958-59	1959-60	1960-61	1961-62
Number of factories .. .. .	211	257	289	301	327
Number of persons employed .. .. .	16,002	16,482	19,559	17,273	14,707
Salaries and wages paid .. .. .	£'000 13,264	14,264	17,644	17,092	14,602
Value of power, fuel, etc., used .. .. .	£'000 479	550	621	648	585
Value of materials used .. .. .	£'000 36,756	39,255	50,129	40,805	35,995
Value of production .. .. .	£'000 20,725	23,431	30,304	24,958	23,587
Total value of output .. .. .	£'000 57,960	63,236	81,054	66,411	60,167
Value of land and buildings .. .. .	£'000 6,374	7,897	8,941	10,479	11,564
Value of plant and machinery .. .. .	£'000 4,250	5,018	5,744	6,468	6,446
Horse-power of engines ordinarily in use h.p.	13,506	12,952	14,302	14,856	15,353

17. **Cotton.**—(i) *General.* Cotton has been grown in Australia since 1860, but never on a very large scale, and production has shown marked fluctuations over the long term. The growing of cotton, which is confined mainly to Queensland, is treated in some detail in Chapter XXIII. Rural Industry. The ginning and marketing of cotton is controlled by the Queensland Cotton Board which operates ginneries and processes by-products. The production of raw cotton is insufficient for local factory requirements and is supplemented by imports from overseas, chiefly (in 1962-63) from the United States of America, Mexico, Brazil and Columbia.

(ii) *Spinning and Weaving.* The number of establishments engaged in cotton spinning and weaving in Australia and other particulars of the industry are shown in the following table for the years 1957-58 to 1961-62.

## COTTON SPINNING AND WEAVING: AUSTRALIA

Particulars	1957-58	1958-59	1959-60	1960-61	1961-62
Number of factories .. .. .	97	97	92	88	88
Number of persons employed .. .. .	9,879	9,770	9,780	9,121	8,980
Salaries and wages paid .. .. .	£'000 8,268	8,116	8,853	8,122	8,245
Value of power, fuel, etc., used .. .. .	£'000 958	988	997	958	1,033
Value of materials used .. .. .	£'000 24,025	19,403	20,631	18,336	19,161
Value of production .. .. .	£'000 15,622	14,751	16,224	15,169	14,827
Total value of output .. .. .	£'000 40,605	35,142	37,852	34,463	35,021
Value of land and buildings .. .. .	£'000 7,179	10,625	9,706	10,392	12,909
Value of plant and machinery .. .. .	£'000 6,702	9,949	9,414	10,105	10,805
Horse-power of engines ordinarily in use h.p.	35,880	38,779	37,240	36,193	40,592

18. **Wool Carding, Spinning and Weaving.**—Details for each State for 1961-62 and for Australia for a series of years are shown in the following table.

WOOL CARDING, SPINNING AND WEAVING  
1961-62

Particulars	N.S.W.	Vic.	Q'land	S. Aust.	W. Aust.	Tas.	Aust.
Number of factories .. .. .	39	79	4	5	3	4	134
Number of persons employed .. .. .	5,305	10,441	960	(a)	(a)	2,280	20,102
Salaries and wages paid .. .. .	£'000 4,688	8,962	671	(a)	(a)	1,897	17,081
Value of power, fuel, etc., used .. .. .	£'000 409	719	52	(a)	(a)	145	1,456
Value of materials used .. .. .	£'000 10,671	23,785	1,385	(a)	(a)	4,024	43,122
Value of production .. .. .	£'000 8,147	12,930	931	(a)	(a)	3,170	26,594
Total value of output .. .. .	£'000 19,227	37,484	2,368	(a)	(a)	7,339	71,172
Value of land and buildings .. .. .	£'000 3,135	6,410	291	(a)	(a)	639	10,911
Value of plant and machinery .. .. .	£'000 4,169	6,802	306	(a)	(a)	1,417	13,235
Horse-power of engines ordinarily in use h.p.	16,922	40,236	3,290	(a)	(a)	6,771	70,610

(a) Not available for publication; figures are included in the total for Australia.



## WOOL CARDING, SPINNING AND WEAVING—continued

## AUSTRALIA

Particulars	1957-58	1958-59	1959-60	1960-61	1961-62
Number of factories .. ..	146	141	134	135	134
Number of persons employed .. ..	22,386	20,809	22,433	21,400	20,102
Salaries and wages paid .. .. £'000	16,380	15,714	18,052	17,372	17,081
Value of power, fuel, etc., used .. .. £'000	1,463	1,445	1,563	1,484	1,456
Value of materials used .. .. £'000	46,012	37,252	47,440	40,629	43,122
Value of production .. .. £'000	25,737	26,458	29,131	28,119	26,594
Total value of output .. .. £'000	73,212	65,155	78,134	70,232	71,172
Value of land and buildings .. .. £'000	9,364	10,519	10,625	10,964	10,911
Value of plant and machinery .. .. £'000	11,641	12,082	12,599	12,552	13,235
Horse-power of engines ordinarily in use h.p.	70,433	72,301	70,811	69,428	70,610

19. Hosiery and Other Knitted Goods.—Details for each State for 1961-62 and for Australia for a series of years are shown in the following table.

HOSIERY AND OTHER KNITTED GOODS  
1961-62

Particulars	N.S.W.	Vic.	Q'land	S. Aust.	W. Aust.	Tas.	Aust.
Number of factories .. ..	174	462	4	9	132	3	658
Number of persons employed .. ..	6,053	16,486	529	126	132	77	23,403
Salaries and wages paid .. .. £'000	4,750	13,142	383	70	92	58	18,495
Value of power, fuel, etc., used .. .. £'000	195	578	12	3	4	2	794
Value of materials used .. .. £'000	11,094	29,376	813	218	189	83	41,773
Value of production .. .. £'000	9,350	25,633	563	164	130	108	35,948
Total value of output .. .. £'000	20,639	55,587	1,388	385	323	193	78,515
Value of land and buildings .. .. £'000	3,639	11,269	195	43	35	48	15,229
Value of plant and machinery .. .. £'000	2,500	7,826	173	39	43	29	10,610
Horse-power of engines ordinarily in use .. .. h.p.	5,199	17,003	581	174	172	121	23,250

## AUSTRALIA

Particulars	1957-58	1958-59	1959-60	1960-61	1961-62
Number of factories .. ..	657	663	701	687	658
Number of persons employed .. ..	22,939	22,851	24,414	24,741	23,403
Salaries and wages paid .. .. £'000	16,124	16,421	18,791	19,101	18,495
Value of power, fuel, etc., used .. .. £'000	770	787	798	810	794
Value of materials used .. .. £'000	38,002	34,701	41,479	42,228	41,773
Value of production .. .. £'000	28,615	31,325	34,629	35,521	35,948
Total value of output .. .. £'000	67,387	66,813	76,906	78,559	78,515
Value of land and buildings .. .. £'000	10,910	12,144	12,962	14,606	15,229
Value of plant and machinery .. .. £'000	8,539	9,353	9,171	9,967	10,610
Horse-power of engines ordinarily in use h.p.	21,858	23,290	22,019	22,738	23,250

20. Rope and Cordage.—Particulars of factories manufacturing rope and cordage are shown in the following table for Australia for each year, 1957-58 to 1961-62. Most of the production takes place in New South Wales and Victoria, although there were factories in 1961-62 in all States except Tasmania.

## ROPE AND CORDAGE: AUSTRALIA

Particulars	1957-58	1958-59	1959-60	1960-61	1961-62
Number of factories .. ..	28	29	28	27	26
Number of persons employed .. ..	2,192	2,239	2,387	2,335	2,146
Salaries and wages paid .. .. £'000	1,830	1,995	2,285	2,272	2,189
Value of power, fuel, etc., used .. .. £'000	120	133	158	171	173
Value of materials used .. .. £'000	3,177	3,790	4,167	5,121	4,240
Value of production .. .. £'000	3,256	4,065	4,407	4,257	4,122
Total value of output .. .. £'000	6,533	7,988	8,732	9,549	8,535
Value of land and buildings .. .. £'000	2,405	2,447	2,625	2,629	2,701
Value of plant and machinery .. .. £'000	1,369	1,441	1,558	1,694	1,718
Horse-power of engines ordinarily in use h.p.	13,530	13,935	14,057	15,015	15,153

21. Tanning, Currying and Leather Dressing.—The following table shows particulars of the tanning industry in each State for the year 1961-62 and for Australia for a series of years.

## TANNING, CURRYING AND LEATHER DRESSING

1961-62

Particulars	N.S.W.	Vic.	Q'land	S. Aust.	W. Aust.	Tas.	Aust.
Number of factories .. ..	53	30	12	8	4	1	108
Number of persons employed ..	1,764	1,449	587	229	(a)	(a)	4,159
Salaries and wages paid .. £'000	2,047	1,556	613	267	(a)	(a)	4,612
Value of power, fuel, etc., used .. £'000	208	180	61	28	(a)	(a)	488
Value of materials used .. £'000	6,306	4,516	2,290	791	(a)	(a)	14,281
Value of production .. £'000	3,248	2,386	1,111	433	(a)	(a)	7,392
Total value of output .. £'000	9,762	7,082	3,462	1,252	(a)	(a)	22,161
Value of land and buildings .. £'000	1,575	1,645	135	111	(a)	(a)	3,537
Value of plant and machinery .. £'000	918	808	276	168	(a)	(a)	2,241
Horse-power of engines ordinarily in use .. .. h.p.	12,843	10,531	4,729	1,944	(a)	(a)	31,278

(a) Not available for publication; figures are included in the total for Australia.

## AUSTRALIA

Particulars	1957-58	1958-59	1959-60	1960-61	1961-62
Number of factories .. ..	124	123	118	112	108
Number of persons employed ..	4,708	4,617	4,435	4,245	4,159
Salaries and wages paid .. £'000	4,413	4,510	4,612	4,575	4,612
Value of power, fuel, etc., used .. £'000	470	490	484	484	488
Value of materials used .. £'000	11,938	12,635	15,766	14,421	14,281
Value of production .. £'000	6,214	6,919	6,967	6,748	7,392
Total value of output .. £'000	18,622	20,044	23,217	21,653	22,161
Value of land and buildings .. £'000	2,341	2,535	3,399	3,418	3,537
Value of plant and machinery .. £'000	2,154	2,223	2,152	2,230	2,241
Horse-power of engines ordinarily in use h.p.	32,378	30,749	33,516	31,516	31,278

22. Leather Goods (including Saddlery and Belting).—Particulars of the leather goods industry in each State for the year 1961-62 and for Australia for a series of years are shown in the following table.

## LEATHER GOODS (INCLUDING SADDLERY AND BELTING)

1961-62

Particulars	N.S.W.	Vic.	Q'land	S. Aust.	W. Aust.	Tas.	Aust.
Number of factories .. ..	196	132	23	23	14	4	392
Number of persons employed ..	2,274	1,395	312	185	135	14	4,315
Salaries and wages paid .. £'000	1,779	1,060	222	121	86	8	3,276
Value of power, fuel, etc., used .. £'000	31	27	3	3	2	(a)	66
Value of materials used .. £'000	3,298	2,000	341	221	160	12	6,032
Value of production .. £'000	2,922	1,994	390	201	152	20	5,679
Total value of output .. £'000	6,251	4,021	734	425	314	32	11,777
Value of land and buildings .. £'000	1,633	1,171	128	113	91	6	3,192
Value of plant and machinery .. £'000	382	368	42	37	16	1	846
Horse-power of engines ordinarily in use .. .. h.p.	1,258	1,320	180	215	166	16	3,155

(a) Under £500.

## AUSTRALIA

Particulars	1957-58	1958-59	1959-60	1960-61	1961-62
Number of factories .. ..	450	430	433	418	392
Number of persons employed ..	4,722	4,727	4,873	4,658	4,315
Salaries and wages paid .. £'000	3,051	3,140	3,471	3,419	3,276
Value of power, fuel, etc., used .. £'000	55	59	66	66	66
Value of materials used .. £'000	5,212	5,670	6,607	6,504	6,032
Value of production .. £'000	5,099	5,280	6,063	5,878	5,679
Total value of output .. £'000	10,366	11,009	12,736	12,448	11,777
Value of land and buildings .. £'000	2,178	2,351	2,821	3,084	3,192
Value of plant and machinery .. £'000	572	607	647	834	846
Horse-power of engines ordinarily in use h.p.	3,091	2,738	3,769	3,678	3,155

23. Tailoring and Ready-made Clothing.—Statistics showing the distribution of this industry among the States in 1961–62 and for Australia for a series of years are shown in the following table.

## TAILORING AND READY-MADE CLOTHING

1961–62

Particulars	N.S.W.	Vic.	Q'land	S. Aust.	W. Aust.	Tas.	Aust.
Number of factories .. .. .	957	545	105	105	111	16	1,839
Number of persons employed .. .. .	18,337	10,411	1,896	1,095	597	160	32,496
Salaries and wages paid .. .. . £'000	13,052	7,916	1,026	661	300	95	23,050
Value of power, fuel, etc., used .. .. . £'000	276	168	24	21	9	2	500
Value of materials used .. .. . £'000	25,218	13,309	1,294	731	464	69	41,085
Value of production .. .. . £'000	21,560	12,730	1,622	1,006	535	132	37,585
Total value of output .. .. . £'000	47,054	26,207	2,940	1,758	1,008	203	79,170
Value of land and buildings .. .. . £'000	8,510	5,778	603	808	392	98	16,189
Value of plant and machinery .. .. . £'000	1,824	1,305	145	116	49	12	3,451
Horse-power of engines ordinarily in use .. .. . h.p.	7,156	4,027	705	451	230	49	12,618

## AUSTRALIA

Particulars	1957–58	1958–59	1959–60	1960–61	1961–62
Number of factories .. .. .	1,914	1,841	1,860	1,871	1,839
Number of persons employed .. .. .	31,457	31,406	33,170	33,890	32,496
Salaries and wages paid .. .. . £'000	19,337	19,533	22,133	23,542	23,050
Value of power, fuel, etc., used .. .. . £'000	422	440	467	495	500
Value of materials used .. .. . £'000	36,680	36,253	40,791	42,674	41,085
Value of production .. .. . £'000	31,117	31,371	35,166	36,970	37,585
Total value of output .. .. . £'000	68,219	68,064	76,424	80,139	79,170
Value of land and buildings .. .. . £'000	11,014	11,948	13,287	15,383	16,189
Value of plant and machinery .. .. . £'000	2,913	3,063	3,147	3,446	3,451
Horse-power of engines ordinarily in use .. .. . h.p.	9,671	10,143	10,899	11,820	12,618

24. Dressmaking and Millinery Establishments.—Particulars of dressmaking and millinery establishments in the States for 1961–62 and in Australia for the years 1957–58 to 1961–62 are shown in the following table.

## DRESSMAKING AND MILLINERY

1961–62

Particulars	N.S.W.	Vic.	Q'land	S. Aust.	W. Aust.	Tas.	Aust.
Number of factories .. .. .	385	552	72	103	67	4	1,183
Number of persons employed .. .. .	2,511	8,896	1,503	878	636	42	14,466
Salaries and wages paid .. .. . £'000	1,601	6,233	826	452	335	24	9,471
Value of power, fuel, etc., used .. .. . £'000	39	122	16	11	7	1	196
Value of materials used .. .. . £'000	2,216	7,826	1,102	486	372	36	12,038
Value of production .. .. . £'000	2,836	9,800	1,369	633	496	38	15,172
Total value of output .. .. . £'000	5,091	17,748	2,487	1,130	875	75	27,406
Value of land and buildings .. .. . £'000	1,828	5,570	541	433	278	11	8,661
Value of plant and machinery .. .. . £'000	185	728	77	49	40	4	1,083
Horse-power of engines ordinarily in use .. .. . h.p.	736	2,725	450	355	266	11	4,543

## AUSTRALIA

Particulars	1957–58	1958–59	1959–60	1960–61	1961–62
Number of factories .. .. .	1,295	1,249	1,228	1,194	1,183
Number of persons employed .. .. .	15,668	15,048	15,021	14,403	14,466
Salaries and wages paid .. .. . £'000	8,859	8,599	9,205	9,191	9,471
Value of power, fuel, etc., used .. .. . £'000	184	184	190	190	196
Value of materials used .. .. . £'000	11,999	11,272	11,758	11,666	12,038
Value of production .. .. . £'000	14,220	13,766	14,764	15,063	15,172
Total value of output .. .. . £'000	26,403	25,222	26,712	26,919	27,406
Value of land and buildings .. .. . £'000	6,693	6,937	7,623	8,277	8,661
Value of plant and machinery .. .. . £'000	1,246	1,171	1,114	1,085	1,083
Horse-power of engines ordinarily in use .. .. . h.p.	4,558	5,159	4,880	4,398	4,543

25. Shirts, Collars and Underclothing.—Particulars of this industry are shown below for each State for 1961-62 and for Australia for a series of years.

## SHIRTS, COLLARS AND UNDERCLOTHING

1961-62

Particulars	N.S.W.	Vic.	Q'land	S. Aust.	W. Aust.	Tas.	Aust.
Number of factories .. ..	148	139	21	30	14	1	353
Number of persons employed .. ..	5,049	5,192	996	508	(a)	(a)	12,276
Salaries and wages paid .. £'000	3,474	3,686	543	256	(a)	(a)	8,242
Value of power, fuel, etc., used £'000	74	64	8	5	(a)	(a)	156
Value of materials used .. £'000	7,789	6,766	462	271	(a)	(a)	15,638
Value of production .. £'000	5,185	6,603	702	377	(a)	(a)	13,276
Total value of output .. £'000	13,048	13,433	1,172	653	(a)	(a)	29,070
Value of land and buildings £'000	2,092	1,962	177	182	(a)	(a)	4,567
Value of plant and machinery £'000	604	564	80	51	(a)	(a)	1,344
Horse-power of engines ordinarily in use .. .. h.p.	2,024	2,746	299	263	(a)	(a)	5,529

(a) Not available for publication; figures are included in the total for Australia.

## AUSTRALIA

Particulars	1957-58	1958-59	1959-60	1960-61	1961-62
Number of factories .. ..	384	394	376	368	353
Number of persons employed .. ..	13,038	13,589	12,891	12,864	12,276
Salaries and wages paid .. £'000	7,718	8,223	8,326	8,424	8,242
Value of power, fuel, etc., used .. £'000	134	147	137	148	156
Value of materials used .. £'000	16,595	16,410	15,823	15,795	15,638
Value of production .. .. £'000	11,945	13,271	13,572	13,360	13,276
Total value of output .. .. £'000	28,674	29,828	29,532	29,303	29,070
Value of land and buildings .. £'000	3,587	3,924	4,050	4,445	4,567
Value of plant and machinery .. £'000	1,233	1,317	1,206	1,334	1,344
Horse-power of engines ordinarily in use h.p.	5,064	5,357	5,090	5,454	5,529

26. Boots and Shoes.—The following tables refer to boot and shoe factories as distinct from those devoted to repairing, except in Tasmania, where it has been necessary to include details of boot and shoe repairing, in order to avoid disclosure of confidential information for that State. Factories engaged in the manufacture of sand-shoes, goloshes and gum, etc. boots of rubber are not included here, being classified under Rubber Goods, see para. 43, page 207.

## BOOTS AND SHOES

1961-62

Particulars	N.S.W.	Vic.	Q'land	S. Aust.	W. Aust.	Tas.(a)	Aust.
Number of factories .. ..	150	201	24	15	13	44	447
Number of persons employed .. ..	5,908	11,510	934	1,074	502	156	20,084
Salaries and wages paid .. £'000	4,899	9,694	712	968	352	93	16,718
Value of power, fuel, etc., used £'000	99	190	11	16	8	3	327
Value of materials used .. £'000	8,322	18,309	1,056	1,588	564	157	29,996
Value of production .. .. £'000	7,795	15,944	975	1,438	510	184	26,846
Total value of output .. .. £'000	16,216	34,443	2,042	3,942	1,082	344	57,169
Value of land and buildings £'000	2,043	3,840	138	367	158	167	6,713
Value of plant and machinery £'000	886	3,579	208	494	173	44	5,384
Horse-power of engines ordinarily in use .. .. h.p.	4,452	7,656	849	1,000	668	180	14,805

(a) Includes details of boot and shoe repairing.

BOOTS AND SHOES--*continued*

## AUSTRALIA

Particulars	1957-58	1958-59	1959-60	1960-61	1961-62
Number of factories .. ..	486	482	455	460	447
Number of persons employed .. ..	20,839	20,449	20,201	20,782	20,084
Salaries and wages paid .. .. £'000	15,090	15,148	16,101	16,913	16,718
Value of power, fuel, etc., used .. .. £'000	266	275	289	314	327
Value of materials used .. .. £'000	22,854	25,222	28,138	29,925	29,996
Value of production .. .. £'000	22,019	22,530	24,059	26,564	26,846
Total value of output .. .. £'000	45,139	48,027	52,486	56,803	57,169
Value of land and buildings .. .. £'000	4,567	5,254	5,551	6,158	6,713
Value of plant and machinery .. .. £'000	3,979	4,307	4,651	5,359	5,384
Horse-power of engines ordinarily in use h.p.	16,663	17,572	17,674	14,599	14,805

27. *Flour-milling.*—The following table shows particulars of the flour-milling industry in each State for the year 1961-62 and for Australia for a series of years.

## FLOUR-MILLING

## 1961-62

Particulars	N.S.W.	Vic.	Q'land	S. Aust.	W. Aust.	Tas.	Aust.
Number of factories .. ..	39	32	12	22	16	4	125
Number of persons employed .. ..	1,556	1,306	551	484	379	129	4,405
Salaries and wages paid .. .. £'000	1,917	1,426	572	536	377	136	4,964
Value of power, fuel, etc., used .. .. £'000	389	250	92	109	91	20	951
Value of materials used .. .. £'000	22,715	19,596	6,238	6,703	5,331	1,348	61,931
Value of production .. .. £'000	4,849	3,535	1,217	1,058	802	267	11,728
Total value of output .. .. £'000	27,953	23,381	7,547	7,870	6,224	1,635	74,610
Value of land and buildings .. .. £'000	2,705	2,149	806	607	664	183	7,114
Value of plant and machinery .. .. £'000	1,941	1,599	714	556	475	176	5,461
Horse-power of engines ordinarily in use .. .. h.p.	17,384	15,468	5,168	4,197	5,049	1,318	48,584

## AUSTRALIA

Particulars	1957-58	1958-59	1959-60	1960-61	1961-62
Number of factories .. ..	142	135	135	132	125
Number of persons employed .. ..	4,284	4,301	4,410	4,463	4,405
Salaries and wages paid .. .. £'000	4,190	4,281	4,657	4,917	4,964
Value of power, fuel, etc., used .. .. £'000	827	827	928	944	951
Value of materials used .. .. £'000	53,659	51,806	57,955	62,826	61,931
Value of production .. .. £'000	9,934	9,816	11,100	11,837	11,728
Total value of output .. .. £'000	64,420	62,449	69,983	75,607	74,610
Value of land and buildings .. .. £'000	6,322	6,711	6,982	7,359	7,114
Value of plant and machinery .. .. £'000	5,962	5,902	6,175	5,684	5,461
Horse-power of engines ordinarily in use h.p.	48,449	48,684	49,253	50,265	48,584

28. *Bakeries.*—Information regarding establishments in which the manufacture of bread, cakes, etc., was carried on is given in the table below. Since the details refer only to establishments coming within the definition of a factory as explained at the beginning of this chapter, the table does not give complete details of the industry, as a large number of bakeries, etc. not coming within the definition are excluded.

## BAKERIES (INCLUDING CAKES AND PASTRY)

1961-62

Particulars	N.S.W.	Vic.	Q'land	S. Aust.	W. Aust.	Tas.	Aust.
Number of factories .. ..	1,519	1,117	497	296	285	141	3,855
Number of persons employed .. ..	8,390	6,080	2,624	1,777	1,102	593	20,566
Salaries and wages paid .. .. £'000	6,935	4,739	1,716	1,442	712	406	15,950
Value of power, fuel, etc., used .. .. £'000	1,156	766	305	218	148	76	2,669
Value of materials used .. .. £'000	20,182	14,105	5,959	4,528	2,680	1,423	48,877
Value of production .. .. £'000	17,804	10,303	4,225	3,210	1,959	1,031	38,532
Total value of output .. .. £'000	39,142	25,174	10,489	7,956	4,787	2,530	90,078
Value of land and buildings .. .. £'000	12,009	9,053	2,015	2,357	1,209	895	27,538
Value of plant and machinery .. .. £'000	7,228	5,049	1,653	1,568	938	456	16,892
Horse-power of engines ordinarily in use .. .. h.p.	14,441	9,968	3,917	4,240	2,376	992	35,934

## AUSTRALIA

Particulars	1957-58 (a)	1958-59 (a)	1959-60 (a)	1960-61 (a)	1961-62
Number of factories .. ..	3,986	4,150	3,999	3,895	3,855
Number of persons employed .. ..	20,323	20,994	21,253	21,743	20,566
Salaries and wages paid .. .. £'000	13,110	13,729	14,936	16,446	15,950
Value of power, fuel, etc., used .. .. £'000	2,440	2,546	2,624	2,737	2,669
Value of materials used .. .. £'000	43,476	45,612	48,387	51,507	48,877
Value of production .. .. £'000	29,816	32,182	35,395	38,309	38,532
Total value of output .. .. £'000	75,732	80,340	86,406	92,553	90,078
Value of land and buildings .. .. £'000	20,205	22,220	23,950	26,280	27,538
Value of plant and machinery .. .. £'000	11,797	13,551	15,122	17,601	16,892
Horse-power of engines ordinarily in use .. h.p.	32,162	33,716	34,953	40,899	35,934

(a) Includes confectionery in Tasmania.

29. Sugar-mills and Sugar Refineries.—Sugar-cane is grown in New South Wales and Queensland, and particulars of area, yield, etc., are given in detail in the chapter Rural Industry. The products of the sugar-mill are raw sugar and molasses, the former being sent to the refineries in different parts of Australia for further treatment.

The following table shows the number of sugar-mills and the number of persons employed therein in New South Wales and Queensland for the years 1957-58 to 1961-62.

## SUGAR-MILLS

Particulars	1957-58	1958-59	1959-60	1960-61	1961-62
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## NEW SOUTH WALES

Number of factories .. ..	3	3	3	3	3
Number of persons employed .. ..	170	254	243	200	219

## QUEENSLAND

Number of factories .. ..	31	31	31	31	31
Number of persons employed .. ..	6,547	6,621	6,197	6,014	6,053

In 1961-62, there were two sugar refineries in Queensland and one each in New South Wales, Victoria, South Australia and Western Australia.

30. Confectionery.—Particulars for 1961–62 for each State and for Australia for a series of years are shown hereunder.

**CONFECTIONERY**  
1961–62

Particulars	N.S.W.	Vic.	Q'land	S. Aust.	W. Aust.	Tas.	Aust.
Number of factories .. ..	78	76	17	16	6	4	197
Number of persons employed ..	2,830	3,134	170	342	259	1,243	7,978
Salaries and wages paid .. £'000	2,583	2,742	100	225	196	1,202	7,138
Value of power, fuel, etc., used £'000	279	281	8	26	20	111	725
Value of materials used .. £'000	8,558	7,833	385	594	584	4,524	22,478
Value of production .. £'000	6,860	4,572	203	412	364	2,419	14,830
Total value of output .. £'000	15,697	12,686	596	1,032	968	7,054	38,033
Value of land and buildings £'000	3,339	2,541	127	363	98	1,166	7,634
Value of plant and machinery £'000	2,458	2,851	65	165	94	2,002	7,635
Horse-power of engines ordinarily in use .. .. h.p.	14,651	15,708	452	1,499	529	6,109	38,948

AUSTRALIA

Particulars	1957–58 (a)	1958–59 (a)	1959–60 (a)	1960–61 (a)	1961–62
Number of factories .. ..	217	209	214	209	197
Number of persons employed ..	6,789	6,704	6,765	6,890	7,978
Salaries and wages paid .. £'000	4,982	5,037	5,493	5,666	7,138
Value of power, fuel, etc., used £'000	529	536	555	591	725
Value of materials used .. £'000	16,052	16,842	17,674	17,883	22,478
Value of production .. £'000	9,771	10,586	11,139	12,391	14,830
Total value of output .. £'000	26,352	27,964	29,368	30,865	38,033
Value of land and buildings .. £'000	4,351	4,812	5,309	5,590	7,634
Value of plant and machinery .. £'000	3,891	4,572	4,745	5,428	7,635
Horse-power of engines ordinarily in use h.p.	29,256	30,504	30,571	32,006	38,948

(a) Excludes Tasmania.

31. Jam, Fruit and Vegetable Canning, Pickles, Sauces, Vinegar.—The following table shows particulars of factories included in this class for each State for 1961–62 and for Australia for a series of years.

**JAM, FRUIT AND VEGETABLE CANNING, PICKLES, SAUCES, VINEGAR**  
1961–62

Particulars	N.S.W.	Vic.	Q'land	S. Aust.	W. Aust.	Tas.	Aust.
Number of factories .. ..	50	55	18	21	9	19	172
Number of persons employed ..	2,825	5,314	1,491	1,043	158	1,261	12,092
Salaries and wages paid .. £'000	2,779	5,490	1,326	874	120	1,237	11,826
Value of power, fuel, etc., used £'000	325	569	91	78	9	129	1,201
Value of materials used .. £'000	11,722	24,507	7,000	3,526	486	3,576	50,817
Value of production .. £'000	7,137	13,767	2,460	2,059	267	2,212	27,902
Total value of output .. £'000	19,184	38,843	9,551	5,663	762	5,917	79,920
Value of land and buildings £'000	2,598	9,140	660	694	156	1,171	14,419
Value of plant and machinery £'000	2,405	7,003	512	1,038	111	1,167	12,236
Horse-power of engines ordinarily in use .. .. h.p.	11,309	22,197	2,931	2,762	437	6,216	45,852

AUSTRALIA

Particulars	1957–58	1958–59	1959–60	1960–61	1961–62
Number of factories .. ..	187	180	177	172	172
Number of persons employed ..	11,407	10,762	10,793	10,865	12,092
Salaries and wages paid .. £'000	9,752	9,186	9,894	10,077	11,826
Value of power, fuel, etc., used £'000	325	569	99	1,037	1,201
Value of materials used .. £'000	41,159	38,358	39,953	41,867	50,817
Value of production .. £'000	19,753	17,458	20,254	21,076	27,902
Total value of output .. £'000	61,890	56,765	61,199	63,980	79,920
Value of land and buildings .. £'000	10,621	11,630	12,095	13,149	14,419
Value of plant and machinery .. £'000	9,275	9,573	10,162	11,211	12,236
Horse-power of engines ordinarily in use h.p.	55,824	48,539	42,250	44,819	45,852

32. Bacon-curing.—The table hereunder shows particulars of factories engaged in bacon-curing in each State for 1961–62 and for Australia for a series of years.

**BACON-CURING**  
1961–62

Particulars	N.S.W.	Vic.	Q'land	S. Aust.	W. Aust.	Tas.	Aust.
Number of factories .. .. .	28	16	9	16	4	10	83
Number of persons employed .. .. .	950	776	1,736	513	339	168	4,482
Salaries and wages paid .. .. . £'000	1,057	804	1,519	546	319	171	4,416
Value of power, fuel, etc., used .. .. . £'000	114	92	144	78	41	24	493
Value of materials used .. .. . £'000	6,016	5,171	8,870	2,846	3,029	1,163	27,095
Value of production .. .. . £'000	2,125	1,435	4,036	890	634	405	9,525
Total value of output .. .. . £'000	8,255	6,698	13,050	3,814	3,704	1,592	37,113
Value of land and buildings .. .. . £'000	900	773	1,360	527	160	303	4,023
Value of plant and machinery .. .. . £'000	638	490	803	331	136	81	2,479
Horse-power of engines ordinarily in use .. .. . h.p.	3,296	3,097	6,505	2,594	1,303	742	17,537

**AUSTRALIA**

Particulars	1957–58	1958–59	1959–60	1960–61	1961–62
Number of factories .. .. .	80	80	83	83	83
Number of persons employed .. .. .	3,745	4,162	4,068	4,215	4,482
Salaries and wages paid .. .. . £'000	3,311	3,649	3,853	4,135	4,416
Value of power, fuel, etc., used .. .. . £'000	403	431	432	440	493
Value of materials used .. .. . £'000	22,147	25,037	28,218	29,045	27,095
Value of production .. .. . £'000	6,798	6,473	6,779	7,962	9,525
Total value of output .. .. . £'000	29,348	31,941	35,429	37,447	37,113
Value of land and buildings .. .. . £'000	2,667	3,104	3,388	3,963	4,023
Value of plant and machinery .. .. . £'000	1,654	1,806	2,050	2,244	2,479
Horse-power of engines ordinarily in use .. .. . h.p.	14,747	14,108	15,670	16,044	17,537

Bacon and ham and other pig products are dealt with more fully in Chapter XXIII. Rural Industry.

33. Butter, Cheese and Condensed and Processed Milk.—The following table shows particulars of butter, cheese and condensed and dried milk factories in each State for 1961–62 and for Australia for a series of years.

**BUTTER, CHEESE AND CONDENSED AND PROCESSED MILK**  
1961–62

Particulars	N.S.W.	Vic.	Q'land	S. Aust.	W. Aust.	Tas.	Aust.
Number of factories .. .. .	72	127	71	44	18	21	353
Number of persons employed .. .. .	2,562	5,681	1,675	662	339	398	11,317
Salaries and wages paid .. .. . £'000	2,666	6,513	1,612	699	308	440	12,238
Value of power, fuel, etc., used .. .. . £'000	749	1,568	339	119	74	83	2,932
Value of materials used .. .. . £'000	18,992	57,348	20,877	5,929	3,445	5,333	111,924
Value of production .. .. . £'000	4,988	14,134	3,398	1,435	588	1,250	25,793
Total value of output .. .. . £'000	24,729	73,050	24,614	7,483	4,107	6,666	140,649
Value of land and buildings .. .. . £'000	3,332	8,183	2,087	725	511	439	15,277
Value of plant and machinery .. .. . £'000	3,426	9,781	2,705	711	596	503	17,722
Horse-power of engines ordinarily in use .. .. . h.p.	31,743	45,501	24,886	5,554	4,012	2,947	114,643

**AUSTRALIA**

Particulars	1957–58	1958–59	1959–60	1960–61	1961–62
Number of factories .. .. .	366	363	363	361	353
Number of persons employed .. .. .	10,870	10,897	11,139	11,072	11,317
Salaries and wages paid .. .. . £'000	9,995	10,270	11,042	11,524	12,238
Value of power, fuel, etc., used .. .. . £'000	2,692	2,816	2,920	2,825	2,932
Value of materials used .. .. . £'000	94,566	101,929	112,307	106,607	111,924
Value of production .. .. . £'000	19,561	21,446	24,816	24,487	25,793
Total value of output .. .. . £'000	116,819	126,191	140,043	133,919	140,649
Value of land and buildings .. .. . £'000	12,558	13,518	14,022	14,702	15,277
Value of plant and machinery .. .. . £'000	15,254	15,819	16,169	17,046	17,722
Horse-power of engines ordinarily in use .. .. . h.p.	109,647	107,880	111,149	114,392	114,643

The butter, cheese and condensed milk industries are dealt with more fully in Chapter XXIII. Rural Industry.



34. **Meat and Fish Preserving.**—The industries included in this group are engaged chiefly in the freezing and preserving of meat. Works have been established at the seaports for the purpose of handling beef, lamb and mutton for export, and insulated space for the carriage of chilled and frozen produce is provided by shipping companies trading between Australia and other parts of the world. In recent years, there has been considerable expansion in the canning of meat and fish.

## MEAT AND FISH PRESERVING

1961-62

Particulars	N.S.W.	Vic.	Q'land	S. Aust.	W. Aust.	Tas.	Aust.
Number of factories .. ..	10	13	32	18	67	9	149
Number of persons employed ..	479	643	6,095	299	1,816	159	9,491
Salaries and wages paid .. £'000	456	711	7,020	221	1,958	158	10,524
Value of power, fuel, etc., used .. £'000	73	130	861	35	197	16	1,312
Value of materials used .. £'000	2,248	4,011	49,622	1,872	8,359	699	66,811
Value of production .. £'000	1,050	2,024	11,749	496	3,254	270	18,843
Total value of output .. £'000	3,371	6,165	62,232	2,403	11,810	985	86,966
Value of land and buildings £'000	453	1,646	4,771	717	2,695	148	10,430
Value of plant and machinery £'000	443	1,181	3,628	174	1,531	124	7,081
Horse-power of engines ordinarily in use .. .. h.p.	2,655	3,378	30,994	795	10,862	569	49,253

## AUSTRALIA

Particulars	1957-58	1958-59	1959-60	1960-61	1961-62
Number of factories .. ..	114	115	128	143	149
Number of persons employed ..	8,878	10,142	9,326	9,031	9,491
Salaries and wages paid .. £'000	8,690	10,699	9,914	9,319	10,524
Value of power, fuel, etc., used .. £'000	1,128	1,292	1,244	1,199	1,312
Value of materials used .. £'000	45,695	61,816	65,116	62,686	66,811
Value of production .. £'000	13,723	15,354	14,195	15,386	18,843
Total value of output .. £'000	60,546	78,462	80,555	79,271	86,966
Value of land and buildings .. £'000	6,710	7,459	8,617	9,347	10,430
Value of plant and machinery .. £'000	4,594	5,261	5,579	6,756	7,081
Horse-power of engines ordinarily in use h.p.	36,956	38,994	39,390	44,731	49,253

Particulars of the quantities and values of beef, mutton and lamb preserved by cold process exported from Australia over a series of years will be found in Chapter XXIII. Rural Industry.

35. **Breweries.**—The following table gives particulars of breweries for Australia for each of the years 1957-58 to 1961-62. Since a separate return for each branch of their activities is not available from all breweries, the figures may include details of employment, wages, output, etc., not directly concerned with the brewing of beer, although associated with it. These extraneous activities include cooperage, malt works, aerated waters, etc.

## BREWERIES

AUSTRALIA

Particulars	1957-58	1958-59	1959-60	1960-61	1961-62
Number of factories .. ..	26	27	25	25	25
Number of persons employed ..	5,909	5,830	5,701	5,626	5,512
Salaries and wages paid .. £'000	6,228	6,232	6,438	6,654	6,878
Value of power, fuel, etc., used .. £'000	1,479	1,488	1,491	1,494	1,531
Value of materials used .. £'000	22,146	22,416	22,731	24,303	25,748
Value of production .. £'000	17,271	16,964	18,620	19,789	21,556
Total value of output(a) .. £'000	40,896	40,868	42,842	45,586	48,835
Value of land and buildings .. £'000	11,797	12,716	12,924	13,003	13,574
Value of plant and machinery .. £'000	15,510	15,727	15,426	14,848	15,625
Horse-power of engines ordinarily in use h.p.	44,869	46,525	48,396	48,490	50,083

(a) Excludes Excise Duty.

36. **Aerated Waters and Cordials.** The following table shows particulars of aerated water and cordial factories in each State for the year 1961-62 and for Australia for a series of years.

## AERATED WATERS AND CORDIALS

1961-62

Particulars	N.S.W.	Vic.	Q'land	S. Aust.	W. Aust.	Tas.	Aust.
Number of factories .. ..	183	97	152	49	41	13	535
Number of persons employed .. ..	1,821	1,132	893	617	311	186	4,960
Salaries and wages paid .. .. £'000	1,668	1,068	604	549	260	181	4,330
Value of power, fuel, etc., used .. .. £'000	152	98	66	40	26	22	404
Value of materials used .. .. £'000	5,005	3,055	1,822	1,445	870	574	12,771
Value of production .. .. £'000	4,687	3,165	1,941	1,147	609	444	11,993
Total value of output .. .. £'000	9,844	6,318	3,829	2,632	1,505	1,040	25,168
Value of land and buildings .. .. £'000	3,005	2,452	873	943	352	210	7,835
Value of plant and machinery .. .. £'000	1,926	1,727	683	758	344	263	5,701
Horse-power of engines ordinarily in use .. .. h.p.	6,484	2,980	2,605	2,428	1,290	563	16,350

## AUSTRALIA

Particulars	1957-58	1958-59	1959-60	1960-61	1961-62
Number of factories .. ..	562	559	552	548	535
Number of persons employed .. ..	4,954	4,877	5,021	5,275	4,960
Salaries and wages paid .. .. £'000	3,557	3,722	4,102	4,458	4,330
Value of power, fuel, etc., used .. .. £'000	351	367	406	410	404
Value of materials used .. .. £'000	10,503	11,328	12,765	13,400	12,771
Value of production .. .. £'000	9,365	10,024	11,355	11,658	11,993
Total value of output .. .. £'000	20,219	21,719	24,526	25,468	25,168
Value of land and buildings .. .. £'000	4,851	5,359	6,232	7,488	7,835
Value of plant and machinery .. .. £'000	3,601	3,874	4,516	5,162	5,701
Horse-power of engines ordinarily in use .. .. h.p.	14,947	14,988	15,799	16,363	16,350

37. **Wineries and Distilleries.**—The following table shows particulars of the operations of Wineries and Distilleries for each State during 1961-62 and for Australia for a series of years.

## WINERIES AND DISTILLERIES

1961-62

Particulars	N.S.W.	Vic.	Q'land	S. Aust.	W. Aust.	Tas.	Aust.
Number of factories .. ..	27	28	5	70	23	..	153
Number of persons employed .. ..	225	319	149	1,348	70	..	2,111
Salaries and wages paid .. .. £'000	284	307	167	1,268	42	..	2,068
Value of power, fuel, etc., used .. .. £'000	123	57	66	155	4	..	405
Value of materials used .. .. £'000	2,177	842	480	6,094	174	..	9,767
Value of production .. .. £'000	881	721	388	2,747	127	..	4,864
Total value of output .. .. £'000	3,181	1,620	934	8,996	305	..	15,036
Value of land and buildings .. .. £'000	537	489	172	1,766	77	..	3,041
Value of plant and machinery .. .. £'000	851	494	370	1,550	65	..	3,330
Horse-power of engines ordinarily in use .. .. h.p.	2,154	2,159	780	14,184	399	..	19,676

## AUSTRALIA

Particulars	1957-58	1958-59	1959-60	1960-61	1961-62
Number of factories .. ..	160	158	165	164	153
Number of persons employed .. ..	2,066	2,021	2,058	2,095	2,111
Salaries and wages paid .. .. £'000	1,800	1,827	1,890	2,017	2,068
Value of power, fuel, etc., used .. .. £'000	426	396	402	383	405
Value of materials used .. .. £'000	7,448	7,900	7,987	9,328	9,767
Value of production .. .. £'000	4,569	3,889	4,900	4,427	4,864
Total value of output .. .. £'000	12,443	12,185	13,289	14,138	15,036
Value of land and buildings .. .. £'000	2,458	2,588	2,759	3,081	3,041
Value of plant and machinery .. .. £'000	2,339	2,573	2,808	3,015	3,330
Horse-power of engines ordinarily in use .. .. h.p.	11,548	10,773	11,604	19,450	19,676

38. *Tobacco, Cigars and Cigarettes.*—Particulars of establishments in which the manufacture of tobacco, cigars or cigarettes was carried on during 1961–62 are shown below for each State and for Australia for a series of years. There were no such factories in South Australia or Tasmania.

**TOBACCO, CIGARS AND CIGARETTES**  
1961–62

Particulars	N.S.W.	Vic.	Q'land	W. Aust.	Aust.
Number of factories .. ..	5	7	5	1	18
Number of persons employed .. ..	2,601	2,173	(a)	(a)	4,914
Salaries and wages paid .. .. £'000	2,839	2,322	(a)	(a)	5,282
Value of power, fuel, etc., used .. .. £'000	108	116	(a)	(a)	234
Value of materials used .. .. £'000	19,689	18,791	(a)	(a)	38,568
Value of production .. .. £'000	9,799	9,358	(a)	(a)	19,491
Total value of output(b) .. .. £'000	29,596	28,265	(a)	(a)	58,293
Value of land and buildings .. .. £'000	1,130	2,675	(a)	(a)	4,037
Value of plant and machinery .. .. £'000	3,164	3,370	(a)	(a)	6,859
Horse-power of engines ordinarily in use h.p.	5,243	5,508	(a)	(a)	11,203

**AUSTRALIA**

Particulars	1957–58	1958–59	1959–60	1960–61	1961–62
Number of factories .. ..	27	22	21	20	18
Number of persons employed .. ..	4,754	4,779	5,046	5,178	4,914
Salaries and wages paid .. .. £'000	4,203	4,178	4,774	5,232	5,282
Value of power, fuel, etc., used .. .. £'000	145	160	176	225	234
Value of materials used .. .. £'000	35,408	35,775	36,578	40,716	38,568
Value of production .. .. £'000	11,177	13,451	16,889	18,378	19,491
Total value of output(b) .. .. £'000	46,730	49,386	53,643	59,319	58,293
Value of land and buildings .. .. £'000	2,962	2,700	3,620	3,551	4,037
Value of plant and machinery .. .. £'000	4,156	4,178	4,961	6,209	6,859
Horse-power of engines ordinarily in use h.p.	10,586	10,384	10,417	10,342	11,203

(a) Not available for publication; figures are included in the total for Australia.

(b) Excludes Excise Duty.

39. *Sawmills, etc.*—The most important industry in Class X. is sawmilling. Because of difficulties associated with the classifying of sawmills into forest and town mills, they have been combined in the following table, together with plywood and veneer mills. The figures exclude particulars of a small number of itinerant and travelling sawmills.

**SAWMILLS AND PLYWOOD AND VENEER MILLS**  
1961–62

Particulars	N.S.W.	Vic.	Q'land	S. Aust.	W. Aust.	Tas.	Aust.
Number of factories .. ..	891	467	594	84	220	329	2,585
Number of persons employed .. ..	9,983	6,387	6,994	2,378	3,956	2,684	32,382
Salaries and wages paid .. .. £'000	9,422	6,397	5,988	2,153	3,470	2,386	29,816
Value of power, fuel, etc., used .. .. £'000	832	500	462	239	320	245	2,598
Value of materials used .. .. £'000	25,379	15,590	11,178	7,350	6,209	5,971	71,677
Value of production .. .. £'000	17,071	11,005	9,815	4,239	6,871	4,492	53,493
Total value of output .. .. £'000	43,282	27,095	21,455	11,828	13,400	10,708	127,768
Value of land and buildings .. .. £'000	6,655	4,643	2,410	2,052	1,183	1,071	18,014
Value of plant and machinery .. .. £'000	6,351	3,520	3,749	3,150	1,613	1,839	20,222
Horse-power of engines ordinarily in use .. .. h.p.	126,501	78,565	95,969	33,322	42,889	39,838	417,084

**AUSTRALIA**

Particulars	1957–58	1958–59	1959–60	1960–61	1961–62
Number of factories .. ..	2,910	2,805	2,791	2,703	2,585
Number of persons employed .. ..	35,185	35,891	36,040	34,701	32,382
Salaries and wages paid .. .. £'000	27,932	29,478	31,172	31,593	29,816
Value of power, fuel, etc., used .. .. £'000	2,143	2,382	2,604	2,621	2,598
Value of materials used .. .. £'000	69,644	70,253	76,676	75,056	71,677
Value of production .. .. £'000	50,246	53,649	58,412	56,526	53,493
Total value of output .. .. £'000	122,033	126,284	137,692	134,203	127,768
Value of land and buildings .. .. £'000	13,924	14,545	16,656	18,548	18,014
Value of plant and machinery .. .. £'000	17,971	18,737	19,635	20,517	20,222
Horse-power of engines ordinarily in use h.p.	380,203	395,630	407,440	425,280	417,084

40. Cabinet and Furniture Making and Upholstery.—These industries constitute the principal manufactures in Class XI. The following table shows particulars for each State in 1961-62 and for Australia for a series of years.

**CABINET AND FURNITURE MAKING AND UPHOLSTERY**  
1961-62

Particulars	N.S.W.	Vic.	Q'land	S. Aust.	W. Aust.	Tas.	Aust.
Number of factories .. ..	555	476	205	172	152	57	1,617
Number of persons employed ..	6,011	4,277	1,884	1,584	1,007	369	15,132
Salaries and wages paid .. £'000	6,150	4,045	1,542	1,310	747	289	14,083
Value of power, fuel, etc., used .. £'000	174	94	40	35	19	6	368
Value of materials used .. £'000	11,896	7,175	3,136	2,351	1,568	429	26,555
Value of production .. £'000	9,852	6,705	2,428	2,252	1,330	481	23,048
Total value of output .. £'000	21,922	13,974	5,604	4,638	2,917	916	49,971
Value of land and buildings .. £'000	5,729	4,098	1,627	1,153	709	307	13,623
Value of plant and machinery .. £'000	1,320	829	387	354	206	62	3,158
Horse-power of engines ordinarily in use .. .. h.p.	17,562	11,713	6,144	5,711	3,547	1,323	46,000

AUSTRALIA

Particulars	1957-58	1958-59	1959-60	1960-61	1961-62
Number of factories .. ..	1,644	1,629	1,664	1,633	1,617
Number of persons employed ..	15,929	16,012	16,475	15,711	15,132
Salaries and wages paid .. £'000	12,462	12,963	14,187	14,218	14,083
Value of power, fuel, etc., used .. £'000	311	334	346	350	368
Value of materials used .. £'000	20,860	22,222	26,123	25,999	26,555
Value of production .. £'000	20,163	21,228	23,501	23,135	23,048
Total value of output .. £'000	41,334	43,784	49,970	49,484	49,971
Value of land and buildings .. £'000	9,069	10,457	11,618	12,719	13,623
Value of plant and machinery .. £'000	2,515	2,679	2,869	2,964	3,158
Horse-power of engines ordinarily in use h.p.	46,447	46,539	45,955	45,313	46,000

41. Printing Works.—The following table gives particulars of establishments engaged in general printing in each State for 1961-62 and for Australia for a series of years. These establishments include those engaged in lithographic printing, bookbinding, paper ruling and linotyping, and Government printing works.

**GOVERNMENT AND GENERAL PRINTING WORKS**  
1961-62

Particulars	N.S.W.	Vic.	Q'land	S. Aust.	W. Aust.	Tas.	Aust.
Number of factories .. ..	737	607	121	115	96	30	1,706
Number of persons employed ..	12,521	10,810	2,369	1,962	1,582	692	29,936
Salaries and wages paid .. £'000	13,653	11,306	2,092	1,837	1,348	676	30,912
Value of power, fuel, etc., used .. £'000	431	349	51	48	42	21	942
Value of materials used .. £'000	18,070	13,256	1,972	2,025	1,517	632	37,472
Value of production .. £'000	25,124	20,009	3,390	2,982	2,474	1,088	55,067
Total value of output .. £'000	43,625	33,614	5,413	5,055	4,033	1,741	93,481
Value of land and buildings .. £'000	13,421	11,425	1,141	1,493	1,544	658	29,682
Value of plant and machinery .. £'000	10,723	8,467	1,426	1,617	1,020	456	23,709
Horse-power of engines ordinarily in use .. .. h.p.	21,870	18,249	3,133	3,041	2,761	1,075	50,129

AUSTRALIA

Particulars	1957-58	1958-59	1959-60	1960-61	1961-62
Number of factories .. ..	1,431	1,518	1,573	1,641	1,706
Number of persons employed ..	25,916	26,827	27,744	29,080	29,936
Salaries and wages paid .. £'000	22,099	23,705	26,711	29,365	30,912
Value of power, fuel, etc., used .. £'000	675	729	797	893	942
Value of materials used .. £'000	29,809	32,420	35,175	38,249	37,472
Value of production .. £'000	38,068	41,036	46,567	51,123	55,067
Total value of output .. £'000	68,552	74,185	82,539	90,265	93,481
Value of land and buildings .. £'000	15,084	19,041	21,599	25,613	29,682
Value of plant and machinery .. £'000	15,705	17,535	19,351	21,889	23,709
Horse-power of engines ordinarily in use h.p.	37,963	40,751	43,561	47,269	50,129

The following table gives similar particulars in respect of establishments producing newspapers and periodicals.

## NEWSPAPERS AND PERIODICALS

1961-62

Particulars	N.S.W.	Vic.	Q'land	S. Aust.	W. Aust.	Tas.	Aust.
Number of factories .. ..	177	128	58	36	17	5	421
Number of persons employed ..	7,149	3,765	2,183	1,182	814	398	15,491
Salaries and wages paid .. £'000	8,700	4,563	2,650	1,467	1,001	493	18,874
Value of power, fuel, etc., used .. £'000	317	162	87	49	49	12	676
Value of materials used .. £'000	11,469	9,144	3,148	2,140	1,505	411	27,817
Value of production .. £'000	16,134	8,135	4,834	2,662	2,099	680	34,544
Total value of output .. £'000	27,920	17,441	8,069	4,851	3,653	1,103	63,037
Value of land and buildings .. £'000	8,547	3,272	1,535	2,112	857	295	16,618
Value of plant and machinery .. £'000	8,420	3,645	1,555	1,329	546	224	15,719
Horse-power of engines ordinarily in use .. .. h.p.	18,973	12,152	6,156	4,845	2,605	1,045	45,776

## AUSTRALIA

Particulars	1957-58	1958-59	1959-60	1960-61	1961-62
Number of factories .. ..	407	423	429	420	421
Number of persons employed ..	14,387	14,878	15,437	15,789	15,491
Salaries and wages paid .. £'000	13,997	15,291	17,056	19,005	18,874
Value of power, fuel, etc., used .. £'000	562	590	615	654	676
Value of materials used .. £'000	25,299	27,746	29,726	30,737	27,817
Value of production .. £'000	25,580	27,738	30,767	33,997	34,544
Total value of output .. £'000	51,441	56,074	61,108	65,388	63,037
Value of land and buildings .. £'000	12,112	13,739	15,193	16,016	16,618
Value of plant and machinery .. £'000	10,833	11,595	13,960	14,416	15,719
Horse-power of engines ordinarily in use h.p.	37,440	37,440	40,116	45,815	45,776

42. Paper Making.—Although the paper manufacturing industry has been established in Australia for many years, it was not until the manufacture of paper pulp from indigenous timber commenced in 1938-39 that any marked development occurred. The number of factories operating in 1961-62 comprised four in New South Wales, eleven in Victoria, two in Queensland, two in South Australia, one in Western Australia, and three in Tasmania. In Tasmania, newsprint, writing and printing papers are produced, and in the other States, wrappings, other papers and boards. Particulars for this industry are shown in the following table.

Mills producing pulp from eucalypt timber are operating in Victoria and Tasmania, while in South Australia pulp is being produced from locally-grown softwoods.

## PAPER MAKING, INCLUDING PULP MILLS: AUSTRALIA

Particulars	1957-58	1958-59	1959-60	1960-61	1961-62
Number of factories .. ..	18	18	20	22	23
Number of persons employed ..	8,088	8,406	8,775	8,822	8,147
Salaries and wages paid .. £'000	9,752	10,422	11,980	12,055	11,218
Value of power, fuel, etc., used .. £'000	3,131	3,341	3,906	4,200	4,109
Value of materials used .. £'000	22,903	25,025	26,601	27,924	26,505
Value of production .. £'000	23,910	25,817	28,326	27,658	26,456
Total value of output .. £'000	49,944	54,183	58,833	59,782	57,070
Value of land and buildings .. £'000	12,203	12,317	13,307	13,902	15,904
Value of plant and machinery .. £'000	21,835	22,482	27,018	33,377	33,735
Horse-power of engines ordinarily in use h.p.	174,557	179,364	189,774	216,539	215,927

43. Rubber Goods.—The following table shows particulars of this industry for each State during 1961-62 and for Australia for a series of years. Establishments engaged primarily in the retreading and repairing of tyres are excluded.

## RUBBER GOODS

1961-62

Particulars	N.S.W.	Vic.	Q'land	S. Aust.	W. Aust.	Tas.	Aust.
Number of factories .. ..	42	48	13	8	3	..	114
Number of persons employed .. ..	5,818	6,193	1,131	(a)	(a)	..	13,993
Salaries and wages paid .. .. £'000	6,791	6,879	1,020	(a)	(a)	..	15,719
Value of power, fuel, etc., used .. .. £'000	937	1,106	125	(a)	(a)	..	2,281
Value of materials used .. .. £'000	15,099	17,088	2,426	(a)	(a)	..	35,942
Value of production .. .. £'000	8,816	13,639	1,935	(a)	(a)	..	26,223
Total value of output .. .. £'000	24,852	31,833	4,486	(a)	(a)	..	64,446
Value of land and buildings .. .. £'000	2,995	5,165	620	(a)	(a)	..	9,490
Value of plant and machinery .. .. £'000	2,618	6,938	376	(a)	(a)	..	10,307
Horse-power of engines ordinarily in use .. .. h.p.	55,361	63,626	9,248	(a)	(a)	..	134,428

(a) Not available for publication; figures are included in the total for Australia.

## AUSTRALIA

Particulars	1957-58	1958-59	1959-60	1960-61	1961-62
Number of factories .. ..	118	122	118	116	114
Number of persons employed .. ..	15,017	15,227	15,620	15,416	13,993
Salaries and wages paid .. .. £'000	14,931	15,442	17,142	17,038	15,719
Value of power, fuel, etc., used .. .. £'000	2,131	2,205	2,318	2,382	2,281
Value of materials used .. .. £'000	36,044	36,339	43,382	42,038	35,942
Value of production .. .. £'000	24,782	27,108	26,072	28,026	26,223
Total value of output .. .. £'000	62,957	65,652	71,772	72,446	64,446
Value of land and buildings .. .. £'000	7,120	7,288	7,585	9,121	9,490
Value of plant and machinery .. .. £'000	7,839	7,632	9,543	10,265	10,307
Horse-power of engines ordinarily in use .. .. h.p.	120,602	126,901	128,393	131,947	134,428

44. Plastic Moulding and Products.—The following table shows particulars of this industry for each State for the year 1961-62 and for Australia for a series of years.

## PLASTIC MOULDING AND PRODUCTS

1961-62

Particulars	N.S.W.	Vic.	Q'land	S. Aust.	W. Aust.	Tas.	Aust.
Number of factories .. ..	200	165	14	26	15	1	421
Number of persons employed .. ..	4,461	5,415	153	329	(a)	(a)	10,496
Salaries and wages paid .. .. £'000	4,615	5,511	125	303	(a)	(a)	10,651
Value of power, fuel, etc., used .. .. £'000	436	487	7	28	(a)	(a)	966
Value of materials used .. .. £'000	9,410	13,778	228	554	(a)	(a)	24,260
Value of production .. .. £'000	9,061	10,901	249	507	(a)	(a)	20,917
Total value of output .. .. £'000	18,907	25,166	484	1,089	(a)	(a)	46,143
Value of land and buildings .. .. £'000	4,143	5,469	121	200	(a)	(a)	10,056
Value of plant and machinery .. .. £'000	4,510	5,645	111	190	(a)	(a)	10,605
Horse-power of engines ordinarily in use .. .. h.p.	19,910	25,277	411	1,016	(a)	(a)	47,083

(a) Not available for publication; figures are included in the total for Australia.

## AUSTRALIA

Particulars	1957-58	1958-59	1959-60	1960-61	1961-62
Number of factories .. ..	327	337	375	398	421
Number of persons employed .. ..	8,998	9,480	10,180	10,658	10,496
Salaries and wages paid .. .. £'000	7,823	8,774	10,160	10,753	10,651
Value of power, fuel, etc., used .. .. £'000	649	759	849	900	966
Value of materials used .. .. £'000	18,181	22,272	26,393	24,613	24,260
Value of production .. .. £'000	15,242	18,339	19,886	20,395	20,917
Total value of output .. .. £'000	34,072	41,370	47,128	45,908	46,143
Value of land and buildings .. .. £'000	5,425	6,081	7,806	8,778	10,056
Value of plant and machinery .. .. £'000	6,201	7,005	8,009	9,747	10,605
Horse-power of engines ordinarily in use .. .. h.p.	27,543	34,384	37,055	41,635	47,083

45. **Electric Light and Power Works.**—For further information on this subject see Chapter VII. Electric Power Generation and Distribution. Particulars of the industry for each State during the year 1961-62 and for Australia for a series of years are shown below.

## ELECTRIC LIGHT AND POWER WORKS

1961-62

Particulars	N.S.W.	Vic.	Q'land	S. Aust.	W. Aust.	Tas.	Aust.
Number of factories .. ..	55	41	52	34	89	14	285
Number of persons employed .. ..	4,382	3,541	1,648	(a)	1,052	(a)	12,441
Salaries and wages paid .. £'000	5,558	4,791	1,990	(a)	1,316	(a)	15,916
Value of power, fuel, etc., used £'000	14,877	11,903	7,134	(a)	3,622	(a)	41,680
Value of materials used .. £'000	1,952	767	1,466	(a)	402	(a)	5,287
Value of production .. .. £'000	38,167	16,508	6,936	(a)	4,467	(a)	76,579
Total value of output .. .. £'000	54,996	29,178	15,536	(a)	8,491	(a)	123,546
Value of land and buildings £'000	148,195	23,813	12,216	(a)	4,238	(a)	245,389
Value of plant and machinery £'000	92,143	92,713	42,569	(a)	15,774	(a)	291,537
Generators installed—kilowatt capacity .. .. '000 kW	3,166	1,661	797	(a)	374	(a)	7,215

## AUSTRALIA

Particulars	1957-58	1958-59	1959-60	1960-61	1961-62
Number of factories .. ..	319	305	304	290	285
Number of persons employed .. ..	12,833	13,124	12,810	12,298	12,441
Salaries and wages paid .. .. £'000	13,467	14,011	14,564	15,018	15,916
Value of power, fuel, etc., used .. £'000	40,261	39,383	40,756	42,367	41,680
Value of materials used .. .. £'000	4,740	4,744	4,839	4,976	5,287
Value of production .. .. £'000	55,514	63,422	68,582	72,964	76,579
Total value of output .. .. £'000	100,515	107,549	114,177	120,307	123,546
Value of land and buildings .. .. £'000	104,512	122,460	136,087	139,790	245,389
Value of plant and machinery .. .. £'000	213,926	235,844	259,899	278,007	291,537
Generators installed—kilowatt capacity .. .. '000 kW	4,881	5,531	5,953	6,665	7,215

(a) Not available for publication; figures are included in the total for Australia.

Particulars of the types of engines and generators installed in Electric Light and Power Works and their rated horse-power are given on page 152.

46. **Gas-works.**—The following table shows particulars of gas-works in each State for the year 1961-62 and for Australia for a series of years.

## GAS-WORKS

1961-62

Particulars	N.S.W.	Vic.	Q'land	S. Aust.	W. Aust.	Tas.	Aust.
Number of factories .. ..	35	26	16	4	3	2	85
Number of persons employed .. ..	1,263	1,459	332	315	(a)	(a)	3,674
Salaries and wages paid .. .. £'000	1,639	1,915	338	504	(a)	(a)	4,630
Value of power, fuel, etc., used .. £'000	2,238	562	48	93	(a)	(a)	3,078
Value of materials used .. .. £'000	5,727	4,874	1,142	1,788	(a)	(a)	14,180
Value of production .. .. £'000	7,093	4,749	1,077	678	(a)	(a)	14,054
Total value of output .. .. £'000	15,058	10,185	2,267	2,559	(a)	(a)	31,312
Value of land and buildings .. .. £'000	1,961	4,192	804	237	(a)	(a)	7,518
Value of plant and machinery .. .. £'000	7,993	14,175	2,062	3,802	(a)	(a)	29,846
Horse-power of engines ordinarily in use .. .. h.p.	17,244	21,826	2,937	8,548	(a)	(a)	52,037

## AUSTRALIA

Particulars	1957-58	1958-59	1959-60	1960-61	1961-62
Number of factories .. ..	88	88	88	84	85
Number of persons employed .. ..	3,783	3,917	3,750	3,733	3,674
Salaries and wages paid .. .. £'000	4,309	4,298	4,367	4,582	4,630
Value of power, fuel, light, etc., used .. £'000	2,720	2,712	2,942	3,012	3,078
Value of materials used .. .. £'000	15,030	14,996	14,738	14,889	14,180
Value of production .. .. £'000	10,577	11,239	12,037	13,542	14,054
Total value of output .. .. £'000	28,327	28,947	29,717	31,443	31,312
Value of land and buildings .. .. £'000	5,710	6,079	5,946	7,235	7,518
Value of plant and machinery .. .. £'000	26,823	28,127	29,346	29,347	29,846
Horse-power of engines ordinarily in use .. h.p.	44,913	46,743	46,058	46,363	52,037

(a) Not available for publication; figures are included in the total for Australia.

## CHAPTER VII

### ELECTRIC POWER GENERATION AND DISTRIBUTION

This chapter is divided into three major parts:—the Introduction, which deals briefly with the resources, generation and distribution, and future development of electric power in Australia; the Snowy Mountains Hydro-electric Scheme; and the origins, development, present situation and new projects of electrical systems in each Australian State and Territory. A Statistical Summary is appended.

The information contained in the chapter relates to situations existing and projects contemplated in 1963, and may be considerably affected by changes in policy or plans, or by developments in the projects themselves.

#### INTRODUCTION

1. **Distribution of Population and Location of Power Resources.**—The two principal centres of population and industry in Australia, the metropolitan areas of Sydney and Melbourne, make the greatest demands for electric power, and their growth has been associated with the development of large deposits of coal located relatively close to the source of demand. This, together with the fact that the major water resources are also located in the south-eastern portion of Australia, materially influences the distribution of industrial population and the location of major electric power stations.

By far the most important source of energy used in the production of electric power in Australia is coal. At 30th June, 1962, thermal power equipment represented 71 per cent., hydro plant 26 per cent., and internal combustion equipment 3 per cent. of the total installed generating capacity.

Most of Australia is poorly supplied with water, only about 13 per cent. receiving an annual rainfall of 30 inches or over, and these areas are confined largely to Tasmania and to the narrow coastal strip along the east coast of the mainland.

The only region on the mainland of Australia high enough to receive reliable winter snowfall, and from which, therefore, reasonably constant water supplies throughout the year can be expected, is the mountain chain which stretches from the high plateaux of south-eastern New South Wales to the north-eastern highlands of Victoria. The hydro-electric potential of this area is considerable, and plans have been formulated to develop more than 3,000,000 kW within the next 25 years. The two major construction projects in this area are the Snowy Mountains and Kiewa schemes. Other hydro-electric potential does exist on the mainland on the rivers of the coastal areas of New South Wales and Queensland, but the amount there available is smaller than the potential of the Alpine region. In Tasmania, hydro-electric resources have been estimated at about 50 per cent. of the total Australian hydro-electric potential. On the mainland the chief source of energy is coal; in Tasmania it is water.

2. **Electric Power Generation and Distribution.**—(i) *Ownership of Undertakings.* At the beginning of this century, Australia's electrical undertakings were carried on mainly by private enterprise, but with some measure of governmental control designed to provide standards of safety, and to define the scope and obligations of the private organizations. A trend towards public ownership commenced during the 1914–18 War and became more pronounced after the 1939–45 War. By 1961, all major generating stations supplying the public were, in varying degrees, under the control of statutory organizations constituted with the object of unifying and co-ordinating the generation and distribution of electricity supplies. There are still a large number of small private and municipal enterprises generating power for supply to country towns, although central authorities are extending supply to these places wherever practicable. In many areas it has been, and remains, the practice for central authorities to sell power in bulk to local distributing organizations which undertake reticulation.



In addition to the private, local government and statutory organizations which generate and/or distribute electricity for sale, numerous firms generate power for use in their own establishments, particularly those engaged in mining pursuits remote from the main centres of population. This chapter, however, is concerned mainly with the activities of central electric stations, and the power regularly produced for such internal consumption is, in any case, a relatively small proportion of the total power produced.

(ii) *Power Production and Generating Capacity.* Since the 1939-45 War, the demand for power has increased considerably, industry and commerce have expanded rapidly, many new houses have been built, the population has increased by approximately 45 per cent., electricity supply has been extended to rural areas, and the use of domestic electric appliances has increased. The measures taken by the various authorities to satisfy the demand created by these developments are described in the following pages.

At 30th June, 1962, installed generating capacity in Australia was 7.22 million kW compared with 6.67 million kW in 1961, an increase of nearly 8 per cent. In 1961-62, each kW of installed capacity produced an average of 3,700 kWh. These figures are based on Commonwealth totals; figures for the States vary, depending on such factors as the distribution of demand, number of consumers, and type of equipment employed. In 1962-63, the production of electric power in Australia was 29,215 million kWh.

### SNOWY MOUNTAINS HYDRO-ELECTRIC SCHEME\*

1. *Snowy Mountains Hydro-electric Power Act 1949.*—In July, 1949, the Commonwealth Government established the Snowy Mountains Hydro-electric Authority, and empowered it to generate electricity by means of hydro-electric works in the Snowy Mountains Area; supply electricity to the Commonwealth:—(i) for defence purposes, (ii) for consumption in the Australian Capital Territory; and supply to a State, or to a State Authority, electricity not required for defence purposes or for consumption in the Australian Capital Territory.

The Authority is constituted by a Commissioner and two Associate Commissioners, the three appointments being made by the Governor-General. It is empowered to construct, maintain, operate, protect, manage and control works:—

- (a) for the collection, diversion and storage of water in the Snowy Mountains Area;
- (b) for the generation of electricity in that area;
- (c) for the transmission of the electricity generated;
- (d) incidental or related to the construction, maintenance, operation, protection, management or control of any works otherwise specified in the Act.

The Snowy Mountains Act is supported by a detailed agreement between the States of New South Wales and Victoria and the Commonwealth with regard to the construction and operation of the Scheme, the distribution of power and water, charges to be made for electricity, and other such matters. The Snowy Mountains Council, established under the terms of the Agreement and consisting of representatives of the Commonwealth, the Authority and the two States, directs and controls the operation and maintenance of the permanent works of the Authority and the allocation of loads to generating stations.

2. *Geography of the Area.*—The Snowy Mountains area in south-eastern New South Wales is the only part of the continent in which altitudes exceed 7,000 feet and in which there is a substantial area over the altitude of 6,000 feet. The precipitation which results from the presence of this barrier on the line of the prevailing winter depressions of Antarctic origin amounts to as much as 150 inches a year in the vicinity of Mt. Kosciusko, the highest point in Australia. The drainage from the snowfields is practically all to three systems—those of the Murray and Murrumbidgee Rivers, which flow inland, and that of the Snowy River, which flows southward to Bass Strait.

3. *Description of the Scheme.*—(i) *General.* The broad basis of the scheme is to transfer waters, which would otherwise flow to the sea unharnessed, from the Snowy River and its tributaries to the inland system, so that the water may be used for irrigation and to provide power. It involves two main diversions, the diversion of the Eucumbene, a tributary of the Snowy, to the Upper Tumut River, and the diversion of the main stream of the Snowy River at Island Bend and Jindabyne to the Swampy Plain River. These two diversions divide the scheme geographically into two sections, the Snowy-Tumut

\* See also Chapter VIII. Water Conservation and Irrigation of this issue and special detailed article in Year Book No. 42, pp. 1103-1130.

Development and the Snowy-Murray Development (*see* map p. 215). For purposes of both power production and irrigation, it is necessary to regulate run-off, and this will be achieved by the use of Lake Eucumbene, formed by the construction of Eucumbene Dam, and other smaller storages to control the waters of the Eucumbene, Murrumbidgee, Tooma, and Tumut Rivers for the Snowy-Tumut Development and of the Snowy River for the Snowy-Murray Development. A sectional diagram of the Scheme appears on page 216.

(ii) *Snowy-Tumut Development.* This development comprises works for the diversion and regulation of the waters of the Eucumbene, Upper Tooma, Upper Murrumbidgee and Upper Tumut Rivers and their combined development through a series of power stations down the Tumut River. A major dam has been constructed on the Eucumbene River to create Lake Eucumbene, which has an ultimate usable storage of 3.5 million acre feet. The waters of the Upper Murrumbidgee River are diverted into Lake Eucumbene by a dam at Tantangara and a 10½-mile tunnel from Tantangara Reservoir. From Lake Eucumbene, the water flows through a 14-mile tunnel to Tumut Pond Reservoir on the upper reaches of the Tumut River, where it joins the waters of the Tumut River itself and the waters of the Tooma River diverted to Tumut Pond Reservoir by a diversion dam and a 9-mile tunnel. The 14-mile Eucumbene-Tumut Tunnel is used during periods of high flow to divert waters of the Tumut River from Happy Jacks Shaft or the combined waters of the Tumut and Tooma Rivers from Tumut Pond reservoir back to Lake Eucumbene for storage.

From Tumut Pond Reservoir, water is conveyed by pressure tunnel to Tumut 1 underground Power Station (capacity 320,000 kW), returned to the Tumut River and then by another pressure tunnel to Tumut 2 underground Power Station (capacity 280,000 kW), thence discharging into Talbingo Reservoir, also on the Tumut River.

Tumut 3 Power Station will be constructed between Talbingo and Blowering Reservoirs. Blowering Dam is to be constructed by the Snowy Mountains Authority for the State of New South Wales and will provide for the regulation of power station discharges for use for irrigation in the Murrumbidgee Valley. The Authority will construct a power station at the foot of this dam to make use of irrigation releases for power purposes.

(iii) *Snowy-Murray Development.* The principal features of the Snowy-Murray development are the diversion of the main stream of the Snowy River by tunnels, shafts, and pipelines westwards through the Great Dividing Range into the Swampy Plain River in the catchment of the Upper Murray, and the development of power on the western slopes of the Alps. The main works of the development will be as follows.

- (a) Construction of a tunnel from the Snowy River near Island Bend through the Great Dividing Range to Geehi Reservoir on the Geehi River, and two power projects between Geehi Reservoir and the Swampy Plain River near Khancoban. The power stations associated with these two power projects, Murray 1 and Murray 2, will be the Scheme's largest stations and will have a combined capacity of 1,500,000 kW.
- (b) Construction of a tunnel from a small dam on the Snowy River near Island Bend to Eucumbene Dam to carry Snowy water to Lake Eucumbene for storage at times of high river flows. When river flows are lower than average, this stored water will be returned towards Island Bend and thence through the Snowy-Geehi Tunnel to Geehi Reservoir and Murray 1 and Murray 2 Power Stations.
- (c) Construction of a dam on the Snowy River near Jindabyne to store the residual flow of the Snowy and Eucumbene Rivers downstream from Island Bend and Eucumbene Dams, including the flows of major tributaries, the Crackenback and Mowamba Rivers, and the construction of a pumping plant, pipeline and tunnel to lift this water from Jindabyne Reservoir to the Snowy-Geehi Tunnel near Island Bend, where it will join the flow to the Geehi Reservoir for use through Murray 1 and Murray 2 Power Stations.

The power output of this section of the Scheme will be increased by the construction of subsidiary hydro-electric projects on the Upper Snowy River above Island Bend and on Windy Creek, a tributary of the Upper Geehi.

4. *Utilization of Power.*—The future electric power plants on the mainland of Australia will be predominantly thermal or thermo-nuclear installations, and in an electrical system in which the greater part of the energy is generated in thermal plants it is usually found that the hydro installations operate to the best advantage on peak load. However, the existing

New South Wales and Victorian systems include a proportion of relatively old and less efficient installations which, for reasons of fuel economy, are also best used for the production of peak load power. Therefore, in order to utilize the potential of the Snowy Mountains Scheme most effectively, the order of development is being arranged so that the early stations operate, initially, somewhat below the peak of the system load, with a progressive change to predominantly peak load operation as construction proceeds and as the load increases in magnitude.

The Snowy Mountains Scheme is situated about midway between the principal load centres of Sydney and Melbourne and is connected to those cities by 330 kV transmission lines. It is, consequently, in a position to take advantage of the diversity in the power requirements of these two load systems, a most important factor in so far as it affects the economy of operation of the supply systems of the two States.

Although most of the output from the scheme will go to the States of New South Wales and Victoria, the Commonwealth Government has the right to draw from the scheme its requirements of power and energy for the Australian Capital Territory and for defence purposes. For convenience, the Commonwealth's requirements are drawn from the New South Wales transmission network by an exchange arrangement between the Commonwealth and the Electricity Commission of New South Wales. Electricity over and above that required by the Commonwealth Government is divided between the States of New South Wales and Victoria in the ratio 2 : 1.

5. **Progress and Future Programme.**—The scheme's first power station, Guthega, of 60,000 kW initial capacity, came into operation in February, 1955. It was followed by Tumut 1, an underground power station with a capacity of 320,000 kW, in 1959, and by the 280,000 kW Tumut 2 underground power station in 1962. The total installed capacity of the scheme at present is 660,000 kW. Eucumbene Dam, which provides the major regulating storage for the scheme, was completed in May, 1958. Tumut Pond Dam, completed in September, 1958, provides the balancing storage for the power stations of the Upper Tumut Works. The first trans-mountain diversion of water from Lake Eucumbene to the Tumut River at Tumut Pond was made possible when the 14-mile Eucumbene-Tumut Tunnel was completed in June, 1959. The 10½-mile Murrumbidgee-Eucumbene Tunnel and the 9-mile Tooma-Tumut Tunnel came into operation early in 1961. Following the completion of the Upper Tumut Works, construction activity has been concentrated on the Snowy-Murray development. Construction is well advanced on the 15-mile Eucumbene-Snowy Tunnel, the 9-mile trans-mountain Snowy-Geehi Tunnel, the 7½-mile Murray 1 Pressure Tunnel, the 1-mile Pressure Pipeline and the 950,000 kW Murray 1 Power Station. These works, together with the Khancoban Dam, which will regulate power station releases before discharge into the Murray River, are to be substantially completed in 1966. At this time, the first trans-mountain diversion of water from the Snowy River to the Murray River and the first generation of electricity from the Murray 1 Power Station will occur.

## STATES AND TERRITORIES

### § 1. New South Wales

1. **General.**—In Year Book No. 39, an account was given in some detail of the origin and development of electricity generation and distribution in New South Wales. At present, the following three main Acts govern electricity supply in New South Wales.

The *Local Government Act*, 1919, which lays down the various rights and responsibilities of local government bodies in the establishment and operation of electricity trading undertakings.

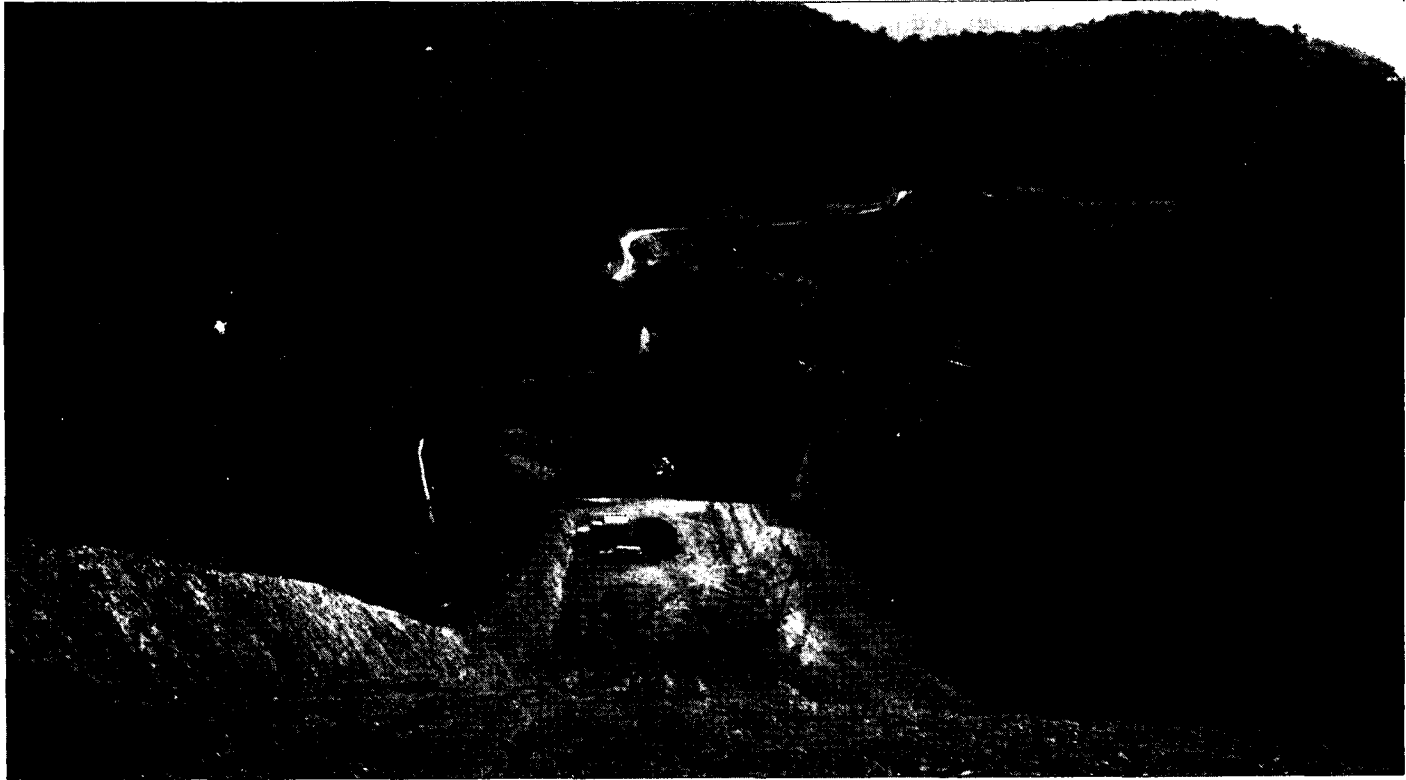
The *Electricity Development Act*, 1945–1957, which established the Electricity Authority of New South Wales as the body responsible for the co-ordination of electricity supply throughout the State.

The *Electricity Commission Act*, 1950–1961, which constituted the Electricity Commission of New South Wales as the major generating authority and not subject to the provisions of the Electricity Development Act.

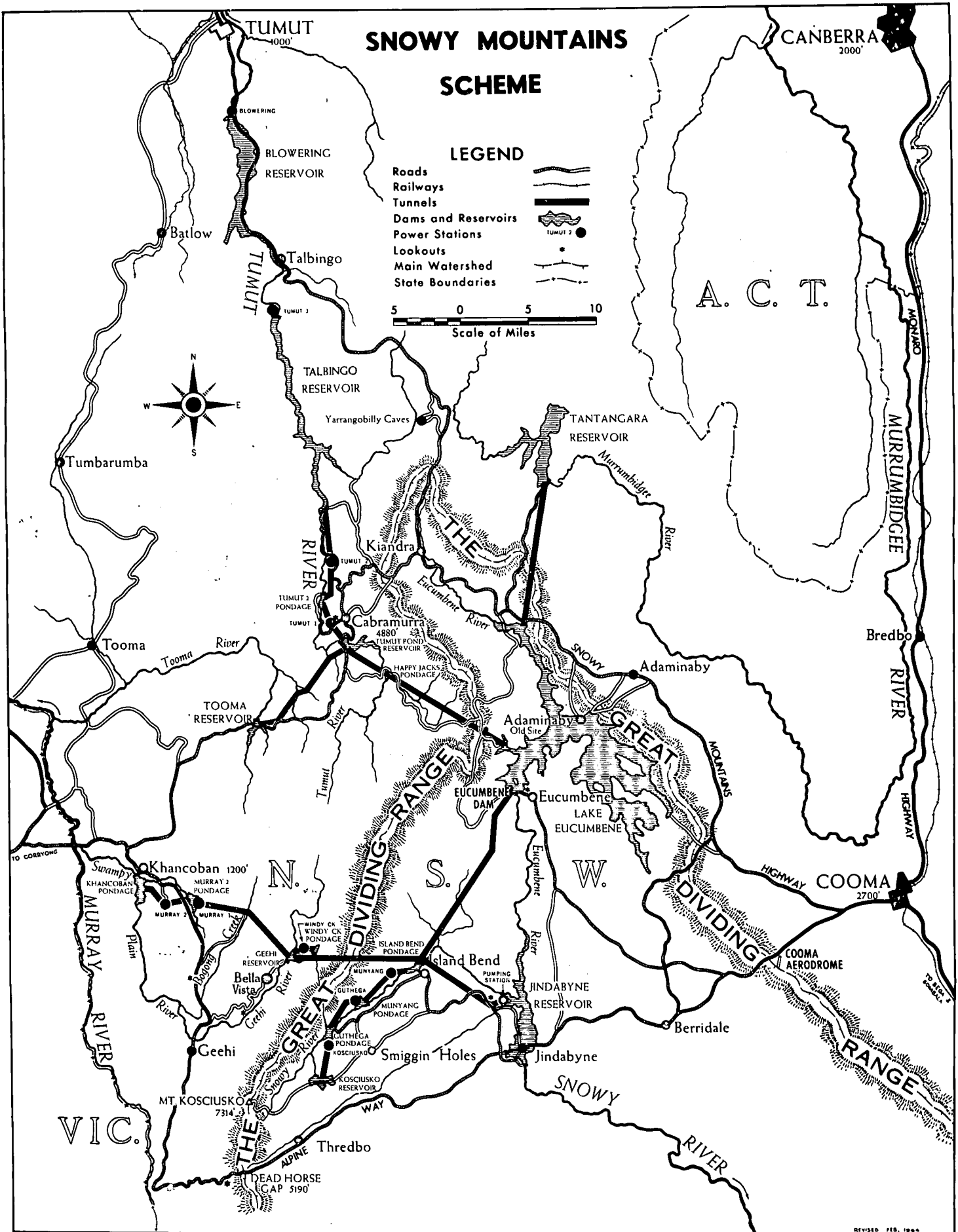
2. **Organization.**—(i) *The Electricity Commission of New South Wales.* The Commission, which is directly responsible to the Minister for Local Government, consists of five members, of whom one is full-time Chairman and one is full-time Vice-Chairman.

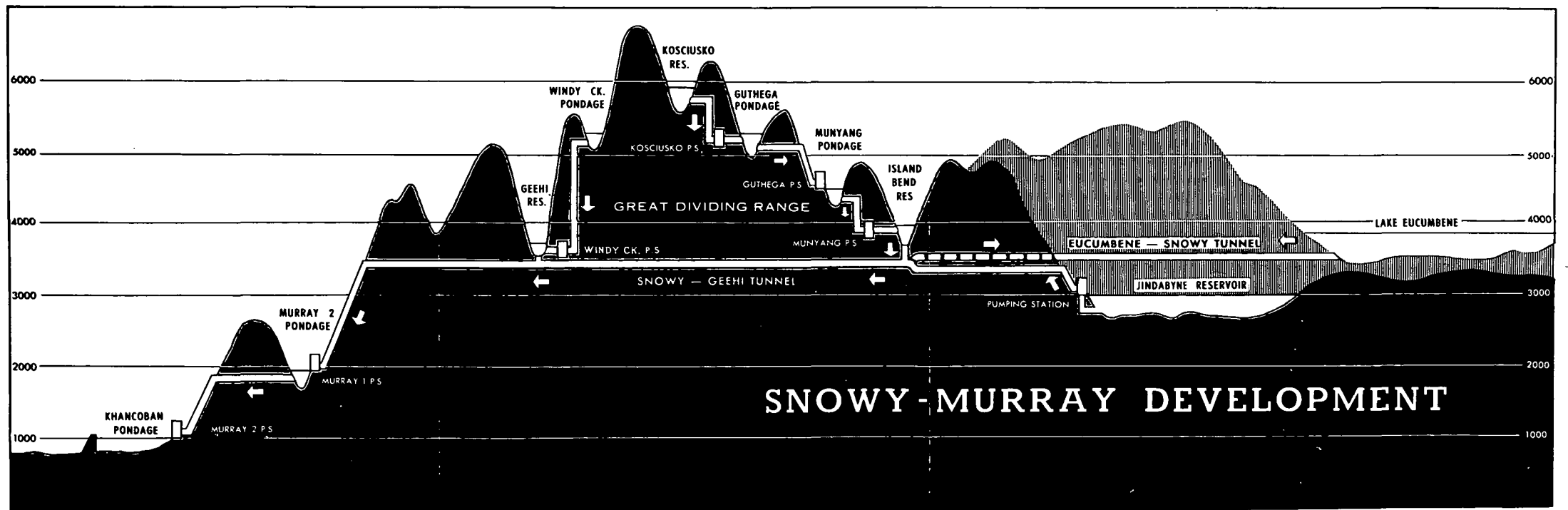
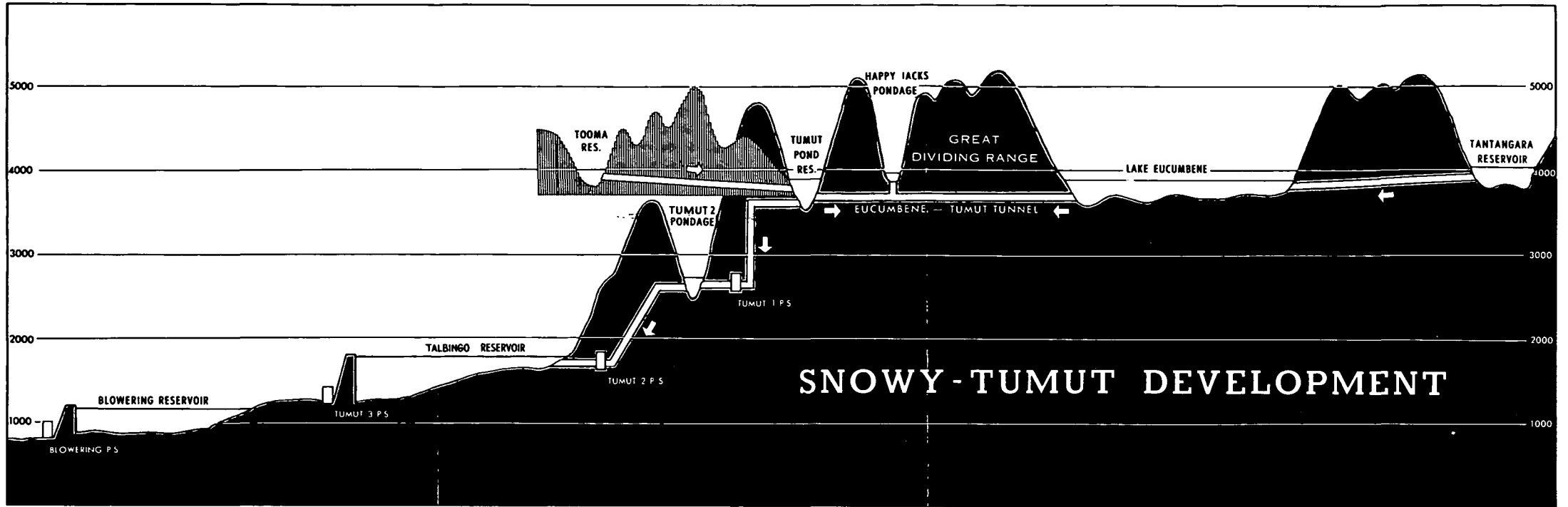


Outlet portal of the spillway tunnel at Geehi Dam.



**The completed excavation for the Murray 1 Pipelines. These pipelines will carry water from the Murray 1 Pressure Tunnel to the Murray Power Station, 1,300 feet below.**





The main function of the Commission is the generation and transmission of electricity, which it sells in bulk to distributing authorities (mainly local government bodies) throughout a large part of the State, to the government railways, and to certain large industrial consumers. As the major generating authority, it is also responsible for the development of new power sources except the Snowy Mountains region.

(ii) *Other Electricity Supply Authorities.* The retail sale of electricity to the public is, in general, carried out by separate electricity supply authorities—municipal and shire councils, electricity county councils (consisting of groups of shire and/or municipal councils), or private franchise holders. At 30th June, 1963, there were 53 supply authorities throughout the State, of which 14 also generated part or all of their power requirements. Most of the small power stations which had operated in many country centres have closed down as the main transmission network has been extended.

Over the past few years, there has been a distinct trend towards the consolidation of supply areas, many of which have been individually too weak to form satisfactory areas for distribution. Generally, these consolidations have taken the form of a county district consisting of a number of neighbouring shire and municipal areas grouped only for electricity supply purposes, and administered by a county council of representatives elected by the constituent councils. Of the 225 cities, municipalities and shires in New South Wales, 215 are included in one or other of the 35 electricity county districts. The majority of these county districts have been constituted since 1945. The largest of the county councils is the Sydney County Council, which at 30th June, 1963, was supplying 504,263 consumers in the Sydney Metropolitan Area.

(iii) *The Electricity Authority of New South Wales.* The Electricity Authority was constituted for the purpose of promoting and regulating the co-ordination, development, expansion, extension and improvement of electricity supply throughout the State. A regulatory body, it consists of seven members of whom one is a full-time Chairman. Like the Electricity Commission, it is responsible to the Minister for Local Government.

The following are the main functions of the Authority.

*Distribution.* The approval of the Authority is required for the establishment or acquisition of an electricity trading undertaking by a local government council, for the granting or renewing by such a council of electricity franchise agreements or corresponding agreements with other councils, and for the giving or taking of bulk supplies of electricity. It also has power to formulate proposals for the establishment of county councils.

In exercising these powers, the Authority is concerned mainly with seeing that distributing authorities are sufficiently strong to provide an economical, efficient and satisfactory service. Its most important activities in this regard are in investigating supply areas and in making recommendations to the Minister for the consolidation of such areas into county districts.

*Rural Electrification.* The Authority administers the rural electricity subsidy scheme under which rural electrification throughout the State is progressing very rapidly (see para. 4, p. 219).

*Safety.* The *Electricity Development Act, 1945–1963*, contains provisions for the making of regulations relating to most aspects of safety, and these powers are being used more and more extensively. Safety regulations now in force cover such matters as inspection of consumers' installations, licensing of electricians and electrical contractors, approval of electrical appliances, safety of linesmen and overhead line construction.

*Generation and Transmission.* The approval of the Authority is required for the establishment or extension of power stations and main transmission lines (with the exception of those of the Electricity Commission).

**3. Generation and Transmission.—(i) General.** Except in the Snowy Mountains district and in one or two other areas, New South Wales is lacking in major water power potential, and for the generation of electricity the State is dependent mainly on steam power stations. During the year ended 30th June, 1963, coal-fired stations generated 92.0 per cent. of the State's energy requirements, hydro-electric stations 7.5 per cent. and internal combustion plants 0.5 per cent. In addition, 1,100 million kWh were purchased from the Snowy Mountains Hydro-Electric Authority during the year.



With the future plant development of the Snowy Mountains scheme, an increasing amount of power will be generated by the Authority, but at no stage of its development will the scheme supply more than 15 per cent. of the State's energy requirements. Coal-fired steam power stations, therefore, will continue to supply the greater part of requirements for the foreseeable future.

(ii) *Major Generating Stations.* In New South Wales, the generation of electricity has followed the general world trend towards large centralized power stations supplying large areas through interconnected transmission networks. Whereas until a few years ago the greater part of the coal-fired generating plant was located in the industrial areas of Sydney, Newcastle and Wollongong, where most of the population is also located, major power stations are now being located on the coalfields to the north, south and west of Sydney, and power is transmitted to the load centres through high voltage transmission lines.

At 30th June, 1963, the major power stations of the State system of the Electricity Commission of New South Wales and their installed capacities were as follows:—*Steam*—Bunnerong (Sydney), 375,000 kW; Wangi (Lake Macquarie), 330,000 kW; Tallawarra (Lake Illawarra), 320,000 kW; Wallerawang (near Lithgow), 240,000 kW; Pyrmont (Sydney), 200,000 kW; Vales Point (Lake Macquarie), 200,000 kW; White Bay (Sydney), 172,000 kW; Balmain (Sydney), 107,000 kW; Ultimo (Sydney), 80,000 kW; Port Kembla, 60,500 kW; Zarra Street (Newcastle), 45,000 kW; Muswellbrook, 30,000 kW; Lithgow, 27,000 kW; Tamworth, 27,000 kW; Maitland, 20,000 kW; Penrith, 20,000 kW; Liverpool, 20,000 kW; *Hydro*—Hume (near Albury), 50,000 kW; Warragamba (near Penrith), 50,000 kW; Burrinjuck (near Yass), 20,000 kW. There were also various other steam, hydro and internal combustion stations aggregating 34,470 kW. The total installed capacity of the Electricity Commission's system was 2,427,970 kW.

The greater part of the Commission's generating plant is concentrated within a hundred mile radius of Sydney—the largest stations outside this area being located at Hume, Muswellbrook and Tamworth.

(iii) *Major Transmission Network.* The retailing of electricity to 97 per cent. of the population of New South Wales is in the hands of local distributing authorities, which obtain electricity in bulk from the Commission's major State network. This network of 330 kV, 132 kV, 66 kV and some 33 kV and 22 kV transmission lines links the Commission's power stations with the load centres throughout the eastern portions of the State, extending geographically up to 400 miles inland.

At 30th June, 1963, there were in service 680 route miles of 330 kV (including 131.5 miles operating for the time being at 132 kV) and 1,515 miles of 132 kV transmission lines (including 243 miles operating for the time being at 66 kV or lower). There were also in service 2,377 miles of transmission line of 66 kV and lower voltages.

Superimposed upon the 132 and 66 kV network will be a powerful 330 kV trunk system extending from the Snowy Mountains Hydro-electric Scheme in the south through Wollongong, Sydney and Newcastle to Armidale in the north. At 30th June, 1963, the 330 kV transmission line was in operation between the Snowy Mountains Upper Tumut Switching Station and the Commission's Vales Point power station, linking these major sources of power for the New South Wales network, and interconnecting the systems of the Electricity Commission of New South Wales and the State Electricity Commission of Victoria at the Upper Tumut Switching Station.

The installed transformer capacity at the Commission's 96 sub-stations was 5,986,800 kVA.

(iv) *Separate Systems and Total State Installed Capacity.* A number of small plants which supply isolated towns and villages have not yet been interconnected with the main network.

Some local government bodies have undertaken the development of independent power stations. Of these, the more important are:—the Northern Rivers County Council, which has constructed a steam power station at Koolkhan (near Grafton) with an installed capacity of 28,750 kW, and the North-West County Council, which has established a 12,500 kW steam power station on the Ashford coalfield.

The aggregate installed capacity for the whole of the New South Wales systems and isolated plants was 2,536,144 kW at 30th June, 1963.

(v) *Future Development.* The major new thermal stations already built and those now being developed on the coalfields will become the main base load centres for the northern, southern and western regions. Wangi, on Lake Macquarie, Wallerawang, near Lithgow, and Tallawarra, on Lake Illawarra, have been completed.

At Vales Point, on Lake Macquarie, work is in progress on a large thermal station with a designed capacity of 875,000 kW. The plant will consist of three 200,000 kW units and one 275,000 kW unit. The first 200,000 kW unit has been commissioned and construction of the remaining three is progressing.

Construction of the Munmorah Power Station, located between Lakes Munmorah and Budgewoi (on the central coast) has commenced. Initially the plant at Munmorah will comprise two 350,000 kW generating units.

The development of the 330 kV main system is continuing. The 330 kV line from the Snowy region has been extended to the Vales Point Power Station, a distance of 335 miles. The section between the Snowy Mountains Hydro-electric Authority's Upper Tumut Switching Station and the Commission's 330 kV Centre at Yass has been duplicated, and the section between Yass and Dapto has also been duplicated. A second circuit from Sydney North 330 kV Substation to Vales Point Power Station will be available for the commissioning of the second Vales Point unit early in 1964. Development of the 330 kV network around the Sydney metropolitan area is proceeding.

Work has commenced on the Sydney West 330 kV Substation which is located near Mount Druitt. Plans to augment the transmission system during the next five years provide for the construction of 480 route miles of 330 kV lines and three associated substations, 740 route miles of 132 kV line and 18 substations, as well as additions to existing substations and a number of lower voltage works.

(vi) *Hydro-electricity.* The greater part of the hydro-electric potential of New South Wales is concentrated in the Snowy Mountains Area (*see* Snowy Mountains Hydro-electric Scheme, p. 210). Apart from this area, there are in operation the new hydro-electric stations at the Warragamba Dam (50,000 kW) and Hume Dam (50,000 kW), and stations at the Burrinjuck Dam (20,000 kW), Wyangala Dam (7,500 kW) (shortly to be closed during repairs and extensions to the dam), and Keepit Dam (6,000 kW). The output of Warragamba Power Station depends upon the availability of water surplus to the requirements of the Sydney Metropolitan Area, and the output of the other stations on the release of water for irrigation.

Of the remaining hydro installations, the largest is that of the New England County Council on the Oakey River, a tributary of the Macleay River, which has a capacity of 5,250 kW.

The Northern Rivers County Council operates a hydro-electric power station on the Nymboida River, a tributary of the Clarence River. This station has a capacity of 4,500 kW.

The Bega Valley County Council has constructed a hydro-electric scheme at Brown Mountain utilizing the headwaters of the Bemboka River. This installation has a capacity of 3,950 kW.

The Mullumbimby Municipal Council has in operation two 150 kW hydro units on Wilson's Creek, a tributary of the Richmond River.

4. *Rural Electrification.*—When the Electricity Authority of New South Wales was constituted in 1946, only 16,000 New South Wales farms were being served with electricity—less than one-quarter of those within reasonable reach of public electricity supply systems. Under a subsidy scheme approved in August, 1946, local electricity suppliers receive subsidies from the Electricity Authority towards the cost of new rural lines. The amount of subsidy is based on the estimated cost of the proposed extension and the number of consumers able to be served by the new lines. The scheme was designed to encourage local electricity supply authorities to construct the more economic extensions first by fixing a limit to the cost for which suppliers could be subsidized. Originally this limit was £250 per consumer when averaged over the cost of the whole extension, but the limit was raised to £400 in December, 1953. Some subsidy was paid on higher cost extensions, but the excess over an average of £400 was not subsidized.

To assist supply authorities in extending supply to less populated, and thus high-cost, areas of the State, the subsidy scheme was extended from May, 1959, to provide for payment of increased subsidy in respect of extensions where the average capital cost per consumer lies within the range of £600–£800.

Between August, 1946, and June, 1963, applications for subsidy had been made by electricity suppliers to the Authority covering rural extensions costing £32.4 million to give supply to some 54,000 farming properties and 33,000 other rural consumers and involving 47,300 miles of line. The greater part of this work had been completed at 30th June, 1963. At this date, the Authority was committed to the payment of £13,504,878 in subsidies, of which £6,807,752 had been paid.

## § 2. Victoria

1. *General.*—In Year Book No. 39, a detailed description is given of the development of electricity generation in the cities of Melbourne, Geelong, Bendigo and Ballarat up to the time of transfer of control of electricity undertakings in those cities to the State Electricity Commission of Victoria. An account is also given of the events culminating in the establishment of the Commission in 1919, and of the early developments in the Commission's undertakings.

2. *State Electricity Commission of Victoria.*—(i) *Power and Fuel Authority.* Since it began operating in 1919, the State Electricity Commission has expanded and co-ordinated the production and supply of electricity on a State-wide basis to the point where its system now generates almost all the electricity produced in Victoria and serves over 97 per cent. of the population through a supply network covering more than three-quarters of the populated area of the State.

Development of Victoria's electricity system is based on the utilization for both power and fuel of Victoria's extensive brown coal resources in the Latrobe Valley in eastern Gippsland, with supplementary development of the hydro-electric potential of north-eastern Victoria. Victoria is entitled to one-third of the electricity from the Snowy Mountains Hydro-electric Scheme, after the Commonwealth has taken the power it needs for its purposes. Victoria also shares with New South Wales in the electricity generated at Hume Hydro Station on the River Murray. About 80 per cent. of the State's electricity is generated from brown coal, either used in its raw state or manufactured into higher quality fuel in the form of brown coal briquettes. All the brown coal and briquette fuel is supplied by undertakings which the Commission itself owns and operates. Output of brown coal in 1962-63 from the three open cuts at Yallourn, Yallourn North and Morwell totalled 17,244,345 tons, of which 11,868,590 tons were used in the Commission's own power stations, and 4,979,924 tons were manufactured into 1,805,347 tons of brown coal briquettes, 52 per cent. of the briquette output then being used for electricity production in metropolitan and provincial steam power stations.

The two functions, generation of electricity and production of fuel, are closely integrated. Apart from the large proportion of brown coal and briquette fuel consumed in the power stations, the process of briquette manufacture results also in the generation of electricity, since the steam needed for processing the raw coal for briquetting is first used to operate turbo-generators.

(ii) *Status and Power.* Constituted by the *Electricity Commissioners Act 1918*, the State Electricity Commission is a semi-governmental authority administered since 1921 by a full-time Chairman and three part-time Commissioners. The principal duty of the Commission is to co-ordinate and extend on an economic basis the supply of electricity throughout Victoria. For this purpose, it is vested with power to erect, own, and operate power stations and other electrical plant and installations, supply electricity retail to individual consumers or in bulk to any corporation or public institution, acquire and operate electricity undertakings, develop, own, and operate brown coal open cuts and briquetting works, and develop the State's hydro-electric resources. From its own revenues, which it controls, the Commission must meet all expenditure in the operation of its power, fuel and subsidiary undertakings, and all interest and other charges incurred in the service of its loans and other capital commitments.

The Commission is the controlling authority for all electrical undertakings in Victoria. It is responsible for the registration of electrical contractors, the licensing of electrical mechanics, the control of installation methods and material and the testing and approval of electrical equipment and appliances. Incidental to its main operations, the Commission owns and operates the tramway systems in Ballarat and Bendigo. For the accommodation of its employees at Yallourn, the Commission owns and administers the town of Yallourn. It also owns large housing estates in the surrounding area, but is progressively selling houses in these estates to Commission employees. In the Kiewa hydro-electric works area, it has built the two townships of Mount Beauty and Bogong, municipal administration of the former now being vested in the Shire of Bright. With construction at Kiewa now complete, many houses at Mount Beauty have been sold for holiday homes.

(iii) *Electricity Supply.* At 30th June, 1963, consumers in Victoria served by the State system numbered 972,741. Outside the State system, there were 11,388 other consumers served by local country undertakings. The system supplies all the Melbourne metropolitan area and over 1,800 other centres of population.

Complete electrification of the State is now within sight. By 30th June, 1963, about 827,000 of the 862,000 homes in the State and 54,200 of Victoria's 71,500 farms were supplied with electricity. By the end of this decade (1970-71), allowing for extensions then in progress, only about 6,000 homes and fewer than 1,250 farms in remote areas will be out of reach of public electricity supply, but efforts will be continued to connect as many of these as possible.

The Commission sells electricity retail in all areas except part of the metropolitan area, where it sells in bulk to eleven municipal undertakings which operate as local retail supply authorities under franchises granted before the Commission was established. Bulk supply is also being provided at present to several New South Wales municipalities and irrigation settlements bordering the River Murray. The number of consumers served by the State system outside the Melbourne metropolitan area is 434,437. Of the new consumers connected to supply each year, more than two-thirds are outside the metropolitan area. New farm connexions average nearly 3,000 a year.

The Commission's retail consumers numbered 775,108 at 30th June, 1963. Retail supply is administered through the metropolitan branch and ten extra-metropolitan branches (Ballarat, Eastern Metropolitan, Geelong, Gippsland, Midland, Mildura, Northern, North-Eastern, South-Western and Wimmera). At 30th June, 1963, there were branch and district supply offices in 87 towns in Victoria.

(iv) *Electricity Production.* Electricity generated in the State system or purchased by it totalled 7,688 million kWh in 1962-63 or 99 per cent. of all Victoria's electricity. The system comprises a series of thermal and hydro-electric power stations. Inclusive of generator capacity both within the State and available to the Victorian system from outside the State, the total installed generator capacity at 30th June, 1963, was 1,898,000 kW. Power stations are interconnected, and feed electricity into a common pool for general supply. The major power station in this interconnected system is the brown coal burning power station at Yallourn, which alone generates more than half of Victoria's electricity. Other power stations in the interconnected system comprise the important brown coal burning power station at Morwell; steam stations in Melbourne (Newport, Richmond and Spencer Street), Geelong and Ballarat and also at Redcliffs, which has, in addition, an internal combustion plan; hydro-electric stations at Kiewa; at Eildon; on the Rubicon and Royston Rivers, near Eildon; and at Cairn Curran; and internal combustion stations at Shepparton and Warrnambool. All within Victoria are Commission-owned, except Spencer Street Power Station, which remains the property of the Melbourne City Council, although operated as a unit in the interconnected system. A 330 kV transmission line links the Victorian system with the Snowy Mountains undertaking, and also provides facilities for interconnexion between the Victorian and New South Wales State generating systems. Also linked with the Victorian interconnected system is the hydro station at Hume Dam on the River Murray. This power station is operated by the Electricity Commission of New South Wales. Output and operating costs are shared by Victoria and New South Wales.

In meeting the total demand on the system, which fluctuates throughout the day and from month to month, each group of stations in the interconnected system is assigned a predetermined function dependent upon the availability of power from each group and the economics of generation. The various stations are utilized in the combination that will meet the system load most economically at a given time.

(v) *Transmission and Distribution.* The electrical transmission and distribution system in the State supply network at 30th June, 1963, comprised 39,650 miles of power-lines, 18 terminal receiving stations, 85 main transmission sub-stations and over 33,000 distribution sub-stations. Main transmission is by 220 kV, 132 kV and 66 kV power lines which supply the principal distribution centres and also provide interconnexion between the power stations. The 220 kV system now totals 1,011 miles.

(vi) *Future Development.* Major new construction is concentrated on the erection of a large new brown coal burning power station (Hazelwood) near Morwell in the brown coal fields of the Latrobe Valley. At the same time, the Commission continues its programme of rural electrification and extension and reinforcement of the State system (particularly in western and north-western Victoria).

At Morwell, six miles from Yallourn, the Commission has almost completed a second brown coal power and briquette undertaking. The new undertaking comprises a brown coal open cut and power station operating in association with a briquetting plant. Some of the electricity generated at Morwell is needed to operate the briquette works, but most of the output of the power station is transmitted through Yallourn to metropolitan terminal stations for general supply through the State network. The installed generator capacity of Morwell Power Station is 170,000 kW. The briquette works have a production capacity of approximately 1,300,000 tons of briquettes a year. The Commission's new Hazelwood Power Station is being erected a short distance south of Morwell. It will operate on raw brown coal fuel supplied by belt conveyor direct from the Morwell open cut. The power station will have a capacity of 1,200,000 kW and will comprise six turbo-generators each of 200,000 kW capacity. Hazelwood is being built in stages. Contracts have been placed for four generating units (800,000 kW) and the related boiler plant, and work is well advanced on the first 400,000 kW stage. The first turbo-generator is due to be in service in 1964 and the second in 1965. Succeeding units are scheduled to be in service in 1966, 1967, 1970 and 1971. Power generated at Hazelwood Power Station will be transmitted at high voltage to Melbourne metropolitan terminal stations for distribution through the State supply network.

3. **Local Country Electricity Undertakings.**—At 30th June, 1963, there were 20 independent electricity undertakings in country centres in Victoria generating and distributing their own local supply. Most of these undertakings were in the far south-west, west and north-west of the State. Under the State Electricity Commission's rural electrification programme, almost all the independent local country undertakings will ultimately be acquired and absorbed into the State system. For the year 1962-63, the total production of the independent undertakings was 41 million kWh. The number of consumers at 30th June, 1963, was 11,388. The operation of the independent undertakings is governed by the *Electric Light and Power Act 1958*, which the State Electricity Commission administers.

### § 3. Queensland

1. **General.**—In Year Book No. 39, an account is given of the growth of electricity generation in Queensland, with particular reference to the City Electric Light Co. Ltd. of Brisbane (now the Southern Electric Authority of Queensland), the Brisbane City Council and the Toowoomba Electric Light and Power Co. Ltd. (taken over by the Southern Electric Authority) (see para. 3, p. 223).

The generation and distribution of electric power in Queensland in earlier years had tended to lag behind developments in this field in other States of Australia, and in 1935, the Queensland Government, being concerned with the need to develop the State's power resources in the public interest, appointed a Royal Commission to inquire into and make recommendations on matters relating to the generation and distribution of electric power in Queensland. (An account of the results of its investigations and of the alternative proposals put before it will be found on page 1182 of Official Year Book No. 39.) The Report of the Royal Commission recommended that a commission to control the generation and distribution of electric power be vested in the State; but if the establishment of an operating commission was not found practicable, then electrification under public control with ultimate public ownership should be implemented by means of a controlling commission capable of being converted into an operating commission. In 1937, the State Government constituted the State Electricity Commission of Queensland.

2. **The State Electricity Commission of Queensland.**—The State Electricity Commission of Queensland commenced to function during January, 1938, its main powers being to secure a proper and efficient supply of electric power, review tariffs, grant licences to supply electricity, secure the safety of the public, and control and advise electrical undertakings generally. It was thus a controlling authority as distinct from an operating authority. Details of its growth and development may be found in earlier issues of the Official Year Book (see No. 44, p. 284). Since its inception, the Commission has made considerable progress in its task of developing the State's power resources and promoting a more widespread use of electric power. The degree of utilization of electrical energy in Queensland now compares favourably with other States in the Commonwealth. Over 90 per cent. of the State's population is now supplied with electricity.

3. **The Southern Electric Authority of Queensland.**—A further major step in electrical progress was taken with the passing of the *Southern Electric Authority of Queensland Act, 1952*. This Act constituted the City Electric Light Co. Ltd. as a public authority to be known as the Southern Electric Authority of Queensland. Two government representatives (including

the Commissioner for Electricity Supply) are included on the board of the Authority, whose establishment prepares the way for the complete amalgamation, in due course, of the electrical undertakings serving the south-eastern Queensland area of supply.

As from 1st July, 1954, the Southern Electric Authority acquired the Toowoomba Electric Light and Power Co. Ltd., thus bringing that company's area of supply under its control. The Southern Electric Authority is now responsible for the electrical supply and development of a consolidated area of over 17,000 square miles and is also providing bulk supply to the Western Downs area centred on Dalby. The Authority also supplies the Tweed area of northern New South Wales. Construction has reached an advanced stage on a 132 kV interconnexion with the area of the Wide Bay-Burnett Regional Electricity Board whereby the output of the Howard power station will be supplemented from the Southern Electric Authority's generating station.

The Southern Electric Authority previously supplied the requirements of the inner portion of the City of Brisbane and those of a considerable rural area in the south-eastern corner of the State from modern power stations at Bulimba, a suburb of Brisbane, and a "packaged plant" at Abermain (near Ipswich). The output of a small hydro-electric unit at Somerset Dam near Brisbane is fed into the Southern Electric Authority system. From 1st January, 1963, the Authority assumed control of the power stations previously operated by the Brisbane City Council at Tennyson and New Farm and main transmission facilities in the Brisbane area. At the same time it relinquished control of the distribution of electricity to the inner city, which is now a function of the Brisbane City Council. The Authority continues to control distribution in the rural areas surrounding Brisbane.

During 1961-62 and 1962-63, the Authority generated 974 million kWh and 1,465 million kWh respectively. The number of consumers served by the Authority at 30th June, 1962, was 121,540, while at 30th June, 1963, the Authority's reduced area of supply contained 105,178 consumers.

4. **The Brisbane City Council.**—The Brisbane City Council's electrical undertaking previously comprised power stations at New Farm and Tennyson (with a "packaged plant" also installed at the latter locality) and supplied suburban Brisbane. As from 1st January, 1963, these power stations were transferred to the control of the Southern Electric Authority together with main transmission facilities, whilst the Council's area of distribution was enlarged to include the inner city as well as suburban Brisbane. During 1961-62, the Council generated 826 million kWh, and during the first six months of 1962-63, 483 million kWh. At 30th June, 1963, its enlarged area of supply contained 173,668 consumers.

5. **Regional Electricity Boards.**—With a view to facilitating the control and development of electricity supply in areas of low population density and those having a predominantly primary producing economy, the Government passed the *Regional Electric Authorities Act 1945*, which provided for the creation of regions of electricity supply and the constitution of regional electricity boards. Prior to the establishment of these boards, no attempt had been made to unify or co-ordinate electricity supplies outside south-eastern Queensland, and rural electrification, apart from reticulation within certain townships, was practically unknown.

Soon after passage of the Act, four regional boards were constituted, Wide Bay, Capricornia, Townsville and Cairns. A fifth board, South Burnett, became an operating authority in October, 1947, but on 1st July, 1951, was absorbed in the Wide Bay Regional board, and this organization is now known as the Wide Bay-Burnett Regional Electricity Board. As from 1st March, 1957, a further regional board became operative, covering the areas of Mackay, Sarina, Proserpine and adjacent rural areas under the name of Mackay Regional Electricity Board.

The Townsville Regional Electricity Board's area was extended in July, 1957, to include that of the Bowen Electricity Undertaking, in October, 1959, to include the Hughenden Electricity Undertaking, and in September, 1960, to include the Collinsville Electricity Undertaking. The local authority areas of Thursday Island and Cook were included in the Cairns Regional Electricity Board's area from 1st July, 1956, and 1st July, 1957, respectively, and the Normanton Undertaking was transferred to this Board on 1st January, 1962. As from 1st January, 1958, the Capricornia Region was extended to include the Shires of Bauhinia, Belyando, Emerald and Peak Downs in central-west Queensland. Further expansion of the existing areas of the Regional Electricity Boards into more remote, but contiguous, areas is anticipated in the immediate future, and this trend is expected to continue in subsequent years as economic and technical considerations render it practicable in various areas of the State. As stated in para. 7 below, it is proposed to place the generating facilities of this northern interconnected system under unified control.

Activities of the five Regional Boards in 1961-62 and 1962-63 compared with operations of the stations located in regions in 1945-46 are shown in the following table.

QUEENSLAND: REGIONAL OPERATIONS

Region	1945-46		1961-62		1962-63			
	Units generated	No. of consumers	Units generated	No. of consumers	Units generated	No. of consumers		
	Million kWh		Million kWh		Million kWh			
Wide Bay-Burnett .. ..	13.7	11,467	109.3	34,770	122.5	35,963		
Capricornia .. ..	19.5	11,196	175.8	25,346	187.2	26,173		
Townsville .. ..	25.8	11,612	} a399.9	{ 31,332	} a440.3	{ 32,426		
Cairns .. ..	22.7	9,722					{ 24,649	{ 25,676
Mackay .. ..	6.5	4,283						
<b>Total .. ..</b>	<b>88.2</b>	<b>48,280</b>	<b>685.0</b>	<b>129,450</b>	<b>750.0</b>	<b>134,337</b>		

(a) Generated by interconnected Northern network.

Installed generator capacity of the five regional boards at 30th June, 1963, was:—Wide Bay-Burnett, 37,500 kW; Capricornia, 54,488 kW; Townsville, 41,725 kW; Mackay, 15,250 kW; Cairns, 146,180 kW; total, 295,143 kW.

6. Hydro-electricity.—Behind the coastal plain of the Cairns-Ingham area is an extensive plateau with elevation ranging from 2,000 to 3,000 feet, although isolated peaks exceed 4,000 feet. The short coastal streams which rise on the plateau descend rapidly into deep gorges, which they have cut through the divide. With heavy monsoonal rainfall on their catchments and concentrated fall, these streams represent a considerable potential source of power, but storage, which can be provided in most cases, is essential to control the very variable flow.

There is a pronounced wet season from December to March, with a dry season from July to November. Average annual rainfall varies greatly with location, being 178 inches at Deeral (midway between Cairns and Innisfail), but only 34 inches at Cashmere (120 miles south-west of Innisfail).

In 1935, a small hydro-electric power station of 3,800 kW was placed in service at Barron Falls, ten miles north-west of Cairns. An output of 32 million kWh was attained during 1962-63, the station operating essentially as a run-of-river station, without any significant water storage capacity being available.

The hydro-electric power scheme at Tully Falls was commissioned in September, 1957, with an initial plant installation of 36,000 kW. Work was completed during 1958-59 on the installation of a further two 18,000 kW sets, making a total installation of 72,000 kW. An output of 318 million kWh was obtained from this station during 1962-63. Power is transmitted to the load centres at Cairns, Innisfail and Tully by means of 132 kV transmission lines. Further extensions of the Tully Scheme may be undertaken at a later date. Interconnexion of the Tully Scheme with the Townsville area, which is also being served by a thermal station, was completed in February, 1958, by the provision of a 160 mile double circuit 132 kV transmission line. In December, 1962, interconnexion with the Mackay Region by means of a 66kV transmission line was effected.

A new peak load power station was commissioned in September, 1963, at Barron Falls. This station will provide a firm (dry year) output of 60,000 kW at 25 per cent. load factor (i.e. firm output of 131 million kWh per annum), and will ensure an adequate supply of power to the Cairns, Townsville and Mackay areas until 1968. The completed scheme has an underground power station below the Barron Falls containing two 30,000 kW Francis turbines, operating under a head of 920 feet.

Other major schemes which have been, or are currently being, investigated include North Johnstone-Russell Rivers (32,000 kW); Beatrice-North Johnstone Rivers (9,000 kW); South Johnstone River (25,000 kW); Herbert River (90,000 kW); Burdekin River (80,000 kW); and Broken River.

The State Electricity Commission, in conjunction with other Government departments, is constantly reviewing the development of hydro-electric resources. It is estimated that full development of the hydro-electric potential of north Queensland would provide the equivalent of over 300,000 kW of power at 50 per cent. load factor or approximately 1,300 million kWh a year.

**7. Generating Capacity.—(i) Regions.** Within the areas administered by the regional electricity boards, development extending over a considerable period may be divided into two stages. The first stage, which is now virtually completed, saw the construction of central power stations at the principal load centres, and of transmission systems, taking supply to smaller centres, thus superseding local generation. The second stage provides for the interconnexion of regional transmission systems to take advantage of lower production costs at the larger power stations. At the same time, it is becoming more economic to locate power stations on coalfields rather than at load centres. The selection of the Callide and Collinsville coalfields as the sites for the next major generating stations in Central and north Queensland is illustrative of this fact.

As part of the first stage, the following new generating stations were commissioned:—Howard (Wide Bay-Burnett Region) which has an installed capacity of 37,500 kW, Rockhampton (Capricornia Region) with 52,500 kW, and Townsville (Townsville Region) which contains 37,500 kW of plant. In the Cairns Region, the Tully Falls hydro-electric power station has been completed with 72,000 kW installed capacity.

The Tully Falls Scheme (*see* para. 6, p. 224) was planned to supply power to the Cairns and to the Townsville Regional Electricity Board systems, and the interconnexion has now been extended southwards to embrace the Mackay Regional Board area also. The commissioning of the further hydro-electric station on the Barron River in September, 1963, has added a further 60,000 kW of hydro-electric generation capacity to these interconnected regional systems. The first stage of the scheme's development is estimated to cost £5,850,000, and initially, full use will be made of available storage capacity at Tinaroo Falls Dam, thus enabling construction of a £5,000,000 storage dam on Flaggy Creek to be postponed for a number of years.

At Mackay, where power was first supplied in 1924, a Regional Electricity Board has now been constituted, and the generating capacity of the station under the control of this Regional Board is 12,500 kW of steam plant and 3,000 kW of diesel plant. To supplement this output a 66 kV transmission line from the Townsville Region has been commissioned. The three North Queensland regions of Cairns, Townsville and Mackay thus form an interconnected system with integrated generation facilities, based mainly on hydro-electric generation.

To serve the needs of the Capricornia region, the construction of a power station capable of being developed to 150,000 kW capacity has commenced at a site on the Callide coalfields. Transmission to the main load centres will be at 132 kV. The Capricornia Region is not connected with either the northern or southern grids.

**(ii) Western Queensland.** In Western Queensland, prior to the war, small isolated internal combustion generating stations supplied power to a number of the larger towns. After the war, the capacities of these existing stations were augmented, they were modernized and converted from direct to alternating current. Supply was also established in larger towns without electrical facilities. Financial assistance towards this electrical development was given by the Government in the form of cash subsidies up to 50 per cent. towards the capital cost involved.

In addition to improving supplies to the larger western towns, a scheme was implemented from 1952 onwards whereby electricity supply was given to smaller western townships where consumers range from 50 to 200. Subsidies of 65 and 60 per cent. are granted if the number of consumers supplied is less than 100 and 200, respectively. At 30th June, 1963, 22 townships in western Queensland were provided with electricity supplied by small oil-driven generating sets with automatic controls which can be run with a minimum of operating attendance. It is planned to install at Birdsville a small generating plant using a pelton wheel driven by water supplied from an artesian bore. For a considerable time, 5 kW generating plant at Quilpie has also been powered in this manner.

Coal-burning gas producers have been successfully commissioned for public electricity supply purposes at Longreach, Clermont, Blackall and Barcaldine, and further extension of their use in western Queensland is predicted, as lower tariffs and more efficient production of electricity is expected to follow their use. The use of natural gas for electricity generation was pioneered in Australia in Western Queensland at Roma. Following the discovery of commercial supplies, and since April, 1961, this fuel has been used at the Roma power



station. During 1962-63, over 73 million cubic feet were utilized. Large boilers now being constructed in the south-eastern portion of the State are being designed to burn natural gas as an alternative fuel should it become available at competitive prices.

In a limited number of cases, transmitted supply from larger generating centres has replaced local generation in small townships, and in southern border areas, transmitted supply is provided from New South Wales to certain townships and rural areas. By teeing off from such transmission lines, supply has been given to many rural properties. The Single Wire Earth Return system of supply has been used extensively in the less populous rural areas.

The State Electricity Commission has acted as consultant for practically all the western local authorities operating electricity undertakings.

All electricity undertakings in western Queensland are operated by local authorities.

(iii) *South-eastern Queensland.* As from 1st January, 1963, all generating and main transmission facilities in south-eastern Queensland have been operated by the Southern Electric authority following a rationalization agreement with the Brisbane City Council. This arrangement will enable all units of generating plant to be operated in the most efficient manner, which was not possible under the previous duality of control. At 30th June, 1963, the combined installed capacity of the Authority was 517,500 kW, comprising 75,000 kW at New Farm, 92,500 kW at Bulimba A, 150,000 kW at Bulimba B, 180,000 kW at Tennyson, and two packaged plants of 10,000 kW each at Abermain (near Ipswich) and Tennyson. The Authority also receives into its system the output of a 3,200 kW hydro-electric plant at Somerset Dam which is operated by the Water Supply Department of the Brisbane City Council. Current plans include the installation by 1964 of a further 60,000 kW at Tennyson and 30,000 kW at Bulimba "B".

To cater for the power needs of this portion of the State after the completion of existing stations, work has commenced on a new power station at Swanbank, on the West Moreton coalfields, with an ultimate capacity of 360,000 kW.

Power from this station will also be transmitted to the Wide Bay-Burnett region at 132 kV, which will obviate the installation of additional plant within this region.

#### § 4. South Australia

1. **General.**—An account of the companies generating electric power in South Australia prior to the establishment of the Adelaide Electric Supply Co. Ltd., and describing the development of that company's activities, was given in Year Book No. 39. Also included in the account was some reference to the early measures of public control over electricity supply in South Australia and the extent to which they were applied, and also to the inquiries into the activities of the Adelaide Electric Supply Co. Ltd. in 1932 and 1935.

Following an inquiry instituted by the Government in 1943, relative to measures for increasing electricity supply to the metropolitan area and country districts, the *Electricity Act 1943* was passed, which, *inter alia*, established the South Australian Electricity Commission.

2. **The Electricity Trust of South Australia.**—Early in 1946, the assets of the Adelaide Electric Supply Co. Ltd. were transferred to a newly formed public authority, the Electricity Trust of South Australia, which became responsible for unification and co-ordination of the major portion of the State's electricity supply and which took over the powers previously vested in the South Australian Electricity Commission. In addition to the powers specified in the *Adelaide Electric Supply Company's Acts 1897-1931*, the Trust may supply electricity direct to consumers within a district or municipality with the approval of the local authority, and by agreement with other organizations which generate or supply electricity, arrange to inter-connect the mains of the Trust with those of other organizations, and give or receive supplies of electricity in bulk.

3. **Capacity and Production.**—Three main categories of organizations generate electric power in South Australia, namely:—(a) governmental, which include the Electricity Trust; (b) local authorities, e.g. municipal and district councils, and the Renmark Irrigation Trust; and (c) other, including individuals and firms primarily engaged in generating power for sale, firms generating power primarily for their own use but supplying outside consumers, and firms generating power solely for their own use.

Of the total installed capacity in South Australia, the Electricity Trust operated plant with a capacity of 551,000 kW, and is the most important authority supplying electricity in the State. There were approximately 337,000 ultimate consumers of electricity in the State, of whom 312,600 were supplied directly and approximately 11,000 indirectly (i.e. through bulk supply) by the Trust. Its major steam stations are Osborne "A" (64,000 kW), Osborne "B" (180,000 kW), and Port Augusta Playford "A" (90,000 kW) and Playford "B" (180,000 kW), the balance of the capacity controlled consisting of house sets and regional stations at Port Lincoln and Mount Gambier, where the Trust operates steam power stations of 5,000 kW and 21,800 kW capacity respectively, the former burning fuel oil and the latter either wood waste or fuel oil. In March, 1963, Mt. Gambier was connected with the Metropolitan system by a 132 kV line.

No hydro-electric potential exists in South Australia. Steam generating units comprise 97 per cent. of installed capacity and the balance is internal combustion equipment. Until 1946, all fuel consumed in the thermal stations was obtained from sources outside the State, and at times power restrictions were necessary owing to the inadequacy of supplies.

4. Leigh Creek and other New Capacity.—With a view to reducing the dependence on external sources of fuel, steps have been taken to produce local coal and to install plant to use it. Fairly extensive deposits of low-grade sub-bituminous coal are obtainable at Leigh Creek, about 360 miles north of Adelaide. Under the *Electricity Trust of South Australia Act Amendment Act* 1946, the Trust was given authority to develop Leigh Creek coal for use in its own undertakings and also for sale to other consumers. Production from the Leigh Creek field commenced in 1944, and in the year ended 30th June, 1963, 1,470,150 tons of coal were produced, practically all of which was used by the electricity undertaking.

The Playford "B" Power Station at Port Augusta will be completed in March, 1964, with the commissioning of the fourth 60,000 kW turbo-alternator. Leigh Creek coal is used exclusively in both power stations at Port Augusta.

A further 60,000 kW turbo-alternator with an associated oil fired boiler is being installed at Osborne "B" station and is due to be commissioned early in 1965.

A large power station is to be constructed on Torrens Island near Adelaide and two 120,000 kW turbo-alternators and associated oil fired boilers have been ordered, the first to be commissioned early in 1967.

## § 5. Western Australia

1. General.—Electrical undertakings in Perth and Fremantle formerly owned by the Perth City Council, the Western Australian Government Electricity Supply, the Fremantle Municipal Tramways and Electric Lighting Board, and other metropolitan, municipal and road board supply authorities have been taken over by the State Electricity Commission of Western Australia. For information on the early history of electricity supply in the metropolitan area, see Year Book No. 39, page 1189.

2. The State Electricity Commission of Western Australia.—In order to ensure an organized and co-ordinated future growth of electricity generation and distribution throughout the State, the Government passed the *State Electricity Commission Act* 1945 and the *Electricity Act* 1945. Under these Acts, the State Electricity Commission was established and given power to secure the ultimate co-ordination of all State or other electrical undertakings in the State, to construct and operate power stations and transmission lines, and to purchase as a going concern and carry on the undertaking of any supply authority. No person or organization is permitted to construct or extend an electricity supply undertaking without consent from the Commission. Local authorities are empowered to operate and construct power stations and other works associated with the supply of electricity, provided that authority is first obtained from the Commission and that their proposals are not inconsistent with the Commission's plans.

3. General Pattern of Electricity Supply.—(i) *General.* The State Electricity Commission gives central power station supply to the metropolitan area and an area of approximately 25,000 square miles defined in the report which formed a basis for the *South West State Power Scheme Act* 1945. These areas include the more highly developed rural districts with a greater population density, which can more readily be connected to a central power station system. It has been announced recently that a similar scheme to be known as the Northern Areas State Power Scheme will be developed during approximately the next sixteen years to serve towns as far north as Northampton.

In the other areas of the State, towns are supplied by the local authority or by a concessionaire operating under an agreement with the local authority and the Commission. Power stations operated under these conditions are exclusively diesel of varying sizes, with the exception of Kalgoorlie which is separately mentioned below.

(ii) *Interconnected System.* At the request of the Government, the Electricity Advisory Committee, in 1945, submitted a report which recommended, among other things, a national power scheme for the south-west. The plan provided for acquisition of the existing Collie Power Station and installation of additional generating capacity, construction of a power station at Bunbury and inter-connexion of the south-west scheme with the metropolitan system. In 1946, the State Electricity Commission acquired the Collie Power Station, and since then it has acquired a number of electrical undertakings from municipal bodies and private organizations in the south-west area and is proceeding with arrangements for the purchase of others. In August, 1951, the first portion of the South-West Power Scheme was officially opened at Collie, and most of the south-west towns have now been connected by transmission line to the interconnected system.

Statistics relating to activities of the interconnected system are shown in the following table.

#### WESTERN AUSTRALIA: INTERCONNECTED SYSTEM

Particulars					1961-62	1962-63
Plant capacity	..	..	..	.. kW	289,500	289,500
Maximum load	..	..	..	.. kW	191,000	229,000
Units generated	..	..	..	.. Million kWh	866	987
Fuel used per unit (kWh) generated	..	..	..	.. lb.	1.54	1.49
Coal used	..	..	..	.. tons	521,978	583,170

In Kalgoorlie, all gold mines now generate their own power requirements. The Power Corporation has ceased operations, and the Kalgoorlie Town Council operates a new 50 cycle diesel station to supply A.C. consumers in Kalgoorlie and Boulder. The D.C. stations of the Kalgoorlie and Boulder Town Council will continue to operate for some time at least.

4. *New Projects.*—Since its inception in 1946, the State Electricity Commission has made the provision of an adequate reserve of generating plant its primary object. With the commissioning of the first unit at South Fremantle Power Station in May, 1951, the lag caused by shortages during the war and early post-war years was overcome. The system then developed rapidly to keep pace with the expansion of industry and housing. Generating plant has been quadrupled in the past seventeen years. The three major power stations have been interconnected with the South West Power Station at Collie enabling the most economical units to be used as a base load station. Continuous development of the transmission and distribution system is being undertaken to keep pace with the growth in consumer demand, which is being maintained at a high level.

Work has commenced on two 60,000 kW turbo alternators, boilers and buildings for the first section of a new station at Muja near Collie, adjacent to a source of open-cut coal. The first unit is planned to be in service in the latter part of 1965, with similar units to be ready for commercial service in March, 1967, 1968 and 1969.

## § 6. Tasmania

1. *General.*—A considerable part of the water catchment in Tasmania is at high level, with a substantial natural storage available, and this has made it possible to produce energy at lower cost than elsewhere in Australia, or in most other countries. Another factor contributing to the low costs is that rainfall is distributed fairly evenly throughout the year with comparatively small yearly variations. The cheap power has led to the establishment in Tasmania of several large electro-chemical and metallurgical works with high load factor, and as a consequence the system load factor is also very high (at present 65.2 per cent.).

For information on hydro-electric development in Tasmania prior to the establishment of the Hydro-Electric Commission in 1930, see Year Book No. 39, pages 1192-3.

2. **The Hydro-Electric Commission.**—(i) *Present System.* In 1929, the Government passed the *Hydro-Electric Commission Act 1929*, which established the Hydro-Electric Commission and vests in the Commission, with some minor exceptions, the right to use the waters of the State of Tasmania, and authorizes it to develop and reticulate electric power for all purposes. In 1930, this corporate body took over the State hydro-electric undertaking and the business of the Hydro-Electric Department.

The first project undertaken by the Commission was the Shannon Power Development which utilizes 258 feet of the difference in level between the Great Lake (Mienna Dam) and Waddamana forebay.

The Tarraleah Power Development was commenced in 1933. In this scheme, the waters of the River Derwent are picked up near Butler's Gorge by a canal and conveyed 14 miles to the pipeline forebay 982 feet above the power station on the Nive River.

The Trevallyn Power Development, which commenced in 1949, was the first constructed by the Commission outside the Central Plateau region and was undertaken primarily to meet the requirements of the aluminium industry. The waters of the South Esk River are diverted through two miles of tunnel and pipeline to a power station on the Tamar River near Launceston.

The Tungatinah Scheme, on which construction started in 1948, draws water from three separate catchment areas located on the Central Plateau between the Great Lake (Shannon-Waddamana) and Lake St. Clair (Butler's Gorge-Tarraleah) catchments, and control of practically the whole run-off from the Central Plateau has now been effected.

The Wayatinah Power Development, started in 1952, comprises two power stations and headworks to utilize water which is, in the main, already regulated and which has been used several times. The volume of water available is much larger and the head smaller than in the case of other major stations.

For further details of these schemes see Year Book No. 48, pp. 243-4, and earlier issues.

The Catagunya Power Development utilizes the whole of the waters flowing through Tarraleah and Tungatinah Power Stations and successively through the Liapootah and Wayatinah Power Stations plus water from the Florentine River. Preliminary construction on this development began early in 1957. Four miles below Wayatinah, a diversion dam was constructed at Catagunya, and a power station with an installed capacity of 48,000 kW was completed at the end of June, 1962. The dam was designed and built as a pre-stressed concrete structure, 147 feet in height, and it is notable as being only the second of its type and the largest yet undertaken by this technique anywhere in the world.

The total installed capacity of the present system throughout Tasmania in June, 1963, was as follows.

	Power station	Installed capacity of alternators	
			kW
Shannon .. .. .	.. .. .	.. .. .	10,500
Waddamana " A " .. .. .	.. .. .	.. .. .	49,000
Waddamana " B " .. .. .	.. .. .	.. .. .	48,000
Tarraleah .. .. .	.. .. .	.. .. .	90,000
Butler's Gorge .. .. .	.. .. .	.. .. .	12,200
Trevallyn .. .. .	.. .. .	.. .. .	80,000
Tungatinah .. .. .	.. .. .	.. .. .	125,000
Lake Echo .. .. .	.. .. .	.. .. .	32,400
Liapootah .. .. .	.. .. .	.. .. .	83,700
Wayatinah .. .. .	.. .. .	.. .. .	38,250
Catagunya .. .. .	.. .. .	.. .. .	48,000
<b>Total</b> .. .. .	.. .. .	.. .. .	<b>617,050</b>
King Island (diesel plant)	.. .. .	.. .. .	390

(ii) *New Capacity.* The installed capacity of the system now stands at 617,050 kW, and approved construction will bring this total to approximately 1,230,000 kW by 1974. Investigations are continuing into the very considerable resources as yet untouched, principally in the west and north-west of the State, and it is estimated that the potential which can be developed economically should ultimately harness 2,400,000 kW to the system.

The Hydro-Electric Commission is engaged on a construction programme which comprises the Great Lake Power Development, the Lower Derwent Power Development and the Mersey-Forth Power Development. In the first named, the water of the Great Lake,

by its diversion in the direction of the most precipitous fall, will be used to much greater advantage than at present. Eventually reaching the South Esk River, it will be used again through the generators of the Trevallyn Power Station. In this development, the power will be generated by the fall of water through a vertical distance of 2,730 feet to an underground power station where generators of 300,000 kW capacity will be installed. The station will be known as Poatina Power Station. A further section of the scheme includes the provision of a dam at Arthur Lakes to increase greatly the storage of the system, and a pumping station and a conduit discharging into the Great Lake so that water from this catchment may be utilized through the Poatina Power Station.

In the Lower Derwent Power Development, a three-stage development is under construction below Catagunya on the River Derwent. With dams and power stations named Repulse, Cluny and Meadowbanks, the completion of this project by 1968 will add a further 85,000 kW to the system, and it will also bring to an end the exploitation of the power potential of the River Derwent and its tributaries.

The Mersey-Forth Power Development has been sanctioned for construction and is scheduled to be completed by 1974. In this development, the Mersey River will be diverted westward to the Forth River by the construction of the Parangana Dam about half a mile below the junction of the Mersey and Fisher Rivers. Thence the flow will be conducted by a tunnel and penstock to Lemonthyme Power Station on the Forth River. The combined flow will be used for power generation at three power stations on the Forth River situated at the foot of dams at Cethana, Devil's Gate, and Palooana. The Wilmot River will be diverted to the east by a dam through a tunnel to a power station on the Forth River upstream from Cethana Dam. The diverted flow of the Wilmot River will also be used to produce power at Cethana, Devil's Gate, and Palooana. A sixth power station will result from the development of the Fisher River, where a rapid fall from Lake Mackenzie on the plateau to the Mersey River enables a head of some 2,100 feet to be exploited.

The principal storage in the development will be situated on the upper Mersey River at Walters Marsh. Smaller storages will be provided by Lake Mackenzie and by Parangana, Wilmot, Cethana and Devil's Gate Dams.

The six stages of the development are to be completed progressively between 1969 and 1974 and will add a total of 286,000 kW to the system.

The Commission is conducting extensive surveys and investigation of other schemes with a view to further construction after the completion of the present programme.

**3. Power Usage by Secondary Industry.**—The abundant and comparatively cheap supplies of electricity and other natural resources have attracted to Tasmania a number of important secondary industries for which energy costs constitute a large proportion of the total cost of production. These include the Electrolytic Zinc Company of Australasia Ltd., Comalco Aluminium (Bell Bay) Ltd., the Australian Newsprint Mills Ltd., the Associated Pulp and Paper Mills Ltd., the Australian Commonwealth Carbide Company Ltd., the Mount Lyell Mining and Railway Company Ltd., the Goliath Portland Cement Company Ltd. and the Tasmanian Electro Metallurgical Co. Pty. Ltd. A paper pulp mill constructed by Australian Paper Manufacturers Ltd. at Geeveston, south of Hobart came into operation towards the end of 1962. The continuous power demands of all these organizations when plant is in full operation aggregates 273,000 kW.

The associated Pulp and Paper Mills Ltd. is now constructing an entirely new particle board mill at Wesley Vale, near Devonport in northern Tasmania, and it is known that other industrial undertakings in the State are also contemplating expansion of their activities.

## § 7. Commonwealth Territories

**1. Internal Territories.**—(i) *General.* The electricity supply undertakings at Canberra in the Australian Capital Territory and at Darwin, Katherine, Tennant Creek and Alice Springs in the Northern Territory are operated by the Commonwealth Government.

(ii) *Australian Capital Territory.* The supply authority is the A.C.T. Electricity Authority which took over the functions of the Canberra Electric Supply Branch, Department of the Interior, on 1st July, 1963. Supply was first made available in Canberra during 1915 and was met from local steam plant. Connexion to the New South Wales interconnected system was effected in 1929, and all requirements are now taken from this system. Locally owned plant consists of 4,000 kW of diesel alternators which are retained as a standby for essential supplies, and 5,100 kW of locally owned steam generating plant was disposed of during 1962–63.

Total population served with electricity at 30th June, 1963, was 73,000 and the total number of ultimate consumers was 21,663.

During the year 1962-63, the bulk electricity purchased was 202,457,700 kWh and the system maximum demand was 54,756 kW.

(iii) *Northern Territory.* At Darwin, supply was established by the Town Council in October, 1934, but during April, 1937, responsibility for generation and supply was transferred to the Northern Territory Administration. The power station is now equipped with turbo alternators with a total capacity of 15,000 kW. Tenders were called in March, 1964, for an additional 15,000 kW turbo alternator and boiler for installation at Stokes Hill, Darwin, power station. In addition, diesel generating plant of approximately 6,500 kW is available. A 66 kV transmission system is used.

At Alice Springs, the power station is equipped with diesel generating plant of 3,800 kW capacity.

At Katherine, the power station is equipped with a diesel generating plant of 960 kW capacity, and a 550 kW set is currently under contract.

The diesel station at Tennant Creek was closed down in 1957, supply for the township being purchased in bulk from Peko Mines N.L.

The total number of ultimate consumers served in the Territory at 30th June, 1963, was 5,691.

**2. External Territories—Papua and New Guinea.**—Responsibility for the operation and establishment of the electrical undertakings in Papua and New Guinea is vested in the Papua and New Guinea Electricity Commission, whose headquarters are located at Port Moresby. The Commission came into operation on 1st July, 1963, and assumed the functions and responsibilities previously vested in the Electrical Undertakings Branch of the Department of Public Works.

The Commission, on its own behalf, operates the public supplies in the main centres of population, and, on behalf of the Administration, operates the supply in the minor centres and patrol posts, hospitals, agricultural establishments, etc., where the supply cannot be considered to be a fully commercial supply.

The Commission also has regulatory functions associated with the licensing of electricians and contractors, the control of franchise holders and the approval of appliances and electrical materials for use in the Territory. The Appliance Approval By-laws will be based upon complete reciprocity with the Australian approval authorities.

The generating capacity in the centres under the control of the Commission is as follows:—Port Moresby—diesel, 2,223 kW, hydro, 5,500 kW; Rabaul—diesel, 3,000 kW; Lae—diesel, 2,640 kW; Madang—diesel, 1,610 kW; Wewak—diesel, 615 kW; Goroka—hydro, 400 kW; Samarai—diesel, 300 kW; Kavieng—diesel, 194 kW; Kokopo—diesel, 64 kW.

On behalf of the Administration, the Commission operates generating sets totalling some 4,000 kW distributed over 130 centres, with capacities between 5 and 150 kW.

The townships of Wau and Bulolo are supplied by power generated by Bulolo Gold Dredging Limited, which operates hydro-electric plant of 5,500 kW capacity. Power produced by this plant is used mainly in the plywood mill and gold dredges at Bulolo.

The Commission has a policy to take increasing advantage of the hydro potential existing in the Territory. Work has recently been completed on the Sirinumu Dam on the Laloki River near Port Moresby, which will provide regulation of the river, to give a minimum flow of 200 cusecs.

Tenders have recently been let for the supply of three 6,000 kW generating sets, which will be installed in an underground power station, which will take advantage of the fall in the Laloki River over the Rouna Falls. This station will have an ultimate capacity of 30,000 kW. It is planned to commission the station in August, 1967.

Preliminary investigations have indicated the economics of developing the potential of the Upper Ramu River adjacent to Kainantu in New Guinea, to provide a regional supply to Lae, Madang, Kainantu, Goroka and Mount Hagen. The present planning is to provide a station designed for ultimate capacity of 50,000 kW, and for the installation of two 8,000 kW machines in the first stage.

Some 400 miles of 66 kV transmission line will be constructed to bring power to the centres of consumption.

To meet the growing needs of the Territory, pending the commissioning of the hydro-electric power stations on the Laloki and Upper Ramu Rivers, the Commission is adopting the policy of installing skid-mounted diesel generating sets of a capacity which will permit their transfer at a later date to other growing centres. Trends indicate that a total of seven 500 kW sets will be needed at Port Moresby. These will later be transferred to Lae and Madang.

Extensive investigations have been made to locate a suitable source of hydro-electric power to supply the township of Rabaul and the quickly developing area along the Gazelle Peninsula. However, the geological reports on those sites so far investigated have not been encouraging, and at present no firm proposal has been put forward.

Several small hydro-electric installations have been made or are in process of construction to serve isolated centres. These are—Aiyura Agricultural Station—30 kW; Mount Hagen—120 kW; Mendi (under construction)—100 kW; Tapini (under construction)—30 kW.

The Commonwealth Department of Works has a Stream Gauging Section and maintain records of many of the main rivers in order to provide material for future investigations into some of the major hydro-electric potential which exists in the Territory.

In 1950, the Commonwealth Government joined with the British Aluminium Co. Ltd. of London to locate and develop large capacity hydro-electric schemes in New Guinea. A company was formed, known as New Guinea Resources Prospecting Co. Ltd., with a capital of £100,000. The Commonwealth Government held 51 per cent. of the shares, and had a controlling interest on the Board of five members, but it later sold its interest to a company formed by Consolidated Zinc Pty. Ltd. and British Aluminium Co. Ltd., both of London. This company carried out very extensive investigations into the rivers of the Gulf of Papua and, in particular, into the Purari River.

The number of consumers served by the Commission as at 30th June, 1963, was 7,410. The consumers in minor centres approximate 2,000.

#### STATISTICAL SUMMARY

The following table shows statistics for each State separately and for the six States combined for the year 1961-62.

Statistics of the electricity supply industry for the years 1957-58 to 1961-62 are given in Chapter VI. Manufacturing Industry.

#### CENTRAL ELECTRIC STATIONS, 1961-62

Particulars	N.S.W.	Vic.	Q'land	S. Aust.	W. Aust.	Tas.	Australia
Generating stations—							
Government .. No.	26	14	..	12	11	11	74
Local authority .. "	13	10	51	8	37	..	119
Companies .. "	16	17	1	14	41	3	92
<b>Total .. ..</b>	<b>55</b>	<b>41</b>	<b>52</b>	<b>34</b>	<b>89</b>	<b>14</b>	<b>285</b>
Installed capacity of generators—							
Steam .. '000 kW	2,284	1,290	685	(a)	305	(a)	5,165
Hydro .. "	809	333	79	(a)	2	(a)	1,826
Internal combustion .. "	73	38	33	(a)	67	(a)	224
<b>Total .. ..</b>	<b>3,166</b>	<b>1,661</b>	<b>797</b>	<b>(a)</b>	<b>374</b>	<b>(a)</b>	<b>7,215</b>
Persons employed(b) No.	4,382	3,541	1,648	(a)	1,052	(a)	12,441
Value of output(c) £'000	54,996	29,178	15,536	(a)	8,491	(a)	123,546
Value of production(d) .. "	38,167	16,508	6,936	(a)	4,467	(a)	76,579
Electricity generated(e)							
million kWh	10,683	6,739	2,837	2,173	1,110	2,733	26,275
Ultimate consumers(f) No.	1,257,445	984,129	434,022	337,000	173,883	125,572	3,312,051

(a) Not available for publication; included in the total for Australia. (b) Average employment in generating station, over whole year, including working proprietors. (c) Value, at generating station, of electricity produced plus certain earnings. (d) Value added in the process of generation. (e) Total generated including that generated by factories for their own use. (f) Approximate figures supplied by the electricity authority in each State. An "ultimate consumer" is a person, business, undertaking, etc., that has contracted to receive electric power from a public or private organization supplying this service. The number of ultimate consumers is not identical with the number of persons served with electricity because one ultimate consumer may represent three or four persons, e.g. in a household.

## CHAPTER VIII

## WATER CONSERVATION AND IRRIGATION

## RESOURCES, UTILIZATION AND NATIONAL AND INTERSTATE ASPECTS

## § 1. Introduction

Official Year Book No. 37, pages 1096-1141, contained a special article on the conservation and use of water in Australia, and for details of general, descriptive and historical matter reference should be made to this article.

For further details on geographical and climatic features determining the Australian water pattern, reference should be made to Chapter II. Physiography; on water supply and sewerage in metropolitan areas, cities and towns to Chapter XX. Local Government; and on the generation of hydro-electric power to Chapter VII. Electric Power Generation and Distribution, of this issue.

A series of maps showing the location of major dams and reservoirs and the various irrigation schemes operating in each of the States may be found on pages 259-65 of Official Year Book No. 46, and a map showing the extent of known artesian basins throughout Australia is shown on page 273 of issue No. 48.

## § 2. Water Resources and their Utilization

1. **Surface Supplies.**—Though river gaugings have been recorded over considerable periods in some parts of Australia, records elsewhere are intermittent, of short duration, or non-existent. At present, therefore, it is impossible to estimate, with any degree of reliability, the total average annual flow of Australian streams, but it would probably amount to only a small figure in comparison with the flow of rivers in other continents, some examples of which, expressed as mean annual discharges in millions of acre feet, are: Nile, 72; Danube, 228; Amazon, 1,780; Volga, 148; Mississippi, 474; and the ten main rivers of the United States of America in the aggregate, 900.

2. **Major Dams and Reservoirs.**—The table below lists existing major dams and reservoirs, together with those under construction and those projected, at June, 1963. The list is confined to dams and reservoirs with a capacity of 100,000 acre feet or more. There are, in addition, many others of smaller capacity in Australia.

## MAJOR DAMS AND RESERVOIRS IN AUSTRALIA

Name	Location	Capacity (acre feet)	Height of wall (feet)	Remarks
EXISTING DAMS AND RESERVOIRS				
Eucumbene ..	Eucumbene River, New South Wales	3,500,000	381	Part of Snowy Mountains Hydro-electric Scheme
Eildon .. ..	Upper Goulburn River, Victoria	2,750,000	260	Storage for irrigation and for the generation of electricity
Hume .. .. .	Murray River near Albury	2,500,000	142	Part of Murray River Scheme—storage for domestic, stock and irrigation purposes. Hydro-electric power also developed
Menindee Storage Lakes	Darling River, near Menindee, New South Wales	2,000,000	..	Part of Darling River Water Conservation Scheme for irrigation and possible hydro-electric power generation
Warragamba ..	Warragamba River, New South Wales	1,670,000	379	For Sydney water supply. Also provides for generation of hydro-electricity and flood mitigation

(a) Useful storage only.



MAJOR DAMS AND RESERVOIRS IN AUSTRALIA—*continued*

Name	Location	Capacity (acre feet)	Height of wall (feet)	Remarks
<i>EXISTING DAMS AND RESERVOIRS—continued</i>				
Miena .. ..	Great Lake, Tasmania	(a)984,500	40	Regulates water to Waddamana hydro-electric power station
Burrinjuck .. ..	Murrumbidgee River, New South Wales	837,000	264	Storage for irrigation and production of hydro-electric power
Somerset .. ..	Stanley River, Queensland	735,000	173	Brisbane-Ipswich water supply, flood mitigation and small hydro-electric power station
Lake Victoria .. ..	Murray River, near South Australian border, in New South Wales	551,700	..	Natural storage for irrigation in South Australia. Storage improved by construction of embankments and control regulators
Lake Echo .. ..	Lake Echo, Tasmania	(a)412,200	60	Storage for Lake Echo and Tungatinah hydro-electric power stations
Keepit .. ..	Namoi River, near Gunnedah, New South Wales	345,000	177	For rural water supplies and hydro-electricity generation
Waranga .. ..	Goulburn River, Victoria	333,400	..	Irrigation storage
Tinaroo Falls .. ..	Barron River, north Queensland	330,000	133	For irrigation purposes in the Mareeba-Dimbulah area
Glenbawn .. ..	Hunter River, near Scone, New South Wales	293,000	251	Part of Hunter Valley conservation work, for irrigation and flood mitigation
Rocklands .. ..	Glenelg River, Victoria	272,000	..	Part of Wimmera-Mallee domestic and stock water supply system
Clark .. ..	Derwent River, Tasmania	(a)253,400	200	Serves Tarraleah hydro-electric power station
Eppalock .. ..	Campaspe River, near Heathcote, Victoria	252,900	150	To supplement supply to Bendigo and for irrigation
Wyangala .. ..	Lachlan River, New South Wales	(b)245,000	200	Storage for domestic, stock and irrigation purposes and for generation of hydro-electric power. ( <i>See also</i> under Dams and Reservoirs under Construction)
Tantangara .. ..	Murrumbidgee River, New South Wales	(a)193,000	148	Part of Snowy Mountains Hydro-electric Scheme
Avon .. ..	Avon River, New South Wales	173,800	232	Part of Sydney water supply
Glenmaggie .. ..	Gippsland, Victoria	154,300	100	Storage for irrigation
Lake St. Clair .. ..	Central Highlands, Tasmania	(a)154,200	..	Improved natural storage for Tarraleah hydro-electric power station
Wellington .. ..	Collie River, Western Australia	150,100	112	For supply of water to irrigation districts and to agricultural areas and country towns
Serpentine .. ..	Serpentine River, Western Australia	144,000	171	For Perth water supply
Lake Brewster .. ..	Lachlan River, near Hillston, New South Wales	123,900	..	Storage of rural water supplies for the lower Lachlan
Cairn Curran .. ..	Loddon River, Victoria	120,600	..	Storage for irrigation
Upper Yarra .. ..	Yarra River, Victoria	110,000	270	For Melbourne water supply

## DAMS AND RESERVOIRS UNDER CONSTRUCTION

Burrondong .. ..	Macquarie River, near Wellington, New South Wales	1,361,000	250	For rural water supplies, flood mitigation and possible hydro-electric power generation
Wyangala .. ..	Lachlan River, New South Wales	1,000,000	270	Strengthening and enlarging of existing dam for increased water supply and hydro-electric power generation. ( <i>See also</i> under Existing Dams and Reservoirs)
Arthur Lakes .. ..	Source of Lake River near Great Lake, Tasmania	(a)339,000	50	Part of Great Lake hydro-electric power development
Koombooloomba .. ..	Tully River, north Queensland	146,000	123	For hydro-electric and possibly irrigation purposes

(a) Useful storage only.

(b) Temporary reduced level.

MAJOR DAMS AND RESERVOIRS IN AUSTRALIA—continued

Name	Location	Capacity (acre feet)	Height of wall (feet)	Remarks
DAMS AND RESERVOIRS PROJECTED				
Burdekin Falls ..	Burdekin River, North Queensland	6,584,000	150	For generation of hydro-electric power, irrigation and flood mitigation
Chowilla ..	Murray River, in South Australia, near Victorian border	4,750,000	41	Regulation of the lower Murray River
Ord River ..	Near Wyndham, Western Australia	3,500,900	200	For irrigation, generation of hydro-electric power and flood mitigation. (Additional 6,000,000 acre-feet flood control proposed)
Blowering ..	Tumut River, New South Wales	1,300,000	346	For regulation of discharges from stations of Snowy Mountains Hydro-electric Scheme, primarily for irrigation but also for power generation
Buffalo ..	Buffalo River, near Myrtleford, Victoria	800,000	260	For irrigation
Talbingo ..	Tumut River, New South Wales	600,000	500	Part of Snowy Mountains Hydro-electric Scheme
Jindabyne ..	Snowy River, New South Wales	560,000	210	Part of Snowy Mountains Hydro-electric Scheme
Warkworth ..	Wollombi Brook, Hunter Valley, New South Wales	406,000	130	Flood mitigation and irrigation dam for the Hunter Valley
Winton ..	Winton Swamp, near Benalla, Victoria	300,000	35	To store flood flows in Broken River for irrigation
Rowallan ..	Mersey River, North Tasmania	110,000	140	Storage for Mersey-Forth power development

3. Irrigation.—(i) *History.* For some brief remarks on the history of irrigation in Australia see issues of the Year Book prior to No. 39. Trends in irrigation practice in more recent years were described in Year Book No. 37, page 1099.

(ii) *Extent and Nature of Irrigated Culture.* The following table shows the area of land irrigated in each State during the seasons 1958-59 to 1962-63, and the nature of irrigated culture in each State in 1962-63.

AREA OF LAND IRRIGATED (Acres)

Season and crop	N.S.W. (a)(b)	Vic. (c)	Q'land	S. Aust.	W. Aust.	Tas.	N.T. (d)	A.C.T.	Aust. (e)
1958-59 ..	641,361	965,766	154,633	85,081	44,102	13,431	274	1,224	1,905,872
1959-60 ..	889,441	1,052,782	152,136	100,899	45,889	18,108	365	869	2,260,489
1960-61 ..	837,191	1,007,180	186,697	102,023	48,551	18,934	602	1,432	2,202,610
1961-62 ..	964,748	1,117,900	209,419	108,400	48,679	23,189	538	1,303	2,474,176
1962-63—									
Rice ..	53,578				(f)		(g)		(h)53,578
Vegetables ..	4,033	22,634	34,258	11,548	9,375	4,100	112	133	86,193
Fruit ..	21,559	43,059	7,020	26,876	9,588	4,446	103	11	199,813
Vineyards ..	13,086	45,757		27,384	924				
Sugar-cane ..	(i)		81,506						(h)81,506
Hops ..		(i)			(f)	1,465			(h) 1,465
Cotton ..			2,206		(f)				(h) 2,206
Other crops (including fodder and fallow land)	218,748	120,403	(j)73,231	25,197	4,447	2,839	123	571	445,559
Total, Crops	311,004	231,853	198,221	91,005	24,334	12,850	338	715	870,320
Pastures ..	520,167	919,702	22,341	21,808	27,167	11,435	96	532	1,523,248
Total, 1962-63 ..	1,036,846	1,151,555	220,562	112,813	51,501	24,285	434	1,247	2,599,243

(a) Source: Water conservation and Irrigation Commission. (b) Includes total area irrigated by licensed Diversions, but details for individual crops, etc., in 1962-63 (205,675 acres), are not available. (c) Source: State Rivers and Water Supply Commission. (d) Incomplete, excludes area of rice irrigated. (e) See footnote (b) to New South Wales. (f) Not available for publication; included in Other crops. (g) Not available for publication; excluded from totals. (h) Incomplete, see footnotes to individual States. (i) Not available separately; included in Other crops. (j) Includes tobacco, 15,202 acres.

Nearly half of Australia's irrigated acreage is in Victoria, and about two-thirds is situated along the Murray and its tributaries (including the Murrumbidgee) in the three States of New South Wales, Victoria and South Australia. In those areas served by the Murray and its tributaries, irrigation water is used extensively for vines, orchards, pastures, fodder, and for domestic and stock purposes. Approximately forty per cent. of Queensland's irrigated acreage is devoted to sugar cane. Western Australia's small irrigated acreage is confined to areas in the south-west where vegetables, orchards, fodder, and pastures are served. Large scale irrigation schemes have not been developed in Tasmania or the Northern Territory, although investigations are at present being carried out in the Northern Territory to determine the availability of irrigation water for agriculture.

(iii) *Research.* Comprehensive programmes of research and investigation are being pursued by State water and agricultural authorities and the Commonwealth Scientific and Industrial Research Organization, often in collaboration. Special attention is being given to the following:—high water tables due to the application of water; surface accumulation of salt and other soil changes associated with irrigation; methods of applying water efficiently; soil treatments to improve the physical condition of irrigated heavy clay soils; the utilization of irrigated pastures by stock; growth problems affecting plants and trees; the prevention of evaporation from water storages; and the potability of saline waters for stock.

Irrigation is studied by the Commonwealth Scientific and Industrial Research Organization at a number of its research stations and laboratories, the principal one being the Irrigation Research Laboratory at Griffith (New South Wales), where investigations are concerned with limiting the degradation of land by irrigation, improving the quality and range of irrigated crops, and assessing the amount of water required by irrigated crops and the most economical means of applying it. The crops being studied include citrus, cotton, wine grapes and lucerne. The Organization's Division of Plant Industry studies irrigated pastures at Deniliquin (New South Wales) and Canberra (Australian Capital Territory), and tobacco at Mareeba (Queensland). At Merbein (Victoria), the Horticultural Research Section is working on problems of the dried-fruit industry. The Division of Land Research and Regional Survey conducts research on rice at the Coastal Plains Research Station, Darwin (Northern Territory), and on a number of irrigated crops, including rice, safflower, linseed and cotton, at the Kimberley Research Station (Western Australia). The Division has also carried out a number of hydrological investigations in connexion with the utilization of underground water for irrigation. The Division of Soils and the Soil Mechanics Section are studying methods of reducing seepage from earthen dams, and take part in the examination of the physical properties of sediments beneath proposed dam sites. The Division of Soils is also looking at underground water movement and the water balance in the south-east of South Australia, and at the drainage and soil moisture regime of the irrigated swamps of the lower Murray River. The Division of Physical Chemistry is investigating methods of minimizing evaporation losses from water storages by the use of monomolecular layers.

The Irrigation Research and Extension Committee plays an important part in the agricultural activity of the Murrumbidgee Irrigation Areas. It is representative of the New South Wales Department of Agriculture, the Commonwealth Scientific and Industrial Research Organization, the Rural Bank of New South Wales, the Soil Conservation Service of New South Wales and certain farmers' organizations (including extension groups). Finance is provided by these authorities on an agreed basis. The objectives are:—to enable the agricultural extension services to the farmers in the defined sub-region to be continued and developed; to provide a system for advising on local agricultural policy and organization; to provide means for farmer opinion to have due weight in the consideration of

regional agricultural administration and policy; to achieve a unified approach to sub-regional extension in all branches of agriculture; to advise on the research needs of the sub-region and the co-ordination of the agricultural research of the various rural institutions working therein; to achieve close liaison between research and extension; and to conduct research in extension methods.

4. **Preservation of Catchments.**—Since water conservation commences on the catchments, it is becoming increasingly recognized that anything which interferes with catchment efficiency affects the quantity of water available for all purposes. Active steps are being taken to counteract soil erosion, to conserve soil generally, and to minimize the effects of floods, overstocking, bush fires, and the destruction of vegetative cover. All States and the Commonwealth have initiated forestry policies which provide for reafforestation and the preservation of catchments. In recent years, efforts to counteract soil erosion have been intensified, and there is some evidence of a more unified approach to catchment, water, forestry, and land use factors regarded as parts of a single problem.

5. **Sub-surface Supplies.**—(i) *General.* Much of Australia's underground water is obtained from artesian and sub-artesian basins and is used for stock purposes. These supplies are indispensable in most inland areas. The quality of the water ranges from usable to very saline. In inland areas, a considerable amount of water has been tapped that is unusable because of its high salt content. Because of this, development of an economic desalting process would provide the interior with additional large quantities of usable water.

Considerable use is also made of sub-surface water, other than pressure water, from local storages, particularly in the well-settled areas. The water is used mainly for domestic and stock purposes. Compared with other countries with similar rainfall and climate, underground water is not used extensively for town and individual industrial supplies, but its use for these purposes is increasing.

Commonwealth and State departments interested in underground water resources are represented on the Technical Committee on Underground Water (formerly the Underground Water Conference of Australia), which is under the auspices of the Australian Water Resources Council (*see* § 3, para. 2, p. 239).

The various States and Territories maintain Geological Surveys and Water Commissions which are continually extending the knowledge of their own States. These authorities have been assisted more recently by various scientific and industrial foundations. In New South Wales, for example, the Hunter Valley Research Foundation is carrying out scientific investigations in the catchment area of the Hunter River, and this includes an integrated study of water, soils and climate.

In addition, the University of New South Wales recently formed the Water Research Foundation which has among its objectives research into underground water. To date, research has been devoted mainly to run-off studies, to the design of large earth farm dams and to sponsoring post-graduate hydrology courses.

As a result, a general picture exists of Australia's available and potential underground water resources. Much remains, however, to be done in the mapping and assessment of individual artesian and sub-artesian basins and in the investigation of their constituent aquifers. Detailed investigations also remain to be carried out of shallower underground water in alluvial deposits, coastal sands and mantles of weathered and jointed rock.

Surveys of this nature are of great importance because of the fundamental need for underground sources of water in the settlement of large areas of Australia.

(ii) *Artesian and Sub-artesian Supplies.* Pressure water (either artesian or sub-artesian), variable in quantity and quality, is obtainable in many parts of Australia, the various artesian basins extending over about half the continent. A map of Australia showing the extent of the known artesian basins appears on page 273 of Year Book No. 48.

The Great Artesian Basin, the most extensive in the world, underlies an area of approximately 676,250 square miles, comprising about 421,000 in Queensland, 135,000 in South Australia, 81,250 in New South Wales and 39,000 in the Northern Territory. The following are the principal defined water-bearing basins in Australia.

## PRINCIPAL WATER-BEARING BASINS IN AUSTRALIA

Name	State	Geological age of chief aquifers	Approximate area	Depth to pressure water
			Square miles	Feet
Great Artesian ..	Queensland, New South Wales, South Australia and Northern Territory	Mesozoic .. ..	676,250	Up to 7,000
Canning ..	Western Australia	Mesozoic-Palaeozoic	150,000	100 to 1,800
Georgina (including Barkly and Daly) ..	Northern Territory, Queensland	Cretaceous, Ordovician, Cambrian and Upper Proterozoic(?)	108,000	150 to 1,000
Murray ..	Victoria, New South Wales and South Australia	Miocene-Eocene ..	107,000	100 to 1,300
Eucla .. ..	Western Australia, South Australia	Pliocene-Miocene ..	74,000	300 to 2,000
Carnarvon ..	Western Australia	Cretaceous, Permian ..	45,000	200 to 4,000
Perth .. ..	Western Australia	Recent, Jurassic ..	21,000	200 to 2,500
Western District (Otway)	Victoria ..	Pleistocene-Upper Cretaceous	13,000	100 to 4,500
Basins of Ord-Victoria region	Northern Territory, Western Australia	Mainly Cambrian and Permian	12,000	Unknown
Pirie-Torrens ..	South Australia ..	Recent, Pleistocene ..	9,000	Up to 600
East Gippsland ..	Victoria ..	Pleistocene-Eocene ..	3,500	200 to 3,500
Adelaide ..	South Australia ..	Recent, Oligocene ..	1,100	10 to 600

More than 18,000 artesian bores have been drilled within the Great Artesian Basin, while the daily free discharge from all bores continuing to flow in Australia has been stated as exceeding 350 million gallons, of which the loss by evaporation and seepage has been estimated at more than 90 per cent. Sub-artesian bores and wells throughout Australia number more than 200,000.

Artesian water generally is good stock water, but most is unsuitable for plant life, while in certain areas sub-artesian waters are suitable for all uses including irrigation. In the Eucla Basin and parts of the Murray and Pirie-Torrens Basins, the water is of poor quality, being barely suitable for stock.

In common with other countries possessing artesian supplies, Australia has been faced with the problem of flow diminution. It was recognized early that flows were diminishing as more bores were drilled, but it is now considered that while many of the bores will ultimately cease to flow, others will assume a perpetually steady rate of flow, corresponding with the average intake of water from rainfall absorbed by permeable outcrops, mainly sandstone and limestone. Diminution in flows from artesian bores has emphasized the need to eliminate wastage as much as possible, and investigations have been made regarding wasteful methods of distribution of artesian water by open channels or bore drains and the careless use of water. (For greater detail on this subject see Year Book No. 37, pp. 1103-4 and § 4, para. 3.)

(iii) *Shallow Groundwater.* Shallow groundwater supplies are used in various parts of Australia for industry, irrigation, stock and domestic purposes. Two of the most important of these supplies are in New South Wales. The Hunter District Water Board pumps 15 million gallons a day for general use from the Tomago coastal sands near Newcastle, and at Botany, Sydney, private industry pumps 8-10 million gallons a day for its own use from similar sands. Exploration of the coastal sands north of the Tomago Sands has revealed a further potential production of 25 million gallons a day.

In recent years there has been a marked increase, particularly in Queensland, New South Wales and Victoria, in investigation into the underground water resources of river and coastal alluvium for irrigation and town water supplies.

### § 3. National and Interstate Aspects

1. *General.*—As the Commonwealth Constitution makes special reference to water rights, both the Commonwealth and the State Governments have an interest in the control and conservation of water. The main responsibility for control of water resources rests with the individual State governments, but as political boundaries sometimes intersect river valleys and catchments, co-operation between governments has been necessary to develop resources in certain cases. Specific examples of Commonwealth-State and interstate co-operation and approach are given in the following paragraphs.

2. *Australian Water Resources Council.*—This Council was established in 1962 to provide a means of securing the highest level of basic information on Australian water resources and of making it readily available. The major problem faced by the Council is that Australia does not have a reliable estimate of how much water is available now, and how much will be available in the future. The Council therefore intends to provide a comprehensive assessment of Australia's water resources, and to extend measurements and research so that future planning can be carried out on a sound and scientific basis.

The first meeting of the Council was held in March, 1963. The Council comprises the Minister for National Development as Chairman, the Minister for Territories, and the Minister in charge of water supplies from each State. Provision has been made for Ministers responsible for closely related activities to be co-opted when problems of particular concern to them are under discussion. The Council is assisted by a Standing Committee of Commonwealth and State officers. Technical committees on surface water and on underground water have been established to undertake detailed investigations.

3. *Murray River Scheme.*—(i) *General.* The Murray River and its tributaries form the largest river system in Australia. The catchment is approximately 414,000 square miles, or one-seventh of the area of the Australian continent, comprising five-sixths of New South Wales, over one-half of Victoria, one-sixth of Queensland and one-fortieth of South Australia. The Murray proper is 1,600 miles long. Its main tributaries are the Darling (1,700 miles), the Murrumbidgee (980 miles), and the Goulburn (350 miles). The average annual flow of each of the chief contributory streams is as follows:—Upper Murray, including the Mitta Mitta and Kiewa Rivers, 3,623,000 acre feet; Darling River, 2,896,000 acre feet; Goulburn River (including Broken River), 2,570,000 acre feet; Murrumbidgee River, 2,054,000 acre feet; and Ovens River, 1,222,000 acre feet. Irrigated production in the Murray River Basin is mainly grapes for wine, dried fruits, fresh fruits, rice, vegetables, dairy produce, wool, and fat lambs.

(ii) *River Murray Waters Agreement.* For a brief summary of the historical events leading up to the River Murray Agreement (1915) by the Governments of the Commonwealth, New South Wales, Victoria, and South Australia, see issues of the Year Book prior to No. 39. Under the Agreement, construction works are carried out by the States (which are also responsible for maintenance) subject to the approval and direction of the Commission. The Agreement provides that the minimum quantity of water to be allowed to pass for supply to South Australia in each year shall be sufficient to maintain certain specified flows in the lower river varying from 47,000 acre feet a month in the winter months to 134,000 acre feet a month in the four summer months of maximum demand—the total amounting to 1,254,000 acre feet over twelve months. The flow at Albury is shared equally by New South Wales and Victoria, and each of these States has full control of its tributaries below Albury, subject in each case to the fulfilment of the South Australian allocation. For a brief outline of the operation of the Agreement prior to 1949, see Year Book No. 40, page 1065, and earlier issues.

At a conference of Ministers held in 1949 to consider the diversion of the Snowy River it was decided that, by diversion of streams in the Snowy Mountains area, an average of approximately 440,000 acre feet per annum would be added to the Murray River (see para. 5, Snowy Mountains Hydro-electric Scheme, p. 241) and that increased storage should be provided in order to give additional regulation of the Murray River itself as well as to provide for regulation of the diverted waters. Hydro-electric potentialities would also affect the size of the storage.

The River Murray Commission investigated the position and subsequently recommended to the contracting Governments that the River Murray Waters Agreement be amended to provide for enlargement of the Hume Reservoir by 500,000 acre feet to 2,500,000 acre feet. A conference of Ministers in 1954 agreed to the enlargement, and it was also agreed that the Commission should be given power to construct regulators and to carry out such other work on the Murray River between Tocumwal and Echuca as it considered necessary to reduce the losses from the regulated flow in that stretch of the river. The amended Agreement was ratified in the Parliaments of the Commonwealth and the three States and was proclaimed on 7th April, 1955. In view of the proposed diversions by the Snowy Mountains Authority to and from the Murray River, and for other reasons, amendments to those sections of the River Murray Waters Agreement dealing with the distribution of the waters of the Murray were considered desirable. Following ministerial conferences, amendments were ratified by the four Parliaments concerned, and came into force on 6th November, 1958.

Legislation to permit further amendment of the Agreement to provide for the construction of a storage of approximately 4,750,000 acre feet capacity at Chowilla in South Australia has been passed by the Commonwealth and State Parliaments. The dam will be located some six miles downstream from the border between Victoria and South Australia, and will consist of concrete outlet structures and a bank forty-one feet high across the flood plain. The overall length of the dam will be three and one-third miles, and the lake formed behind it will extend to Wentworth Weir, a distance of about one hundred and twenty miles by river.

The estimated quantity (in acre feet) of water diverted during 1962-63 from the Murray and its tributaries for irrigation and other purposes under the River Murray Agreement was as follows:—New South Wales, 2,602,000; Victoria, 3,060,000; South Australia, 296,000; a total of 5,958,000 acre feet.

(iii) *River Murray Works.* One of the major works of the Murray River Scheme is the Hume Reservoir, situated just below the junction of the Murray and Mitta Mitta Rivers, 10 miles above Albury, forming a lake of 56,000 acres. The design comprises a mass concrete spillway and outlet works extending for 1,000 feet, and an earthen embankment 142 feet high extending for 4,000 feet across the river flats, the length of the total structure being approximately one mile. Work on the enlargement of the reservoir to its approved capacity was completed in 1961.

The Yarrawonga Diversion Weir, which was completed in 1939, raised the river level so that water could be diverted by gravitation into main channels constructed on either side of the river. Between the Yarrawonga Weir and the Murray mouth, thirteen weirs and locks have been built. Two flood diversion weirs have been constructed on the Murrumbidgee—one between Hay and the Lachlan junction and the other below the Lachlan junction.

The Mulwala Canal, served by the Yarrawonga Weir, has an off-take capacity of 2,500 cubic feet a second, to serve 1,500,000 acres of land in New South Wales. The Yarrawonga Channel, on the Victorian side, has an off-take capacity of 1,250 cubic feet a second, to serve 270,000 acres. Only a portion of each area will be irrigated.

Adjoining the river in New South Wales, and 35 miles from the Murray-Darling junction, Lake Victoria storage, with a surface area of 27,670 acres, was completed in 1928. The water released from Lake Victoria is used by the South Australian settlements. The inlet channel to Lake Victoria was enlarged in 1957 to permit greater diversion of periodical flood flows of short duration.

Five barrages across channels near the Murray River mouth connecting Lake Alexandrina with the sea were completed in 1940 to prevent ingress of salt water to Lakes Alexandrina and Albert and to the lower river, thereby increasing the productivity of adjacent lands. The structures maintain a sufficiently high level for 50 miles up river to permit watering by gravitation of a considerable area of reclaimed river flats. The total distance across the barrages and intervening islands is 15 miles.

In addition to the works carried out under the auspices of the Commission, the separate States have constructed thousands of miles of distribution channels and have provided a number of storages on the tributaries, thereby contributing very materially to the large amount of irrigation development in the Murray Basin. The main storages are: New South Wales—Menindee Lakes Storage (Darling), Burrinjuck (Murrumbidgee), Keepit (Namoi) and Wyangala (Lachlan); Victoria—Eildon (Goulburn) and Waranga (Goulburn). Details of these and other State works on Murray tributaries will be found in the sections dealing with State systems. No storages exist on the Murray in South Australia at present, but the construction of a large storage at Chowilla is proposed (*see sub-para. (ii) above*).

4. **New South Wales-Queensland Border Rivers Agreement.**—The New South Wales-Queensland Border Rivers Agreement came into effect on 1st July, 1947. The Agreement provides for the construction of certain works on those sections of the Severn, Dumaresq, Macintyre and Barwon Rivers which constitute part of the boundary between New South Wales and Queensland for the furtherance of water conservation, water supply and irrigation in those States.

The works to be constructed comprise a dam on the Dumaresq River at a site to be selected by the Commission to give a storage basin with a capacity as large as is reasonably practicable and not less than six nor more than twelve weirs as may be found necessary to meet the requirements of irrigation along the rivers. Provision is also made for the construction of not more than four regulators in the effluents from the barrier rivers and for the taking over of the existing weir on the Macintyre River at Goondiwindi and the existing weir on the Barwon River at Mungindi. The cost of these works and of administration are to be borne by the States in equal shares. The agreement further provides that the water discharge from the Dumaresq storage, whether by regulated or unregulated flow, shall be available to the two States in equal shares.

The Water Conservation and Irrigation Commission of New South Wales, which is the constructing authority for the dam, carried out investigations of several dam sites on the Dumaresq River near Mingoola Station homestead, which is approximately 39 miles from Tenterfield. Foundation drilling supplemented by a geophysical survey carried out by the Commonwealth Bureau of Mineral Resources disclosed unfavourable foundation conditions at all sites, the depth of alluvium overlying sound rock exceeding 150 feet in all cases. In an endeavour to obtain more economical storages, investigations were extended to tributary streams, and superficially suitable sites have been located on Pike Creek and the Mole River. A geophysical survey was made at each of these sites and preliminary comparative estimates prepared to determine the relative economy of providing one large storage at Mingoola or two smaller storages on the tributaries. Following exploratory drilling of the tributary sites, a report dealing with alternative storage proposals and possible amendments to the existing Agreement was submitted to the participating States. This report is at present under consideration.

The Irrigation and Water Supply Commission of Queensland is the constructing authority for the new weirs and regulators. Bonshaw and Cunningham Weirs on the Dumaresq River were completed in 1953 and 1954 respectively.

A weir and regulator have been constructed on the Barwon River at the offtake of the Boomi River. A low level weir to establish a pumping pool at Glenarbo on the Dumaresq River was also constructed. The existing Goondiwindi and Mungindi Weirs are being maintained, operated and controlled by the Queensland Irrigation and Water Supply Commission. Until a dam has been constructed, it is unlikely that any weirs, other than those referred to above, will be required.

The catchments for the border streams (2,000 square miles) extend to the granite areas in the vicinity of Tenterfield (New South Wales) and Stanthorpe (Queensland), and elevation rises to 3,000 feet. Average rainfall is 30 inches. The catchments and the areas suitable for irrigation are approximately equal in each State. Climatic conditions are such that from April to October it is necessary to supplement rainfall by irrigation to stabilize and increase production. The capacity of the area to grow lucerne and tobacco under irrigation has already been demonstrated. Other possible development of the area includes irrigation of cotton, root crops, cereals, and citrus fruit, and expansion of the fat stock industry.

5. **Snowy Mountains Hydro-electric Scheme.\***—Following a comprehensive investigation into both the water and power potential of the Snowy River waters by a Technical Committee representative of the Commonwealth and the States of New South Wales and Victoria in 1947 and 1948, and the submission by the committee of reports in 1948 and 1949, the Commonwealth Parliament passed the *Snowy Mountains Hydro-electric Power Act 1949* setting up an Authority to implement the proposals agreed upon.

The basis of the proposals is to impound the Snowy River waters at high elevations and, by diverting them into tunnels passing under the Alps, to use their potential power for the generation of electricity and then to discharge them into the Murray and Murrumbidgee River systems for use in the irrigation areas.

\* See also Chapter VII. Electric Power Generation and Distribution, p. 210. For more detailed information see special article by the Commissioner, Snowy Mountains Hydro-electric Authority (Sir William Hudson) which appeared in Chapter XXIX. Miscellaneous, of Year Book No. 42.



The Scheme involves two main diversions, that of the Eucumbene, a tributary of the Snowy, to the Upper Tumut River and that of the main stream of the Snowy River at Island Bend and Jindabyne to the Swampy Plain River. In addition, works required to make use of the waters of the Upper Murrumbidgee, the Upper Tumut, the Upper Tooma and the Geehi Rivers for power generation also provide additional regulation of these streams, and this makes more water available for irrigation. Details of the two trans-mountain diversions and the associated power works together with details of progress and construction are given in Chapter VII. Electric Power Generation and Distribution (*see pp. 210-12*).

An additional 500,000 acre feet of water per annum is now available for irrigation in the Murrumbidgee Valley. When all works are completed, it is estimated that the total gain to the Murrumbidgee by diversion and regulation will amount to 1,120,000 acre feet per annum and the total gain to the Murray will be 800,000 acre feet per annum. This additional water should be sufficient to provide irrigation for approximately 1,000 square miles of land which is expected to result in a substantial increase in annual primary production.

#### § 4. International Aspects

Australia maintains contact with international developments in water conservation and irrigation through its membership, since 1952, of the International Commission on Irrigation and Drainage. This Commission was set up in India in 1950 in order that the technical experience of all countries might be pooled for the benefit of all, and to promote the development and application of the science and technique of irrigation and drainage in the engineering, economic and social aspects. The Commission is constituted of National Committees of participating countries, and fifty-four countries, including Australia, have already been admitted to membership.

The Central Office of the International Commission is situated in New Delhi, India. Congresses, which are held every three years, have taken place in India, Algeria, the United States of America, Spain and Japan, in that order. The sixth Congress will be held in India in January, 1966.

An Australian National Committee was established following a meeting of representatives of Australian authorities held in Melbourne in 1953. At that meeting it was decided, *inter alia*, "that a National Committee should be formed and that the National Committee would consist of representatives of Government Departments, Statutory Authorities, firms and individuals actively interested in irrigation and drainage". The Committee meets annually.

### STATES AND TERRITORIES

#### § 1. Australian Local Pattern of Water Conservation and Use

The foregoing sections deal with water conservation and irrigation in Australia generally and with international, national and interstate projects. The following survey covers the local pattern of water resources and the steps taken by the State governments to bring about their development. It will be seen that water policies in the various States tend to assume a distinctive and characteristic pattern closely allied with climatic conditions and specific local needs.

In Victoria, almost every form of water scheme is in operation. In New South Wales, major emphasis at present is on irrigation and stock development in the dry areas along the Murray and Murrumbidgee Rivers, though a substantial scheme of intensive irrigation is being conducted in the Murrumbidgee Irrigation Areas. In Queensland, up to the present, the predominant emphasis has fallen on water (mainly underground sources) for stock, and the development of small irrigation schemes in sub-humid and humid areas, especially to stabilize sugar production.

Apart from regular irrigation practices along the Murray River, South Australian authorities are vitally concerned with reticulated supplies for rural areas and towns. Western Australia has developed unique rock catchments and piped supplies for agricultural areas and towns in dry districts. Tasmanian interest relates almost exclusively to hydro-electric generation. The Northern Territory is concerned primarily with stock supplies and the safeguarding of long stock routes.

## § 2. New South Wales

1. **General.**—(i) *Rainfall and History.* On page 1110 of Year Book No. 37, information is given on the pattern of rainfall and the history of irrigation in New South Wales. (See also Chapter II. Physiography, p. 47, of this issue.)

(ii) *Administration.* The Water Conservation and Irrigation Commission of New South Wales consists of three members appointed by the Governor. The operations of the Commission cover water conservation, control of irrigation areas, the establishment, operation and maintenance of works for domestic and stock water supply, irrigation districts, flood control districts, sub-soil drainage districts, constitution of water trusts, the issue of licences for private irrigation, artesian and shallow boring, assistance under the provisions of the farm water supplies scheme, and river improvement works.

Under the *Water Act* 1912–1955, the right to the use and flow and the control of water in all rivers and lakes which flow through, or past, or are situated within, the land of two or more occupiers, is vested in the Commission for the benefit of the Crown. A system of licences operates for the protection of private works of water conservation, irrigation, water supply, drainage, and prevention of inundation.

For particulars of the New South Wales–Queensland Border Rivers Agreement ratified by Acts of both States in 1947, see page 241 of this chapter.

2. **Schemes Summarized.**—(i) *Location and Type.* The bulk of irrigated land is along the Murray and its tributary the Murrumbidgee. Smaller areas are served by the Wyangala Dam, Lake Cargelligo and Lake Brewster on the Lachlan (a tributary of the Murrumbidgee), by Glenbawn Dam on the Hunter River, by Keepit Dam on the Namoi River, and by the Menindee Lakes Storage on the Darling River. None of the other rivers is regulated by large head storages, though weirs and dams have been provided for town supplies, etc., in many places, and a head storage on the Macquarie River is nearing completion. In addition, substantial use is made of artesian and sub-artesian water in pastoral areas.

New South Wales legislation provides for the constitution and control of various schemes having different characteristics and including irrigation areas, irrigation districts, water trust districts, flood control and irrigation districts, and river improvement districts. There are nine irrigation areas, although two of these, Yanco and Mirrool, are generally described under the one heading, namely, the Murrumbidgee Irrigation Areas. The Areas are:—The Murrumbidgee Irrigation Areas, consisting of 451,260 acres served with water through a channel system stemming from the river at Berembded Weir; the Coomealla Irrigation Area of 34,672 acres, served by pumping from the Murray; the Curlwaa Irrigation Area of 10,393 acres, supplied from the Murray by pumping; the Hay Irrigation Area of 6,850 acres, supplied with water pumped from the Murrumbidgee; the Tullakool Irrigation Area of 18,006 acres, supplied from the Edward River by diversion at Stevens Weir; the Buronga (8,693 acres) and Mallee Cliffs (1,900 acres) Irrigation Areas, served by pumping from the Murray; and the Coleambally Irrigation Area (109,179 acres), served by diversion from the Murrumbidgee River. All these Areas are administered by the Commission, and details of the various schemes are given in sub-section (iii) below.

(ii) *Works.* The capacities of the main storages (in acre feet) are:—

*Darling*—Menindee Lakes Storages (2,000,000);

*Murray*—Half share of Hume Reservoir, weirs and locks to Wentworth (1,361,420); Stevens Weir, Edward River (7,165);

*Murrumbidgee*—Burrinjuck Dam (837,000); Berembded Weir (10,000); Redbank Weir (7,360); Maude Weir (6,740);

*Namoi*—Keepit Dam (345,000);

*Lachlan*—Wyangala Dam (temporary reduced level 245,000); Lake Brewster (123,900); Lake Cargelligo (29,435); Jemalong Weir (2,200); and

*Hunter*—Glenbawn Dam (185,000 acre feet irrigation storage; 108,000 acre feet flood mitigation storage).

The total length of supply channels, drains, escape channels and pipe lines constructed by the Water Conservation and Irrigation Commission in New South Wales is 4,772 miles. This comprises 3,367 miles of supply channels (including main canals), 1,336 miles of drains and escape channels, and 69 miles of pipe lines.

(iii) *Extent of Systems and Nature of Irrigated Culture.* The following table shows the areas of the various irrigation systems in 1962-63 and particulars of the areas under irrigated culture in New South Wales during the seasons 1958-59 to 1962-63.

**AREAS OF SYSTEMS AND OF LAND IRRIGATED: NEW SOUTH WALES**

(Source: Water Conservation and Irrigation Commission)

(Acres)

Season and system	Total area	Area irrigated(a)										Total
		Rice	Other cereals grown for grain	Fodder crops		Pastures		Vineyards	Orchards (b)	Vegetables	Fallow land and miscellaneous	
				Lucerne	Other	Sown	Natural					
1958-59(c)	6,746,225	47,054	24,905	46,677	14,271	414,606	12,169	13,039	22,134	15,828	30,678	641,361
1959-60	6,781,246	48,972	29,147	31,513	12,463	464,421	4,763	12,365	17,761	4,048	47,215	889,441
1960-61	6,901,105	46,116	33,436	34,950	10,490	458,360	5,412	12,388	17,962	3,362	36,195	837,191
1961-62	6,952,579	50,223	37,779	40,273	14,024	522,748	5,097	11,515	18,080	2,784	50,443	964,748
1962-63—												
<b>Irrigation Areas—</b>												
Murrumbidgee (with- in the Areas)	451,260	27,948	26,909	5,301	3,320	78,608	5,794	5,782	18,501	3,500	29,963	205,626
Lands adjacent sup- plied under agree- ment	(e)	..	..	399	6	1,629	830	2	83	10	..	2,959
Coomaella	34,672	..	..	..	5	..	..	4,578	1,431	..	..	6,014
Curlwaa	10,393	..	..	..	43	..	..	381	1,196	..	..	1,620
Hay	6,850	..	..	144	612	1,976	116	..	..	..	..	2,888
Tullakool	18,006	1,000	633	35	200	6,615	..	..	..	..	200	8,683
Buronga	8,693	..	..	..	..	..	..	..	..	..	..	..
Mallee Cliffs	1,900	..	..	..	..	..	..	..	..	..	..	..
Coleambally	109,179	5,364	6,129	321	770	4,178	..	38	52	117	18,925	35,894
<b>Total</b>	<b>6,400,953</b>	<b>34,312</b>	<b>33,671</b>	<b>6,200</b>	<b>4,956</b>	<b>93,006</b>	<b>6,740</b>	<b>10,781</b>	<b>21,263</b>	<b>3,627</b>	<b>49,128</b>	<b>263,684</b>
<b>Irrigation Districts—</b>												
Benerambah	112,818	5,086	8,424	1,727	3,255	33,289	890	..	..	30	9,490	62,191
Tabbita	32,330	358	960	316	323	6,566	..	..	..	30	772	9,325
Wah Wah	575,716	..	5,685	1,610	450	11,945	250	..	..	..	4,120	24,060
Berriquin	803,737	..	18,558	18,391	1,919	236,524	745	..	..	136	4,000	280,273
Wakool	503,322	6,940	7,117	1,475	2,650	78,747	245	..	..	78	1,165	98,417
Denimein	147,005	2,796	3,069	1,170	1,778	12,490	..	..	12	8	695	22,018
Jemalong and Wyld's Plains	224,556	..	3,320	9,694	700	10,797	1,140	..	..	..	1,269	26,920
Gumly	353	..	57	69	5	11	..	..	20	77	239	239
Denibootea	337,897	4,086	4,598	2,162	2,260	26,552	230	..	..	2	1,539	41,429
<b>Total</b>	<b>2,737,734</b>	<b>19,266</b>	<b>51,788</b>	<b>36,614</b>	<b>13,340</b>	<b>416,921</b>	<b>3,500</b>	<b>..</b>	<b>32</b>	<b>361</b>	<b>23,050</b>	<b>564,872</b>
<b>Flood Control Districts—</b>												
Lowbidgee	399,707	..	..	..	..	..	..	..	..	..	..	(e)
Medgun	272,800	..	..	..	..	..	..	..	..	..	..	(e)
<b>Total</b>	<b>672,507</b>	..	..	..	..	..	..	..	..	..	..	(e)
<b>Irrigation Trusts—</b>												
Pomona	1,580	..	..	..	..	..	..	760	130	..	..	890
Goodnight	1,104	..	..	..	..	..	..	565	41	..	..	612
Bungunyah-Koraleigh	1,810	..	..	..	..	..	..	980	93	40	1	1,113
Glerview	661	..	..	..	..	..	..	..	..	..	..	..
Bringan	4,933	..	..	..	..	..	..	..	..	..	..	(e)
Bama	3,446	..	..	..	..	..	..	..	..	..	..	(e)
<b>Total</b>	<b>13,534</b>	..	..	..	..	..	..	<b>f 2,305</b>	<b>(f) 264</b>	<b>(f) 45</b>	<b>1</b>	<b>(f) 2,615</b>
<b>Water Trusts—Domes- tic and Stock Supplies</b>	<b>2,907,871</b>	..	..	..	..	..	..	..	..	..	..	..
Licensed Diversions	(e)	..	..	..	..	..	..	..	..	..	..	g 205,675
<b>Total, 1962-63</b>	<b>6,972,239</b>	<b>53,578</b>	<b>85,459</b>	<b>42,814</b>	<b>18,296</b>	<b>509,927</b>	<b>10,240</b>	<b>13,086</b>	<b>21,559</b>	<b>4,033</b>	<b>72,179</b>	<b>1,036,846</b>

(a) Excludes Flood Control Districts and some Irrigation Trusts, particulars for which are not available. (b) Citrus and deciduous: in 1962-63, deciduous amounted to 10,010 acres, of which 9,796 acres were in the Murrumbidgee Irrigation Area. (c) Includes details (except Total area) for Licensed Diversions. (d) Includes total area irrigated by Licensed Diversions, but details for individual crops, etc., are not available. (e) Not available. (f) Incomplete. (g) Details for individual crops, etc., are not available.

3. **Irrigation Areas.**—(i) *Murrumbidgee.* (a) *Description.* These areas, together with adjacent lands supplied under agreement, received 403,770 acre feet, or nearly a quarter of the total water (1,702,301 acre feet) allocated within the State for stock, domestic supply and irrigation. They are served by the Burrinjuck Dam on the Murrumbidgee, 40 miles north-west of Canberra. The catchment above the dam is about 5,000 square miles. The river rises on the high plateau north of Mount Kosciusko where the average annual rainfall exceeds 60 inches. Flow for the irrigation areas and districts is supplemented by unregulated flow from the Tumut River below the dam. The dam also provides town supplies for Gundagai, Wagga, Narrandera, Hay, Balranald, and for towns served by the South-West Tablelands scheme.

Domestic and stock water and water for irrigation are supplied to the Irrigation Districts of Tabbita, Benerembah and Wah Wah, and the Flood Control and Irrigation District of Lowbidgee. Flood flows are relied on to serve the Lowbidgee district, and water is not released from the dam for that purpose. For the other undertakings, however, water is stored during the winter, fed by melting snows and spring freshets, and is released during the September-May irrigation season. It passes along the river channel to Berembed Weir, 240 miles westward, where it is diverted to the main canal with an off-take capacity of 1,600 cubic feet a second. The main canal has been completed to beyond Griffith, 106 miles from the off-take. Reticulation channels aggregate approximately 900 miles and drainage channels 880 miles. In addition, approximately 440 miles of supply channels run through irrigation districts adjacent to the Murrumbidgee Areas in which the water supply is operated and maintained by the Water Conservation and Irrigation Commission.

The land on which the Murrumbidgee Irrigation Areas and associated districts are situated originally comprised large sheep stations and was sparsely populated, but at 30th June, 1963, its population was approximately 27,000, that of Leeton Shire being 10,500 and that of Wade Shire 16,500.

(b) *Administration.* The Water Conservation and Irrigation Commission controls land transactions and water supplies for the Murrumbidgee Irrigation Areas only, and has no jurisdiction over land transactions in the adjacent irrigation districts, although it is responsible for the operation and maintenance of the water supply in these areas. Other local government services, including electricity and town water supply, are provided by Councils. Land is disposed of by the Commission by purchase or under perpetual lease tenure or leased for short terms for grazing or cultivation. The area under occupation at 30th June, 1963, was 408,876 acres, including 37,278 acres held for short lease grazing, agriculture, etc.

(c) *Production.* The principal products of the Murrumbidgee Irrigation Areas are wool, livestock for slaughtering, rice, citrus fruits, peaches and nectarines, grapes, tomatoes, peas, beans and root vegetables. Rice growing was initiated on the Areas in 1924 and has since become the most important crop. In a normal season, the water supplied for rice represents about half the total delivered to the Areas.

(ii) *Other Irrigation Areas.* The Coomealla, Tullakool, Buronga, Mallee Cliffs, Hay, Curlwaa and Coleambally Irrigation Areas follow the same administrative pattern as the Murrumbidgee Areas—that is, land transactions are administered by the Water Conservation and Irrigation Commission which is responsible also for the operation and maintenance of works to supply water.

4. **Irrigation Districts.**—These Districts are set up under the *Water Act* 1912–1955 for (a) domestic and stock water supply and (b) irrigation. They differ from water trusts in that the cost of the works is not required to be repaid over a period, but annual charges are made by the State for water supplied to landholders.

Since the completion of the Hume Reservoir, several such districts have been established along the Murray to utilize the New South Wales share of the storage. Water is not available for the whole of the 5,000,000 acres adjacent to the Murray in New South Wales, and therefore the schemes are based on “extensive” irrigation, that is, water rights are allotted to holdings on the basis that only a portion of each holding (one acre in three, five or ten, according to the district, etc.) will be irrigated, but additional water, when available, may be obtained by landholders. “Water right” means right to such a quantity annually of water, 12 inches deep, as will cover an area of one acre.

Water to serve Berriquin, Deniboota and Denimein Districts is diverted through a main canal which is approximately 100 miles long. Water for the Wakool Irrigation District and the Tullakool Irrigation Area is diverted from the Edward River at Stevens Weir, and a supplementary supply is also obtainable from Mulwala canal. At 30th June, 1963, the total

length of completed canals and channels in Berriquin District was 996 miles, comprising Mulwala canal 75 miles, Berrigan channel 22 miles, subsidiary channels 782 miles, escape channels 107 miles and cross drainage channels 10 miles. Off-take capacity of the Mulwala canal is 5,000 acre feet a day.

Wakool, with 387 miles of channel, contains 309 holdings, and the area developed by irrigation includes about one acre in five of the total area. Sheep raising is the main industry.

Considerable subdivision has occurred within the Berriquin District, and the proportion of the total area developed for irrigation is higher than in the case of Wakool. Sheep (including fat lambs), dairying and wheat growing are the main industries.

**5. Water Trust Districts, Irrigation Trusts and Flood Control and Irrigation Districts.**—The *Water Act* 1912-1955 provides for the constitution of Trust Districts for domestic and stock water and irrigation, and empowers the Commission to construct, acquire or utilize necessary works. When the works are completed, they are handed over to trustees to administer. The trustees are elected by the occupiers of the land and act with a representative of the Commission. They are empowered to levy and collect rates covering the cost of the works repayable to the Crown by instalments and also the cost of operation and maintenance of the works. The rates are struck according to the area of land which benefits. The following water trusts—other than irrigation—have been constituted (the area in acres of each district is shown in parenthesis)—*Murray River*—Little Merran Creek (157,440), Tuppal Creek (78,080), Bullatate Creek (68,320), Poon Boon (34,300), Minnie Bend Flood Prevention (2,190); *Murrumbidgee River*—Yanco, Colombo and Billabong Creeks (1,007,780); *Lachlan River*—Marrowie Creek (292,640), Torrigan, Muggabah and Merrimajeel Creeks (170,240), Ulonga (64,960), Micabil Weir (11,500), Condobolin West Weir (4,480); *Miscellaneous*—Great Anabranche of Darling River (959,184), Nidgerly Weir (46,880), Algdudgerie Creek (9,760), Collarenebri town water supply (117)—making in all a total area of 2,907,871 acres. Thirteen of these trusts have been formed for the provision of water for domestic and stock purposes, one for a town supply and one for flood prevention.

Irrigation Trusts are established under the same Act and are administered by trustees in a similar way.

The Lowbidgee Provisional Flood Control and Irrigation District, the first of its kind, was constituted in 1945. Its purpose is to provide flood irrigation for pasture lands on the lower Murrumbidgee by water diverted from the Maude and Redbank Weirs. Another district, Medgun, near Moree in the north-west, is also in operation.

**6. River and Lake, and Farm Water Supplies.**—During recent years, the numbers of licences and permits issued to individuals to draw water from rivers and lakes for irrigation have increased substantially, especially along the coastal streams in sub-humid districts where the value of supplementary irrigation is becoming more recognized as a means of stabilizing production in dry months. There has also been a considerable increase along the Murrumbidgee and Lachlan.

Under the *Farm Water Supplies Act* 1946, technical advice and assistance, and also financial assistance, are made available to help individual farmers and groups of farmers to provide and improve water supplies for domestic, stock and irrigation purposes by means of wells, bores, excavated tanks, weirs or dams, flood and spray irrigation systems.

**7. Underground Water.**—Extensive use is made of artesian, sub-artesian, and shallow underground water. The Great Artesian Basin underlies an area of some 81,250 square miles in north-western New South Wales. Eighty-seven Bore Water Trusts and 12 Artesian Wells Districts have been constituted. Bore Trusts are administered in the same way as Water Trusts, but in Artesian Wells Districts the settlers maintain the drains. Bore Trusts and Artesian Districts cover 5,597,202 acres and distribute water through 3,623 miles of open earth drains.

As at 30th June, 1963, 1,114 artesian bores had been constructed in the New South Wales section of the Basin. At that date, 641 bores were flowing and were capable of producing about 64,000,000 gallons per day. Conservation measures control this to about 50,000,000 gallons per day. The total length of bore drains, including those for Trusts and Districts, is approximately 8,000 miles.

Of other structural basins of sedimentary rocks, e.g., Murray, Sydney, Oxley and Clarence Basins, the Murray is the largest and also the most important in that it affords stock water supplies over an extensive area of the south-western section of the State. Only a few of these bores flow, the remainder being sub-artesian. Good supplies for stock and,

in some instances, small scale irrigation, are obtained from porous sandstone in the Moss Vale-Picton area, but the remainder has limited potential. Stock supplies are obtained from bores in the fringe zones of the Oxley Basin, but the centre of this basin lies under the Liverpool range. The Clarence Basin is relatively unimportant from a groundwater viewpoint, but stock supplies are obtained from some sections.

In other parts of the State, the largest and best quality groundwater supplies are obtained from sands and gravels in the alluvium of the major rivers and their tributaries, particularly the western-flowing rivers, e.g. Lachlan, Macquarie and Namoi. Supplies of up to 60,000 gallons an hour are obtained from wells and screened bores in these areas and are used for irrigation and town water supply. The Government is carrying out investigations to determine the ground-water potential of the alluvium of such valleys, particularly with regard to irrigation use, and a test-boring programme is in progress in the Lachlan Valley. Coastal river systems have a much more limited potential in this regard, the main exception being the Hunter.

Old sand dune areas along the coast provide large supplies of good quality water. However, since the soils of these areas are not suited to agricultural pursuits, exploitation has been largely confined to the Sydney and Newcastle areas. Initially a source of Sydney's water supply, the Botany sands are now utilized mainly by industry. The Tomago sands provide a considerable proportion of the Newcastle water supply.

The older rocks, which are mostly folded and jointed, are very variable in their ground-water potential and only rarely do they yield supplies sufficient and suitable for limited irrigation. Where suitable conditions obtain, they yield useful stock supplies, mostly at depths between 50 and 250 feet.

It is necessary under the *Water Act* 1912-1955 that all wells and bores be licensed, and details of over 20,500 bores and wells in the State are recorded. When assessed in relation to the geologic and topographic conditions of any particular area, such records provide valuable evidence of the ground-water potential and are thus of considerable benefit to landholders.

8. **Future Programme.**—The programme of development in hand includes the provision of additional dams and storages, diversion weirs, and flood mitigation and river protection works in various parts of the State. Construction of Burrendong Dam on the Macquarie River is nearing completion. Legislation has been passed authorizing the construction of a flood control and irrigation dam at Warkworth in the Hunter Valley and a storage dam at Blowering on the Tumut River. The Hunter River development, of which Glenbawn Dam is an integral part, concerns an exceptionally fertile coastal valley, forming the hinterland to Newcastle, where the annual rainfall is not heavy and variations from month to month are considerable. This is the first coastal scheme initiated in New South Wales. At Wyangala Dam, on the Lachlan River, the fixed crest of the dam spillway has been lowered temporarily to enlarge the spillway for passage of greater floods. Construction has commenced on a new earth and rock-fill dam which will be built behind the present dam to give a storage of 1,000,000 acre feet. Within the new Coleambally Irrigation Area further development of farms has been carried out and water is being supplied by the new diversion weir at Gogeldrie. At the 30th June, 1963, 114 large area farms and 8 horticultural farms had been allotted south of the Murrumbidgee River, whilst 47 large area farms had been allotted north of the river and now form part of the Murrumbidgee Irrigation Areas.

9. **Hydro-electricity.**—A survey of the use of water for power generation in New South Wales may be found in the previous chapter (*see* p. 219).

### § 3. Victoria

1. **General.**—(i) *Rainfall.* Particulars of the rainfall pattern of Victoria were given on page 1117 of Year Book No. 37. (*See also* Chapter II. Physiography, p. 47, of this issue.)

(ii) *Administration.* The passing of the *Irrigation Act* 1886 put the control of surface waters under the Crown, provided for the establishment of Irrigation Trusts and marked the beginning of irrigation development. The *Water Act* 1905 established the State Rivers and Water Supply Commission and gave it control of all irrigation, rural domestic and stock supplies, town water supplies, and flood protection and drainage undertakings outside the Metropolitan area, with the exception of the irrigation area operated by the First Mildura Irrigation Trust and the town water supplies operated by locally constituted waterworks trusts or local governing bodies.

The operations of the First Mildura Irrigation Trust, the waterworks trusts and local governing bodies administering town water supplies, the river improvement and drainage trusts and the various sewerage authorities which control sewerage undertakings in country towns are also subject to general supervision by the Commission.

2. **Works Summarized.**—In 1902, a great drought emphasized the need for a concerted attack on water problems. Subsequently to the establishment of the State Rivers and Water Supply Commission, the total capacity of storages controlled by that Commission has increased from 172,000 acre feet in 1906 to 4,515,278 acre feet at 30th June, 1963. In addition, Murray River storages with a combined capacity of 2,722,840 acre feet are shared equally by New South Wales and Victoria under the River Murray Waters Agreement, subject to certain obligations to South Australia. The total storage capacity available to Victoria is thus some 5,876,698 acre feet. Most of the water from these storages is used for irrigation. The area actually irrigated has risen from 105,000 acres in 1906 to 1,151,555 acres in 1962-63, to which 1,539,890 acre feet of water were delivered. The Commission estimated the value of irrigated production in 1961-62 at £61,355,000, representing about one-sixth of the value of Victoria's total rural production.

Besides supplying water to its own irrigation districts, the Commission supervises the diversion of water for irrigation by private persons by means of licences and permits. In the last ten years, the area so licensed has doubled, and private diverters now provide a fifth of total irrigation production.

3. **Storages.**—The capacities of the main storages in the various systems (in acre feet) at 30th June, 1963, were as follows:—

*Goulburn System*:—Eildon Reservoir, 2,750,000; Waranga Reservoir, 333,400; Total, 3,104,100; *Murray-Loddon System*:—Half share of Murray River storages, 1,361,420; Cairn Curran, 120,600; Tullaroop, 60,000; Total, 1,690,230; *Campaspe River*:—Eppalock Reservoir, 252,860; *Wimmera-Mallee*:—Rocklands, 272,000; Total, 563,800; *Gippsland*:—Glenmaggie, 154,300; Total 154,340; *Coliban*:—62,730; *Werribee-Bacchus Marsh*:—34,900; *Mornington Peninsula*:—5,800; *Otway*:—1,080; *Miscellaneous*:—6,858; *Grand Total*:—5,876,698.

4. **Extent of Systems and Nature of Irrigated Culture.**—The following table shows the areas of the various irrigation systems in 1962-63, and the areas under irrigated culture during the seasons 1958-59 to 1962-63.

#### AREAS OF SYSTEMS AND OF LAND IRRIGATED: VICTORIA

(Source: State Rivers and Water Supply Commission)

(Acres)

Season and system	Total area (a)	Area irrigated								Total	
		Cereals	Fodder crops		Pastures		Vineyards	Orchards	Market gardens		Fallow and miscellaneous
			Lucerne	Other	Sown	Natural					
1958-59 .. ..	2,149,466	9,436	38,752	15,228	716,951	72,802	44,267	35,349	18,595	14,386	965,766
1959-60 .. ..	2,115,542	26,426	41,698	13,883	774,268	73,340	43,778	39,612	20,628	19,149	1,052,782
1960-61 .. ..	2,188,136	7,940	39,872	10,239	754,323	67,014	44,817	40,274	21,735	20,966	1,007,180
1961-62 .. ..	2,151,976	27,586	41,253	16,468	830,925	69,505	44,563	42,671	22,197	22,732	1,117,900
1962-63—											
Goulburn - Campaspe - Loddon .. ..	1,350,093	16,262	19,329	13,484	402,533	25,279	293	23,397	1,613	13,614	515,804
Murray—											
Torrumbarry ..	357,471	6,607	4,792	4,389	201,061	22,021	5,489	2,088	1,058	3,117	250,622
Murray Valley Irrigation Area ..	301,141	2,115	7,398	1,310	96,205	2,268	40	6,280	413	896	116,925
Pumping(b) ..	80,763	11	547	136	601	302	36,803	2,912	590	1,486	43,388
Total .. ..	739,375	8,733	12,737	5,835	297,867	24,591	42,332	11,280	2,061	5,499	410,935
Other Northern systems .. ..	(c)	43	1,271	..	11,022	671	8	3,281	498	..	16,794
Southern systems .. ..	147,279	207	1,288	789	61,654	2,808	..	602	5,601	411	73,360
Private diversions(d) ..	(c)	868	8,555	2,712	85,309	7,968	3,124	4,499	12,861	8,766	134,662
<b>Total, 1962-63 ..</b>	<b>2,236,747</b>	<b>26,113</b>	<b>43,180</b>	<b>22,820</b>	<b>858,385</b>	<b>61,317</b>	<b>45,757</b>	<b>43,059</b>	<b>22,634</b>	<b>28,290</b>	<b>1,151,555</b>

(a) Excludes Other Northern Systems and Private Diversions. (b) Includes First Mildura Irrigation Trust.  
(c) Not available. (d) Excludes private diverters in the Torrumbarry System, but includes all other private diverters along the Murray River.

5. **Irrigation Systems.**—(i) *Goulburn.* The storage capacity for this system is provided principally by Eildon Reservoir, the enlargement of which was completed in 1956. Large-scale works have been in progress for several years to distribute the extra water available from this and other major storages.

Water from Eildon Reservoir flows down the Goulburn River to the Goulburn Weir, located near Nagambie. This raises the summer level of the river about 45 feet for the purpose of diversion. From this weir, water is diverted via the East Goulburn Main Channel direct to the irrigation areas around Shepparton. The western main channels from the weir convey water to the Waranga Reservoir near Murchison in addition to supplying part of the large Rodney area directly.

Two main outlet channels issue from Waranga Reservoir. One serves the western section of Rodney area, while the other serves irrigation areas as far west as Boort, and continues into the Wimmera-Mallee domestic and stock system to provide a supplementary supply as far as Beulah East (*see* para. 6, below).

Water is also supplied to part of the Goulburn-Loddon system from Cairn Curran Reservoir on the Loddon River, and from Tullaroop Reservoir on one of its tributaries, together with the new Eppalock Reservoir on the Campaspe River. Eildon itself may be used to supplement supply to the districts along the Murray River.

The main products of the Goulburn system are dairy produce, fruit, wool and fat lambs. Annual production of deciduous canning fruits in the area is about two-thirds of Australia's total.

(ii) *Murray River System.* The waters of the Murray River are used to supply the area between Yarrawonga and Merbein. The districts between Yarrawonga and Swan Hill, except Tresco near Swan Hill, are supplied by gravitation and those west of Swan Hill by pumping.

The main items produced in the Murray Valley Irrigation Area, which is served from Yarrawonga Weir, are dairy products, fat lambs and canning fruit.

The gravitation system based on Torrumbarry Weir (52 miles downstream from Echuca) serves the area around Cohuna, Kerang, Koondrook and Swan Hill. (Also included in the Torrumbarry System is the Tresco District supplied by pumping from Lake Boga.) Dairying and fat lamb raising are the major industries. Vine and orchard fruits and vegetables are grown extensively around Swan Hill.

West of Swan Hill lie four Commission districts with a pumped supply—Nyah, Robinvale, Red Cliffs and Merbein. These contain about 1,500 holdings devoted mainly to dried vine fruit, although citrus fruit and table and wine grapes are of some importance. The area around Mildura is controlled by the First Mildura Irrigation Trust, the only irrigation trust operating in Victoria. It serves an irrigated area about half the combined size of the four Commission districts and has similar major products.

(iii) *Southern Systems.* The most important southern system is the area around Maffra and Sale, devoted mainly to dairying. This is supplied from Glenmaggie Reservoir on the Macalister River and from the natural flow of the Thomson River when the flow is adequate. Other important irrigation districts are located quite close to Melbourne around Werribee and Bacchus Marsh. These districts are intensively developed for dairying and vegetable growing.

6. **Wimmera-Mallee Domestic and Stock Supply System.**—This system serves an area of 11,000 square miles or about one-eighth of the State. Without the artificial supply of water, development in this area would be meagre and hazardous owing to the constant threat of drought. The main supply is drawn from the Grampians storages and can be supplemented by water drawn from the Goulburn and Loddon Rivers, via the Waranga Western Channel referred to previously. Works in progress will make the Wimmera and Mallee independent of supplies from the Goulburn and Loddon Rivers in the near future. In addition, some 300 farmers in the north of the system are provided with a domestic and stock supply direct from pumps on or near the Murray River.

As far as possible, water is distributed in the winter and spring to reduce evaporation losses in 6,500 miles of Commission channels and 3,000 miles of farm channels. It is the responsibility of the 7,000 farmers served to provide sufficient storage capacity on their farms to meet their domestic and stock needs for the year. In addition to meeting rural and domestic demand, together with stock requirements, the Grampians storages provide a water supply for more than 40,000 people in 47 towns, and are used to irrigate a small area near Horsham.

7. **Town Water Supplies and Sewerage.**—Details of the operations of the State Rivers and Water Supply Commission with respect to water supplies and sewerage for country towns and local government authorities are given in Chapter XX. Local Government, of this Year Book.



8. **Drainage, Flood Protection and River Improvement.**—The largest work in this category undertaken by the State Rivers and Water Supply Commission is the Koo-wee-rup-Cardinia flood protection district embracing 80,000 acres of a continuous depression along the seaboard of Westernport. Once useless, indeed a hindrance to communication, this area now yields primary products worth several million pounds each year.

By the *River Improvement Act* 1948, the formation of local river improvement and drainage trusts under the supervision of the Commission has been greatly facilitated and, since 1950, 20 such trusts have been formed. The importance of river improvement work is expected to continue to grow.

9. **Finance.**—The net capital liability of the Commission at 30th June, 1963, was £113 million. Of this amount, nearly £78 million were expended on irrigation and £8 million on domestic and stock supply systems. Both these amounts were financed entirely by the State. The total liability for urban supply was £17 million, of which 55 per cent. was borne by the State and the remainder by the districts concerned. The remaining £10 million were due for expenditure on flood protection and drainage (£2 million) and items such as loan flotation expenses, surveys and investigations, and buildings, plant and stores (£8 million).

10. **Underground Resources.**—A survey of these resources is being carried out by the Victorian Department of Mines. Their deep drilling plant has located suitable water for town supplies at Portland, Heywood, Port Fairy, Timboon and Petersborough during exploration to 5,500 feet in the Western District basin. Other drilling plants are engaged in other parts of the State, and up to date over 100 wells have been successfully completed.

The Murray Artesian Basin underlies an area of 107,000 square miles, of which 27,000 square miles are in Victoria, 28,000 square miles in South Australia and 52,000 square miles in New South Wales. The quality of the water varies, and is suitable for domestic purposes in much of the south-western part of the basin in Victoria, but elsewhere is suitable only for limited stock use. Maximum depth of development of underground water in Victoria is approximately 4,500 feet. Some individual bores can yield up to 2,000,000 gallons a day. In the last few years, the Department of Mines has expanded considerably the work of exploration for underground water.

11. **Future Programme.**—The principal works under construction are Bellfield Reservoir on Fyans Creek (Grampians Mountains) to supplement the supply to the Wimmera-Mallee system (*see* paragraph 6 above), and a channel enlargement and remodelling project in the Goulburn system (*see* paragraph 5 (i) above).

In July, 1963, the Government announced plans for a long-term storage programme to cost a total of £37.5 million between 1963-64 and 1973-74. Some of the storages are already under construction, namely Bellfield Reservoir, Devilbend Reservoir (to serve the Mornington Peninsula system) and the first stage of the large Buffalo Reservoir referred to in the table on page 235. The others are Chowilla Reservoir (a River Murray Commission storage) and Winton Reservoir, also included in the table on page 235 together with the following:—

- (a) Tarago Reservoir on the Tarago River to supplement supply to the Mornington Peninsula area.
- (b) Nillahcootie Reservoir on the Broken River below Mansfield, to be used for irrigation;
- (c) Lerderderg Reservoir on Coimadai Creek, to be filled mainly from the Lerderderg River and Goodmans Creek, and used to supplement irrigation water supplies at Werribee and Bacchus Marsh; and
- (d) Corop Lakes, two natural lakes near Rochester to be used as an adjunct to Waranga Basin for off-river storages for irrigation.

#### § 4. Queensland

1. **General.**—(i) *Rainfall.* Particulars of the rainfall pattern of Queensland are given in Year Book No. 37, page 1122. (*See also* Chapter II. Physiography, page 47, of this issue.)

(ii) *Administration.* In Queensland, the right to the use and flow of non-tidal surface water contained in, or flowing through or past, the land of two or more occupiers, and all artesian and sub-artesian water vests in the Crown. Subject to certain reservations for local authority and other purposes, such water is controlled by a Commissioner of Irrigation and Water Supply.

For a description of the development of the present administration *see* Year Book No. 42 and earlier issues.

(iii) *Water Utilization.* In Queensland, private diversions from watercourses, artesian wells and, in certain declared areas, sub-artesian wells, are subject to licence by the Commissioner. Dams and weirs are constructed by the Commissioner to safeguard supplies in streams from which private pumping for irrigation takes place, and also to provide water for irrigation areas established by the Commissioner.

2. *Irrigation.*—(i) *General.* Irrigation as a means of stabilizing and increasing agricultural production continues to receive attention in Queensland. As a large portion of Queensland is tropical, the State's crops differ considerably from those of other States. Sugar cane is the greatest individual crop, representing in value nearly half of the total agricultural production. In 1962-63, 17 per cent. of the sugar cane acreage was irrigated. This represented 37 per cent. of the total irrigated area in Queensland. Queensland is also Australia's major tobacco-producing State, and plans are in hand to increase greatly the annual production of this crop by means of development under irrigation. The area of tobacco irrigated during 1962-63 represented 97 per cent. of the total plantings of this crop in the State.

Most irrigation in Queensland is undertaken by private farmers operating under licence to obtain water by pumping from streams or from natural underground storages. During recent years, there has been considerable development of individual water conservation projects (water harvesting) to provide storage for irrigation of pastures, fodder crops and small crops, and orchards. Where available, electricity is the most popular source of power for pumping, and the principal areas supplied with electricity are the Burdekin Delta, the Lockyer Valley, and the Darling Downs.

It has been estimated that about two-thirds of the total area irrigated in Queensland is supplied from underground water. The main areas where these supplies have been developed extensively are the Burdekin Delta (Ayr-Home Hill area), the Pioneer Valley, Callide Valley, Lower Burnett (Bundaberg area), Lockyer Valley and Redland Bay. Similar development is taking place in other areas such as parts of the Darling Downs.

Furrow irrigation is used for cotton, sugar cane, most tobacco and some other crops. Spray irrigation is used widely on fruit, vegetables, fodder crops and a small part of the tobacco crop. Spraying is well suited for the application of water on deep soils by small pumping plants, particularly when the quantity of water available is limited. Use of the border check method in the irrigation of pasture and fodder crops has proved successful.

The following table shows the number of irrigators and the areas irrigated for the years ended 31st March, 1959 to 1963, and for each division for the year ended 31st March, 1963.

AREA OF LAND IRRIGATED: QUEENSLAND

Season and division	No. of irrigators	Area irrigated (acres)							Total
		Vegetables	Fruit and vineyards	Sugar-cane	To-bacco	Cot-ton	Other crops	Pas-tures	
1958-59 .. ..	7,149	26,597	4,876	65,613	7,490	1,520	38,135	10,402	154,633
1959-60 .. ..	6,889	27,207	5,212	62,346	9,256	2,579	36,115	9,421	152,136
1960-61 .. ..	7,932	29,698	5,758	68,987	13,789	2,675	50,139	15,651	186,697
1961-62 .. ..	8,433	32,139	6,537	74,541	13,671	2,040	59,947	20,544	209,419
1962-63—									
Southern Queensland ..	5,952	28,061	5,775	21,949	3,181	298	44,449	17,334	121,047
Central Queensland ..	625	1,051	253	233	38	1,862	9,094	2,123	14,421
Northern Queensland ..	1,962	5,146	992	59,557	11,983	46	4,486	2,884	85,094
<b>Total, 1962-63 ..</b>	<b>8,539</b>	<b>34,258</b>	<b>7,020</b>	<b>81,506</b>	<b>15,202</b>	<b>2,206</b>	<b>58,029</b>	<b>22,341</b>	<b>220,562</b>

The pattern of irrigation in Queensland is unlike that in southern States. The spring to autumn "irrigation season" of the temperate southern irrigated lands is not applicable, as round-the-year irrigation is required throughout most of the State, the timing and duration of the summer "wet" season being too variable to enable a definite non-irrigation season to be fixed.

Two of the more important areas of development by irrigation by private pumping are the Lockyer Valley and Burdekin River Delta.

(a) *Lockyer Valley.* West of Brisbane and within 30 miles of that metropolitan market is the Lockyer Valley, which is portion of the Brisbane River Basin. The valley comprises an extensive flood plain where heavy black alluvial soil thickly overlies gravels

and sands carrying water suitable for irrigation. Despite a mean annual rainfall of 30 inches, the variation is great, and irrigation is necessary for continuous agricultural production. Surveys suggest that of some 60,000 acres of land highly suitable for irrigation only about a third is under irrigation. Most of the farmers operate electric pumps for irrigation purposes, and a special policy designed to encourage such development is fostered by the Southern Electric Authority of Queensland. The Irrigation and Water Supply Commission has constructed a number of small weirs on Lockyer Creek with a total storage of 1,340 acre feet. These also tend to augment and conserve underground supplies. The Irrigation Research Station established at Gatton has been converted to a Regional Experimental Farm under the control of the Department of Primary Industries.

The Lockyer Valley produces a substantial proportion of Queensland's onions, potatoes, pumpkins, lucerne, hay, green fodder, maize and dairy products.

(b) *Burdekin River Delta.* The Burdekin River, which enters the sea between Townsville and Bowen, is a major factor in the life of north Queensland. In most years, heavy floods from a catchment twice the size of Tasmania cause extensive damage and traffic disruptions. On the other hand, the fertile delta area, with its underground water supplies at shallow depth, has contributed greatly to the agricultural prosperity of north Queensland. The average annual rainfall of this area is some 41 inches, but the major part falls in the months December to March. Consequently, sugar growers and other farmers have tapped the underground water resources of the delta to obtain supplies in the dry periods. Sugar is the main crop irrigated, together with citrus fruits, pineapples, vegetables and tobacco. The irrigated area is in excess of 30,000 acres, with up to 1,000 acre feet of water being drawn daily from underground sources.

In the Home Hill-Inkerman areas on the south side of the Burdekin, water is obtained from shallow wells by electric pumps supplied from a local power station controlled by the Townsville Regional Electricity Board. Around Ayr, on the north side of the river, electric power from the mains of the Townsville Regional Electricity Board is now being used in place of individual internal combustion engines. At both Home Hill and Ayr, water for domestic supply is raised by a windmill on each property.

In 1940, the Burdekin River Trust was formed to safeguard the sugar areas of the delta from erosion and floods. An irrigation research station studies the development of pastures and irrigated crops under local conditions.

(ii) *Government Projects.* The Irrigation and Water Supply Commission has constructed and operates two dams and forty-two weirs with a storage capacity of 457,326 acre feet. Water from these storages supplies four irrigation areas operated by the Commission and supplements numerous streams from which pumping for private irrigation takes place.

(a) *Mareeba-Dimbulah Irrigation Area.* The large areas of sandy soils in the valleys of the Walsh and Barron Rivers in the neighbourhood of Mareeba and Dimbulah are suitable for tobacco production, and in 1952 an irrigation undertaking was established.

Construction of Tinaroo Falls Dam on the Barron River has been completed, and construction of irrigation works which will serve a total of 78,000 acres is proceeding. Of this area, 49,000 acres will be irrigated. It is expected that 910 tobacco farms and 180 mixed farms will be served. While tobacco will be the basic crop, peanuts, vegetables, maize, cotton and stock fattening also appear suitable. One hundred and fifty miles of channels have been constructed, and irrigation water from Tinaroo Falls Dam is available to 501 farms.

In 1962-63, the value of tobacco leaf sold was £6.3 million from 516 farms.

(b) *Burdekin River Irrigation Area.* While construction of the major part of the Burdekin River Irrigation, Hydro-electric and Flood Mitigation Project has been deferred indefinitely, three sections associated with the Project have been completed. These are the Clare, Millaroo and Dalbeg sections, all of which are used predominantly for tobacco production. Located from 25 to 65 miles upstream from the mouth of the Burdekin, these areas comprise 18,862 acres, and obtain irrigation waters from central pumping stations drawing on the flow of the Burdekin. A storage of 7,670 acre feet capacity has been constructed about 79 miles upstream from the mouth of the Burdekin to augment supplies. During 1962-63, a further storage of some 2,550 acre feet was completed. At 30th June, 1963, 149 farms were occupied, and total production for 1962-63 was valued at £470,736.

(c) *Dawson Valley Irrigation Area.* A scheme for the development of the Dawson Valley providing for the irrigation of 70,000 acres was inaugurated in 1923. Much investigational and survey work on the scheme was carried out, but the general financial

depression and limited loan funds brought about the cessation of the work. However, the initial step in construction was completed, comprising a weir on the river at Theodore and irrigation works to serve an area of 3,500 acres supplied from a central pumping station. Two additional weirs have since been built, giving a total storage of 10,280 acre feet and covering some 61 farms in production, returning an estimated £292,000. Pasture, vegetables, cotton, fruit and dairy products are the principal produce. Recently, further attention has been given to the former plans for the valley, and earlier work has been under close scrutiny as a prelude to future development.

(d) *St. George Irrigation Area.* The St. George irrigation area comprises 19 farms engaged mainly in raising fat lambs in conjunction with irrigated pastures. Water supply for the area is obtained by pumping from the combined weir and road bridge on the Balonne River at St. George.

(e) *Warrill Valley Project.* Moogerah Dam on Reynolds Creek (a tributary of Warrill Creek) is of double curvature thin arch construction 105 feet high to spillway crest level, and will serve some 11,000 acres of the Valley by private diversion of water released from its 73,000 acre feet storage into Reynolds and Warrill Creeks.

(f) *Mary Valley Project.* The construction by contract of Borumba Dam on Yabba Creek is nearing completion. This is a rock-fill structure with an upstream impermeable concrete membrane 144 feet high above stream bed. In its initial stage, storage capacity will be 34,500 acre feet with provision for later increase to 80,000 acre feet. In its first stage, water released from the dam will be available to maintain the town water supply for Gympie, and will allow extension of the area irrigated by private diversion from the Mary River to some 18,000 acres.

(g) *Upper Condamine Project.* Work is continuing on the construction of Leslie Dam on Sandy Creek, a tributary of the Condamine River. This will be a mass concrete gravity dam 95 feet above foundation level. In its initial stage, storage capacity will be 38,500 acre feet with provision for later increase to 87,000 acre feet. Water released from the dam will be available for irrigation of sections of the Darling Downs downstream the Condamine River as far as Cecil Plains. In addition, the city of Warwick will be supplied by pipeline from Leslie Dam.

(h) *Border Rivers Project.* The development of the rivers constituting portion of the border between Queensland and New South Wales is under the authority of the Dumaresq-Barwon Border Rivers Commission on which each State is represented. For information on the project, see page 241.

3. *Underground Water.*—(i) *General.* The use of underground water supplies has been a very important factor in agricultural and pastoral development in Queensland. Detailed information is given below concerning the Great Artesian Basin, which is the major source of stock water supplies over more than half of the State. Elsewhere, supplies obtained at shallower depths, in porous, fractured or fissured rocks, are extensively used for domestic and stock purposes. Underground water also supports more than half the irrigated area in the State, supplies being obtained chiefly from alluvial formations along river valleys, and from river deltas, the most conspicuous example of which is the Burdekin River Delta. Reference has been made to these areas in para. 2 above.

(ii) *Great Artesian Basin.* (a) *General.* Western Queensland, beyond the 20 inch rain-fall belt, is predominantly pastoral and is mainly dependent for water supplies on artesian and sub-artesian bores and, where surface storage is not readily available, on excavated tanks. The Great Artesian Basin in Queensland corresponds approximately with the area lying west and south of the Great Dividing Range, excluding the Cloncurry mineral field and the Barkly Tableland. It comprises 421,000 square miles or nearly two-thirds of the total State area of 667,000 square miles.

(b) *Artesian Water.* Although the number of bores has gradually increased over the years, the total flow of all bores has declined since the peak flow of 351 million gallons a day. A report on the nature and structure of the Great Artesian Basin, presented in 1954, indicated that the output would continue its decline during the next sixty years, at which stage the flow from the remaining flowing bores would be of the order of 110 million gallons a day. The discharge from windmills, springs and other leakages, together with the underflow past the Queensland borders, would then be about 20 million gallons a day. It was further expected that the total discharge, of the order of 130 million gallons a day, would be in equilibrium with the recharge of the basin. It was anticipated that numbers of bores on higher ground would cease to flow during the next sixty years and the area served by the flowing bores would contract by perhaps twenty per cent.

Up to 30th June, 1963, 2,814 artesian bores had been drilled, of which 1,898 were still flowing. The total depth drilled amounted to 3,952,832 feet and the estimated daily flow was 200 million gallons. Although very few bores exceed 2,000 feet in depth (the average depth is 1,405 feet) and a new bore greater than 3,000 feet deep is exceptional, the deepest bore recorded was sunk to 7,009 feet. Some bores which had been classified as "ceased" have been inspected and found to be still flowing, while other ceased bores have responded to deepening and have recommenced flowing. Both the pressure and flow of artesian bores are steadily diminishing, the rate of decrease varying widely throughout the basin. Present average rates of diminution are:—pressure, 1–2 feet/head; total flow, 2–3 per cent. per annum. The greater part of the artesian discharge is distributed by some 15,500 miles of open earth channels, from which a large proportion of the water is lost by soakage and evaporation, less than 10 per cent. being actually used by stock.

Although artesian beds underlie a large area of the State, only 79,000 square miles are primarily watered by bore drains. The remaining area is watered by artesian bores (with small or no flow and limited drains), sub-artesian bores, excavated tanks, dams and natural waterholes. In many districts, artesian bores do not provide economical watering facilities because of depth, limited area to be watered, and difficult terrain for distribution of water by drains. The quality of artesian water from the greater part of the basin is not suited for prolonged use for irrigation on most soils, nor are the supplies sufficient for both large scale irrigation and stock-watering. Practically the whole of the final steady-rate discharge from flowing bores will be needed for the watering of stock.

Shallower supplies, which come from beds unconnected with artesian beds, are of variable quality and volume. These supplies are available at depths of less than 1,000 feet over a large area of the basin. Some 10,996 sub-artesian bores within the Great Artesian Basin have been registered in Queensland. An important practical consideration is that the main artesian beds are continuous and the sub-artesian beds are not continuous.

(c) *Bore Water Areas.* The constitution of Bore Water Areas was inaugurated in 1913 to aid pastoral settlement in districts where large flows were available at a cost beyond individual capacity, and to conserve artesian supplies by fully utilizing flows from the existing bores on the land resumed for closer settlement. Bores and drains are constructed from loan funds repayable over a period of years. The areas are administered by local boards or by the Commissioner of Irrigation and Water Supply, acting as a board. Rates are levied to meet interest, redemption, maintenance and administration costs. Statistics for the year 1962–63 are:—areas constituted, 73; administered by the Commissioner, 55; administered by local boards, 6; number abolished, 12; area benefited, 4,247,540 acres; average rate per acre, 1.34d.; number of flowing bores, 57; total flow, 26,122,000 gallons a day; drains served, 2,646 miles.

(iii) *Other Sources.* Outside the Great Artesian Basin, ground water supplies can conveniently be divided into two broad groupings, (a) those obtained in porous, weathered, fissured or fractured rocks, and (b) those obtained in unconsolidated sediments of Cainozoic age.

In the first group, supplies, often within short distances, are widely variable both in quantity and quality, but normally are sufficient only for stock-watering purposes. Because storage is generally small, seasonal fluctuation of water level tends to be high, and this can have a significant effect on the supply available during dry seasons.

Small to moderate irrigation supplies (up to a few thousand gallons an hour) are sometimes obtained and, in exceptional cases, particularly with basalts and limestones, supplies may be as much as 10,000 gallons an hour.

The second group comprises the main irrigation supplies and, although it is common to find a wide range in the supply normally available from individual bores in any area, pumping rates as high as 10,000 gallons an hour are not uncommon. The availability of underground water has been investigated in a considerable number of alluvial valleys in south eastern Queensland and in a number of coastal areas, particularly in the vicinity of the estuaries of the Burnett, Pioneer and Burdekin Rivers, where underground water is the main source for irrigation of sugar cane.

Reference has already been made to the importance of underground water for irrigation in the Lockyer Valley (*see* para. 2 (i) (a) above), and other areas in which irrigation supplies from alluvial formations have been extensively utilized include the Callide Valley, the Monto area, parts of Barker and Barumbah Creeks, Warrill Creek, Cressbrook Creek, the Upper Logan River and parts of the Upper Condamine River and its tributaries.

Government authorities do not normally undertake private drilling for landholders, but, as discussed below, assistance is given in the location and development of ground water supplies through the provisions of the *Farm Water Supplies Assistance Act 1958*. This assistance has considerably accelerated the use of underground water for irrigation, and there is no doubt that there are many areas with a large potential for future expansion.

4. Stock Watering.—(i) *General*. A predominant interest in the field of water conservation has been the provision of stock and domestic water supplies in Queensland's great pastoral areas, which contain more than a third of the Commonwealth's cattle and about a seventh of the sheep. In addition to the stabilization of water supplies in the pastoral areas, the provision of water along stock routes for travelling stock has received much attention in recent years.

(ii) *Main Stock Routes*. The Queensland Irrigation and Water Supply Commission acts as consultant and constructing authority to the Stock Routes Co-ordinating Board for watering facilities on stock routes. On completion, facilities are vested in local authorities for control and maintenance. From 1935, when the scheme was inaugurated, to 30th June, 1963, 593 facilities had been completed, and at 30th June, 1963, 48 facilities were under construction or investigation. A State-wide investigation is being carried out by the two authorities mentioned above to ascertain the general movement of stock, determine primary and secondary routes, register existing water facilities, and formulate a co-ordinated plan in regard to the provision of new watering facilities.

(iii) *Channel Country Stock Routes*. Under *The State Grants (Encouragement of Meat Production) Acts 1949-1954*, the Commonwealth Government agreed to meet half the cost of providing additional watering facilities in stock routes leading into, along, and out of, the Channel country and on the route from Camooweal to Mount Isa. These routes connect with the main far-western route included in the State scheme inaugurated in 1935.

This scheme was completed during 1962-63. The total number of watering facilities constructed since the commencement of the scheme was 37, at a total cost of £299,592.

5. Technical and Financial Assistance to Farmers.—The *Farm Water Supplies Assistance Act 1958* is designed to improve the standard of water supply installations on individual holdings, encourage greater development of individual irrigation schemes, and provide greater stability of production and avoid losses in time of drought together with generally increasing production.

To achieve this purpose, the Act authorizes the provision of technical and financial assistance to landowners for the investigation, design and installation of approved works of farm water supply. All projects for which finance is provided under the Act are carried out under Commission supervision, and for the payment of a small charge the Commission will supervise the construction of works designed by its staff, but for which the landowners do not require financial assistance under the Act.

During 1962-63, 767 requests (569 for technical assistance only, and 198 for technical and financial assistance) were dealt with in addition to advice on a further 285 requests on ground-water supplies. An amount of £282,966 was approved for advances under the Act in 1962-63.

6. Hydro-electricity.—An outline of hydro-electricity schemes operating in Queensland is given in the previous chapter (*see p. 224*).

## § 5. South Australia

1. *General*.—(i) *Rainfall*. Brief particulars of the climatic conditions in South Australia are given on page 1129 of Year Book No. 37. (*See also* Chapter II. Physiography, page 47, of this issue.)

(ii) *Administration*. Water supplies, other than irrigation works, are under the control of the Engineering and Water Supply Department, which administers the *Waterworks Act 1886* governing the supply of water through mains in water districts for townships and farm lands. The *Water Conservation Act 1886* provides for the construction of storages in non-reticulated areas, and authorizes the Minister concerned to "divert and impound the water from any streams or springs or alter their courses, and take water therefrom, or any other waters as may be found in, under, or on, any land entered upon for the purpose of supplying water to the inhabitants of any water district".

(iii) *Methods of Catchment and Conservation*. Early in the history of the State, the rights to all running streams, springs and soaks were vested in the Crown. The *Water Conservation Act* was passed in 1886 and, up to 30th June, 1963, more than 550 dams, tanks and rainsheds, together with 460 wells and 340 bores, had been built or acquired by the State at a total cost of £1,853,585. The rainsheds are timber frameworks roofed with galvanized iron to collect rainfall which is delivered to storage tanks and is available for surrounding settlers and travellers. Rainshed catchments vary from a few hundred square feet to four acres in extent. Over most of the State, extraordinary precautions are taken to counteract

evaporation, and pipelines in preference to open channels and covered storages are used for this purpose. Meters are attached to practically all services to check usage by individual consumers.

2. Irrigation.—Australian irrigation originated in the upper Murray of South Australia and the Mildura area of Victoria. South Australian irrigation commenced with an agreement between the Government and the Chaffey brothers in 1887 whereby an area of land at Renmark was made available for the establishment of certain irrigation works. In South Australia, irrigation is almost exclusively confined to the Murray Valley. Except for that held in various lock pools, no water from the Murray is stored in South Australia. Water is either pumped onto the land or gravitated from the river.

The two major authorities administering irrigation areas are the Department of Lands and the Renmark Irrigation Trust. The Trust is controlled by a local board of management consisting of seven members. This area differs from other South Australian irrigation areas in that the land is freehold instead of leasehold and is self-contained and self-controlled. Every settler is entitled to vote for the election of Trust members. The Trust maintains 100 miles of reticulation channels.

The following table shows particulars of the areas of crops and pastures irrigated in South Australia during the seasons 1958-59 to 1962-63.

AREA OF LAND IRRIGATED: SOUTH AUSTRALIA  
(Acres)

Season and authority	Vine fruits	Tree fruits	Citrus fruits	Other crops <sup>(a)</sup>	Pastures	Total
1958-59 .. .. .	25,389	20,795		26,372	12,525	85,081
1959-60 .. .. .	26,014	22,315		33,183	19,387	100,899
1960-61 .. .. .	26,071	22,706		34,198	19,048	102,023
1961-62 .. .. .	27,167	25,236		36,653	19,344	108,400
1962-63—						
Department of Lands—						
Orchard land—						
Berri .. .. .	4,888	1,203	1,430	..	..	7,521
Cadell .. .. .	543	186	175	..	..	904
Waikerie .. .. .	1,752	689	1,446	..	..	3,887
Cobdogla .. .. .	4,268	252	348	..	..	4,868
Moorook .. .. .	308	140	257	..	..	705
Kingston .. .. .	180	81	286	..	..	547
Mypolonga .. .. .	..	286	514	..	..	800
Chaffey-Ral Ral Division	727	237	24	..	..	988
War service land settlement—						
Cooltong Division .. .. .	385	245	493	..	..	1,123
Loxton area .. .. .	3,166	1,059	2,307	..	..	6,532
Loveday Division .. .. .	248	38	39	..	..	325
Reclaimed swamp land—						
Monteith .. .. .	..	..	..	..	992	992
Mypolonga .. .. .	..	..	..	..	1,306	1,306
Wall .. .. .	..	..	..	..	512	512
Burdett .. .. .	..	..	..	..	109	109
Mobilong .. .. .	..	..	..	..	429	429
Long Flat .. .. .	..	..	..	..	338	338
Neeta .. .. .	..	..	..	..	561	561
Pompoota .. .. .	..	..	..	..	425	425
Cowirra .. .. .	..	..	..	..	571	571
Jervois .. .. .	..	..	..	..	3,637	3,637
<i>Total</i> .. .. .	16,465	4,416	7,319	..	8,880	37,080
Renmark Irrigation Trust ..	5,366	2,477	1,000	457	..	9,300
Private landowners .. .. .	5,553	11,664		36,288	12,928	66,433
<b>Total, 1962-63</b> .. .. .	<b>27,384</b>	<b>26,876</b>	<b>36,745</b>	<b>21,808</b>	<b>112,813</b>	

(a) Includes fodder and fallow land.

3. **Water Supply Schemes.**—(i) *Adelaide Metropolitan Water Supply.* Adelaide derives its water from six reservoirs in the nearby Mount Lofty Ranges, and by means of pumping stations and a pipeline from the Murray River at Mannum. The reservoirs have a storage capacity of 87,400 acre feet and the pipeline has a capacity of 65,000 acre feet a year.

To the north, the new city of Elizabeth receives water from South Para Reservoir in the Barossa system and from the metropolitan storages. The consumption for the whole area for the year 1962–63 was 88,800 acre feet, equivalent to a consumption of 100 imperial gallons per head per day. The capital cost to 30th June, 1963 was £43,648,315.

(ii) *Country Reticulated Supplies.* Areas extending to a distance of 90 miles north of Adelaide are supplied from the Warren, Barossa, and South Para Reservoirs (50,350 acre feet) in the Barossa Ranges. Agricultural towns and areas further north are supplied from Beetaloo, Bundaleer and Baroota Reservoirs, and the Morgan-Whyalla Pipeline. There is a supplementary supply from the Mannum-Adelaide pipeline through the Warren Reservoir. The 223-mile pipeline from Morgan to Whyalla can carry up to 10,000 acre feet of water a year from the Murray River. Work is commencing on a second main of more than double that capacity. A large part of Eyre Peninsula is supplied through the 240-mile Tod River Main and the 104-mile East Coast Main with water from the Tod River reservoir (9,160 acre feet), the sand beds of the Uley-Wanilla Basin, the Lincoln Basin, and the newly developed Poldia Basin. Along the Murray River, all towns are supplied from the river. Water from the river is also reticulated through adjacent farmlands for up to 30 miles. Surface and underground resources have been developed to supply most rural centres not covered by the larger schemes.

Water conservation and distribution works in country districts to 30th June, 1963, have cost £44,257,662 (exclusive of river control and irrigation works on the Murray River) and contain 7,267 miles of water mains.

4. **Underground Water.**—The occupied portion of South Australia is, on the whole, well endowed with underground water, and the extent of the several artesian basins is reasonably well known. There are also considerable areas in which groundwater occurs, notably in the south-east of the State where, in the Keppock district, supplies exceeding 100,000 gallons an hour are not uncommon. Quality varies widely, but a great deal is at least useful for watering stock, and this is the major use to which it is put.

The deepest portion of the Great Artesian Basin (in the north-east) is not extensively developed because development costs are high in proportion to the carrying capacity of the arid land. Deep boreholes have been drilled by the Government to provide watering places along stock routes, and bores around the basin margin have developed pressure waters which occur at comparatively shallow depth, as at Marree township, where the deepest flowing bore is 575 feet. In addition to the pressure waters, the non-pressure aquifers of the subsidiary basins provide pastoralists with stock water supplies which can be readily and economically developed.

The use of the waters of the Murray Basin is essential to settlement in the Murray Mallee country and in the south-east of the State, especially for farms and township supplies. Mount Gambier draws its water from Blue Lake, which is fed from the Basin. Bores supply a number of towns in this Basin, the deepest bore being 1,805 feet.

On Eyre Peninsula, the Uley-Wanilla Basin has been in use since 1949, the Lincoln Basin since 1960, and the Poldia Basin since 1963, to supplement surface water supplies. Investigations are being made in another basin south-west of the Uley-Wanilla Basin.

The Lincoln Basin is now fully developed and is yielding up to 20 million gallons a week which provides a water supply for the town of Port Lincoln on Eyre Peninsula.

The Poldia Basin near the township of Lock was brought into operation late in 1962. The present pumping plant has a capacity of 7 million gallons a week. The water is reticulated to townships and farming properties on the upper Eyre Peninsula. Investigations are currently proceeding for the further development of this basin.

Pastoralists, farmers, market gardeners and others have been assisted with expert advice on drilling, and the Government maintains and operates 25 drilling plants which to date have developed an underground water supply potential in excess of 150 million gallons of water a day throughout the State. The whole of the Murray River Basin has been examined critically to ascertain the extent of land which could be used for lucerne, and considerable tracts of previously undeveloped country in the upper south-east, Kangaroo Island and Yorke Peninsula have been found to have usable water and are now being opened up.



Groundwater resources surveys are undertaken continually by geologists of the Department of Mines, the results being published in various bulletins and reports issued from time to time. The *Groundwater Handbook* published in 1959 by the department provides a comprehensive detailed review of the State's groundwater resources.

5. **Farm Water Schemes.**—The Department of Mines gives assistance to individual farmers in the provision of supplies from underground sources, and the Department of Agriculture provides an advisory service on water conservation and irrigation designs, on farms, and on the use and suitability of underground water for irrigation and stock purposes. In addition, a great part of the farming areas is supplied with water under pressure from the extensive distribution systems connected to various reservoirs or the Murray River.

6. **South-Eastern Drainage.**—In the south-east of South Australia it has been necessary to construct costly drainage schemes to dispose of surplus water from areas where a series of valleys or flats is separated by low ranges, parallel to the coastline, which prevent natural drainage.

The Millicent Drainage System, completed in 1885, reclaimed 100,000 acres. The South-Eastern Drainage Area System, which is controlled by the South-Eastern Drainage Board, comprises drains constructed by the Government at national cost, plus those undertaken by the Government in co-operation with the landholders. The area is bounded on the east by the State boundary, and on the west by the sea coast. It extends from about 55 miles north of Kingston southerly to near Millicent and Kalangadoo. Up to 1948, about 430 miles of drains had been provided at a cost of £720,876. These were of a developmental nature intended more to promote the rapid removal of floodwaters than to provide a complete system of drainage. Since 1948, the complete drainage of the Biscuit, Reedy Creek and Avenue Flats in the Western Division has been in progress. The southern section of 260,000 acres, which involved the excavation of 8,100,000 cubic yards and the provision of 343 miles of new or enlarged drains, has been completed. Work is in progress on the northern section of 140,000 acres, where 48 miles of drains, involving the excavation of 2,787,000 cubic yards of material, have been completed. In addition, work is in hand for the drainage of 727,000 acres of land in the Eastern Division of the south-east, situated east of Bakers Range, and extending from near Kalangadoo to north of Naracoorte. As part of the first stage of the work (which involves the construction of a main diversion drain from Beachport to Struan), an existing drain from Beachport to Legges Lane (a distance of over 24 miles) has been enlarged, and work is proceeding between Legges Lane and Struan (a distance of 33 miles). A total of 4,156,000 cubic yards of material has been excavated.

The capital cost of drainage in the South-Eastern Drainage Area System to 30th June, 1963, was £7,060,000, and the length of drains constructed was 745 miles.

## § 6. Western Australia

1. **General.**—(i) *Rainfall.* Brief particulars of the climatic conditions in Western Australia are given on page 1133 of Year Book No. 37. (See also Chapter II. Physiography, p. 47, of this Year Book.)

(ii) *Administration.* Natural water rights in the State, with few exceptions, are vested in the Crown. Irrigation districts are administered by the Minister for Water Supply, Sewerage and Drainage under the *Rights in Water and Irrigation Act 1914–1954*, and he is advised by an Irrigation Commission representing the local irrigationists and governmental, technical and financial branches. Water supplies in country areas in Western Australia coming under the provisions of the *Water Boards Act 1904–1954* and the *Country Areas Water Supply Act 1947–1960* are controlled either by the local authority or by the Public Works Department. Those controlled by the Department (except for some local water supplies to country towns still under the provisions of the *Water Boards Act*) form the Country Areas Water Supply, consisting of the Goldfields and Agricultural Water Supply, the Great Southern Towns Water Supply and local water supplies to country towns and districts. The Department also controls individual water supplies serving isolated mines, stock routes, and agricultural areas.

2. **Irrigation.**—The main irrigation areas are situated in the south of the State along the South-Western Railway between the towns of Waroona (70 miles from Perth) and Dardanup (116 miles from Perth). In the north, new irrigation areas are being established at Carnarvon on the Gascoyne River, Camballin on the Fitzroy River and at Kununurra on the Ord River.

The Public Works Department controls three irrigation districts—Waroona, Harvey and Collie River—the total area irrigated in these districts during 1962–63 being 27,974 acres and the total water used 94,785 acre feet. Investigations are being carried out with a view to irrigating a further 30,000 acres south of the Collie River Irrigation District.

The Waroona Irrigation District (3,051 rated acres) is supplied from Samson Brook Dam (7,437 acre feet capacity) and Drakes Brook Dam (1,855 acre feet); the Harvey Irrigation District (12,863 rated acres) from Stirling Dam (46,191 acre feet) and the Harvey Weir (8,372 acre feet); and the Collie River Irrigation District (10,490 rated acres) from the Wellington Dam (150,107 acre feet). The Logue Brook Dam (19,246 acre feet) within the Harvey Irrigation District was completed in November, 1963.

An area of approximately 1,350 acres of Gascoyne River flats adjacent to Carnarvon is under irrigated cultivation. The principal crops are bananas and beans, but others such as tomatoes are also grown. For this agriculture, some 3,500 acre feet of water were drawn during 1962–63 by the individual growers pumping from aquifers situated in and adjacent to the dry bed of the Gascoyne River. The quantity of water which any grower may pump is controlled by the Public Works Department, assisted by an advisory committee with local representation. Allocations of water are granted on a monthly basis, and are based on river behaviour and the capital values of the properties concerned. A pilot scheme to augment the supply to 20 settlers by pumping from aquifers five miles upstream was completed in 1962–63.

On the Liveringa flood plain adjacent to Camballin, 65 miles south-east of Derby, commercial production of rice has been achieved following successful experimental work. Irrigation water from the Fitzroy River is diverted through Uralla Creek for 25 miles to the rice growing area where a natural storage of approximately 1,200 acre feet exists. During periods of low flow in the Fitzroy River, the supply of water is augmented by pumping. Further storage with a capacity of 4,500 acre feet has been provided by the construction of a dam on Uralla Creek 18 miles from the Fitzroy River. A weir which has been constructed across the Fitzroy River provides gravity flow to Uralla Creek while the Fitzroy River is flowing.

The Ord River in the Kimberley Division of Western Australia traverses a tropical area served with monsoonal rains of irregular incidence and quantity, varying from 20 inches in the south to 30 inches in the north. The hottest months (December to March) are also the months of highest rainfall. Communications and population are sparse. The Western Australian Government is considering a proposal to build a dam equipped with a hydro-electric plant, to conserve  $3\frac{1}{2}$  million acre feet of water, which might supply water for an area of some 200,000 acres agriculturally and topographically suitable for irrigation. Investigations show that the climate and soil conditions are suitable for the cultivation of sugar cane, rice, cotton, safflower and various oil seeds. The economic production of these and other crops, as well as the possible use of such irrigation areas for fattening cattle, is being examined at the Kimberley Research Station on the Ord River. Construction of a diversion dam at Bandicoot Bar, some 30 miles downstream from the main dam site, was virtually completed by June, 1963. Irrigation of safflower on the first five farms commenced in May, 1963. This dam will provide water for an area of 30,000 acres.

Particulars of the areas of crops and pastures irrigated in Western Australia in the seasons 1958–59 to 1962–63 are given in the table below.

#### AREA OF LAND IRRIGATED: WESTERN AUSTRALIA

(Acres)

Season	Vegetables	Fruit	Vineyards	Other crops (a)	Pastures	Total
1958–59..	8,211	6,850	630	3,429	24,982	44,102
1959–60..	8,447	7,642	705	3,668	25,427	45,889
1960–61..	9,076	8,335	897	5,591	24,652	48,551
1961–62..	9,596	8,840	972	4,235	25,036	48,679
1962–63..	9,375	9,588	924	4,447	27,167	51,501

(a) Includes fodder and fallow land.

3. **Water Supply Schemes.**—(i) *Metropolitan.* Particulars relating to the Metropolitan Water Supply are given in Chapter XX. Local Government.

(ii) *Goldfields and Agricultural Water Supply.* Western Australia has one of Australia's most spectacular water supply schemes, and a brief account of its development will be found on page 1134 of Year Book No. 37. Mundaring Reservoir on the Helena River, 26 miles from Perth, is the source of water supplied to the Eastern Goldfields and has a capacity of 62,435 acre feet and a catchment of 569 square miles. The water passes through 346 miles of main pipeline, mostly steel and 30 inches in diameter, equipped with eight pumping stations.

Maximum pumping capacity from Mundaring Pumping Station is 13.75 million gallons a day with provision to increase this to 18.5 million gallons a day. The total capacity of all receiving, regulating, standby and service tanks along the main pipeline is 154 million gallons, which includes three standby reservoirs at Kalgoorlie having a combined capacity of 60 million gallons.

Hundreds of miles of branch pipelines have been laid to mining areas, agricultural areas and country towns, a notable one being the Norseman extension of 103 miles. The system serves some 87 towns, and water is reticulated to 4,200,000 acres of mixed farming lands. The total length of pipelines is 3,782 miles and the number of services is 24,963. The total quantity of water pumped from Mundaring Reservoir in 1962-63 was 3,184 million gallons. The total cost of the scheme to the end of 1962-63 was £18,991,388, of which the Commonwealth Government contributed £3,609,278 under the terms of the Comprehensive Water Supply Scheme.

(iii) *Comprehensive Water Supply Scheme.* A comprehensive water supply scheme to supplement water supplies to the goldfields, agricultural areas, and country towns, authorized in 1947 as a joint work between the Commonwealth and State Governments, was completed towards the end of 1961. The northern section is an enlargement and extension of the Goldfields and Agricultural Water Supply. The southern section is the Great Southern Towns Water Supply. Linked with Wellington Dam (initially an irrigation work on the Collie River) by 80 miles of 30-inch diameter pipe through three pumping stations to Narrogin, it now supplements the existing water supplies to country towns along the Great Southern Railway, north to Brookton and south to Kojonup. The raising of the impounding wall of Wellington Dam to increase its storage to about 150,100 acre feet was completed in 1960. Expenditure on the Scheme to 30th June, 1963, amounted to £10,248,861.

(iv) *Local Water Supplies.* Local schemes other than as above comprise those in the remaining agricultural and mining areas, including the North-west and Kimberley Divisions: Ninety-three separate reticulated water supplies serve country towns and districts. Of these, eighty-four are controlled by the Water Supply, Sewerage and Drainage Department and the remainder by local authorities.

(v) *Commonwealth and State Government Railways.* Railways of the Commonwealth and State Governments make independent provision for supplies of water for their own purposes, although considerable additional quantities are consumed by the Railways from other sources, e.g., Public Works and Metropolitan Water Supply Departments.

(vi) *Catchments.* The water supplies to these country schemes come from stream flow, dams, tanks, wells and bores.

A total of 81 rated stream gauging stations is operating in the South-west, North-west and Kimberley Divisions. Three types of catchment peculiar to this State developed in connexion with local water supplies and deserving special mention are:—rock catchments, which consist mainly of clear granite out-cropping rock, from which the overall run-off from rain amounts to approximately 40 per cent.; bituminous catchments, which are areas which have been sealed with emulsified bitumen—some hundreds of acres have been so treated and yield a run-off of approximately 80 per cent. of the rainfall; and roaded catchments, where selected areas of a catchment are cleared, graded and formed into roads to assist in obtaining additional rainfall run-off.

4. **Underground Water.**—Considerable use is made of underground water by individual farmers, pastoralists, market gardeners, etc., and it is estimated that over 50,000 bores are in use in the State. The quality of the water varies from place to place and much of the water is only suitable for stock. However, artesian aquifers are tapped to supply or augment the town supplies of Perth, Bunbury, Busselton and Denham, and non-pressure water is used in the public supplies of thirty-five other towns.

Considerable advances in the knowledge of aquifers and quality of water in the main sedimentary basins has been made as a result of extensive geological surveys by oil exploration companies in recent years. The Hydrology Division of the Geological Surveys of Western Australia is investigating and assessing the underground water resources of the State. A detailed survey of the Perth Basin, including systematic exploratory drilling, is in progress. The Geological Survey undertakes geological investigations in connexion with new town water supplies or extensions of existing town water supplies, and arranges for the drilling of recommended exploratory bores. Projects are in progress, or have recently been completed, for the towns of Northampton, Geraldton, Morawa, Watheroo, Lancelin, Mandurah, Capel, Eaton and Busselton. The Geological Survey advises Local Government authorities, private industry and individuals on underground water problems, and supervises departmental exploratory drilling.

## § 7. Tasmania

1. **General.**—(i) *Rainfall.* Brief particulars of the rainfall pattern in Tasmania are given on page 1136 of Year Book No. 37. (See also Chapter II. Physiography, page 47 of this Year Book.)

(ii) *Main Purposes of Conservation and Utilization.* Owing to the generally more adequate rainfall in Tasmania, scarcity of water is not such a problem as it is in most mainland areas, though not all streams are by any means permanently flowing. The only large scale conservation by reservoirs is for hydro-electric power generation, but there are some moderately sized dams built by mining and industrial interests, and by municipal authorities for town water supplies.

Until a few years ago, irrigated areas were negligible except for long-established hop fields, but there is a rapidly extending use of spray irrigation on orchards and pastures, and to some extent on potatoes and beans. Up to the present, there has been almost complete dependence on natural stream flows, but the need for some regulating storages is now apparent. A few farmers are constructing storages of their own, and the extension of this practice is foreseen as the logical solution in most areas, as valleys are narrow and steep sided. Single large reservoirs cannot economically serve large areas of suitable land, as nearly every valley is separated from others by pronounced hills, prohibiting the construction of cross-country channels.

Underground water is generally of poor quality through mineralization, but a small quantity, exploited to a minor degree by bores and pumps, exists over an area in the midlands, on the north-west coast, and on King Island.

(iii) *Administration.* In 1962, a new authority, the Metropolitan Water Board, assumed control of water supplies to Hobart, Glenorchy, Kingborough and Clarence. Water supplies to other areas are primarily the responsibility of local councils, subject to approval of plans and finance by the Rivers and Water Supply Commission.

While the Commission does not own the waters of streams and lakes, it is empowered to take them, or issue licences, subject to pre-existing statute and common law rights. These include water reserved for specific industries, municipal requirements, and ordinary riparian rights. The Commission is also concerned with drainage trusts' operations, river improvement, including repairs after flood damage, and stream gauging.

2. **Hydro-electricity.\***—With the exception of a small diesel plant on King Island, electricity generation in Tasmania has resulted entirely from the development of its plentiful waters, and on a world basis this State ranks second to Norway in electricity consumption per head of population. The Hydro-Electric Commission, the authority controlling the generation of electricity in Tasmania, conducts a continuous survey of the water power resources of the State assisted by modern methods such as aerial photography and geo-physical exploration.

3. **Regional Water Schemes.**—Three regional water schemes are in operation. The first draws water from the east bank of the River Derwent at Lawitta to provide domestic and industrial supplies in five southern municipalities, and a second, which increases existing supplies to Hobart, pumps water from the west bank of the River Derwent at Lawitta. These two schemes are controlled by the Metropolitan Water Board. In addition, the State government has constructed a regional water scheme to serve the aluminium refinery at Bell Bay on the River Tamar and to supply several municipalities with bulk water for domestic and industrial purposes.

\* See also Chapter VII. Electric Power Generation and Distribution, p. 228.

Potential sources capable of greater development without storage exist on the Derwent, South Esk, Huon, Lake, Mersey and Forth Rivers. There is also a great reserve of untapped permanent streams in the western half of the State, which is largely unsettled. Diversion to the eastern half of the watersheds is not regarded as practicable.

4. **Industrial.**—Three principal industrial schemes have been installed privately. About 10 million gallons of water a day are being pumped from the Derwent River at Lawitta for use in a nearby paper mill. Another paper mill at Burnie uses several million gallons of water a day from the Emu River, and a factory at Heybridge reticulates water from Chasm Creek.

The State Government has constructed some water schemes for use primarily for industrial purposes. The scheme serving the aluminium refinery at Bell Bay is referred to in para. 3 above. A new wood-pulping plant near Geeveston uses several million gallons of water a day and, in order to supplement the summer flows of the Kermandie River for use by the industry, the State Government in 1962, through the Hydro-Electric Commission, constructed a storage on Riley's Creek by means of a 37-foot high rock-fill dam. The Prosser River Scheme, at present under construction, is designed to supply water to a sodium alginate industry at Louisville near Orford and to supplement the water supply of the township of Orford.

5. **Irrigation.**—There are no State irrigation projects at present, but the Rivers and Water Supply Commission is investigating the possibility of establishing a storage for the Coal Valley. Preliminary investigations have also been made in the Jordan Valley. The *Water Act* 1957 provides for irrigation works to be undertaken by municipalities and by trusts constituted for the purpose, but no such works have been undertaken to date. All systems operating are privately owned, and with one exception (at Bushy Park) are single-farm units. At Bushy Park, a small system serves a group of properties. The larger proportion of the area under irrigation is watered by gravitational systems and the remainder comprises areas devoted to vegetables and served by municipal water supplies or private spray systems.

Details of the areas of crops and pastures irrigated in Tasmania in the seasons 1958–59 to 1962–63 are shown in the following table.

**AREA OF LAND IRRIGATED: TASMANIA**  
(Acres)

Season	Vegetables	Fruit	Hops	Other crops (a)	Pastures	Total
1958–59 . . . . .	1,386	1,737	1,292	1,514	7,502	13,431
1959–60 . . . . .	1,235	2,350	1,311	1,873	11,339	18,108
1960–61 . . . . .	2,103	3,311	1,364	1,787	10,369	18,934
1961–62 . . . . .	3,388	3,930	1,447	2,711	11,713	23,189
1962–63 . . . . .	4,100	4,446	1,465	2,839	11,435	24,285

(a) Includes fodder and fallow land.

## § 8. Northern Territory

1. **Climate and Topography.**—Some particulars of the climate and main topographical features of the Northern Territory are given on page 1138 of Year Book No. 37, and in this issue information on climatic conditions will be found in Chapter II. Physiography, and a brief outline of contour and physical characteristics in Chapter V. The Territories of Australia.

2. **Administration.**—Under the *Control of Waters Ordinance* 1938–1961 of the Northern Territory, natural waters are vested in the Crown. Where a watercourse or lake forms a boundary of any land alienated by the Crown, the beds and banks are deemed to remain the property of the Crown (except in special cases) and diversion of water is prohibited except under prescribed conditions. There is a Water Resources Branch of the Northern Territory Administration under the control of a Director. The functions of the branch include systematic stream gauging, collection of data on surface and underground water supplies, planning of water use for irrigation and town water supplies, and flood prevention and control.

Another function of the branch, which is increasing in importance as it builds up a body of technical data and information about the Territory's water resources, is the dissemination of this knowledge by the provision of advice and assistance to professional drillers and to landholders for the development and improvement of water supplies on agricultural and pastoral leases.

**3. Underground Water.**—The marked seasonal rainfall over the whole of the Northern Territory is one of the basic factors affecting the pastoral industry, which provides a large proportion of the Territory's income. The inadequacy of surface water during the dry season emphasizes the importance of underground water supplies in the Territory, where most of the cattle numbers are dependent on underground supplies for three to five months each year.

Rainfall is one of the factors controlling cattle numbers, but geological features, controlling both soils and the storage of underground water, are equally important. In the northern-most portion of the Territory, which receives from 25 to 60 inches of seasonal rainfall a year, surface water supplies are, in general, adequate for the pastoral industry. Despite this, however, this area has a comparatively low carrying-capacity for cattle, and the pastoral industry is concentrated more in inland areas where feed retains more nutritive value in winter, despite dry conditions.

South from this well-watered northern-most portion, the Territory becomes progressively drier, with an average annual rainfall of only 5 inches at the margins of the Simpson Desert in the south-east corner. In the lower rainfall areas, the search for potable underground water becomes exacting, but in the Ord-Victoria region and the Barkly Tablelands, the best pastures are generally in areas where sub-surface conditions are suitable for the storage of underground water.

In the Ord-Victoria region, the best grass lands overlie volcanic rocks and extend over some 10,000 square miles. Groundwater is obtained in shallow bores averaging 70 to 80 feet in depth and producing small supplies which range up to 1,500 gallons an hour. For the most part, water is stored in joints, faults or cracks in the rocks, although in places sub-artesian conditions exist. On the whole, selection of bore sites is difficult. Outcrops of sandstone, limestone and shale also occur in this area and underlie the volcanics in most places. In general, these sedimentary rocks dip gently to the east, and sub-artesian conditions obtain. Sandstone aquifers within the group yield good supplies of water ranging up to 4,000 gallons an hour. There are also small basins of younger sedimentary rocks in the region, some of which yield sub-artesian, and in places artesian, water and provide areas of good pastures.

The Barkly Tablelands, which extend into Western Queensland, overlie flat-lying limestone, sandstone and shale of the Barkly Basin. In most places, underground water is under pressure (sub-artesian), but no flowing bores are known. Sandstones and beds of limestone with fractures and solution cavities provide a number of aquifers within the Basin. The hydraulic surface (to which pressure water will rise in bores) ranges between 500 and 600 feet above sea level and adequate supplies for the watering of stock are available at depths ranging from 150 to 400 feet from the surface. The water from over 90 per cent. of the bores is suitable for stock and over 50 per cent. of it is suitable for human consumption. Investigations by the Commonwealth Bureau of Mineral Resources indicate that underground water supplies will be more than sufficient for the future development of the pastoral industry on the Tablelands.

In the Alice Springs district, valuable pastures occur on a great variety of rock types, and from some of these very little underground water is available. Many shallow bores obtain water from alluvium near stream channels. There are also many successful bores in porous sands and limestone in Mesozoic and Cainozoic sedimentary basins and in some Upper Proterozoic and Palaeozoic limestones and sandstones. However, boring in the metamorphic rocks and granite of the basement has, on the whole, met with little success. In many areas, the underground water is of poor quality.

Considerable research has been undertaken in recent years by the Water Resources Branch of the Northern Territory Administration into increasing the Alice Springs town water supply from alluvial basins and providing a water supply for the mining town of Tennant Creek from the Cabbage Gum Basin, a small basin of alluvium and deeply weathered Precambrian rocks, 15 miles south of the town. Recent work by this authority has also proved the existence of high-yielding dolomitic aquifers of probable Lower Proterozoic age in the region of Darwin.

Up to 30th June, 1963, 3,855 bores and wells had been registered in the Territory. Of these 2,342 were on pastoral properties, 170 on agricultural properties, 311 served town and domestic water supplies, 27 were located on mining fields, 334 were being used as test-bores and 390 were used by defence Departments during World War II. The number of registered stock route bores established by the Government is 281.

4. **Irrigation.**—There are no large-scale water conservation projects in the Territory with the exception of the Manton Dam (12,700 acre feet), which serves Darwin with a reticulated supply. Some water is drawn from the rising main between the Manton Dam and Darwin for irrigation purposes, but the trend is for properties in this area to develop their own water supplies, either by boring or by pumping from watercourses or lakes. Investigations for a further dam site to augment Darwin's water supply and to provide reticulated water to properties without natural waters have commenced in the Berry Springs area.

Hydrological investigations are being carried out by the Administration to determine the supply of water and the best methods of control and use in the potential rice-growing areas of the Territory. One hundred and forty-eight gauging stations were in operation in the Territory at 30th June, 1963, under the control of the Administration's Water Resources Branch. Of these, 126 measure the volume of discharge from rivers and streams, 5 record tide levels (one of these being the Darwin Harbour Tide gauge, which is operated on behalf of the Harbour and Marine Branch) and the remaining 17 measure the level of flooding of the north sub-coastal plains.

Agricultural activity in the Territory is not extensive, being confined to the Darwin, Adelaide River, Coomalie Creek, Daly River, Katherine River and Alice Springs areas, with only small acreages being utilized. In these areas, a total of 320 acres on 49 farms is under irrigation. Purposes for which irrigation water is used include the growing of fruit, vegetables, crops and pastures, and for dairying and mixed farming.

The Katherine River appears to offer irrigation potentialities on the level soil below the township. Approximately 14 properties in and around Katherine are at present drawing water from the Katherine River for irrigation purposes, vegetables and pastures being the usual crops grown. The Katherine River passes through a gorge upstream of the town under conditions which appear suitable for dam construction. The Administration and the Commonwealth Scientific and Industrial Research Organization are investigating the potentialities of the Katherine area for agricultural production.

The possibility of using the Daly and Adelaide Rivers for irrigation is also being investigated. The Commonwealth Government recently approved the establishment of three pilot farms on the Marrakai Land System along the Adelaide River to ascertain whether rice and fodder crops could be grown on a commercial scale in this area.

## § 9. Papua and New Guinea

1. **Rainfall.**—Rainfall in Papua and New Guinea varies considerably from approximately 250 inches near Lindenhafen (New Britain) and 230 inches at Kikori (Papua) to about 70 inches near Marienburg (New Guinea) and 40 inches at Port Moresby (Papua).

2. **General.**—For a general description of these territories see Chapter V. The Territories of Australia, page 116, of this Year Book. Irrigation has not been developed on any organized basis owing to the availability of high rainfall and the nature of agricultural development.

The Territory of Papua and New Guinea is well served with large rivers deriving their water from heavy tropical rains and high mountains which rise to over 14,000 feet. However, complete data regarding water resources are not available.

The largest rivers in the Territory include the Fly (at least 500 miles long, situated in the western division of Papua), the Sepik (700 miles), the Ramu (450 miles), the Purari (300 miles) and the Markham (110 miles).

The main water conservation interest in New Guinea at present is the hydro-electric potential, which is extensive. An outline of schemes at present in operation is given in the previous chapter.

## CHAPTER IX

### POPULATION

Statistics in this chapter cover, in the main, the year 1962. More detailed figures will be found in the annual bulletin, *Demography*, and current statistics are published in the *Monthly Review of Business Statistics*, the *Quarterly Summary of Australian Statistics*, and the *Australian Demographic Review* (a mimeographed series issued at intervals throughout the year on oversea arrivals and departures, population, and vital statistics).

Statistics of the population of the principal countries and continental groupings of the world are set out in § 15.

Summarized results of the 1961 census of population are contained in § 7 of this chapter, and corresponding results relevant to the subject-matter are included in other chapters of this Year Book; for detailed results, reference should be made to the series of printed and mimeographed bulletins relating to individual States and Territories, Australia as a whole, and particular characteristics of the population (*see* Chapter XXX. Miscellaneous).

All statistics in this chapter, except for those in § 14. The Aboriginal Population of Australia, are exclusive of particulars of full-blood Aboriginals.

#### § 1. Population Statistics

Population statistics for Australia or the component States and Territories at specific dates are of two types.

- (i) *Those ascertained by census enumeration.* These results attain a very high degree of accuracy and may generally be accepted without reservation.
- (ii) *Estimates derived by the application of vital and migration statistics to census data.* In general, three estimates are made for any specific date.
  - (a) Original estimates for dates subsequent to a census made before another census is taken. These estimates represent the population ascertained at the census, plus natural increase and recorded net migration since the census. As complete records of interstate migration are not available, the estimated State or Territory populations so derived are approximate, and are subject to revision when the actual population of each State or Territory is ascertained at the next census. For some States, such revisions are substantial.
  - (b) Two-stage revision of the original estimates for each newly completed intercensal period to adjust for the difference between the new census result and the comparable estimate. This is to bring intercensal estimates into line with the two census populations and thus effect adjustment for unrecorded movement of population in the intercensal period. The first revision is reconciled with preliminary census results and the second revision with final census results.

Final revised figures become the permanent population estimates. For purposes requiring a mean population for any twelve-month period, such mean is calculated as described in § 4. As populations at specific dates are used in these calculations, consequential revisions are made to mean populations when the estimates for specific dates are revised as described above.

In accordance with this policy, all Australian population statistics shown in this issue of the Year Book for dates up to 30th June, 1961, and all mean populations for calendar years up to 1960 and financial years up to 1960-61, are final. Population statistics for dates or years subsequent to these will be revised in accordance with the results of the next census.



Since the establishment of the Commonwealth Bureau of Census and Statistics, the populations of the States and Territories have been estimated in a comparable manner and attention has been given to the improvement of the basic data from which the estimates are compiled. The principal source of error in early estimates lay in the migration records, both overseas and interstate, and post-censal revisions were made to these figures. With the improvement of records of overseas migration, however, such post-censal revision of the records of overseas migration was not found necessary after the 1933 census. The same level of improvement has not been achieved in respect of records of interstate movement, which cover travel by sea, air, rail and some movements by road.

## § 2. The Census

1. *Census-taking.*—Although “musters” of the population were carried out at least annually from 1788 to 1825, the first regular census in Australia was not taken until 1828, when a count of the population of the Colony of New South Wales was made. Subsequent censuses were taken sporadically in the various colonies until 1881, when a census was taken on the same date throughout Australia.

In 1891 and 1901, census-taking was still in the hands of the Government Statisticians of the States, but, in 1911, under the provisions of the *Census and Statistics Act 1905* which provided for the enumeration to be made from one centre instead of by each State as formerly, the Commonwealth Statistician undertook the first census of the Commonwealth of Australia. The second was taken in 1921, the third in 1933, the fourth in 1947, the fifth in 1954, and the sixth in 1961.

2. *Population recorded at Censuses.*—State and Territorial populations recorded at the Australia-wide censuses taken over the period 1881 to 1961 are shown in the following table. The figures relate to the political boundaries of the several States (or Colonies) and Territories as they existed at the date of each census, except that the Northern Territory has been shown separately from South Australia for the censuses prior to its transfer from that State. The years of formation of the separate Colonies and transfer of the Territories are shown in Chapter 1, § 3 and § 4. The total populations recorded at the censuses taken in the Colonies from 1828 to 1881 were shown in Year Book No. 40, page 326.

### POPULATION: AUSTRALIAN CENSUSES

Census	Population enumerated								
	N.S.W.	Vic.	Q'land	S. Aust.	W. Aust.	Tas.	N.T.	A.C.T. (a)	Aust.
<b>MALES</b>									
3rd April, 1881 ..	410,211	451,623	125,325	146,183	17,062	61,162	3,347	..	1,214,913
5th April, 1891 ..	609,666	598,222	223,779	162,241	29,807	77,560	4,560	..	1,705,835
31st March, 1901 ..	710,005	603,720	277,003	180,485	112,875	89,624	4,216	..	1,977,928
3rd April, 1911 ..	857,698	655,591	329,506	207,358	161,565	97,591	2,734	992	2,313,035
4th April, 1921 ..	1,071,501	754,724	398,969	248,267	177,278	107,743	2,821	1,567	2,762,870
30th June, 1933 ..	1,318,471	903,244	497,217	290,962	233,937	115,097	3,378	4,805	3,367,111
30th June, 1947 ..	1,492,211	1,013,867	567,471	320,031	258,076	129,244	7,378	9,092	3,797,370
30th June, 1954 ..	1,720,860	1,231,099	676,252	403,903	330,358	157,129	10,288	16,229	4,546,118
30th June, 1961 ..	1,972,909	1,474,395	774,579	490,225	375,452	177,628	16,206	30,858	5,312,252
<b>FEMALES</b>									
3rd April, 1881 ..	339,614	409,943	88,200	130,231	12,646	54,543	104	..	1,035,281
5th April, 1891 ..	517,471	541,866	169,939	153,292	19,975	69,107	338	..	1,471,988
31st March, 1901 ..	644,841	597,350	221,126	177,861	71,249	82,851	595	..	1,795,873
3rd April, 1911 ..	789,036	659,960	276,307	201,200	120,549	93,620	576	722	2,141,970
4th April, 1921 ..	1,028,870	776,556	357,003	246,893	155,454	106,037	1,046	1,005	2,672,864
30th June, 1933 ..	1,282,376	917,017	450,317	289,987	204,915	112,502	1,472	4,142	3,262,728
30th June, 1947 ..	1,492,627	1,040,834	538,944	326,042	244,404	127,834	3,490	7,813	3,781,988
30th June, 1954 ..	1,702,669	1,221,242	642,007	393,191	309,413	151,623	6,181	14,086	4,440,412
30th June, 1961 ..	1,944,104	1,455,718	744,249	479,115	361,177	172,712	10,889	27,970	5,195,934

(a) Part of New South Wales prior to 1911.

## POPULATION: AUSTRALIAN CENSUSES—continued

Census	Population enumerated								
	N.S.W.	Vic.	Q'land	S. Aust.	W. Aust.	Tas.	N.T.	A.C.T. (a)	Aust.
PERSONS									
3rd April, 1881 ..	749,825	861,566	213,525	276,414	29,708	115,705	3,451	..	2,250,194
5th April, 1891 ..	1,127,137	1,140,088	393,718	315,533	49,782	146,667	4,898	..	3,177,823
31st March, 1901 ..	1,354,846	1,201,070	498,129	358,346	184,124	172,475	4,811	..	3,773,801
3rd April, 1911 ..	1,646,734	1,315,551	605,813	408,558	282,114	191,211	3,310	1,714	4,455,005
4th April, 1921 ..	2,100,371	1,531,280	755,972	495,160	332,732	213,780	3,867	2,572	5,435,734
30th June, 1933 ..	2,600,847	1,820,261	947,534	580,949	438,852	227,599	4,850	8,947	6,629,839
30th June, 1947 ..	2,984,838	2,054,701	1,106,415	646,073	502,480	257,078	10,868	16,905	7,579,358
30th June, 1954 ..	3,423,529	2,452,341	1,318,259	797,094	639,771	308,752	16,469	30,315	8,986,530
30th June, 1961 ..	3,917,013	2,930,113	1,518,828	969,340	736,629	350,340	27,095	58,828	10,508,186

(a) Part of New South Wales prior to 1911.

The results of the 1961 Census of the Australian External Territories are shown in § 13 of this chapter.

3. Increase since 1891 Census.—The increases in the populations of the several States and Territories and of Australia as a whole during the last seven intercensal periods are shown in the following table, which distinguishes the numerical increases, the proportional increases (which do not allow for the differences in the length of the intercensal periods) and the average annual rates of increase.

## POPULATION: INTERCENSAL INCREASES

State or Territory	1891-1901 (10 years)	1901-1911 (10 years)	1911-1921 (10 years)	1921-1933 (12½ years)	1933-1947 (14 years)	1947-1954 (7 years)	1954-1961 (7 years)
NUMERICAL INCREASE							
New South Wales(a)	227,709	293,602	453,637	500,476	383,991	438,691	493,484
Victoria ..	60,982	114,481	215,729	288,981	234,440	397,640	477,772
Queensland ..	104,411	107,684	150,159	151,562	158,881	211,844	200,569
South Australia ..	42,813	50,212	86,602	85,789	65,124	151,021	172,246
Western Australia ..	134,342	97,990	50,618	106,120	63,628	137,291	96,858
Tasmania ..	25,808	18,736	22,569	13,819	29,479	51,674	41,588
Northern Territory ..	-87	-1,501	557	983	6,018	5,601	10,626
Aust. Cap. Terr.(b)	..	..	858	6,375	7,958	13,410	28,513
Australia ..	595,978	681,204	980,729	1,194,105	949,519	1,407,172	1,521,656

## PROPORTIONAL INCREASE—PER CENT.

New South Wales(a)	20.20	21.67	27.55	23.83	14.76	14.70	14.41
Victoria ..	5.35	9.53	16.40	18.87	12.88	19.35	19.48
Queensland ..	26.52	21.62	24.79	25.34	16.77	19.15	15.21
South Australia ..	13.57	14.01	21.20	17.33	11.21	23.38	21.61
Western Australia ..	269.86	53.22	17.94	31.89	14.50	27.32	15.14
Tasmania ..	17.60	10.86	11.80	6.46	12.95	20.10	13.47
Northern Territory ..	-1.78	-31.20	16.83	25.42	124.08	51.54	64.52
Aust. Cap. Terr.(b)	..	..	50.06	247.86	88.95	79.33	94.06
Australia ..	18.75	18.05	22.01	21.97	14.32	18.57	16.93

## AVERAGE ANNUAL RATE OF INCREASE—PER CENT.

New South Wales(a)	1.86	1.97	2.46	1.76	0.99	1.98	1.94
Victoria ..	0.52	0.91	1.53	1.42	0.87	2.56	2.58
Queensland ..	2.38	1.98	2.24	1.86	1.11	2.53	2.04
South Australia ..	1.28	1.32	1.94	1.31	0.76	3.05	2.83
Western Australia ..	13.97	4.36	1.66	2.29	0.97	3.51	2.03
Tasmania ..	1.63	1.04	1.12	0.51	0.87	2.65	1.82
Northern Territory ..	-0.18	-3.67	1.57	1.87	5.93	6.12	7.37
Aust. Cap. Terr.(b)	..	..	4.14	10.71	4.65	8.70	9.93
Australia ..	1.73	1.67	2.01	1.63	0.96	2.46	2.26

(a) Includes Australian Capital Territory prior to 1911.

(b) Part of New South Wales prior to 1911.

NOTE.—Minus sign (-) denotes decrease.

## § 3. Growth and Distribution of Population

1. Growth of Population.—The table which follows shows the growth in the population of each sex in the various States and Territories as measured by the estimated population at 31st December in 1900 and thereafter at decennial intervals to 1960, and for each year from 1959 to 1963.

## ESTIMATED POPULATION:

At 31st Dec.—	N.S.W.	Victoria	Q'land	S. Aust.	W. Aust.	Tas.	N.T.	A.C.T. (a)	Australia
<b>MALES</b>									
1900	716,047	601,773	274,684	180,349	110,088	89,763	4,288	..	1,976,992
1910	858,181	646,482	325,513	206,557	157,971	98,866	2,738	..	2,296,308
1920	1,067,945	753,803	396,555	245,300	176,895	107,259	2,911	1,062	2,751,730
1930	1,294,419	892,422	481,559	288,618	232,868	113,505	3,599	4,732	3,311,722
1940b	1,402,297	947,037	536,712	297,885	248,734	123,650	6,337	7,856	3,570,508
1950	1,627,618	1,114,497	620,329	364,705	294,758	147,103	9,414	13,021	4,191,445
1960	1,951,907	1,455,696	766,448	483,802	372,665	178,630	14,785	29,140	5,253,073
1959	1,908,062	1,416,347	753,906	471,868	366,253	175,285	14,256	26,386	5,132,363
1960	1,951,907	1,455,696	766,448	483,802	372,665	178,630	14,785	29,140	5,253,073
1961	1,983,891	1,483,176	778,282	495,778	379,947	185,661	15,236	32,588	5,354,539
1962	2,015,081	1,514,612	789,664	504,571	389,304	187,833	15,798	36,048	5,452,941
1963	2,052,339	1,546,890	798,224	514,458	398,091	189,515	17,042	40,495	5,557,054
<b>FEMALES</b>									
1900	644,258	594,440	219,163	176,901	69,879	83,137	569	..	1,788,347
1910	785,674	654,926	273,503	200,311	118,861	94,937	563	..	2,128,775
1920	1,023,777	774,106	354,069	245,706	154,428	105,493	1,078	910	2,659,567
1930	1,251,934	900,183	435,177	285,849	198,742	111,792	1,365	3,987	3,189,029
1940b	1,388,651	967,881	494,740	301,171	225,342	120,352	2,637	6,304	3,507,078
1950	1,613,439	1,122,685	585,089	358,138	277,891	143,230	5,006	10,558	4,116,036
1960	1,925,354	1,432,594	735,838	473,220	358,368	177,339	10,002	26,132	5,138,847
1959	1,886,015	1,395,082	723,255	462,629	352,438	176,064	9,558	23,564	5,028,605
1960	1,925,354	1,432,596	735,838	473,220	358,368	177,339	10,002	26,132	5,138,847
1961	1,965,529	1,467,614	746,996	484,977	366,258	178,473	10,022	29,503	5,249,372
1962	2,001,554	1,498,835	760,706	495,122	376,411	181,570	10,486	32,776	5,357,460
1963	2,033,954	1,533,325	773,758	505,716	386,016	184,125	11,780	37,083	5,465,757
<b>PERSONS</b>									
1900	1,360,305	1,196,213	493,847	357,250	179,967	172,900	4,857	..	3,765,339
1910	1,643,855	1,301,408	599,016	406,868	276,832	193,803	3,301	..	4,425,083
1920	2,091,722	1,527,909	750,624	491,006	331,323	212,752	3,989	1,972	5,411,297
1930	2,546,353	1,792,605	916,736	574,467	431,610	225,297	4,964	8,719	6,500,751
1940b	2,790,948	1,914,918	1,031,452	599,056	474,076	244,002	8,974	14,160	7,077,586
1950	3,241,057	2,237,182	1,205,418	722,843	572,649	290,333	14,420	23,579	8,307,481
1960	3,877,261	2,888,290	1,502,286	957,022	731,033	355,969	24,787	55,272	10,391,920
1959	3,794,077	2,811,429	1,477,161	934,497	718,691	351,349	23,814	49,950	10,160,968
1960	3,877,261	2,888,290	1,502,286	957,022	731,033	355,969	24,787	55,272	10,391,920
1961	3,949,420	2,950,790	1,525,278	980,755	746,205	364,134	25,258	62,091	10,603,931
1962	4,016,635	3,013,447	1,550,370	999,693	765,715	369,403	26,284	68,824	10,810,371
1963	4,086,293	3,080,215	1,571,982	1,020,174	784,107	373,640	28,822	77,578	11,022,811

(a) Part of New South Wales prior to 1911. (b) Includes all defence personnel enlisted in Australia irrespective of movements subsequent to enlistment.

Estimates of population for intercensal years are obtained in the manner outlined in § 1.

The estimated population at 31st December each year from 1788 to 1946 was shown in *Demography*, Bulletin No. 67, 1949, and for the period 1881 to 1962 in *Demography*, Bulletin No. 80. A graph illustrating the growth of the population of Australia and of each State and Territory appears on page 282.

2. **Proportion of Area and Population, Density and Masculinity.**—The previous table shows the estimated number of persons in each of the States and Territories at 31st December, 1963. In the following table, the proportions of the total area and of the total population represented by each State and Territory are given, together with the density and the masculinity of the population.

DENSITY AND MASCULINITY OF POPULATION, 1963

State or Territory	Proportion of total area (per cent.)	Proportion of estimated population, 31st December, 1963 (per cent.)			Density (a)	Masculinity (b)
		Males	Females	Persons		
New South Wales .. .. .	10.42	36.93	37.21	37.07	13.21	100.90
Victoria .. .. .	2.96	27.84	28.05	27.94	35.05	100.88
Queensland .. .. .	22.45	14.36	14.16	14.26	2.36	103.16
South Australia .. .. .	12.79	9.26	9.25	9.26	2.68	101.73
Western Australia .. .. .	32.85	7.16	7.06	7.11	0.80	103.13
Tasmania .. .. .	0.88	3.41	3.37	3.39	14.25	102.93
Northern Territory .. .. .	17.62	0.31	0.22	0.26	0.06	144.67
Australian Capital Territory .. .. .	0.03	0.73	0.68	0.71	82.62	109.20
<b>Australia .. .. .</b>	<b>100.00</b>	<b>100.00</b>	<b>100.00</b>	<b>100.00</b>	<b>3.7£</b>	<b>101.67</b>

(a) Number of persons per square mile.

(b) Number of males per 100 females.

Additional information regarding density and masculinity of population appears in later sections of this chapter.

3. **Urban and Rural Distribution.**—The table on pages 270–1 shows the distribution of the population among metropolitan, other urban and rural areas in each State and Territory at the 1954 and 1961 censuses. Corresponding details for previous censuses were shown in earlier issues of the Year Book.

Metropolitan Urban Divisions comprise the capital cities of the States and the City of Canberra, the National Capital, and include, together with the cities proper, a number of adjacent municipalities and shires. The boundaries of the metropolitan urban divisions are determined for census purposes by the Statisticians of the States in collaboration with the Commonwealth Statistician and, in order to conform to the growth of the metropolitan urban population, the boundaries are reviewed at each census and adjustments made, wherever necessary, to embrace contiguous urban areas that have developed since the previous census. Amendments were made, prior to the census of 1961, to the boundaries of the Metropolitan Urban Divisions of Victoria, Queensland and Tasmania.

Other Urban Divisions comprise (i) all separately incorporated municipalities (or cities, towns or boroughs) outside the Metropolitan Urban Division (including Darwin, the capital city of the Northern Territory) except for any municipality or part of a municipality which was specifically regarded as rural for census purposes; and (ii) towns, not separately incorporated, with a population of 1,000 persons or more (750 persons or more in Tasmania).

Rural Divisions comprise the remaining portions of each State and Territory.

The term "Migratory" used in the following tables refers to persons not elsewhere enumerated who at midnight between 29th and 30th June, 1961, were on ships in Australian waters or were travelling on long-distance trains, motor coaches or aircraft.

Before comparisons are made between the populations of the metropolitan urban, other urban and rural divisions at various censuses, consideration must be given to the changes which have taken place in the composition of these divisions from census to census. In the following table, the comparative figures for 1954 have been adjusted to the boundaries used in 1961.

## URBAN AND RURAL POPULATION(a): CENSUS, 30th JUNE, 1961

Division	1961 Census			Proportion of total population of State (per cent.)		Percentage increase since the 1954 census
	Males	Females	Persons	1954 census	1961 census	
NEW SOUTH WALES						
Urban—						
Metropolitan ..	1,077,978	1,105,410	2,183,388	54.42	55.74	17.19
Other ..	577,925	573,974	1,151,899	28.68	29.41	17.32
Rural ..	308,511	262,624	571,135	16.70	14.58	— 0.09
Migratory ..	8,495	2,096	10,591	0.20	0.27	54.16
<i>Total</i> ..	<i>1,972,909</i>	<i>1,944,104</i>	<i>3,917,013</i>	<i>100.00</i>	<i>100.00</i>	<i>14.41</i>
VICTORIA						
Urban—						
Metropolitan ..	949,719	962,176	1,911,895	62.48	65.25	24.79
Other ..	286,196	287,734	573,930	19.86	19.59	17.83
Rural ..	234,720	204,959	439,679	17.33	15.00	3.43
Migratory ..	3,760	849	4,609	0.33	0.16	—42.68
<i>Total</i> ..	<i>1,474,395</i>	<i>1,455,718</i>	<i>2,930,113</i>	<i>100.00</i>	<i>100.00</i>	<i>19.48</i>
QUEENSLAND						
Urban—						
Metropolitan ..	304,871	316,679	621,550	39.45	40.92	19.52
Other ..	269,062	267,834	536,896	34.23	35.35	18.99
Rural ..	199,026	159,368	358,394	26.10	23.60	4.18
Migratory ..	1,620	368	1,988	0.22	0.13	—33.09
<i>Total</i> ..	<i>774,579</i>	<i>744,249</i>	<i>1,518,828</i>	<i>100.00</i>	<i>100.00</i>	<i>15.21</i>
SOUTH AUSTRALIA						
Urban—						
Metropolitan ..	289,467	298,490	587,957	60.66	60.66	21.60
Other ..	91,240	86,140	177,380	15.24	18.30	46.07
Rural ..	106,315	93,750	200,065	23.81	20.64	5.41
Migratory ..	3,203	735	3,938	0.29	0.40	67.86
<i>Total</i> ..	<i>490,225</i>	<i>479,115</i>	<i>969,340</i>	<i>100.00</i>	<i>100.00</i>	<i>21.61</i>
WESTERN AUSTRALIA						
Urban—						
Metropolitan ..	205,107	215,026	420,133	54.50	57.03	20.50
Other ..	63,893	61,841	125,734	16.97	17.07	15.82
Rural ..	103,923	83,822	187,745	28.18	25.49	4.13
Migratory ..	2,529	488	3,017	0.35	0.41	33.08
<i>Total</i> ..	<i>375,452</i>	<i>361,177</i>	<i>736,629</i>	<i>100.00</i>	<i>100.00</i>	<i>15.14</i>

See footnote on following page.

## URBAN AND RURAL POPULATION(a): CENSUS, 30TH JUNE, 1961—continued

Division	1961 census			Proportion of total population of State (per cent.)		Percentage increase since the 1954 census
	Males	Females	Persons	1954 census	1961 census	
<b>TASMANIA</b>						
Urban—						
Metropolitan ..	57,337	58,595	115,932	30.91	33.09	21.49
Other ..	64,986	65,617	130,603	36.03	37.28	17.38
Rural ..	54,547	48,379	102,926	32.85	29.38	1.49
Migratory ..	758	121	879	0.21	0.25	35.23
<b>Total ..</b>	<b>177,628</b>	<b>172,712</b>	<b>350,340</b>	<b>100.00</b>	<b>100.00</b>	<b>13.47</b>
<b>NORTHERN TERRITORY</b>						
Urban—						
Metropolitan ..						
Other ..	9,464	7,510	16,974	58.11	62.65	77.37
Rural ..	6,507	3,350	9,857	40.53	36.38	47.67
Migratory ..	235	29	264	1.36	0.97	17.86
<b>Total ..</b>	<b>16,206</b>	<b>10,889</b>	<b>27,095</b>	<b>100.00</b>	<b>100.00</b>	<b>64.52</b>
<b>AUSTRALIAN CAPITAL TERRITORY</b>						
Urban—						
Metropolitan ..	29,463	26,986	56,449	93.28	95.96	99.63
Other ..	..	..	..	..	..	..
Rural ..	1,395	984	2,379	6.72	4.04	16.73
Migratory ..	..	..	..	..	..	..
<b>Total ..</b>	<b>30,858</b>	<b>27,970</b>	<b>58,828</b>	<b>100.00</b>	<b>100.00</b>	<b>94.06</b>
<b>AUSTRALIA</b>						
Urban—						
Metropolitan ..	2,913,942	2,983,362	5,897,304	54.21	56.12	21.06
Other ..	1,362,766	1,350,650	2,713,416	25.27	25.82	19.48
Rural ..	1,014,944	857,236	1,872,180	20.26	17.82	2.81
Migratory ..	20,600	4,686	25,286	0.26	0.24	8.20
<b>Total ..</b>	<b>5,312,252</b>	<b>5,195,934</b>	<b>10,508,186</b>	<b>100.00</b>	<b>100.00</b>	<b>16.93</b>

(a) See letterpress preceding this table for definitions of urban, rural, etc., and for reference to the adjustments to 1954 census figures in order to provide approximate comparisons on the 1961 census basis.

NOTE.—Minus sign (—) denotes decrease.

A feature of the metropolitan population is its relatively higher femininity, but this has become less marked over the last 20 years owing to the excess of males in the high annual number of births and in the oversea migration flow in that period. In 1933, the masculinity ratio of metropolitan population was only 90.35 males per 100 females, but in succeeding censuses the ratios have been: 1947, 92.76; 1954, 96.04; and 1961, 97.67. There is little difference in the ratios between the several metropolitan areas, the ratio of males per 100 females ranging from 95.39 in Perth (Western Australia) to 98.71 in Melbourne (Victoria).

4. **Principal Urban Areas.**—The following table shows the population of the principal cities and towns (population 6,000 or more) in each State and Territory of Australia at 30th June, 1963, or at 30th June, 1961, where later figures are not available.

**ESTIMATED POPULATION OF PRINCIPAL CITIES AND TOWNS: AUSTRALIA**  
30th JUNE, 1963

City or town	Popu- lation	City or town	Popu- lation	City or town	Popu- lation
<b>New South Wales</b>		<b>Victoria</b>			
Sydney and Suburbs(a) . . .	2,256,110	Melbourne and Sub- urbs(a) . . .	2,003,100	Charters Towers . . .	7,700
Newcastle and Suburbs(b) . . .	215,950	Geelong and Suburbs(b) . . .	96,510	Gladstone . . .	7,250
Greater Wollongong . . .	142,170	Ballarat and Suburbs(b) . . .	56,550	Innisfail(c) . . .	(d) 6,917
Perth . . .	38,990	Bendigo and Suburbs(b) . . .	41,610	<b>South Australia</b>	
Greater Cessnock . . .	34,870	Warrnambool . . .	16,680	Adelaide and Suburbs(a) . . .	600,200
Blue Mountains . . .	30,220	Moe . . .	16,320	Elizabeth(c) . . .	31,050
Broken Hill . . .	30,100	Morwell(c) . . .	16,010	Whyalla . . .	16,800
Maitland . . .	27,950	Shepparton . . .	15,130	Mount Gambier . . .	16,200
Albury . . .	23,520	Wangaratta . . .	14,490	Port Pirie . . .	13,900
Cambelltown . . .	22,900	Traralgon . . .	13,320	Port Augusta . . .	10,100
Wagga Wagga . . .	22,840	Mildura . . .	12,820	Salisbury(c) . . .	(d) 9,349
Goulburn . . .	20,460	Hamilton . . .	9,740	Port Lincoln . . .	7,700
Tamworth . . .	19,970	Colac . . .	9,710	Renmark . . .	6,150
Orange . . .	19,300	Horsham . . .	9,430	<b>Western Australia</b>	
Lismore . . .	19,060	Benalla . . .	8,640	Perth and Suburbs(a) . . .	445,000
Bathurst . . .	17,150	Sale . . .	8,420	Kalgoorlie and Sub- urbs(b) . . .	21,740
Shellharbour . . .	17,030	Ararat . . .	8,120	Bunbury . . .	14,380
Grafton . . .	15,650	Wodonga(c) . . .	(d) 7,498	Geraldton . . .	11,680
Dubbo . . .	14,750	Bairnsdale(c) . . .	(d) 7,427	Albany . . .	11,170
Lithgow . . .	13,950	Maryborough . . .	7,270	Collie(c) . . .	7,630
Armidale . . .	13,630	Castlemaine . . .	7,260	Northam . . .	7,300
Windsor . . .	12,900	Echuca . . .	6,850	<b>Tasmania</b>	
Woy Woy-Ettalong(c) . . .	(d) 12,206	Swan Hill . . .	6,570	Hobart and Suburbs(a) . . .	121,275
Taree . . .	10,320	Warragul(c) . . .	(d) 6,405	Launceston and Sub- urbs(b) . . .	58,441
Queanbeyan . . .	(e) 10,303	Portland . . .	6,370	Burnie(c) . . .	14,720
Cooma . . .	9,200	<b>Queensland</b>		Devonport(c) . . .	13,500
Toronto(c) . . .	(d) 8,515	Brisbane and Suburbs(a) . . .	649,500	Ulverstone(c) . . .	7,060
Parke . . .	8,410	Townsville . . .	54,000	<b>Northern Territory</b>	
Inverell . . .	8,350	Toowoomba . . .	52,000	Darwin . . .	13,500
Casino . . .	8,100	Ipswich . . .	51,000	<b>Australian Capital Territory</b>	
Kempsey . . .	8,060	Rockhampton . . .	44,850	Canberra(a) . . .	(e) 70,775
Griffith(c) . . .	(d) 7,696	Gold Coast . . .	36,300		
Gosford(c) . . .	(d) 7,318	Cairns . . .	25,900		
Moree . . .	7,210	Bundaberg . . .	23,400		
Coff's Harbour(c) . . .	(d) 7,188	Maryborough . . .	19,350		
Murwillumbah(c) . . .	(d) 7,151	Mackay . . .	17,250		
Camden . . .	7,110	Mount Isa(c) . . .	(d) 13,358		
Gunnedah . . .	7,030	Gympie . . .	11,350		
Forbes . . .	6,960	Warwick . . .	10,000		
Cowra . . .	6,430	Ayr(c) . . .	(d) 8,010		
Port Macquarie . . .	6,390	Dalby . . .	7,850		
Nowra(c) . . .	(d) 6,221				
The Entrance-Long Jetty(c) . . .	(d) 6,006				
Cootamundra . . .	6,000				

(a) Metropolitan area. (b) Entire urban area. (c) Non-municipal town, i.e., a town not separately incorporated for purpose of local government. (d) 30th June, 1961. (e) Population count, 1st July, 1963.

5. **Urban Population Outside Metropolitan Areas.**—The aggregate urban population at the 1961 census of all cities and towns outside the metropolitan area of each State with 2,000 or more and 3,000 or more urban inhabitants, irrespective of whether such centres were incorporated separately or not, together with the proportion of the aggregate urban population of these cities and towns to the total population of the State, is shown in the following table.

**AGGREGATE URBAN POPULATION OF NON-METROPOLITAN CITIES AND TOWNS OF SPECIFIED SIZE: CENSUS, 30th JUNE, 1961**

State or Territory	Cities and towns outside metropolitan area with urban population of—					
	2,000 and over			3,000 and over		
	Number	Population	Proportion of total population	Number	Population	Proportion of total population
New South Wales .. .. .	101	1,074,922	27.44	71	1,002,344	25.59
Victoria .. .. .	60	518,730	17.70	42	474,584	16.20
Queensland .. .. .	53	498,871	32.85	33	451,148	29.70
South Australia .. .. .	21	142,669	14.72	15	128,927	13.30
Western Australia .. .. .	16	102,145	13.87	12	92,443	12.55
Tasmania .. .. .	11	112,821	32.20	7	103,119	29.43
Northern Territory .. .. .	2	16,974	62.65	2	16,974	62.65
Australian Capital Territory(a) .. .. .	..	..	..	..	..	..
<b>Total .. .. .</b>	<b>264</b>	<b>2,467,132</b>	<b>23.48</b>	<b>182</b>	<b>2,269,539</b>	<b>21.60</b>

(a) The only city or town is Canberra, the capital city of Australia, classed as metropolitan.

In the foregoing table, "Urban Areas" comprising two or more local government areas, or portions thereof, are treated as units. The "Urban Areas" so treated are: in New South Wales, Newcastle; in Victoria, Ballarat, Bendigo, Geelong, Latrobe Valley (Urban); in Western Australia, Kalgoorlie; and in Tasmania, Launceston. With the exception of Latrobe Valley (Urban), the areas in each instance are composed of the nucleus town and neighbouring local government areas, either in whole or in part, to form one continuous built-up area. In Latrobe Valley (Urban) there is no nucleus town, but all urban localities are closely associated with the development of the Latrobe Valley brown coal deposits.

A table showing similar data for the 1954 census was given in Official Year Book No. 47, page 295 and one for the 1947 census in Official Year Book No. 40, page 334. Comparisons between these various tables can be made only if allowance is made for changes in the status and structure of local government areas and for changes in the manner of determining urban population at each census.

6. **Principal Cities of the World.**—The following table shows the population of the world's largest cities at the latest available date. Since the way in which cities are delimited differs from country to country, the table shows data for the urban agglomeration, if such exists, as well as data for the so-called city proper. The urban agglomeration is defined in the United Nations *Demographic Year-book* 1962 (page 35), from which most of the figures in the table have been taken, as the suburban fringe or thickly settled territory lying outside of, but adjacent to, city boundaries. (See also the Technical Notes on Statistical Tables and footnotes to the table in the *Demographic Year-book*.)



## POPULATION OF THE WORLD'S LARGEST CITIES

(Details for Commonwealth countries are printed in italics)

City	Country	Year	Population ('000)	
			City proper	Urban agglomeration
New York .. .. .	U.S.A. .. .. .	1960	7,782	(a) 14,115
Tokyo .. .. .	Japan .. .. .	1961	8,480	9,936
London .. .. .	England .. .. .	1961	3,195	8,172
Buenos Aires .. .. .	Argentina .. .. .	1960	2,967	7,000
Shanghai .. .. .	China .. .. .	1957	6,900	..
Paris .. .. .	France .. .. .	1962	2,790	6,524
Los Angeles .. .. .	U.S.A. .. .. .	1960	2,479	6,489
Moscow .. .. .	U.S.S.R. .. .. .	1962	6,262	6,296
Chicago .. .. .	U.S.A. .. .. .	1960	3,550	5,959
<i>Bombay .. .. .</i>	<i>India .. .. .</i>	<i>1960</i>	<i>4,941</i>	..
<i>Calcutta .. .. .</i>	<i>India .. .. .</i>	<i>1962</i>	<i>2,957</i>	<i>4,488</i>
Peking .. .. .	China .. .. .	1957	4,010	..
Philadelphia .. .. .	U.S.A. .. .. .	1960	2,003	3,635
Detroit .. .. .	U.S.A. .. .. .	1960	1,670	3,538
Leningrad .. .. .	U.S.S.R. .. .. .	1962	3,036	3,498
Berlin(b) .. .. .	Germany .. .. .	1962	3,238	..
Rio de Janeiro .. .. .	Brazil .. .. .	1960	3,223	..
Tientsin .. .. .	China .. .. .	1957	3,220	..
Sao Paulo .. .. .	Brazil .. .. .	1960	3,165	..
Osaka .. .. .	Japan .. .. .	1961	3,085	..
Cairo .. .. .	United Arab Republic .. .. .	1959	2,852	2,993
Mexico City .. .. .	Mexico .. .. .	1961	2,908	..
Djakarta .. .. .	Indonesia .. .. .	1961	2,907	..
<i>Delhi .. .. .</i>	<i>India .. .. .</i>	<i>1962</i>	<i>2,156</i>	<i>2,468</i>
Seoul .. .. .	Korea .. .. .	1960	2,445	..
San Francisco .. .. .	U.S.A. .. .. .	1960	740	2,431
<i>Manchester .. .. .</i>	<i>England .. .. .</i>	<i>1961</i>	<i>661</i>	<i>2,427</i>
Boston .. .. .	U.S.A. .. .. .	1960	697	2,413
Mukden .. .. .	China .. .. .	1957	2,411	..
<i>Birmingham .. .. .</i>	<i>England .. .. .</i>	<i>1961</i>	<i>1,106</i>	<i>2,344</i>
Madrid .. .. .	Spain .. .. .	1960	..	2,260
<i>Sydney .. .. .</i>	<i>Australia .. .. .</i>	<i>1963</i>	<i>169</i>	<i>2,256</i>
Rome .. .. .	Italy .. .. .	1961	..	2,161
Wuhan .. .. .	China .. .. .	1957	2,146	..
Chungking .. .. .	China .. .. .	1957	2,121	..
<i>Montreal .. .. .</i>	<i>Canada .. .. .</i>	<i>1961</i>	<i>1,191</i>	<i>2,110</i>
<i>Melbourne .. .. .</i>	<i>Australia .. .. .</i>	<i>1963</i>	<i>76</i>	<i>2,003</i>
Istanbul .. .. .	Turkey .. .. .	1960	1,460	1,925
<i>Karachi .. .. .</i>	<i>Pakistan .. .. .</i>	<i>1961</i>	<i>1,913</i>	..
Santiago .. .. .	Chile .. .. .	1960	..	1,900
Athens .. .. .	Greece .. .. .	1961	628	1,853
Canton .. .. .	China .. .. .	1957	1,840	..
Teheran .. .. .	Iran .. .. .	1960	1,839	..
Hamburg .. .. .	Germany .. .. .	1961	1,832	..
Budapest .. .. .	Hungary .. .. .	1961	1,830	..
<i>Toronto .. .. .</i>	<i>Canada .. .. .</i>	<i>1961</i>	<i>672</i>	<i>1,824</i>
Washington .. .. .	U.S.A. .. .. .	1960	764	1,808
Pittsburgh .. .. .	U.S.A. .. .. .	1960	604	1,804
<i>Glasgow .. .. .</i>	<i>Scotland .. .. .</i>	<i>1961</i>	<i>1,055</i>	<i>1,802</i>
Cleveland .. .. .	U.S.A. .. .. .	1960	876	1,785
<i>Madras .. .. .</i>	<i>India .. .. .</i>	<i>1962</i>	<i>1,771</i>	..
Lima .. .. .	Peru .. .. .	1961	1,716	..
Leeds .. .. .	England .. .. .	1961	511	1,703

(a) New York-Northeastern New Jersey urbanized area, which includes Elizabeth, Jersey City, Newark, Paterson and Yonkers. Area extended considerably compared with that previously shown.

(b) East Berlin (1,058,000) and West Berlin (2,180,000).

### § 4. Mean Population

1. General.—Mean populations are calculated for twelve-month periods to provide a satisfactory average basis for calculations requiring allowance for the continuous change in population figures during such periods.

From 1901 onwards, the mean population for any year has been calculated by the formula:—

$$\text{Mean Population} = \frac{a + 4b + 2c + 4d + e}{12}$$

where *a*, *b*, *c*, *d* and *e*, respectively, are the populations at the end of the quarter immediately preceding the year and at the end of each of the four succeeding quarters; e.g., in the case of a calendar year, 31st December of the preceding year and 31st March, 30th June, 30th September and 31st December of the year under consideration. This formula gives a close approximation to the mean of a theoretical population progressing smoothly through the five values *a*, *b*, *c*, *d*, *e*.

2. Results.—(i) *Calendar Years*. The following table shows the mean population of each State and Territory for the calendar years 1954 to 1963.

MEAN POPULATION: CALENDAR YEARS

Year ended 31st Dec.—	N.S.W.	Victoria	Q'land	S. Aust.	W. Aust.	Tas.	N.T.	A.C.T.	Australia
1954 ..	3,428,549	2,452,741	1,313,738	796,364	639,963	311,055	16,293	30,424	8,989,127
1955 ..	3,492,799	2,520,481	1,344,445	820,161	657,323	315,565	17,670	32,738	9,201,182
1956 ..	3,556,672	2,592,670	1,377,393	848,563	674,459	321,039	19,155	35,352	9,425,303
1957 ..	3,624,311	2,656,363	1,408,732	874,201	687,448	328,435	20,620	37,999	9,638,109
1958 ..	3,696,049	2,717,371	1,436,156	896,987	699,915	335,382	21,746	41,110	9,844,716
1959 ..	3,762,339	2,783,951	1,464,469	921,106	711,737	341,423	23,623	46,618	10,055,266
1960 ..	3,834,085	2,857,032	1,491,114	944,861	722,900	346,913	25,107	52,562	10,274,574
1961 ..	3,914,718	2,927,526	1,515,516	969,630	737,386	353,613	26,243	58,792	10,503,424
1962 ..	3,980,675	2,990,041	1,539,076	989,385	755,259	359,408	26,973	65,699	10,706,516
1963 ..	4,050,987	3,055,162	1,562,456	1,008,862	773,235	364,280	28,668	73,348	10,916,998

(ii) *Financial Years*. The following table shows the mean population of each State and Territory for the years ended 30th June, 1954 to 1963.

MEAN POPULATION: FINANCIAL YEARS

Year ended 30th June—	N.S.W.	Victoria	Q'land	S. Aust.	W. Aust.	Tas.	N.T.	A.C.T.	Australia
1954 ..	3,405,414	2,422,839	1,300,464	785,981	630,705	309,416	15,930	29,595	8,900,344
1955 ..	3,459,755	2,485,222	1,328,064	807,510	648,222	312,694	16,853	31,411	9,089,731
1956 ..	3,524,991	2,556,148	1,360,801	834,489	666,898	318,309	18,419	34,132	9,314,187
1957 ..	3,589,128	2,625,609	1,394,088	861,410	680,949	324,666	19,915	36,749	9,532,514
1958 ..	3,660,738	2,687,115	1,422,349	886,021	693,568	332,046	21,239	39,283	9,742,359
1959 ..	3,729,030	2,749,994	1,450,535	908,354	705,869	338,628	22,507	43,429	9,948,346
1960 ..	3,796,452	2,819,650	1,478,129	933,619	717,316	344,111	24,573	50,013	10,163,863
1961 ..	3,875,921	2,893,417	1,503,703	957,136	729,770	350,077	25,673	55,232	10,390,929
1962 ..	3,948,380	2,959,167	1,526,959	980,108	745,805	356,686	26,566	62,433	10,606,104
1963 ..	4,015,463	3,021,792	1,551,304	998,971	764,426	362,111	27,604	69,217	10,810,888

### § 5. Elements of Increase

1. General.—The two factors which contribute to the growth of a population are “natural increase”, i.e., the excess of births over deaths, and “net migration”, i.e., the excess of arrivals over departures. The “total increase” of the population is obtained by combining natural increase with the increase by net migration. However, comparison of the total increase so obtained with that derived by subtracting the population recorded at one census from that recorded at the next census reveals differences which can be attributed partly to differences in the coverage of the census enumerations, and partly to deficiencies in the records of the elements of increase. The principal source of error in the elements of increase in earlier years lay in migration records, oversea as well as interstate, and adjustments were made to these records for the intercensal periods. With the gradual improvement of

records of overseas migration, it was considered that from July, 1933, it was no longer possible to attribute the much smaller differences for Australia as a whole solely to records of overseas migration, and since that date the differences, when ascertained for the intercensal period, have been shown as a separate item, with the elements of increase left as recorded. However, it has not been possible to effect a similar improvement in the records of interstate migration, and much of the intercensal differences for particular States may be attributed to deficiencies in this factor.

2. *Elements of Increase, 1936-1963, Australia.*—In the following table, particulars are given of the elements of increase for each five-year period from 1936 to 1960 and for each of the years 1959 to 1963. The numbers of males, females and persons are shown separately.

## POPULATION: ELEMENTS OF INCREASE

Period				Natural increase(a)	Net migration(b)	Intercensal adjustment(c)	Total increase
MALES							
1936-40	..	..	..	123,262	20,873	3,335	147,470
1941-45	..	..	..	142,605	5,325	3,428	151,358
1946-50	..	..	..	255,335	217,728	-3,484	469,579
1951-55	..	..	..	287,685	240,481	-5,794	522,372
1956-60	..	..	..	328,616	214,210	-3,570	539,256
1959..	..	..	..	65,948	41,024	- 704	106,268
1960..	..	..	..	68,786	52,722	- 798	120,710
1961..	..	..	..	72,864	29,055	- 433	101,486
1962..	..	..	..	69,732	28,620	(d)	98,352
1963..	..	..	..	67,924	36,219	(d)	104,143
FEMALES							
1936-40	..	..	..	148,995	22,255	3,204	174,454
1941-45	..	..	..	195,073	2,484	3,696	201,253
1946-50	..	..	..	274,112	135,356	-1,763	407,705
1951-55	..	..	..	312,017	173,343	-3,388	481,972
1956-60	..	..	..	351,241	190,812	-1,214	540,839
1959..	..	..	..	71,816	35,767	- 241	107,342
1960..	..	..	..	73,076	37,413	- 247	110,242
1961..	..	..	..	78,161	32,468	- 104	110,525
1962..	..	..	..	74,186	33,902	(d)	108,088
1963..	..	..	..	72,871	35,426	(d)	108,297
PERSONS							
1936-40	..	..	..	272,257	43,128	6,539	321,924
1941-45	..	..	..	337,678	7,809	7,124	352,611
1946-50	..	..	..	529,447	353,084	-5,247	877,284
1951-55	..	..	..	599,702	413,824	-9,182	1,004,344
1956-60	..	..	..	679,857	405,022	-4,784	1,080,095
1959..	..	..	..	137,764	76,791	- 945	213,610
1960..	..	..	..	141,862	90,135	-1,045	230,952
1961..	..	..	..	151,025	61,523	- 537	212,011
1962..	..	..	..	143,918	62,522	(d)	206,440
1963..	..	..	..	140,795	71,645	(d)	212,440

(a) Excess of births over deaths. For the period September, 1939, to June, 1947, deaths of defence personnel, whether overseas or in Australia, have been included. (b) Excess of arrivals over departures. Excludes troop movements for the period September, 1939, to June, 1947. (c) Adjustment of population on the basis of the final results of the 1947, 1954 and 1961 censuses. (d) For periods subsequent to the census of 30th June, 1961, the intercensal adjustment will not be known until after the next census has been taken.

3. Analysis of Intercensal Increase, 30th June, 1954, to 30th June, 1961.—In the following table, particulars are given for States and Territories of the recorded elements of increase and the intercensal adjustment for the whole of the seven-year intercensal period from 30th June, 1954, to 30th June, 1961.

As stated in § 1. of this chapter (see p. 265), complete records of interstate migration are not available. For this reason, the differences between the estimated populations and those recorded at the census of 30th June, 1961, i.e. the intercensal adjustments, were substantial for some States.

**POPULATION: ANALYSIS OF INTERCENSAL INCREASE, 30th JUNE, 1954, TO 30th JUNE, 1961**

State or Territory	Population at 30th June, 1954(a)	Natural increase(b)	Net migration (c)	Total recorded increase	Intercensal adjustment (d)	Population at 30th June, 1961(a)
MALES						
New South Wales ..	1,720,860	150,250	86,499	236,749	15,300	1,972,909
Victoria ..	1,231,099	127,005	135,628	262,633	-19,337	1,474,395
Queensland ..	676,252	73,227	8,072	81,299	17,028	774,579
South Australia ..	403,903	41,607	46,432	88,039	-1,717	490,225
Western Australia ..	330,358	38,000	14,723	52,723	-7,629	375,452
Tasmania ..	157,129	19,946	13,120	33,066	-12,567	177,628
Northern Territory ..	10,288	1,753	463	2,216	3,702	16,206
Aust. Capital Territory..	16,229	3,732	10,792	14,524	105	30,858
<i>Australia</i> ..	<i>4,546,118</i>	<i>455,520</i>	<i>315,729</i>	<i>771,249</i>	<i>- 5,115</i>	<i>5,312,252</i>

FEMALES						
New South Wales ..	1,702,669	165,876	86,193	252,069	-10,634	1,944,104
Victoria ..	1,221,242	129,415	126,020	255,435	-20,959	1,455,718
Queensland ..	642,007	80,840	342	81,182	21,060	744,249
South Australia ..	393,191	44,156	39,892	84,048	1,876	479,115
Western Australia ..	309,413	41,432	12,615	54,047	-2,283	361,177
Tasmania ..	151,623	20,705	-8,077	12,628	8,461	172,712
Northern Territory ..	6,181	2,118	1,941	4,059	649	10,889
Aust. Capital Territory..	14,086	3,627	10,099	13,726	158	27,970
<i>Australia</i> ..	<i>4,440,412</i>	<i>488,169</i>	<i>269,025</i>	<i>757,194</i>	<i>- 1,672</i>	<i>5,195,934</i>

PERSONS						
New South Wales ..	3,423,529	316,126	172,692	488,818	4,666	3,917,013
Victoria ..	2,452,341	256,420	261,648	518,068	-40,296	2,930,113
Queensland ..	1,318,259	154,067	8,414	162,481	38,088	1,518,828
South Australia ..	797,094	85,763	86,324	172,087	159	969,340
Western Australia ..	639,771	79,432	27,338	106,770	-9,912	736,629
Tasmania ..	308,752	40,651	5,043	45,694	-4,106	350,340
Northern Territory ..	16,469	3,871	2,404	6,275	4,351	27,095
Aust. Capital Territory..	30,315	7,359	20,891	28,250	263	58,828
<i>Australia</i> ..	<i>8,986,530</i>	<i>943,689</i>	<i>584,754</i>	<i>1,528,443</i>	<i>- 6,787</i>	<i>10,508,186</i>

(a) Census. (b) Excess of births over deaths. (c) Excess of arrivals over departures for recorded interstate and overseas migration. (d) Adjustment of population on the basis of the census of 30th June, 1961.

4. Rate of Population Growth.—The annual percentage rate of population growth is computed by the formula:—

$$P_1 = P_0 (1 + r)^t$$

where  $P_0$  and  $P_1$  are the populations at the beginning and end of the period respectively,  $t$  is the number of years intervening and  $r$  is the annual rate of growth.

The annual rates of growth of population (per cent.) in Australia during each of the five yearly periods 1936-40 to 1956-60 and the years 1959 to 1963 are shown in the following table.

**POPULATION: RATE OF GROWTH, AUSTRALIA**  
(Per cent.)

Period	Annual rate of population growth(a)		
	Natural increase(b)	Net migration (c)	Total increase (d)
1936-40 .. .. .	0.79	0.13	0.94
1941-45 .. .. .	0.94	0.02	0.98
1946-50 .. .. .	1.36	0.91	2.26
1951-55 .. .. .	1.38	0.95	2.31
1956-60 .. .. .	1.40	0.83	2.22
1959.. .. .	1.39	0.77	2.15
1960.. .. .	1.39	0.89	2.27
1961.. .. .	1.45	0.59	2.04
1962.. .. .	1.36	0.59	1.95
1963.. .. .	1.30	0.67	1.97

(a) Annual rates for single years represent the increase during the period expressed as a proportion (per cent.) at the beginning of the period. (b) Excess of births over deaths including deaths of Australian defence personnel. (c) Excess of overseas arrivals over departures excluding overseas movements of Australian defence personnel. (d) Total of natural increase and net migration, together with adjustments for differences disclosed by the results of population censuses up to 30th June, 1961.

The annual rate of population growth during the present century has been 1.75 per cent., but the results from year to year have deviated widely from this figure. In the following table, the period 1st January, 1901, to 31st December, 1963, has been arranged into certain defined groups of years according to the occurrence of influences markedly affecting the growth of population.

**POPULATION: PERIODICAL RATES OF GROWTH**

Period	Interval (years)	Total increase ('000)	Average annual numerical increase ('000)	Annual rate of population growth (per cent.)		
				Natural increase	Net migration	Total
1901 to 1913 .. .. .	13	1,128	87	1.55	0.49	2.04
1914 to 1923 .. .. .	10	862	86	1.49	0.15	1.64
1924 to 1929 .. .. .	6	680	113	1.26	0.62	1.88
1930 to 1939(a) .. .. .	10	569	57	0.82	0.02	0.85
1940 to 1946(a) .. .. .	7	513	73	0.98	0.01	1.01
1947 to 1952(a) .. .. .	6	1,222	204	1.37	1.19	2.54
1953 to 1963 .. .. .	11	2,283	208	1.38	0.76	2.13

(a) For the period September, 1939, to June, 1947, overseas movements of Australian defence forces have been excluded and deaths of members of these forces, whether occurring in Australia or overseas have been included.

Up to 1913, the rate of natural increase was rising, and this factor, coupled with the impetus given to immigration from 1911 onwards by increased governmental assistance, was responsible for the comparatively high annual rate of 2.04 per cent. during this period. The 1914-18 War was a dominating influence in the decade 1914-23, and its effects can be seen in the reduction of the rate from 2.04 to 1.64 per cent. From 1924 to 1929, more settled and prosperous conditions were experienced; encouraged migration was resumed on a large scale and, despite a further decline in the rate of natural increase owing to the persistent fall in the birth rate, the annual rate of growth rose to 1.88 per cent. After 1929 came the economic depression and immigration ceased—in fact, Australia actually lost people through an excess of departures over arrivals in 1930, 1931, 1932 and 1935. The rate of natural increase also fell, and the annual rate of growth of the population fell to 0.85 per cent. With the outbreak of war in 1939, Australia entered a new phase in her demographic history. The immediate effect of the war was to increase the number of marriages

and to reverse the downward trend in fertility. The number of births increased each war year from 1940 to 1945, and these increases more than offset the rise in deaths due to war casualties and higher civilian death rates. As might be expected, migration over these years was negligible. The period 1947 to 1963 was marked by a continued high natural increase and a resumption of immigration, the latter resulting in very high net gains in each of the four years 1949 to 1952. The annual rate of growth for the period 1947 to 1952 was 2.54 per cent., and from 1953 to 1963 it was 2.13 per cent.

Rates of population growth from 1881 are shown for each State and Territory of Australia in the annual bulletin, *Demography*.

Estimated rates of growth of the population of Australia in comparison with those for other countries of the world for the years 1958-1961 are shown in the table in § 15. International Statistics of Population.

## § 6. Density

From certain aspects, population may be less significant in respect of its absolute amount than in its relation to the area of the country. Australia, with an area of 2,971,081 square miles and an estimated population at 31st December, 1963, of 11,022,811, excluding full-blood aboriginals, has a density of only 3.71 persons to the square mile, and is, therefore, one of the most sparsely populated countries of the world. For other continents and sub-continents, the densities in 1961 were approximately as follows:—Europe (excluding U.S.S.R.), 225; Asia (excluding U.S.S.R.), 165; U.S.S.R., 25; Africa, 22; Northern and Middle America, 29; and South America, 22. The population density of Australia in 1961 was 3.54; about one-sixth of that of South America and of Africa; about one-seventh of that of U.S.S.R.; about one-eighth of that of Northern and Middle America; about one-forty-seventh of that of Asia (excluding U.S.S.R.); and about one sixty-fourth of that of Europe (excluding U.S.S.R.).

Because of the large area of Australia and the unsuitability for settlement of much of the country, the density of population must necessarily increase slowly. In Australia as a whole, the figure has increased from 1.29 per square mile in 1901 to 3.71 in 1963. The rise in density from 1901 to 1963 in each State and Territory was:—New South Wales 4.45 to 13.21, Victoria 13.77 to 35.05, Queensland 0.76 to 2.36, South Australia 0.95 to 2.68, Western Australia 0.20 to 0.80, Tasmania 6.68 to 14.25, Northern Territory 0.01 to 0.06, and Australian Capital Territory 2.05 (in 1911) to 82.62. When comparing the density of population of the several States, consideration should be given to the average annual rainfall distribution in each State as an indication of the climatic influence upon probable population numbers. The proportion of the area of Australia receiving less than 10 inches of rainfall is 39 per cent.; that of the various States is:—New South Wales, 20 per cent.; Victoria, nil; Queensland, 13 per cent.; South Australia, 83 per cent.; Western Australia, 58 per cent.; and Tasmania, nil.

The number and density of population of the principal countries and continental groups of the world are shown in the table in § 15. International Statistics of Population.

## § 7. General Characteristics

NOTE.—The corresponding section of the previous issue of this Year Book contained particulars of the characteristics of the population of Australia at the 1961 census compared with the 1954 census, and for the individual States and Territories at the 1961 census. The latter information has not been repeated in this issue. Details of the various characteristics of the population at the 1961 census as shown in the previous issue have been amended, and the amended figures for Australia appear in the following paragraphs.

1. **Sex Distribution.**—The number of males to each hundred females has been adopted as a measure of the "masculinity" of the population. The masculinity of the population of each of the States may be obtained for each year from 1796 to 1907 from the table on pages 163-5 of Year Book No. 2 and for the years 1900 to 1910 from the table on page 123 of issue No. 5.

With the exception of some dislocation arising from the two World Wars, there was a continuous diminution of the masculinity of the population until 1945. This resulted from the increasing proportion of the population in the higher age groups, in which females preponderate owing to their greater longevity, and the general long-term fall in the birth rate. At the 1947 census, the numbers of the sexes were practically equal, but during the following decade there was an increase in masculinity owing to the greater number of males as compared with females in net overseas migration.

The following table shows the masculinity of the population at ten-year intervals from 1900 to 1960 and for each of the years 1958 to 1963.

**POPULATION: MASCULINITY**  
(NUMBER OF MALES PER 100 FEMALES)

At 31st December—	N.S.W.	Victoria	Q'land	S. Aust.	W. Aust.	Tas.	N.T.	A.C.T.	Aust.
1900 .. ..	111.14	101.23	125.33	101.95	157.54	107.97	753.60	(a)	110.55
1910 .. ..	109.23	98.71	119.02	103.12	132.90	104.14	486.32	(a)	107.87
1920 .. ..	104.31	97.38	112.00	99.83	114.55	101.67	270.04	116.70	103.47
1930 .. ..	103.39	99.14	110.66	100.97	117.17	101.53	263.66	118.69	103.85
1940 .. ..	100.98	97.85	108.48	98.91	110.38	102.74	240.31	124.62	101.81
1950 .. ..	100.88	99.27	106.02	101.83	106.07	102.70	188.05	123.33	101.83
1960 .. ..	101.38	101.61	104.16	102.24	103.99	100.73	147.82	111.51	102.22
1958 .. ..	101.24	101.47	104.33	101.95	104.54	99.75	147.75	114.81	102.13
1959 .. ..	101.17	101.52	104.24	102.00	103.92	99.56	149.15	111.98	102.06
1960 .. ..	101.38	101.61	104.16	102.24	103.99	100.73	147.82	111.51	102.22
1961 .. ..	100.93	101.06	104.19	102.23	103.74	104.03	152.03	110.46	102.00
1962 .. ..	100.68	101.05	103.81	101.91	103.42	103.45	150.66	109.98	101.78
1963 .. ..	100.90	100.88	103.16	101.73	103.13	102.93	144.67	109.20	101.67

(a) Part of New South Wales prior to 1911.

The masculinity of the population in the principal countries of the world is shown in the table in § 15. *International Statistics of Population*.

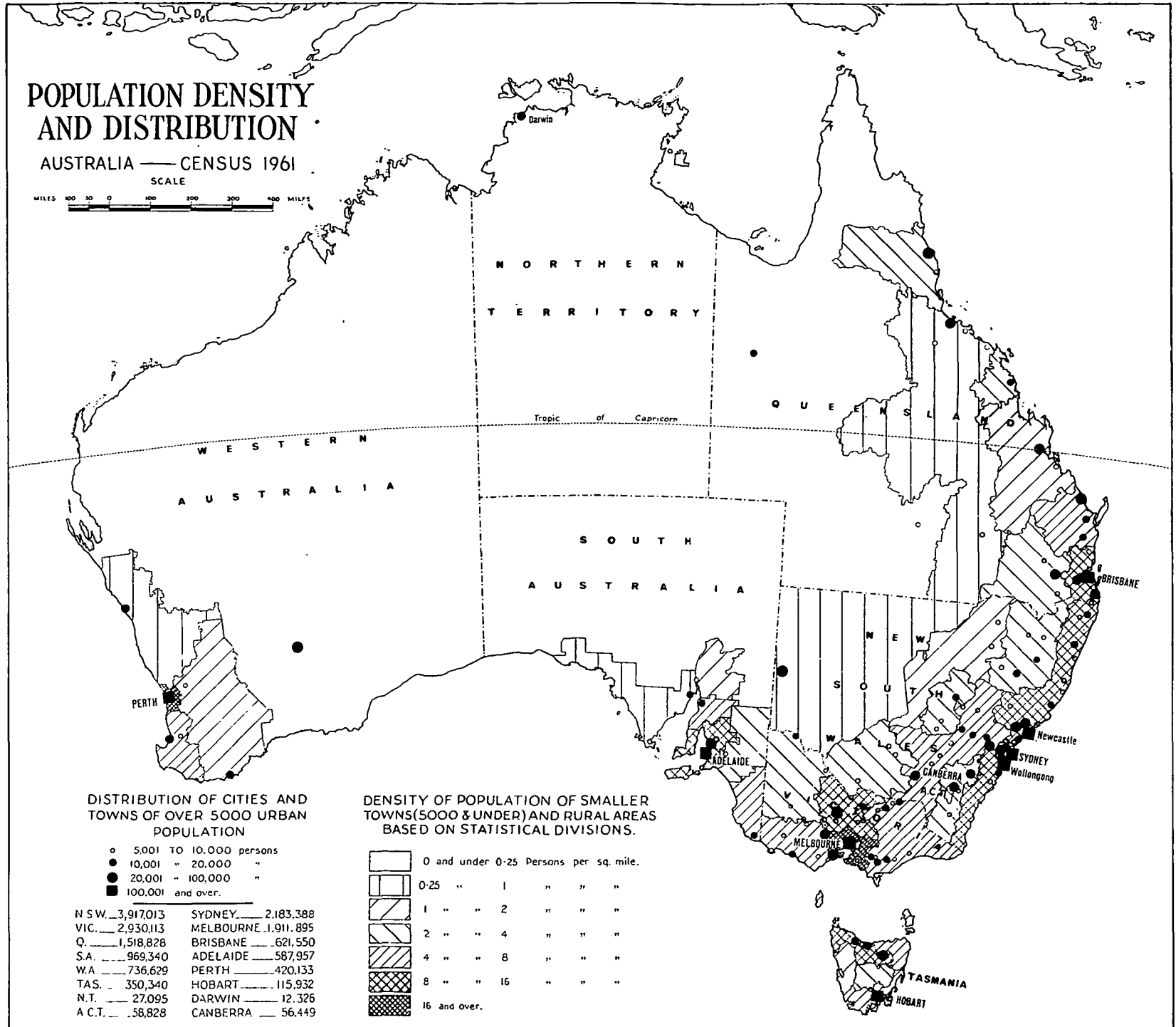
2. *Age Distribution*.—(i) *1954 and 1961 censuses*. The following table shows the variation which took place in the age distribution of the population during the seven years following the 1954 census.

**POPULATION: ADJUSTED AGE DISTRIBUTION(a), AUSTRALIA**

Age last birthday (years)	Census, 30th June, 1954			Census, 30th June, 1961			Increase, 1954-61
	Males	Females	Persons	Males	Females	Persons	
0-4 .. ..	493,682	472,735	966,417	567,742	541,751	1,109,493	143,076
5-9 .. ..	461,903	440,834	902,737	536,046	511,475	1,047,521	144,784
10-14 .. ..	354,075	340,105	694,180	522,407	497,577	1,019,984	325,804
15-19 .. ..	302,287	289,484	591,771	414,788	394,145	808,933	217,162
20-24 .. ..	311,979	288,187	600,166	361,531	335,907	697,438	97,272
25-29 .. ..	368,639	336,178	704,817	342,443	313,628	656,071	-48,746
30-34 .. ..	364,238	343,605	707,843	386,175	351,793	737,968	30,125
35-39 .. ..	325,768	317,355	643,123	395,247	372,669	767,916	124,793
40-44 .. ..	323,418	305,010	628,428	343,973	334,554	678,527	50,099
45-49 .. ..	286,705	260,224	546,929	335,890	321,941	657,831	110,902
50-54 .. ..	246,061	233,140	479,201	293,004	275,023	568,027	88,826
55-59 .. ..	193,148	204,122	397,270	238,051	225,330	463,381	66,111
60-64 .. ..	178,947	198,695	377,642	190,805	210,048	400,853	23,211
65-69 .. ..	143,140	160,172	303,312	149,130	184,654	333,784	30,472
70-74 .. ..	94,961	115,429	210,390	116,939	148,048	264,987	54,597
75-79 .. ..	55,104	72,738	127,842	69,223	95,724	164,947	37,105
80-84 .. ..	27,972	40,470	68,442	33,069	52,627	85,696	17,254
85-89 .. ..	11,025	16,618	27,643	12,216	21,736	33,952	6,309
90-94 .. ..	2,726	4,613	7,339	3,087	6,114	9,201	1,862
95 and over .. ..	340	698	1,038	486	1,190	1,676	638
<b>Total .. ..</b>	<b>4,546,118</b>	<b>4,440,412</b>	<b>8,986,530</b>	<b>5,312,252</b>	<b>5,195,934</b>	<b>10,508,186</b>	<b>1,521,656</b>
<b>Under 21 years .. ..</b>	<b>1,668,770</b>	<b>1,596,959</b>	<b>3,265,729</b>	<b>2,115,005</b>	<b>2,014,083</b>	<b>4,129,088</b>	<b>863,359</b>
<b>21 years and over .. ..</b>	<b>2,877,348</b>	<b>2,843,453</b>	<b>5,720,801</b>	<b>3,197,247</b>	<b>3,181,851</b>	<b>6,379,098</b>	<b>658,297</b>
<b>Total .. ..</b>	<b>4,546,118</b>	<b>4,440,412</b>	<b>8,986,530</b>	<b>5,312,252</b>	<b>5,195,934</b>	<b>10,508,186</b>	<b>1,521,656</b>

(a) At the 1954 and 1961 censuses, unspecified ages were distributed over all ages prior to tabulation.

NOTE.—Minus sign (-) denotes decrease.

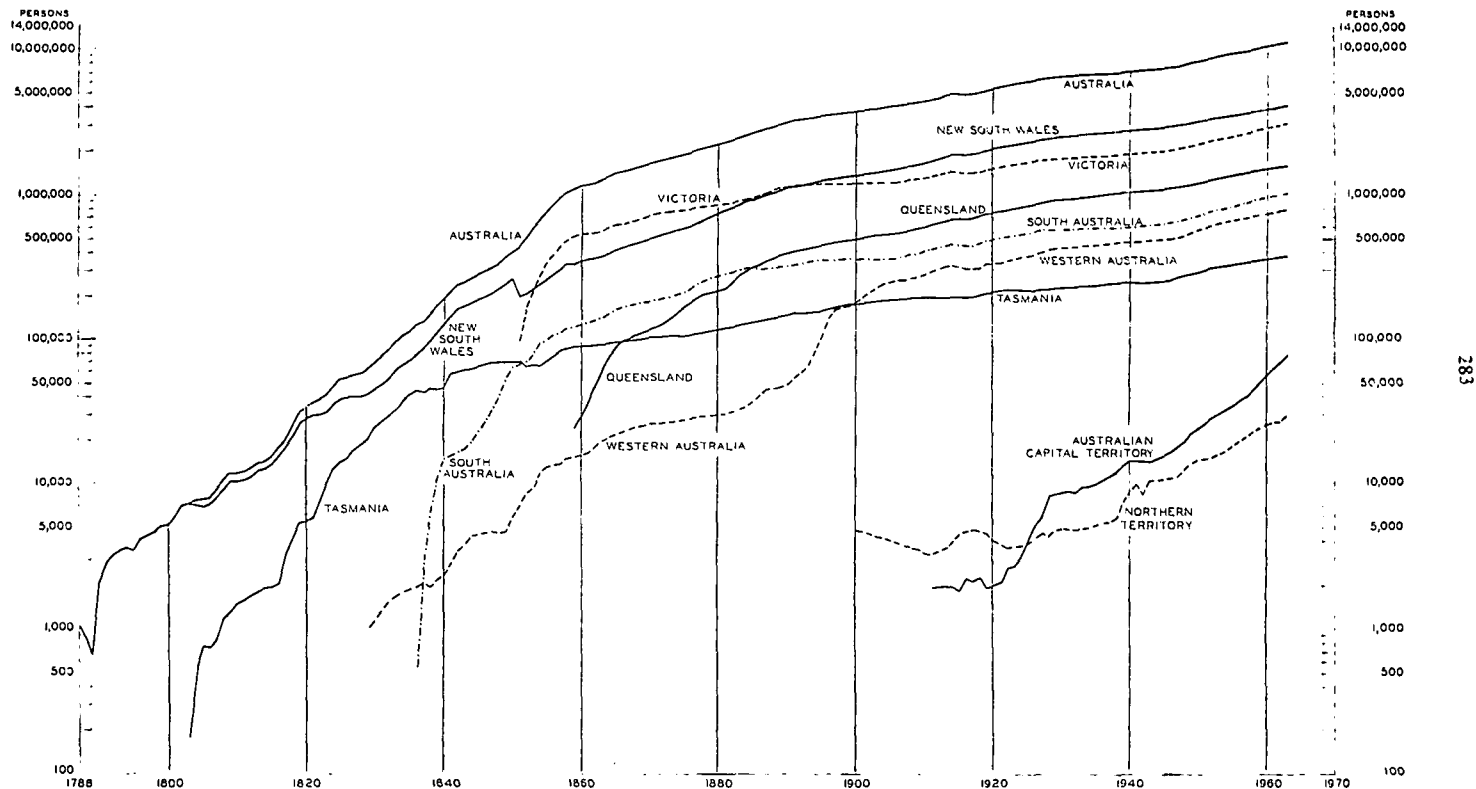






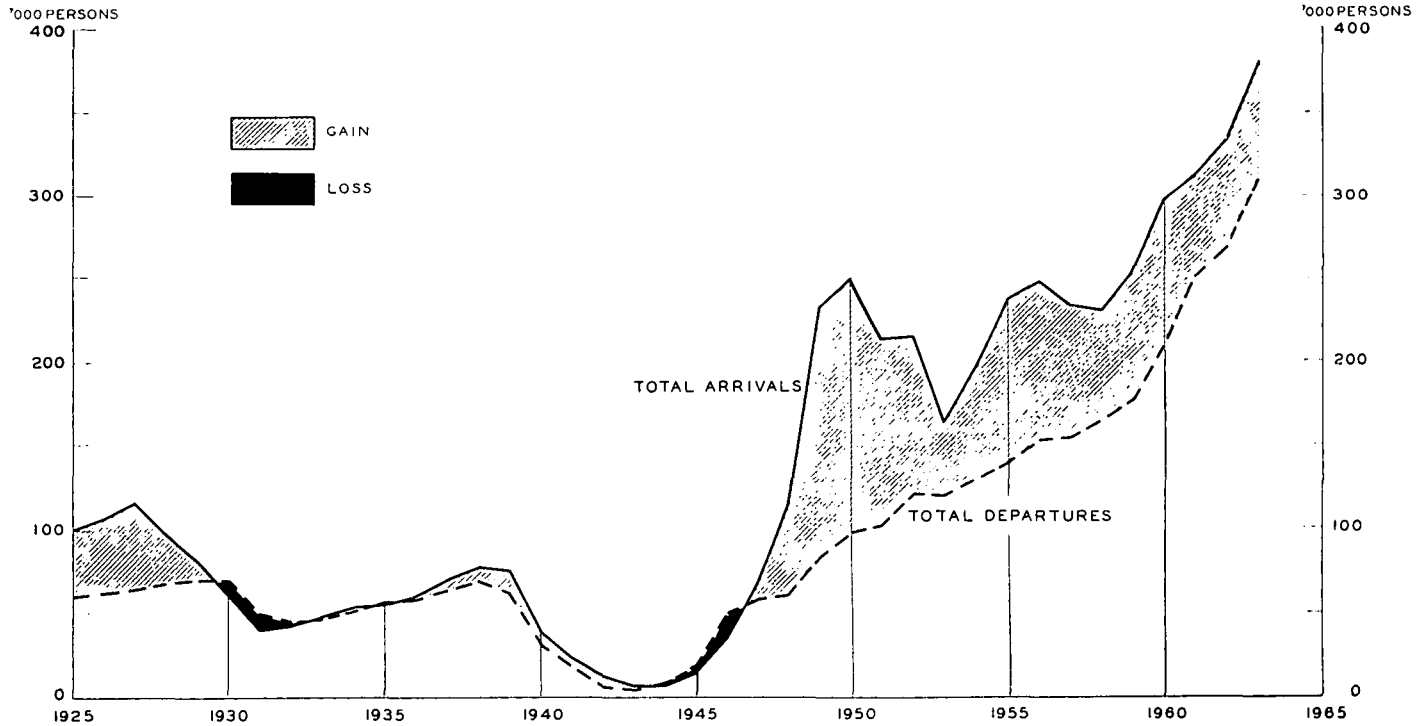
# POPULATION OF AUSTRALIA, 1788 TO 1963

## RATIO GRAPH



NOTE - THE VERTICAL SCALE IS LOGARITHMIC, AND THE CURVES RISE AND FALL ACCORDING TO THE RATE OF INCREASE OR DECREASE, ACTUAL NUMBERS ARE INDICATED BY THE SCALE

# OVERSEA ARRIVALS AND DEPARTURES AUSTRALIA, 1925 TO 1963



Of the 10,508,186 persons enumerated at the 1961 census, 39.3 per cent. were under 21 years of age; 52.2 per cent. were 21 to 64 years; and 8.5 per cent. were aged 65 years and over. At the 1954 census, 36.3 per cent. were under 21 years of age; 55.4 per cent. were 21-64 years; and 8.3 per cent. were aged 65 years and over.

(ii) *Proportional Distribution, Censuses, 1871 to 1961.* The next table shows the changes which have taken place in the age distribution of the population of Australia since 1871.

POPULATION: PROPORTIONAL AGE DISTRIBUTION, AUSTRALIA  
(Per cent.)

Census	Males				Females				Persons			
	Under 15 years	15 years and under 65	65 years and over	Total	Under 15 years	15 years and under 65	65 years and over	Total	Under 15 years	15 years and under 65	65 years and over	Total
1871..	38.84	59.11	2.05	100	46.02	52.60	1.38	100	42.09	56.17	1.74	100
1881..	36.36	60.81	2.83	100	41.86	56.03	2.11	100	38.89	58.61	2.50	100
1891..	34.80	62.01	3.19	100	39.38	58.09	2.53	100	36.92	60.19	2.89	100
1901..	33.89	61.80	4.31	100	36.51	59.88	3.61	100	35.14	60.88	3.98	100
1911..	30.84	64.82	4.34	100	32.52	63.28	4.20	100	31.65	64.08	4.27	100
1921..	31.64	63.88	4.48	100	31.79	63.83	4.38	100	31.71	63.86	4.43	100
1933..	27.53	66.09	6.38	100	27.42	65.99	6.59	100	27.48	66.04	6.48	100
1947..	25.49	67.08	7.43	100	24.62	66.71	8.67	100	25.06	66.89	8.05	100
1954..	28.81	63.82	7.37	100	28.23	62.52	9.25	100	28.52	63.18	8.30	100
1961..	30.61	62.16	7.23	100	29.85	60.33	9.82	100	30.23	61.26	8.51	100

(iii) *Estimated Age Distribution, 30th June, 1962.* Estimates, based on the census distribution of ages and records of births, ages at death, and ages of migrants, are made for intercensal years. The following table shows the estimated age distributions of the Australian population at 30th June, 1962 and 1963.

POPULATION: ESTIMATED AGE DISTRIBUTION, AUSTRALIA(a)

Age last birthday (years)	30th June, 1962			30th June, 1963		
	Males	Females	Persons	Males	Females	Persons
0-4 .. ..	578,186	552,315	1,130,501	585,805	558,439	1,144,244
5-9 .. ..	544,385	519,309	1,063,694	553,627	527,596	1,081,223
10-14 .. ..	519,922	495,421	1,015,343	528,450	504,714	1,033,164
15-19 .. ..	450,670	428,541	879,211	480,709	456,139	936,848
20-24 .. ..	369,259	348,443	717,702	379,196	359,370	738,566
25-29 .. ..	344,456	320,851	665,307	350,476	328,502	678,978
30-34 .. ..	377,699	345,896	723,595	371,086	340,649	711,735
35-39 .. ..	395,262	371,540	766,802	396,193	369,057	765,250
40-44 .. ..	357,475	346,028	703,503	372,550	359,433	731,983
45-49 .. ..	334,810	324,454	659,264	331,267	323,628	654,895
50-54 .. ..	300,344	283,357	583,701	309,618	294,112	603,730
55-59 .. ..	245,028	232,793	477,821	252,388	240,147	492,535
60-64 .. ..	196,149	211,597	407,746	202,895	214,244	417,139
65-69 .. ..	148,656	185,835	334,491	148,063	185,912	333,975
70-74 .. ..	118,111	151,260	269,371	118,447	154,598	273,045
75-79 .. ..	72,059	100,710	172,769	74,549	105,459	180,008
80-84 .. ..	33,785	53,697	87,482	34,707	56,325	91,032
85 and over .. ..	16,176	30,642	46,818	16,440	31,459	47,899
Total .. ..	5,402,432	5,302,689	10,705,121	5,506,466	5,409,783	10,916,249

(a) Based on the age distribution at the census of 30th June, 1961, and on subsequent births, recorded ages at death and recorded ages of migrants.

3. *Conjugal Condition.*—(i) *Censuses, 30th June, 1954 and 1961.* Of the total population of Australia at the 1961 census, 48.0 per cent. were never married; 46.2 per cent. were married (including 1.4 per cent. married but permanently separated); 5.0 per cent. were widowed and 0.8 per cent. were divorced. Between 1954 and 1961, the number never married increased by 19.8 per cent.; those married (including permanently separated) by 14.8 per cent.; the widowed by 13.0 per cent.; and the divorced by 18.7 per cent.

The ratio of widowed females to widowed males increased from 311 : 100 in 1954 to 352 : 100 in 1961. This disparity between the number of widowed males and widowed females is the result of two influences. The first is the greater longevity of females coupled with the usually younger age at marriage; and the second is that a larger proportion of males cancel their widowhood by remarriage.

The ratio of males to females in the never married group "15 years of age and over" increased from 141 : 100 in 1954 to 143 : 100 in 1961.

The numbers of males, females and persons recorded at the censuses of 30th June, 1954 and 1961, are shown in the following table according to their conjugal condition.

POPULATION: CONJUGAL CONDITION, AUSTRALIA

Conjugal condition	Census, 30th June, 1954			Census, 30th June, 1961			Increase, 1954-61
	Males	Females	Persons	Males	Females	Persons	
Never married—							
Under 15 years of age ..	1,309,660	1,253,674	2,563,334	1,626,195	1,550,803	3,176,998	613,664
15 years of age and over	962,491	684,154	1,646,645	1,098,450	770,048	1,868,498	221,853
Total .. .. .	2,272,151	1,937,828	4,209,979	2,724,645	2,320,851	5,045,496	835,517
Married .. .. .	2,062,122	2,043,651	4,105,773	2,364,710	2,344,754	4,709,464	603,691
Married but permanently separated .. .. .	57,371	66,228	123,599	68,172	78,367	146,539	22,940
Widowed .. .. .	113,064	351,102	464,166	116,085	408,623	524,708	60,542
Divorced .. .. .	32,389	36,650	69,039	38,640	43,339	81,979	12,940
Not stated .. .. .	9,021	4,953	13,974	(a)	(a)	(a)	-13,974
Grand Total .. .. .	4,546,118	4,440,412	8,986,530	5,312,252	5,195,934	10,508,186	1,521,656

(a) In processing the 1961 census data, a conjugal condition was allocated prior to tabulation in all instances where this information was not stated.

NOTE.—Minus sign (—) denotes decrease.

(ii) *Conjugal Condition and Occupational Status.* Tables showing the occupational status in conjunction with the age and conjugal condition of the population are included in Chapter XII. Employment and Unemployment.

4. *Countries of Birth.*—At 30th June, 1961, the Australian-born element of the population of Australia represented 83.1 per cent. as compared with 85.7 per cent. at the 1954 census. The number of Australian-born increased by 1,029,342 or 13.4 per cent. between 1954 and 1961, while the oversea-born population increased by 492,314 or 38.3 per cent. The latter resulted mainly from the increase of 441,110 in the number of persons of European birthplace between 1954 and 1961—principally persons born in Italy (an increase of 108,397); United Kingdom and Republic of Ireland (91,096); Greece (51,461); and the Netherlands (50,099).

Of persons born outside Australia, 55.5 per cent. were males and 44.5 per cent. females.

The following table shows the countries of birth of the population recorded at the census of 30th June, 1961, as compared with the census of 30th June, 1954.

## POPULATION: COUNTRY OF BIRTH, AUSTRALIA

Country of birth	Census, 30th June, 1954			Census, 30th June, 1961			Increase, 1954-61
	Males	Females	Persons	Males	Females	Persons	
Australia .. .. .	3,812,435	3,887,629	7,700,064	4,325,005	4,404,401	8,729,406	1,029,342
New Zealand .. .. .	21,723	21,627	43,350	23,368	23,634	47,002	3,652
Europe—							
United Kingdom and Republic of Ireland ..	359,010	305,195	664,205	400,390	354,911	755,301	91,096
Germany .. .. .	33,663	31,759	65,422	57,584	51,736	109,320	43,898
Greece .. .. .	16,794	9,068	25,862	43,583	33,740	77,323	51,461
Italy .. .. .	80,279	39,618	119,897	134,622	93,672	228,294	108,397
Malta .. .. .	12,411	7,577	19,988	22,629	16,709	39,338	19,350
Netherlands .. .. .	30,046	21,989	52,035	56,862	45,272	102,134	50,099
Poland .. .. .	35,652	20,942	56,594	36,390	23,654	60,044	3,450
Other .. .. .	91,848	59,213	151,061	134,208	90,212	224,420	73,359
Total, Europe .. .. .	659,703	495,361	1,155,064	886,268	709,906	1,596,174	441,110
Other Countries .. .. .	52,257	35,795	88,052	77,611	57,993	135,604	47,552
<i>Total born outside Australia .. .. .</i>	<i>733,683</i>	<i>552,783</i>	<i>1,286,466</i>	<i>987,247</i>	<i>791,533</i>	<i>1,778,780</i>	<i>492,314</i>
Grand Total .. .. .	4,546,118	4,440,412	8,986,530	5,312,252	5,195,934	10,508,186	1,521,656

5. Period of Residence in Australia.—The post-war migration flow into Australia is shown in the following table, which classifies the oversea-born population of Australia according to period of residence in Australia.

## PERIOD OF RESIDENCE IN AUSTRALIA OF PERSONS BORN OUTSIDE AUSTRALIA

Period of residence (years)	Census, 30th June, 1954			Census, 30th June, 1961			Increase, 1954-61
	Males	Females	Persons	Males	Females	Persons	
<b>Born outside Australia—</b>							
Under 1 .. .. .	47,430	34,841	82,271	72,162	51,169	123,331	41,060
1 and under 2 .. .. .	32,228	27,096	59,324	48,600	38,366	86,966	27,642
2 " " 3 .. .. .	65,374	39,354	104,728	47,126	42,901	90,027	-14,701
3 " " 4 .. .. .	71,183	50,367	121,550	37,736	41,254	78,990	-42,560
4 " " 5 .. .. .	87,636	62,200	149,836	42,600	41,284	83,884	-65,952
5 " " 6 .. .. .	64,618	45,416	110,034	54,091	42,064	96,155	-13,879
6 " " 7 .. .. .	21,522	15,424	36,946	51,816	40,202	92,018	55,072
7 " " 14 .. .. .	331,417	268,228	599,645	345,666	254,983	600,649	490,716
14 " " 21 .. .. .				22,386	17,795	40,181	
21 and over .. .. .				244,002	205,529	449,531	
Not stated .. .. .				21,062	15,986	37,048	
<i>Total born outside Australia</i>	<i>733,683</i>	<i>552,783</i>	<i>1,286,466</i>	<i>987,247</i>	<i>791,533</i>	<i>1,778,780</i>	<i>492,314</i>
Born in Australia(a) .. .. .	3,812,435	3,887,629	7,700,064	4,325,005	4,404,401	8,729,406	1,029,342
Grand Total .. .. .	4,546,118	4,440,412	8,986,530	5,312,252	5,195,934	10,508,186	1,521,656

(a) Excludes full-blood Aboriginals.

NOTE.—Minus sign (-) denotes decrease.

6. **Nationality.**—At 30th June, 1961, 9,984,709 persons, or 95.0 per cent. of the Australian population, were of British nationality (consisting of 83.1 per cent. born in Australia and 11.9 per cent. born outside), compared with 95.5 per cent. in 1954 (85.7 per cent. born in Australia and 9.8 per cent. born outside). Of the oversea-born population in 1961, 70.6 per cent. were British subjects, compared with 68.6 per cent. in 1954.

The following table shows the numbers of males, females and persons at the 1954 and 1961 censuses classified by nationality (i.e. allegiance).

**POPULATION: NATIONALITY (i.e., ALLEGIANCE), AUSTRALIA**

Nationality	Census, 30th June, 1954			Census, 30th <sup>h</sup> June, 1961			Increase, 1954-61
	Males	Females	Persons	Males	Females	Persons	
<b>British(a)—</b>							
Born in Australia ..	3,812,435	3,887,629	7,700,064	4,325,005	4,404,401	8,729,406	1,029,342
Born outside Australia ..	485,601	397,473	883,074	686,611	568,692	1,255,303	372,229
<i>Total, British</i> ..	<i>4,298,036</i>	<i>4,285,102</i>	<i>8,583,138</i>	<i>5,011,616</i>	<i>4,973,093</i>	<i>9,984,709</i>	<i>1,401,571</i>
<b>Foreign—</b>							
Dutch ..	30,518	22,940	53,458	41,216	34,601	75,817	22,359
German ..	17,262	14,186	31,448	34,317	26,172	60,489	29,041
Greek ..	11,415	6,428	17,843	32,763	28,238	61,001	43,158
Hungarian ..	5,910	3,746	9,656	8,210	5,815	14,025	4,369
Italian ..	61,673	28,345	90,018	86,941	67,066	154,007	63,989
Latvian, Lithuanian and Estonian ..	16,735	13,893	30,628	4,176	2,939	7,115	-23,513
Polish ..	29,524	20,222	49,746	12,939	9,474	22,413	-27,333
Ukranian ..	9,871	7,368	17,239	2,925	2,109	5,034	-12,205
Yugoslavian ..	11,633	6,491	18,124	17,746	9,637	27,383	9,259
Other (incl. Stateless) ..	53,541	31,691	85,232	59,403	36,790	96,193	10,961
<i>Total, Foreign</i> ..	<i>248,082</i>	<i>155,310</i>	<i>403,392</i>	<i>300,636</i>	<i>222,841</i>	<i>523,477</i>	<i>120,085</i>
<b>Grand Total</b> ..	<b>4,546,118</b>	<b>4,440,412</b>	<b>8,986,530</b>	<b>5,312,252</b>	<b>5,195,934</b>	<b>10,508,186</b>	<b>1,521,656</b>

(a) All persons of individual citizenship status who, by virtue of the Nationality and Citizenship Act 1948, are deemed to be British subjects. Includes naturalized British. For purposes of this table Irish nationality is included with British.

NOTE.—Minus sign (—) denotes decrease.

7. **Religion.**—At the 1921 census, 92,258 persons in Australia, or 1.7 per cent., gave no reply to this question, but at the censuses of 1933, 1947, 1954 and 1961, when the public was informed that there was no legal obligation to answer this question, 848,948 persons (12.8 per cent.), 824,824 (10.9 per cent.), 855,819 (9.5 per cent.) and 1,102,929 (10.5 per cent.) respectively, gave no reply. Of males 11.2 per cent., and of females 9.8 per cent., did not state their religion in 1961.

Amongst the denominations with the larger numbers of adherents, the greatest proportional increase since 1954 was recorded by Roman Catholic and Catholic combined, 27.1 per cent.; then Presbyterian, 12.2 per cent.; Methodist, 10.1 per cent.; Church of England, 7.6 per cent. The largest proportional increase was that of the Greek Orthodox denomination, 107.3 per cent.

At the 1961 census, as at earlier censuses, 99 per cent. of those who stated their religion professed the Christian faith. Between 1954 and 1961 the number who stated they were of non-Christian religion increased by 26 per cent., while those specifically stating they had no religion increased by 59 per cent.

The following table shows the number of adherents of the various religions as recorded at the censuses of 30th June, 1954, and 30th June, 1961.

## POPULATION: RELIGION, AUSTRALIA

Religion	Census, 30th June, 1954			Census, 30th June, 1961			Increase, 1954-61
	Males	Females	Persons	Males	Females	Persons	
<b>Christian—</b>							
Baptist .. .. .	60,048	67,396	127,444	70,990	78,638	149,628	22,184
Brethren .. .. .	7,511	8,893	16,404	7,265	8,228	15,493	-911
Catholic, Roman(a) .. .. .	413,719	347,383	761,102	602,763	536,886	1,139,649	378,547
Catholic(a) .. .. .	635,398	664,486	1,299,884	730,093	750,242	1,480,335	180,451
Churches of Christ .. .. .	37,880	42,484	80,364	45,115	50,518	95,633	15,269
Church of England .. .. .	1,709,197	1,699,653	3,408,850	1,834,732	1,834,208	3,668,940	260,090
Congregational .. .. .	32,508	36,944	69,452	34,679	38,847	73,526	4,074
Greek Orthodox .. .. .	44,382	30,363	74,745	84,965	69,959	154,924	80,179
Lutheran .. .. .	60,306	55,872	116,178	82,453	77,729	160,182	44,004
Methodist .. .. .	478,605	499,328	977,933	528,003	548,392	1,076,395	98,462
Presbyterian .. .. .	430,798	439,444	870,242	482,503	494,218	976,721	106,479
Protestant (undefined) .. .. .	48,539	46,877	95,416	50,515	48,048	98,563	3,147
Salvation Army .. .. .	20,304	22,534	42,838	24,379	26,735	51,114	8,276
Seventh-day Adventist .. .. .	11,166	14,163	25,329	14,313	17,320	31,633	6,304
Other (including Christian un- defined) .. .. .	31,957	35,616	67,573	48,626	52,779	101,405	33,832
<i>Total, Christian .. .. .</i>	<i>4,022,318</i>	<i>4,011,436</i>	<i>8,033,754</i>	<i>4,641,394</i>	<i>4,632,747</i>	<i>9,274,141</i>	<i>1,240,387</i>
<b>Non-Christian—</b>							
Hebrew .. .. .	24,548	23,888	48,436	29,571	29,758	59,329	10,893
Other .. .. .	4,910	1,471	6,381	6,547	2,928	9,475	3,094
<i>Total, Non-Christian .. .. .</i>	<i>29,458</i>	<i>25,359</i>	<i>54,817</i>	<i>36,118</i>	<i>32,686</i>	<i>68,804</i>	<i>13,987</i>
Indefinite .. .. .	10,038	8,418	18,456	13,495	11,267	24,762	6,306
No religion .. .. .	16,652	7,032	23,684	25,206	12,344	37,550	13,866
No reply .. .. .	467,652	388,167	855,819	596,039	506,890	1,102,929	247,110
<b>Grand Total .. .. .</b>	<b>4,546,118</b>	<b>4,440,412</b>	<b>8,986,530</b>	<b>5,312,252</b>	<b>5,195,934</b>	<b>10,508,186</b>	<b>1,521,656</b>

(a) So described in individual census schedules.

NOTE.—Minus sign (—) denotes decrease.

8. **Industry, Occupational Status and Occupation.**—Information concerning the industry and occupational status of the population which was previously included in this chapter is now included in Chapter XII. Employment and Unemployment, which contains also particulars of the various occupations of the population.

9. **Other General Characteristics.**—In addition to the questions asked at the 1961 census on the foregoing characteristics, a question on race was asked. The information supplied in reply to this question is not available for inclusion in this chapter, but will be included in the Appendix.

For information supplied at the 1961 census in answer to questions asked on dwellings and householders *see* Chapter XI. Housing and Building.

## § 8. Oversea Arrivals and Departures

NOTE.—More detailed statistics of overseas arrivals and departures, covering country of residence, country of embarkation/intended disembarkation, mode of travel, month of arrival or departure, etc., are shown in the tables of Section II. "Overseas Arrivals and Departures" of the annual bulletin, *Demography*.

1. **Overseas Arrivals and Departures since 1936.**—Earlier issues of the Official Year Book contain, in summary form, tables showing the increase of population by net migration from 1861 to the latest date, while information for individual years from 1881 is published in the annual bulletin, *Demography*. The following table shows, for Australia, arrivals and



departures since 1936, and refers to total movement irrespective of length of stay. Air crews and ships' crews and persons passing through Australia on board the same ship or aircraft are excluded from Australian statistics of overseas arrivals and departures. A graph showing arrivals and departures from 1921 to 1963 appears on page 283.

### OVERSEA ARRIVALS AND DEPARTURES: AUSTRALIA

Period	Total arrivals			Total departures			Excess of arrivals over departures		
	Males	Females	Persons	Males	Females	Persons	Males	Females	Persons
1936-40(a) ..	161,774	159,538	321,312	140,901	137,283	278,184	20,873	22,255	43,128
1941-45(a) ..	35,422	28,503	63,925	30,097	26,019	56,116	5,325	2,484	7,809
1946-50(a) ..	398,507	303,413	701,920	180,779	168,057	348,836	217,728	135,356	353,084
1951-55 ..	581,300	446,566	1,027,866	340,819	273,223	614,042	240,481	173,343	413,824
1956-60 ..	695,445	568,652	1,264,097	481,235	377,840	859,075	214,210	190,812	405,022
1959 .. ..	139,941	113,955	253,896	98,917	78,188	177,105	41,024	35,767	76,791
1960 .. ..	169,579	129,582	299,161	116,857	92,169	209,026	52,722	37,413	90,135
1961 .. ..	170,404	142,686	313,090	141,349	110,218	251,567	29,055	32,468	61,523
1962 .. ..	180,732	151,592	332,324	152,112	117,690	269,802	28,620	33,902	62,522
1963 .. ..	211,430	169,297	380,727	175,211	133,871	309,082	36,219	35,426	71,645

(a) Excludes movements of defence personnel from September, 1939, to June, 1947.

2. *Excess of Arrivals over Departures.*—(i) *General.* The excess of total overseas arrivals over total departures is one of the elements of population increase taken into account in preparing the estimated population for other than census dates (see § 5 of this chapter, pp. 275-9). It is necessary to use statistics of total overseas arrivals and departures for this purpose, because Australian population statistics relate to the total population present in Australia at the date of the census or estimate, and not the population normally resident in Australia (which would include those temporarily overseas and exclude those temporarily visiting Australia). In the following paragraphs are set out particulars of the net gain or loss of population due to overseas migration, according to age and conjugal condition and country of birth, during the years 1961 to 1963.

(ii) *Age Distribution and Conjugal Condition.* The net gain to the population of Australia due to total migration movement for the years 1961 to 1962 according to age and conjugal condition, was as follows. Particulars for the year 1963 will be found in the Appendix to this volume.

### EXCESS OF ARRIVALS OVER DEPARTURES: AGE DISTRIBUTION AND CONJUGAL CONDITION, AUSTRALIA

Particulars	1961			1962		
	Males	Females	Persons	Males	Females	Persons

#### AGE DISTRIBUTION

Years—						
0-4 .. ..	3,378	3,154	6,532	3,262	2,760	6,022
5-14 .. ..	6,983	6,441	13,424	6,101	5,601	11,702
15-24 .. ..	8,975	7,889	16,864	7,294	9,613	16,907
25-44 .. ..	7,727	11,186	18,913	8,734	11,234	19,968
45-64 .. ..	1,619	2,881	4,500	2,298	3,574	5,872
65 and over .. ..	373	917	1,290	931	1,120	2,051
<b>Total</b> .. ..	<b>29,055</b>	<b>32,468</b>	<b>61,523</b>	<b>28,620</b>	<b>33,902</b>	<b>62,522</b>

EXCESS OF ARRIVALS OVER DEPARTURES: AGE DISTRIBUTION AND CONJUGAL CONDITION, AUSTRALIA—*continued*

Particulars	1961			1962		
	Males	Females	Persons	Males	Females	Persons
CONJUGAL CONDITION						
Never married—						
Under 15 years of age ..	10,361	9,595	19,956	9,363	8,361	17,724
15 years of age and over ..	7,512	8,328	15,840	7,805	11,450	19,255
Married .. .. .	11,176	13,484	24,660	11,207	12,913	24,120
Widowed .. .. .	-63	834	771	128	982	1,110
Divorced .. .. .	69	227	296	117	196	313
<b>Total .. .. .</b>	<b>29,055</b>	<b>32,468</b>	<b>61,523</b>	<b>28,620</b>	<b>33,902</b>	<b>62,522</b>

NOTE.—Minus sign (-) indicates excess of departures over arrivals.

(iii) *Country of Birth.* The net gain due to total migration movement during the years 1961, 1962 and 1963, according to country of birth, was as follows.

## EXCESS OF ARRIVALS OVER DEPARTURES: COUNTRY OF BIRTH, AUSTRALIA

Country of birth	1961			1962			1963		
	Males	Females	Persons	Males	Females	Persons	Males	Females	Persons
Australia .. .. .	-5,371	-5,105	-10,476	-2,724	-3,239	-5,963	-5,347	-5,844	-11,191
United Kingdom and Ireland .. .. .	13,503	12,907	26,410	12,215	11,557	23,772	21,760	20,287	42,047
Canada .. .. .	381	318	699	356	253	609	202	206	408
India, Pakistan, and Ceylon .. .. .	411	399	810	496	480	976	565	506	1,071
Malaya and Singapore ..	463	417	880	258	262	520	363	424	787
Malta .. .. .	846	768	1,614	958	886	1,844	2,190	1,833	4,023
New Zealand .. .. .	-224	603	379	570	321	891	1,196	1,331	2,527
Papua and New Guinea	105	212	317	251	222	473	226	182	408
Other Commonwealth countries .. .. .	884	783	1,667	1,047	994	2,041	706	718	1,424
<b>Total, Commonwealth Countries .. .. .</b>	<b>10,998</b>	<b>11,302</b>	<b>22,300</b>	<b>13,427</b>	<b>11,736</b>	<b>25,163</b>	<b>21,861</b>	<b>19,643</b>	<b>41,504</b>
Austria .. .. .	156	198	354	-247	-36	-283	-81	39	-42
Germany .. .. .	644	941	1,585	-607	202	-405	-474	257	-217
Greece .. .. .	1,845	4,794	6,639	4,158	7,161	11,319	4,969	4,919	9,888
Italy .. .. .	5,970	6,912	12,882	4,509	7,197	11,706	3,181	4,194	7,375
Netherlands .. .. .	1,121	963	2,084	-310	-37	-347	-475	-517	-992
Poland .. .. .	878	925	1,803	390	502	892	315	429	744
Spain .. .. .	722	625	1,347	1,983	1,855	3,838	977	902	1,879
Yugoslavia .. .. .	2,444	1,506	3,950	2,204	1,593	3,797	2,656	1,956	4,612
Other European countries .. .. .	708	1,116	1,824	-41	569	528	162	428	590
China .. .. .	961	629	1,590	871	671	1,542	134	237	371
South Africa .. .. .	602	645	1,247	309	347	656	188	237	425
United States of America	661	547	1,208	728	660	1,388	485	431	916
Other countries .. .. .	1,135	1,037	2,172	979	1,157	2,136	1,747	1,800	3,547
<b>Total, Foreign Countries .. .. .</b>	<b>17,847</b>	<b>20,838</b>	<b>38,685</b>	<b>14,926</b>	<b>21,841</b>	<b>36,767</b>	<b>13,784</b>	<b>15,312</b>	<b>29,096</b>
At sea, and not stated ..	210	328	538	267	325	592	574	471	1,045
<b>Grand Total .. .. .</b>	<b>29,055</b>	<b>32,468</b>	<b>61,523</b>	<b>28,620</b>	<b>33,902</b>	<b>62,522</b>	<b>36,219</b>	<b>35,426</b>	<b>71,645</b>

NOTE.—Minus sign (-) indicates excess of departures over arrivals.

3. **Stated Purpose of Travel.**—Since 1st July, 1924, overseas travellers have been classified according to declared intention in regard to residence into two principal categories, distinguishing movements for short terms from movements for longer periods (including permanently). Prior to 1957, these categories were *temporary* and *permanent*. Thereafter the categories were entitled *short-term* and *permanent and long-term*, but the basis of classification was not changed and the figures are directly comparable for the whole period. For short-term movements, overseas visitors and Australian residents have been identified separately.

Revised questions for travellers were introduced in mid-1958, and these enabled the separation, from 1st January, 1959, of permanent from other long-term movements and also the identification of former settlers departing among the permanent departures.

The principal categories of travellers according to stated purpose of travel are as follows:—

*Permanent movement*—consisting of persons arriving with stated intent to settle permanently in Australia, and Australian residents departing with stated intent to reside permanently abroad;

*Long-term movement*—consisting of the arrival of visitors and the departure of residents with stated intent to stay (in Australia or in a country abroad respectively) for twelve months or more; and departure of visitors and return of residents who have stayed (in Australia or in a country abroad respectively) for twelve months or more;

*Short-term movement*—consisting of all other movements, including the movement of Australian troops irrespective of period of stay;

*Settlers*—persons who, on arrival in Australia, indicated that they came intending to settle;\*

*Former Settlers*—persons who, on departure from Australia, stated that they had come to Australia intending to settle, had stayed for a period of twelve months or more and were now departing permanently.\*

\* Included in *Permanent movement* above.

This classification is based on the purpose of travel stated by travellers on arrival in, or departure from, Australia. These statements represent the traveller's intention at that time. Many travellers subsequently change their intentions, and this must be borne in mind in interpreting the statistics.

The numbers so classified since 1st January, 1936, on the basis of declared intention as to residence, and since 1st January, 1959, on this basis supplemented by additional particulars as to stated purpose of travel, are as follows.

### OVERSEA ARRIVALS AND DEPARTURES BY STATED PURPOSE OF TRAVEL: AUSTRALIA

(Persons)

#### ARRIVALS

Period	Permanent and long-term movement				Short-term movement				Total arrivals
	Permanent Settlers arriving	Long-term		Total permanent and long-term arrivals	Residents returning	Overseas visitors arriving			
		Residents returning	Overseas visitors arriving			In transit	Other	Total	
1936-40	n.a.	n.a.	n.a.	88,712	104,870	n.a.	n.a.	127,730	321,312
1941-45	n.a.	n.a.	n.a.	32,624	11,150	n.a.	n.a.	20,151	63,925
1946-50	n.a.	n.a.	n.a.	457,988	108,736	n.a.	n.a.	135,196	701,920
1951-55	n.a.	n.a.	n.a.	570,090	216,949	77,825	163,002	240,827	1,027,866
1956-60	n.a.	n.a.	n.a.	615,767	309,611	84,206	254,513	338,719	1,264,097
1959 ..	97,777	15,285	10,960	124,022	61,754	17,006	51,114	68,120	253,896
1960 ..	110,079	16,495	12,797	139,371	75,167	20,919	63,704	84,623	299,161
1961 ..	95,407	18,602	13,577	127,586	86,208	24,945	74,351	99,296	313,090
1962 ..	90,464	20,580	13,941	124,985	95,915	25,477	85,947	111,424	332,324
1963 ..	108,150	22,205	13,813	144,168	111,182	27,348	98,029	125,377	380,727

OVERSEA ARRIVALS AND DEPARTURES, BY STATED PURPOSE OF TRAVEL: AUSTRALIA—*continued*  
(Persons)  
DEPARTURES

Period	Permanent and long-term movement					Short-term movement		Total departures	
	Permanent		Long-term			Total permanent and long-term departures	Residents departing		Oversea visitors departing
	Former settlers departing	Other residents departing	Total permanent	Residents departing	Oversea visitors departing				
1936-40	n.a.	n.a.	n.a.	n.a.	n.a.	51,006	94,650	132,528	278,184
1941-45	n.a.	n.a.	n.a.	n.a.	n.a.	22,399	9,163	24,554	56,116
1946-50	n.a.	n.a.	n.a.	n.a.	n.a.	105,968	101,787	141,081	348,836
1951-55	n.a.	n.a.	n.a.	n.a.	n.a.	155,509	212,978	245,555	614,042
1956-60	n.a.	n.a.	n.a.	n.a.	n.a.	210,807	306,118	342,150	859,075
1959 ..	6,034	6,866	12,900	21,296	6,248	40,444	64,631	72,030	177,105
1960 ..	5,551	5,302	10,853	25,331	10,411	46,595	77,761	84,670	209,026
1961 ..	8,240	6,537	14,777	32,157	12,217	59,147	89,880	102,540	251,567
1962 ..	8,518	6,911	15,429	31,781	13,137	60,347	95,872	113,583	269,802
1963 ..	9,102	7,176	16,278	38,317	12,729	67,324	112,427	129,331	309,082

4. Permanent Movement.—(i) *General*. In the following paragraphs, particulars are given of the persons who on arrival in Australia stated that they came intending to settle, and of Australian residents who on departure from Australia stated their intent to reside permanently abroad.

(ii) *Country of Birth*. The principal countries of birth of permanent arrivals (assisted arrivals and others) and departures during the years 1962 and 1963 were as follows.

OVERSEA ARRIVALS AND DEPARTURES—PERMANENT MOVEMENT:  
COUNTRY OF BIRTH, AUSTRALIA  
(Persons)

Country of birth	1962				1963			
	Arrivals			Departures	Arrivals			Departures
	Assisted (a)	Others	Total		Assisted (a)	Others	Total	
Australia .. .. .	470	241	711	4,801	621	261	882	5,252
United Kingdom and Ireland .. .. .	28,539	4,347	32,886	5,403	45,867	5,722	51,589	5,424
India, Pakistan and Ceylon .. .. .	186	796	982	85	248	868	1,116	105
Malta .. .. .	1,291	810	2,101	70	2,079	2,218	4,297	54
New Zealand .. .. .	52	1,072	1,124	613	52	1,446	1,498	534
Other Commonwealth countries .. .. .	511	2,026	2,537	311	652	2,105	2,757	436
<i>Total, Commonwealth Countries</i> .. .. .	<i>31,049</i>	<i>9,292</i>	<i>40,341</i>	<i>11,283</i>	<i>49,519</i>	<i>12,620</i>	<i>62,139</i>	<i>11,805</i>
Austria .. .. .	310	129	439	230	488	185	673	206
Belgium .. .. .	602	45	647	21	390	34	424	57
Germany .. .. .	2,227	697	2,924	945	2,486	619	3,105	897
Greece .. .. .	2,194	9,766	11,960	99	2,299	8,511	10,810	128
Italy .. .. .	606	14,988	15,594	325	233	12,582	12,815	416
Netherlands .. .. .	1,649	540	2,189	859	1,262	579	1,841	1,003
Poland .. .. .	135	1,121	1,256	136	106	930	1,036	109
Spain .. .. .	3,699	270	3,969	27	1,785	328	2,113	49
Yugoslavia .. .. .	1,202	3,065	4,267	148	2,023	3,002	5,025	155
Other European countries .. .. .	578	1,389	1,967	741	995	1,080	2,075	671
South Africa .. .. .	362	370	732	60	300	327	627	74
United States of America .. .. .	381	656	1,037	257	568	625	1,193	382
Other countries .. .. .	193	2,730	2,923	257	323	3,647	3,970	290
<i>Total, Foreign Countries</i> .. .. .	<i>14,138</i>	<i>35,766</i>	<i>49,904</i>	<i>4,105</i>	<i>13,258</i>	<i>32,449</i>	<i>45,707</i>	<i>4,437</i>
At sea, and not stated .. .. .	89	130	219	41	137	167	304	36
<b>Grand Total</b> .. .. .	<b>45,276</b>	<b>45,188</b>	<b>90,464</b>	<b>15,429</b>	<b>62,914</b>	<b>45,236</b>	<b>108,150</b>	<b>16,278</b>

(a) For details of assisted passage schemes, see § 9, pp. 297-302.

(iii) *Nationality.* The principal nationalities of permanent arrivals (assisted arrivals and others) and departures during the years 1962 and 1963 were as follows.

**OVERSEA ARRIVALS AND DEPARTURES—PERMANENT MOVEMENT:  
NATIONALITY, AUSTRALIA  
(Persons)**

Nationality	1962				1963			
	Arrivals			Departures	Arrivals			Departures
	Assisted (a)	Others	Total		Assisted (a)	Others	Total	
<b>British—</b>								
Country of citizenship—								
Australia .. .. .	475	777	1,252	4,170	537	1,042	1,579	4,913
Canada .. .. .	35	562	597	65	66	602	668	183
Ireland(b) .. .	483	97	580	148	641	130	771	190
India, Pakistan and								
Ceylon .. .. .	2	560	562	52	4	600	604	40
New Zealand .. .	17	1,121	1,138	514	19	1,508	1,527	487
South Africa(b) ..	243	300	543	49	165	228	393	45
United Kingdom and								
colonies(c) .. .	28,194	4,600	32,794	2,826	41,943	5,693	47,636	4,482
Other countries .. .	48	787	835	79	52	709	761	88
Citizenship not stated	2,408	1,336	3,744	3,632	7,004	2,974	9,978	1,634
<b>Total, British</b> ..	<b>31,905</b>	<b>10,140</b>	<b>42,045</b>	<b>11,535</b>	<b>50,431</b>	<b>13,486</b>	<b>63,917</b>	<b>12,062</b>
American (U.S.) .. .	395	687	1,082	331	585	671	1,256	464
Austrian .. .. .	321	107	428	235	476	168	644	212
Belgian .. .. .	607	38	645	11	392	27	419	61
Dutch .. .. .	1,728	620	2,348	983	1,342	667	2,009	1,086
German .. .. .	2,180	679	2,859	957	2,382	572	2,954	900
Greek .. .. .	2,187	10,210	12,397	86	2,306	9,269	11,575	114
Italian .. .. .	556	15,104	15,660	287	179	12,735	12,914	394
Lebanese .. .. .		459	459	20		576	576	8
Polish(d) .. .. .	20	1,032	1,052	74	7	820	827	69
Russian(e) .. .. .		859	860	39		268	268	45
Spanish .. .. .	3,708	260	3,968	28	1,776	335	2,111	48
Yugoslav .. .. .	726	2,836	3,562	83	1,187	2,805	3,992	95
Stateless(f) .. .	466	888	1,354	62	867	689	1,556	57
Other .. .. .	476	1,269	1,745	698	984	2,148	3,132	663
<b>Grand Total</b> .. .	<b>45,276</b>	<b>45,188</b>	<b>90,464</b>	<b>15,429</b>	<b>62,914</b>	<b>45,236</b>	<b>108,150</b>	<b>16,278</b>

(a) For details of assisted passage schemes see § 9, pp. 297-302. (b) Included with "British" nationality for the purpose of this table. (c) Includes Maltese. See (ii) above for particulars of persons born in Malta. (d) Includes "Stateless" who were formerly Polish. (e) Includes "Stateless" who were formerly Russian. (f) Stateless, former nationality not stated, or other than Polish or Russian.

(iv) *Occupation.* The main occupation groupings of permanent arrivals and departures during the years 1962 and 1963 were as follows.

**OVERSEA ARRIVALS AND DEPARTURES—PERMANENT MOVEMENT:  
OCCUPATION AND SEX, AUSTRALIA**

Occupation group(a)	1962				1963			
	Arrivals		Departures		Arrivals		Departures	
	Males	Females	Males	Females	Males	Females	Males	Females
Professional, technical and related workers .. .	2,412	1,532	774	536	3,159	1,954	866	647
Administrative, executive and managerial workers ..	1,100	112	306	24	1,467	174	370	31
Clerical workers .. .	1,291	2,208	411	660	1,738	3,299	411	727
Sales workers .. .	943	530	265	131	1,307	710	282	137
Farmers, fishermen, hunters, timbergetters and related workers .. .	3,070	76	189	5	3,167	51	173	5
Miners, quarrymen and related workers .. .	286	..	58	..	316	..	43	1
Workers in transport and communication .. .	1,633	158	295	29	1,999	246	303	41
Craftsmen and production-process workers .. .	10,207	2,171	2,139	227	14,115	1,904	2,086	217
Labourers .. .. .	5,756	..	593	..	7,652	..	567	..
Service (protective and other), sport and recreation workers .. .	1,044	8,703	306	232	1,371	6,264	293	212
Occupation inadequately described or not stated .. .	1,694	494	129	29	2,064	738	151	18
Persons not in work force—								
Children and students ..	14,085	12,768	2,495	2,347	17,561	16,016	2,706	2,530
Others .. .. .	720	17,471	191	3,058	886	19,992	191	3,270
<b>Total</b> .. .. .	<b>44,241</b>	<b>46,223</b>	<b>8,151</b>	<b>7,278</b>	<b>56,802</b>	<b>51,348</b>	<b>8,442</b>	<b>7,836</b>

(a) The classification of occupations used in compiling these figures is that used for the 1961 census and is not directly comparable with that in use prior to 1961.

(v) *Age and Conjugal Condition.* The age distribution and conjugal condition of permanent arrivals and departures during the year 1963 were as follows.

**OVERSEA ARRIVALS AND DEPARTURES—PERMANENT MOVEMENT:  
AGE DISTRIBUTION AND CONJUGAL CONDITION, AUSTRALIA, 1963**

Age (years)	Arrivals				Departures				
	Never married	Married	Widowed and divorced	Total	Never married	Married	Widowed and divorced	Total	
<b>MALES</b>									
0-4.. .. .	6,427	..	..	6,427	1,191	..	..	1,191	
5-14.. .. .	9,426	..	..	9,426	1,280	..	..	1,280	
15-24.. .. .	12,735	2,101	9	14,845	1,258	205	1	1,464	
25-44.. .. .	6,745	14,043	182	20,970	1,157	2,233	30	3,420	
45-64.. .. .	278	3,787	154	4,219	135	705	43	883	
65 and over .. .. .	35	670	210	915	27	112	65	204	
<b>Total .. .. .</b>	<b>35,646</b>	<b>20,601</b>	<b>555</b>	<b>56,802</b>	<b>5,048</b>	<b>3,255</b>	<b>139</b>	<b>8,442</b>	

<b>FEMALES</b>									
0-4.. .. .	6,098	..	..	6,098	1,072	..	..	1,072	
5-14.. .. .	8,907	1	..	8,908	1,259	..	..	1,259	
15-24.. .. .	8,623	4,721	18	13,362	810	615	3	1,428	
25-44.. .. .	3,146	13,313	354	16,813	470	2,229	96	2,795	
45-64.. .. .	269	3,415	1,045	4,729	106	596	234	936	
65 and over .. .. .	77	546	815	1,438	26	82	238	346	
<b>Total .. .. .</b>	<b>27,120</b>	<b>21,996</b>	<b>2,232</b>	<b>51,348</b>	<b>3,743</b>	<b>3,522</b>	<b>571</b>	<b>7,836</b>	

<b>PERSONS</b>									
0-4.. .. .	12,525	..	..	12,525	2,263	..	..	2,263	
5-14.. .. .	18,333	1	..	18,334	2,539	..	..	2,539	
15-24.. .. .	21,358	6,822	27	28,207	2,068	820	4	2,892	
25-44.. .. .	9,891	27,356	536	37,783	1,627	4,462	126	6,215	
45-64.. .. .	547	7,202	1,199	8,948	241	1,301	277	1,819	
65 and over .. .. .	112	1,216	1,025	2,353	53	194	303	550	
<b>Total .. .. .</b>	<b>62,766</b>	<b>42,597</b>	<b>2,787</b>	<b>108,150</b>	<b>8,791</b>	<b>6,777</b>	<b>710</b>	<b>16,278</b>	

(vi) *Country of Intended Future Residence.* The principal countries of intended future residence (i.e. for a period of twelve months or more) of persons departing permanently during the years 1962 and 1963 are shown in the table following. Separate figures are given for "former settlers" departing permanently (see definition on p. 292) and other residents departing permanently.

**OVERSEA ARRIVALS AND DEPARTURES—PERMANENT DEPARTURES:  
COUNTRY OF INTENDED FUTURE RESIDENCE(a): AUSTRALIA**

(Persons)

Country of intended future residence(a)	1962			1963		
	Former settlers departing	Other residents departing	Total	Former settlers departing	Other residents departing	Total
United Kingdom and Ireland ..	3,393	1,900	5,293	3,359	1,791	5,150
Canada .. .. .	170	265	435	312	322	634
New Zealand .. .. .	1,553	1,610	3,163	1,501	1,703	3,204
Papua and New Guinea ..	123	935	1,058	111	1,073	1,184
Other Commonwealth countries	256	379	635	257	352	609
<i>Total, Commonwealth Countries</i>	<i>5,495</i>	<i>5,089</i>	<i>10,584</i>	<i>5,540</i>	<i>5,241</i>	<i>10,781</i>
Germany .. .. .	651	268	919	651	259	910
Italy .. .. .	198	200	398	261	236	497
Netherlands .. .. .	662	299	961	779	367	1,146
Other European countries ..	651	338	989	765	342	1,107
United States of America ..	616	570	1,186	866	544	1,410
Other countries .. .. .	245	147	392	240	187	427
<i>Total, Foreign Countries</i> ..	<i>3,023</i>	<i>1,822</i>	<i>4,845</i>	<i>3,562</i>	<i>1,935</i>	<i>5,497</i>
<b>Grand Total</b> .. .. .	<b>8,518</b>	<b>6,911</b>	<b>15,429</b>	<b>9,102</b>	<b>7,176</b>	<b>16,278</b>

(a) For a period of twelve months or more.

5. Long-term and Short-term Movement—Oversea Visitors Arriving and Residents Departing.—The number of oversea visitors arriving in Australia and the number of Australian residents departing from Australia are shown in the following table classified by mode of transport. The figures exclude persons classified to permanent movement. Visitors arriving and residents departing who are classified to short-term movement are shown according to stated purpose of travel also.

**OVERSEA ARRIVALS AND DEPARTURES—LONG-TERM AND SHORT-TERM  
MOVEMENT: MODE OF TRANSPORT, AND STATED PURPOSE OF TRAVEL  
(SHORT-TERM ONLY): AUSTRALIA**

(Persons)

Particulars	1961			1962			1963		
	By Sea	By Air	Total	By Sea	By Air	Total	By Sea	By Air	Total
<b>OVERSEA VISITORS ARRIVING</b>									
<b>Short-term movement—</b>									
In transit .. .. .	5,133	19,812	24,945	4,285	21,192	25,477	4,336	23,012	27,348
Business .. .. .	710	16,295	17,005	645	18,322	18,967	543	21,287	21,830
Holiday .. .. .	12,658	33,993	46,651	12,521	41,033	53,554	11,769	49,406	61,175
Education .. .. .	254	3,865	4,119	252	4,368	4,620	243	5,999	6,242
Other and not stated ..	1,144	5,432	6,576	1,462	7,344	8,806	1,175	7,607	8,782
<b>Total</b> .. .. .	<b>19,899</b>	<b>79,397</b>	<b>99,296</b>	<b>19,165</b>	<b>92,259</b>	<b>111,424</b>	<b>18,066</b>	<b>107,311</b>	<b>125,377</b>
<b>Long-term movement—</b>									
<b>Total</b> .. .. .	<b>6,276</b>	<b>7,301</b>	<b>13,577</b>	<b>5,393</b>	<b>8,548</b>	<b>13,941</b>	<b>4,427</b>	<b>9,386</b>	<b>13,813</b>

OVERSEA ARRIVALS AND DEPARTURES—LONG-TERM AND SHORT-TERM MOVEMENT: MODE OF TRANSPORT, AND STATED PURPOSE OF TRAVEL (SHORT-TERM ONLY): AUSTRALIA—*continued*

Particulars	1961			1962			1963		
	By Sea	By Air	Total	By Sea	By Air	Total	By Sea	By Air	Total
<b>RESIDENTS DEPARTING</b>									
Short-term movement—									
Business .. .. .	1,896	16,426	18,322	1,665	18,864	20,529	1,453	22,248	23,701
Holiday .. .. .	36,284	26,289	62,573	34,927	30,748	65,675	36,512	39,663	76,175
Education .. .. .	491	929	1,420	394	987	1,381	487	1,221	1,708
Other and not stated .. .. .	3,199	4,366	7,565	2,244	6,043	8,287	2,601	8,242	10,843
<b>Total .. .. .</b>	<b>41,870</b>	<b>48,010</b>	<b>89,880</b>	<b>39,230</b>	<b>56,642</b>	<b>95,872</b>	<b>41,053</b>	<b>71,374</b>	<b>112,427</b>
Long-term movement—									
<b>Total .. .. .</b>	<b>24,272</b>	<b>7,885</b>	<b>32,157</b>	<b>24,292</b>	<b>7,489</b>	<b>31,781</b>	<b>27,930</b>	<b>10,387</b>	<b>38,317</b>

§ 9. Assisted Migration into Australia

1. General.—In the following table, particulars are shown of the total numbers of persons who were assisted to come to Australia by the Australian Government under all assisted passage schemes during the period 1936 to 1963.

“ASSISTED” MIGRATION: AUSTRALIA

Period								Nominated and selected (assisted) arrivals
1936-40	..	..	..	..	..	..	..	3,828
1941-45	..	..	..	..	..	..	..	..
1946-50	..	..	..	..	..	..	..	273,195
1951-55	..	..	..	..	..	..	..	275,241
1956-60	..	..	..	..	..	..	..	305,517
1959	..	..	..	..	..	..	..	64,146
1960	..	..	..	..	..	..	..	68,254
1961	..	..	..	..	..	..	..	55,685
1962	..	..	..	..	..	..	..	45,276
1963	..	..	..	..	..	..	..	62,914

2. Joint Commonwealth and States Scheme.—Details of the joint scheme of assisted immigration arrived at by agreement between the Commonwealth and State Governments,



which operated from 1920 to 1939, were published in earlier issues of the Year Book (*see* No. 38, p. 576). After the outbreak of hostilities in 1939, it was decided to discontinue the grant of assisted passages for the duration of the war.

3. Migration from Britain.—(i) *General*. Resumption of migration was the subject of negotiations between the Commonwealth and British Governments towards the end of 1945, and two agreements were signed in March, 1946. These agreements, which came into operation on 31st March, 1947, provided for free and assisted passages to be granted to British residents desirous of settling in Australia. The Free Passage Agreement, which applied to British ex-servicemen and their dependants, was terminated on 28th February, 1955. From 1st April, 1949, the Assisted Passage Agreement continued in operation under renewal from time to time and was again renewed as from 1st April, 1962.

(ii) *Assisted Passages*. Under the existing financial arrangements, the British Government's contribution towards the Assisted Passage Scheme is agreed upon when the agreement is extended, and for the five years from 1st April, 1962, was fixed at a maximum amount of £150,000 sterling a year.

The Assisted Passage Agreement covers five main groups of migrants (and their families), namely, personal nominees, group nominees, Commonwealth nominees, "Bring out a Briton" campaign families, and unnominated migrants. *Personal nominees* are migrants sponsored by residents of Australia able to provide suitable accommodation for them (any adult resident of Australia may nominate friends or relatives in Britain who are eligible to be considered for assisted passages under this agreement). *Group nominees* are recruited on a trade-qualification basis to meet applications lodged by employers and State Governments, who undertake to provide employment and accommodation for those selected. *Commonwealth nominees* comprise workers selected against known and assessed employment demands in Australia. Migrants in this group can live in hostels established by the Commonwealth Government for up to two years while they are seeking to obtain private accommodation. The Commonwealth nominee scheme was introduced in 1950 in order to reinforce the personal and group nomination schemes. "Bring out a Briton" campaign families are selected to fill employment and accommodation vacancies located by special voluntary committees formed by community effort to stimulate the flow of British migrants who are otherwise unable to obtain sponsorship. *Unnominated migrants* may also be granted assisted passages, even though they are unable to arrange personal nominations and are not occupationally qualified for approval under other existing assisted passage selection schemes. Unnominated families must possess a minimum of £500 sterling for transfer to Australia. Unnominated single persons must possess £25 sterling, and married couples without children £50 sterling, and must be between the ages of 19 and 45 years. The unnominated categories must be prepared to make their own accommodation arrangements after arrival.

Although the Commonwealth is not generally prepared to accept single persons or married persons without children if they have reached their forty-sixth birthday before the date of sailing, the parents or close relatives of intending migrants or of persons established in Australia may, if otherwise acceptable under the scheme, be granted passages irrespective of age. Each migrant of 19 years of age and over is required to contribute £10 sterling towards the cost of his or her passage, while persons under 19 years travel free. Apart from this contribution and that made annually by the British Government, the cost of the passages is borne by the Commonwealth Government.

(iii) *Number of Arrivals*. The numbers of British migrants who came to Australia under the Free and Assisted Passage Agreement during the years January, 1947, to June, 1963, are given in the following table, according to the State of proposed destination.

**UNITED KINGDOM FREE AND ASSISTED PASSAGE AGREEMENT: NUMBER OF MIGRANTS(a)**

Period	N.S.W.	Vic.	Qld.	S. Aust.	W. Aust.	Tas.	A.C.T.	C'wealth nominees (b)	Total
1958-59 ..	4,375	4,931	2,449	2,912	1,853	706	210	11,070	28,506
1959-60 ..	6,341	6,324	2,862	3,988	1,442	873	277	11,790	33,897
1960-61 ..	6,313	6,186	2,579	3,308	1,613	657	234	13,830	34,700
1961-62 ..	5,804	4,433	2,593	3,317	2,094	509	157	8,161	27,070
1962-63 ..	8,093	6,118	2,980	4,512	5,294	677	271	13,755	41,700
<b>Total, January, 1947 to June, 1963 ..</b>	<b>96,576</b>	<b>104,487</b>	<b>48,909</b>	<b>40,582</b>	<b>40,683</b>	<b>13,160</b>	<b>4,338</b>	<b>120,903</b>	<b>469,638</b>

(a) Includes child migrants as shown in para. 4 (iii) below.

(b) See text, p. 298, for explanation.

4. **Child Migration from Britain.**—(i) *General.* Since the commencement of the assisted passage schemes in 1947, the migration of unaccompanied children and youths from Britain has been encouraged under the auspices of approved voluntary organizations. The organizations at present introducing child migrants include the Fairbridge Farm Schools, Dr. Barnardo's Homes, the Big Brother Movements of New South Wales and Tasmania, and the Northcote Children's Emigration Fund. All the principal religious denominations are also participating in the scheme. There are 34 approved homes in Australia for the care of child migrants. There is also a growing interest in the Family Schemes operated by the Fairbridge Society and the Northcote Children's Farm School. Children of school age may be accepted under the Fairbridge Scheme by schools at Molong (New South Wales) and at Pinjarra (Western Australia) and, by arrangement with the Northcote Trust, at the Northcote Farm School near Bacchus Marsh (Victoria). Children with only one parent living may be accommodated at the St. John's Home for Boys and Girls at Canterbury (Victoria) conducted by the Church of England, and at Draper's Hall, Adelaide. Maintenance payments for these children vary within each State.

(ii) *Financial Assistance.* The British Government contributes £A1 5s. a week for each child, and in addition, the respective State Governments contribute amounts varying from 7s. a week in New South Wales to 16s. in Western Australia. The Commonwealth Government pays the normal child endowment. In addition, the Commonwealth Government and the State Government concerned have contributed towards the capital expenditure on accommodation for child migrants.

(iii) *Number of Arrivals.* From the beginning of 1947 to 30th June, 1963, a total of 6,575 British children and youths arrived under the sponsorship of voluntary organizations. New South Wales took 4,203, Western Australia 1,360, Victoria 561, and the other three States 451. These children were brought to Australia under the United Kingdom Free and Assisted Passage Scheme and are included in the figures shown in the table above.

5. **Maltese Migration.**—On 31st May, 1948, the Commonwealth Government and the Government of Malta entered into an agreement under which both Governments grant financial assistance towards the passage costs of selected Maltese migrants. This agreement has been extended from time to time. On 13th August, 1957, a new agreement, which was acknowledged to have come into effect as from 1st July, 1956, was signed between the two governments. This agreement has been extended by exchange of letters and is currently operative until 30th June, 1964.

From its inception until 30th June, 1963, a total of 28,944 Maltese had arrived under this scheme. Up to the end of June, 1963, 261 Maltese children had been brought out to approved institutions in Australia. These are included in the number shown above.

6. **Netherlands Migration.**—A migration agreement outlining the terms and conditions under which Netherlands nationals may be selected in the Netherlands and assisted with their passage costs to enable them to settle in Australia was concluded between the Commonwealth and Netherlands Governments in February, 1951, and came into operation on 1st April of that year. This superseded an earlier arrangement in 1946, between the Commonwealth and the Netherlands Emigration Foundation (*see Official Year Book No. 39, p. 567*). The agreement has continued in operation under extensions since 1st April, 1956.

The provision of shipping is the responsibility of the Netherlands Government. The Commonwealth arranges for the reception of migrants and their after-care and assists in the securing of employment. Families who have not obtained private accommodation prior to arrival may be temporarily accommodated in an Immigration Centre. When the breadwinner is placed in employment, he proceeds either to employer-found accommodation or to a Commonwealth Hostel. These arrangements continue until the family can secure its own accommodation, or vacancies enable a family to be united in a hostel. Up to the end of June, 1963, 65,649 Dutch migrants had settled here under the Netherlands—Australia Migration Agreement.

7. **Italian Migration.**—On 29th March, 1951, the Commonwealth and Italian Governments entered into a migration agreement effective for a period of 5 years, under which certain selected Italian migrants were assisted to Australia. The agreement came into force on 1st August, 1951.

The agreement was temporarily suspended at the end of 1952, but in March, 1954, provision was made for assisted passages to be granted to certain relatives and fiancées of migrants who had previously settled in Australia under the agreement. On 1st December, 1954, the agreement proper was re-opened and was extended to 31st July, 1959. It has since been further extended. Up to 30th June, 1963, arrivals under this agreement totalled 45,420 persons.

8. **German Migration.**—On 29th August, 1952, a migration agreement was signed between the Commonwealth Government and the Government of the Federal Republic of Germany. This was somewhat similar to the agreements concluded with the Netherlands and Italy and was effective for a period of 5 years. The agreement was renewed on 27th August, 1958, to be effective from 29th August, 1957. Arrivals of German assisted migrants numbered 69,814 to the end of June, 1963.

9. **Austrian Migration.**—Late in 1952, arrangements were made with the Intergovernmental Committee for European Migration for the migration to Australia of a small number of selected rural and other workers and their families from Austria. Later,

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NOTE.—Australia makes a basic per capita contribution of \$U.S.100 towards the transport costs of assisted national migrants who are moved under the auspices of the Intergovernmental Committee for European Migration from Malta, the Netherlands, Italy, Germany, Austria, Greece, Belgium and Spain. A similar basic contribution is made for refugees selected under assisted passage arrangements. An additional payment of up to approximately \$U.S.64 per migrant is also made in accordance with the financial requirements of each of the foregoing schemes. The balance of the required passage costs is made up by the Governments of the emigration countries concerned, by the migrants themselves, and in respect of Greece and Spain, by the Intergovernmental Committee for European Migration. The Commonwealth Government also contributes \$U.S.100 per capita towards the movement to Australia of each handicapped refugee and accompanying family member who do not at present qualify for an Australian per capita contribution under assisted passage arrangements.

these arrangements were extended to cover greater numbers and wider categories of migrants. Reception arrangements, temporary accommodation, after-care and placement in employment are undertaken by the Commonwealth. Under these arrangements, 17,122 Austrians arrived in Australia up to 30th June, 1963.

10. **Greek Migration.**—An arrangement similar to the Austrian one was made with the Intergovernmental Committee for European Migration late in 1952. Reception arrangements, temporary accommodation, after-care and employment are undertaken by the Commonwealth. The balance of passage costs, after the Australian Government contribution, is made by the migrants themselves, the Greek Government, and the Intergovernmental Committee for European Migration. Under these arrangements, 33,608 Greek assisted migrants had settled in Australia up to 30th June, 1963.

11. **Spanish Migration.**—Negotiations were completed in 1958 with the Spanish Government and the Intergovernmental Committee for European Migration under which selected rural workers suitable for sugar-cane cutting were offered assisted passages to Australia. Later this arrangement was extended to include other occupational groups and to certain family dependants nominated by assisted migrants already in Australia.

The Spanish Government, the migrant, and the Intergovernmental Committee for European Migration contribute the balance of passage costs after the Australian Government contribution.

Reception arrangements, temporary accommodation and initial placement in employment are the responsibility of the Commonwealth. Under these arrangements, 7,880 Spanish nationals arrived in Australia up to 30th June, 1963.

12. **Belgian Migration.**—On 1st February, 1961, the General Assisted Passage Scheme, which had covered Belgian nationals, ceased to operate in Belgium, and, following agreement with the Belgian Government and with the Intergovernmental Committee for European Migration, arrangements were made for assisted Belgian nationals to travel under the auspices of the Intergovernmental Committee for European Migration. Reception arrangements, temporary accommodation, after-care and placement in employment are undertaken by the Commonwealth.

The Commonwealth contribution and the arrangements for reception, accommodation, after-care and employment are the same as for Austrian migrants. Under these arrangements, 1,152 Belgian assisted migrants arrived in Australia up to 30th June, 1963.

13. **Refugee Migration.**—On 21st July, 1947, the Commonwealth Government entered into an agreement with the International Refugee Organization to settle displaced persons in Australia. Although the International Refugee Organization concluded its activities in 1951, the Commonwealth agreed to receive those displaced persons already accepted for migration, but whose passages had still to be arranged. A total of 170,700 persons settled in Australia under this scheme. Following the cessation of the Displaced Persons Scheme in 1951, Australia has accepted for permanent resettlement under assisted passage arrangements 32,171 refugees of European origin to 30th June, 1963. Included in this figure are 14,060 Hungarians who have been granted asylum in Australia since the uprising in October, 1956. The Commonwealth Government granted a total of £A.130,000 for the relief of Hungarian refugees and, in addition, contributed the equivalent of \$100 a head to the passage costs of those refugees who were granted assisted passages.

Australia continues to accept refugees under assisted passage and full-fare arrangements. In recent years, assisted passage migration for refugees has been maintained with application mainly in Italy and Austria. In the post-war period to 30th June, 1963, 202,871 refugees arrived as assisted passage and 67,962 as full-fare migrants.

14. **General Assisted Passage Scheme.**—To encourage the migration of persons from the United States of America, Switzerland, Denmark, Norway, Sweden and Finland, the Commonwealth Government on 10th September, 1954, introduced an assisted passage scheme for nationals of these countries. Later, the scheme was extended to cover certain British subjects living in a number of countries other than the United Kingdom and to nationals of Eire, Belgium and France. (As from 1st February, 1961, new arrangements have operated for Belgium. See para. 12 above.) Up to 31st December, 1958, the Commonwealth made a contribution of £37 10s. sterling per adult and *pro rata* amounts for children according to the fare paid, but this was increased to £57 2s. 10d. sterling (\$160) per adult and *pro rata* for children in respect of migrants approved on and after 1st January, 1959. To the end of June, 1963, 20,188 migrants had arrived in Australia under this scheme.

15. **Other Assisted Migration Schemes.**—The Displaced Persons Scheme, the Empire and Allied Ex-Servicemen's Scheme, the Triestian Scheme and the Eire Assisted Passage Scheme have now lapsed. Details of these schemes were published in earlier issues of the Year Book (see No. 47, pp. 321-3).

16. **Summary of Arrivals of Assisted Migrants.**—The following table shows the number of assisted migrants who arrived in Australia in each of the last five financial years and since January, 1947.

#### ARRIVALS UNDER ASSISTED MIGRATION SCHEMES

Assisted migration scheme	1958-59	1959-60	1960-61	1961-62	1962-63	January, 1947, to June, 1963
Austrian .. .. .	1,289	1,841	1,494	227	372	17,122
Belgian .. .. .	..	..	232	506	414	1,152
General Assisted Passage(a) ..	3,275	4,176	3,527	2,234	1,874	20,188
German .. .. .	6,541	9,514	10,151	2,234	1,967	69,814
Greek .. .. .	2,099	2,191	2,086	2,761	2,051	33,608
Italian .. .. .	3,014	3,006	3,013	1,255	227	45,420
Maltese .. .. .	1,005	1,028	1,099	931	1,501	28,944
Netherlands .. .. .	7,222	8,842	5,728	2,349	1,352	65,649
Refugee .. .. .	4,118	3,969	3,413	946	1,375	202,871
Spanish .. .. .	328	447	1,230	1,549	4,326	7,880
United Kingdom .. .. .	28,506	33,897	34,700	27,070	41,700	469,638
Other schemes .. .. .	623	406	323	..	..	28,098
<b>Total .. .. .</b>	<b>58,020</b>	<b>69,317</b>	<b>66,996</b>	<b>42,062</b>	<b>57,159</b>	<b>990,384</b>

(a) Mostly Scandinavians, U.S. Americans and British nationals from countries other than the United Kingdom.

NOTE.—(i) All arrivals indicated in this table have obtained some financial assistance from the Australian Government towards payment of their passage money. Transport to Australia for the migrants concerned has been arranged on (1) ships under charter to the Department of Immigration, (2) ships and aircraft under charter to the Intergovernmental Committee for European Migration, and (3) normal commercial shipping and airlines.

(ii) The arrivals under these schemes include a small number of nationals of countries other than those referred to, and stateless persons.

## § 10. The Regulation of Immigration into Australia

1. Powers and Legislation of the Commonwealth.—(i) *Constitutional*. Under section 51 (xxvii.) and (xxviii.) of the Commonwealth Constitution, the Parliament of the Commonwealth is empowered to make laws with respect to immigration, emigration, aliens and the influx of criminals.

(ii) *Legislation*. Immigration into Australia is regulated by the *Migration Act 1958* which came into force on 1st June, 1959, and repealed the *Immigration Act 1901–1949* and the *Aliens Deportation Act 1948*.

Any immigrant entering Australia after the commencement of the Act without having been granted an "entry permit" or who is not within an exempted class is a prohibited immigrant. Exempted persons include diplomatic, consular and trade representatives of other countries, and seamen who enter on leave while their ships are in Australian ports. For the purposes of the Immigration Act an immigrant includes a person entering for temporary stay.

An entry permit is normally granted at the port of entry by means of a stamp in the traveller's passport or equivalent travel document. There is no form of application involved. Temporary entry permits are granted to persons who have been authorized to enter for a limited period only. Persons eligible to enter for indefinite residence are granted permits of unrestricted validity. A person who is refused an entry permit must be kept on board the ship on which he arrives; otherwise, the shipping company is liable to a fine of £500.

The Act abolished the "Dictation Test" as a means of excluding or deporting ineligible persons. Other deportation powers which were contained in the repealed legislation were largely re-enacted, although with some revision.

The Act revised the law relating to the emigration of Aborigines and children, repealing the *Emigration Act 1910*.

The Act does *not* affect passport or visa requirements for entry to Australia. All persons who, prior to the 1958 Act, had been required before embarkation to obtain visas or other kinds of authority to proceed to Australia, are still required to obtain them. Likewise, persons who have not had to obtain prior authority to proceed to Australia are not now required to obtain such authority solely as a result of the Act. Persons previously allowed to enter without production of passports—notably British people arriving from New Zealand—are still able to do so.

The *Aliens Act 1947–1959* provides that a register of aliens shall be maintained for every State or mainland Territory of the Commonwealth. Unless exempted, aliens 16 years of age and over are required to register with the Department of Immigration and to notify the Department of any change of address, occupation or employment, and of their marriage. The Act provides also that the consent of the Department must be obtained before an alien may change his surname.

The *Immigration (Guardianship of Children) Act 1946–1952* provides that the Minister for Immigration becomes the legal guardian of every person under the age of 21 years who enters Australia (except for certain groups exempted) other than in charge of, or for the purpose of living in the care of, a parent or adult relative. It is primarily administered through the Child Welfare authorities in each State and mainland Territory who, as the Minister's delegates under the Act, supervise the welfare of each "immigrant child".

2. Conditions of Immigration into Australia.—(i) *Admission of Non-Europeans*. Australia's immigration policy is directed towards maintaining a predominantly homogeneous population. It is hoped in this way to avoid difficult social and economic problems.

It is regarded as fundamental to this policy that people coming to Australia for permanent residence should be capable, both economically and socially, of ready integration into the community. Consequently, preference is given to persons of European origin.

The Australian practice is not one of the total exclusion of persons of other than European origin. The immigration laws governing residence in Australia permit the Minister to exercise discretion. The policy so administered takes into account the qualifications of persons wishing to settle here and the merits of each case, including considerations of a humanitarian nature and broad national interest.

In addition to the Aborigines, there are in Australia more than 30,000 people of non-European origin. These include more than 12,000 Asian and other non-European students attending Australian Universities, schools and technical colleges. There are also some 8,000 non-Europeans who have been admitted for temporary residence (on a short-term or long-term basis) in a wide variety of categories. The remaining 10,000 comprise mainly non-Europeans who are Australian citizens by birth, or who have acquired citizenship through the process of naturalization or registration.

The present immigration policy provides, *inter alia*—

- (a) that non-Europeans, who are the spouses, unmarried minor children or aged parents of Australian citizens, or of British subjects permanently resident here, may be admitted for permanent residence;
- (b) that a European British subject proceeding from overseas to Australia for permanent residence may be accompanied by his non-European spouse and unmarried minor children;
- (c) that non-Europeans who have been admitted for temporary residence may qualify, on residential and other grounds, for permanent resident status and subsequently for naturalization;
- (d) in addition to those non-Europeans admitted for temporary residence for commerce and trade, for the admission, on a selective basis for indefinite stay, of highly qualified and distinguished people who seek to reside here (including those non-Europeans who have taken educational courses at the tertiary level in Australia, who have spent at least five years in their own countries after having completed their courses, and who have qualifications from which the Australian community would benefit); and
- (e) that those non-Europeans, whose continued residence in Australia was induced by political events in their own countries, may be permitted to remain here indefinitely.

(ii) *Persons of European Race.* Maltese, Cypriots and aliens of European race desiring to settle permanently in Australia are required to obtain authority for admission from the Department of Immigration or an Australian overseas post. Their admission under the present policy is subject to their compliance with the Commonwealth's requirements with regard to health, character, freedom from security risk and general suitability as settlers.

(iii) *General Information.* General information as to conditions of entry into Australia may be obtained from the following officers:—

- (a) in Australia—the Secretary, Department of Immigration, Canberra, Australian Capital Territory, and Commonwealth Migration Officers in the capital cities of the various States;
- (b) in overseas countries—from migration officers or from Australian Diplomatic posts (a complete list of these is given in Chapter XXIX. International Relations).

### § 11. Passports

Australian passports are issued, under the *Passports Act* 1938-1948 and Passport Regulations, to Australian citizens.

Diplomatic passports are issued to persons travelling on official missions of a diplomatic character. Official passports are granted to persons travelling on the official business of the Commonwealth or a State Government.

Australian passports are obtainable on application at offices of the Commonwealth Department of Immigration in each State and internal Territory of Australia or from overseas offices of that Department, from any Australian diplomatic or consular mission abroad, or from the office of any Australian Government Trade Commissioner overseas.

Applicants for passports must furnish evidence of their identity and nationality and pay a fee of £1.

Approximately 50,000 Australian passports are issued each year in Australia and abroad.

### § 12. Citizenship and Naturalization

1. *Commonwealth Legislation.*—The *Nationality and Citizenship Act* 1948 commenced on Australia Day (26th January), 1949, and repealed all previous Commonwealth legislation on this subject. The most significant effect of the Act was the creation for the first time of the status of "Australian Citizen". In this respect the Act was complementary to citizenship legislation passed or about to be passed by other countries of the Commonwealth of Nations. All Australian citizens, and the citizens of other countries of the Commonwealth of Nations, are declared to be British subjects. For details of the Act, see Official Year Book No. 42, page 619.

2. *Naturalization Certificates Granted.*—The following tables show the number of certificates granted during 1962 and the number of persons affected by these certificates. The certificate covers the person being naturalized and his/her children under the *Nationality and Citizenship Act* 1948-1960.

#### NATURALIZATION CERTIFICATES GRANTED AND PERSONS AFFECTED: PREVIOUS NATIONALITIES OF RECIPIENTS, AUSTRALIA, 1962

Previous nationality	No. of certificates granted	Persons affected by certificates	Previous nationality	No. of certificates granted	Persons affected by certificates	Previous nationality	No. of certificates granted	Persons affected by certificates
Albanian ..	80	93	Filipino ..	10	15	Polish ..	3,386	4,030
Argentinian ..	9	9	Finnish ..	99	111	Portuguese ..	45	56
Australian Protected Persons ..	79	126	French ..	198	221	Romanian ..	141	173
Austrian ..	813	1,023	German ..	3,974	5,090	Russian ..	778	854
Belgian ..	30	37	Greek ..	5,361	6,313	Spanish ..	89	98
Brazilian ..	2	2	Hungarian ..	4,169	4,890	Swedish ..	55	59
British Protected Persons ..	11	13	Indonesian ..	29	30	Swiss ..	145	169
Bulgarian ..	69	72	Iranian ..	6	7	Syrian ..	6	8
Burmese ..	3	3	Iraqi ..	5	5	Tibetan ..	1	1
Byelorussian ..	34	38	Israeli ..	437	574	Turkish ..	27	30
Chinese ..	474	512	Italian ..	10,277	12,654	Ukrainian ..	1,161	1,378
Costa Rican ..	1	1	Japanese ..	78	80	Uruguayan ..	3	4
Czechoslovak ..	430	465	Jordanian ..	5	5	U.S. American ..	64	64
Danish ..	310	410	Korean ..	1	1	Venezuelan ..	1	1
Dutch ..	5,979	7,941	Latvian ..	865	929	Vietnamese ..	1	1
Egyptian (U.A.R.) ..	15	22	Lebanese ..	436	516	Yugoslav ..	2,298	2,621
Estonian ..	287	302	Lithuanian ..	507	545	Stateless ..	415	506
			Norwegian ..	93	100			
			Panamanian ..	2	3			
						<b>Total ..</b>	<b>43,794</b>	<b>53,211</b>



**COUNTRIES IN WHICH RECIPIENTS(a) ORDINARILY RESIDED IMMEDIATELY BEFORE ENTERING AUSTRALIA OR EXTERNAL TERRITORIES, 1962**

Country of previous residence	Certificates granted	Country of previous residence	Certificates granted	Country of previous residence	Certificates granted	Country of previous residence	Certificates granted
Albania ..	27	Fiji ..	2	Latvia ..	17	Singapore ..	34
Argentina ..	18	Finland ..	97	Lebanon ..	427	South Africa ..	23
Austria ..	2,985	France ..	383	Lithuania ..	7	Spain ..	63
Belgium ..	106	Ghana ..	1	Luxembourg ..	2	Sweden ..	77
Bolivia ..	1	Germany ..	10,142	Malaya ..	6	Switzerland ..	261
Brazil ..	12	Greece ..	4,638	Malta ..	2	Syria ..	7
British Borneo ..	4	Holland ..	5,815	Mexico ..	1	Tanganyika ..	38
Bulgaria ..	11	Hong Kong ..	145	New Guinea ..	106	Turkey ..	62
Burma ..	5	Hungary ..	2,133	New Zealand ..	71	Ukraine ..	10
Canada ..	32	India ..	14	Norway ..	93	United States of America ..	93
Ceylon ..	1	Indonesia ..	199	Pakistan ..	2	Uruguay ..	4
Chile ..	2	Iran ..	13	Panama ..	1	Venezuela ..	5
China ..	904	Iraq ..	1	Peru ..	5	Vietnam ..	1
Cuba ..	2	Ireland (Republic of) ..	1	Philippines ..	44	Western Samoa ..	3
Cyprus ..	3	Italy ..	496	Poland ..	243	West Indies ..	1
Czechoslovakia ..	48	Japan ..	10,947	Portugal ..	38	Yugoslavia ..	858
Denmark ..	361	Jordan ..	8	Rhodesia ..	2		
Egypt ..	1,008	Korea ..	2	Romania ..	40		
England ..	468			Russia ..	13		
Estonia ..	11			Saudi Arabia ..	1	<b>Total ..</b>	<b>43,794</b>

(a) Excludes children affected by grant of certificates.

The number of persons affected by certificates granted in 1962 in respect of residents of the various States and Territories was as follows:—New South Wales, 18,686; Victoria, 19,508; Queensland, 3,603; South Australia, 6,463; Western Australia, 3,470; Tasmania, 718; Northern Territory, 217; Australian Capital Territory, 411; External Territories, 135; Total, 53,211.

### § 13. Population of External Territories

Ordinances of the individual external territories under the control of Australia provide for a census of the population to be taken on the day prescribed for the taking of a census in the Commonwealth of Australia.

The following table shows the population of the Territories of Christmas Island, Cocos (Keeling) Islands, Norfolk Island, Papua, the Trust Territory of New Guinea and the Trust Territory of Nauru at the census of 30th June, 1961, and as estimated at 30th June, 1963.

#### POPULATION: EXTERNAL TERRITORIES

Territory	Census, 30th June, 1961			Estimate, 30th June, 1963
	Males	Females	Persons	Persons
Christmas Island .. ..	1,963	1,136	3,099	3,349
Cocos (Keeling) Islands .. ..	333	273	606	664
Norfolk Island .. ..	421	423	844	853
Papua .. ..	(a) 5,490	(a) 4,304	(a) 9,794	(b) 543,138
Trust Territory of New Guinea .. ..	(a) 9,158	(a) 6,378	(a) 15,536	(b) 1,516,385
Trust Territory of Nauru .. ..	3,019	1,594	4,613	4,801

(a) Non-indigenous population only. The indigenous population was estimated to be—Papua, 513,648; Trust Territory of New Guinea, 1,433,383. (b) Total population. The non-indigenous population was estimated to be—Papua, 11,998; Trust Territory of New Guinea, 15,728.

Further particulars concerning the indigenous populations of the territories are given in Chapter V. The Territories of Australia.

## § 14. The Aboriginal Population of Australia

In Official Year Book No. 17, pages 951-61, a brief account was given of the Australian Aboriginal population, its origin, its numbers as estimated from time to time and the steps taken for its protection. On pages 914-6 of Official Year Book No. 22, particulars were shown for each of the States and Territories of Australia at successive periods, while a special article dealing with the estimated number and distribution of the native population at the date of first settlement of the white race in the continent appeared on pages 687-96 of Official Year Book No. 23.

The Aborigines are scattered over the whole of the mainland, but are mostly in the Northern Territory, Queensland, and Western Australia. Particulars of the number in each State and Territory at the census of 30th June, 1961, are shown in the following table. Half-caste Aborigines are included in the numbers of the population and are of course enumerated at the census.

## ABORIGINAL POPULATION, 30th JUNE, 1961

State or Territory	Full-blood					Half-caste (enumerated at the census)			Total full-blood and half-caste
	Number enumerated at census, 30th June, 1961			Estimated number out of contact at census	Total number as recorded or estimated at 30th June, 1961	Males	Females	Persons	
	Males	Females	Persons						
New South Wales ..	791	697	1,488	..	1,488	6,703	6,525	13,228	14,716
Victoria ..	141	112	253	..	253	758	785	1,543	1,796
Queensland ..	4,686	4,000	8,686	..	8,686	5,460	5,550	11,010	19,696
South Australia ..	1,181	966	2,147	..	2,147	1,426	1,311	2,737	4,884
Western Australia ..	4,243	3,878	8,121	2,000	10,121	4,108	4,047	8,155	18,276
Tasmania ..	..	..	..	..	..	24	14	38	38
Northern Territory ..	7,857	7,585	15,442	1,944	17,386	1,156	1,162	2,318	19,704
Aust. Cap. Territory ..	..	..	..	..	..	78	65	143	143
<b>Australia ..</b>	<b>18,899</b>	<b>17,238</b>	<b>36,137</b>	<b>3,944</b>	<b>40,081</b>	<b>19,713</b>	<b>19,459</b>	<b>39,172</b>	<b>79,253</b>

Torres Strait Islanders, both full-blood and half-caste, are not included as Aborigines, but are included in the populations shown on pp. 266-89. At the 1961 census there were 4,972 full-blood and 245 half-caste Torres Strait Islanders of whom 4,970 and 237 respectively were recorded in Queensland.

For further information as to the estimated numbers of full-blood Aborigines, and the difficulty of arriving at precise figures, see Year Book No. 47, page 329.

## § 15. International Statistics of Population

1. Introduction.—In the following tables, the population, density, rate of growth, natural increase and masculinity are shown in respect of all countries which had an estimated population of at least one million persons in 1961, plus Papua and Western New Guinea (West Irian). The source of these figures is the 1962 *Demographic Yearbook* which is prepared and published by the Statistical Office of the United Nations. The tables include figures varying in reliability and accuracy, there being considerable variation in the quality of demographic statistics as between countries, but this information has been shown to provide some form of guide as to the magnitude and trend of population movements in oversea countries.

Where the information available to the Statistical Office of the United Nations relates to only part of the population of a country, the population characteristic (e.g. rate of growth), or vital statistics rate (e.g. marriages), has been omitted from the tables, and this is indicated by a footnote.

For fuller particulars of the differences in the quality of the statistics and their reliability and for other qualifications, reference should be made to the detailed explanations contained in the *Demographic Yearbook* of the Statistical Office of the United Nations (*see particularly Technical Notes on Statistical Tables and footnotes to the tables*).

**2. Population, Rate of Growth and Density: World, Continents and Regions.**—The following table shows for the World, Continents, and Regions, estimated population and density at ten-yearly intervals since 1930, and for 1961. The annual rate of increase (per cent.), together with the average annual increase during the period 1950–61, is also shown. It should be noted that the population figures have been adjusted for underenumeration and errors in estimation. In preparing these figures, the Population Branch of the United Nations revises, from time to time, the estimates for previous years as new data become available, for example, from a census. The figures are estimates only, and as such are subject to a substantial margin of error.

**POPULATION, DENSITY AND RATE OF INCREASE FOR THE WORLD AND CONTINENTS—SELECTED YEARS**

(Source: United Nations *Demographic Yearbook*, 1962)

Continent and region	Population							Density (persons per square mile)
	Adjusted estimates of mid-year population (millions)					Annual rate of increase 1950–61 (per cent.)	Average annual increase 1950–61 (millions)	
	1930	1940	1950	1960	1961			
<b>World Total</b> .. .. .	<b>2,015</b>	<b>2,249</b>	<b>2,510</b>	<b>2,995</b>	<b>3,069</b>	<b>1.8</b>	<b>50.9</b>	<b>59</b>
<i>Africa</i> .. .. .	157	176	206	254	261	2.1	4.9	22
Northern Africa .. .. .	53	61	71	88	90	2.2	1.7	23
Tropical and Southern Africa .. .. .	104	115	135	166	171	2.1	3.2	22
<i>America</i> .. .. .	244	277	329	405	422	2.3	8.5	26
Northern America .. .. .	135	146	167	199	204	1.8	3.4	25
Middle America .. .. .	34	41	51	66	69	2.8	1.6	65
South America .. .. .	75	90	111	140	149	2.7	3.5	22
<i>Asia</i> .. .. .	1,072	1,212	1,386	1,679	1,721	2.0	30.6	165
South West Asia .. .. .	47	53	60	77	79	2.5	1.7	37
South Central Asia .. .. .	362	410	472	559	575	1.8	9.4	290
South East Asia .. .. .	128	155	175	214	223	2.3	4.5	129
East Asia .. .. .	535	594	679	829	844	2.0	15.0	186
<i>Europe</i> .. .. .	356	381	395	427	430	0.8	3.2	225
Northern and Western Europe .. .. .	122	128	133	142	143	0.7	0.9	164
Central Europe .. .. .	120	127	128	139	140	0.8	1.1	357
Southern Europe .. .. .	114	126	134	146	147	0.8	1.2	226
<i>Oceania</i> .. .. .	10.4	11.3	13.0	16.5	16.8	2.5	0.3	5
<i>Union of Soviet Socialist Republics</i> .. .. .	176	192	181	214	218	1.7	3.4	25

**3. Population, Density, Rate of Growth, Natural Increase and Masculinity of Principal Countries.**—Certain details of the population of the larger countries within continental groups are shown in the following table. As explained above, reference should be made to the detailed comments contained in the United Nations *Demographic Yearbook*, 1962, regarding geographical units used, boundaries of areas, reliability of estimates, etc.

## POPULATION, DENSITY, RATE OF INCREASE, NATURAL INCREASE AND MASCULINITY—SELECTED COUNTRIES

(Source: United Nations Demographic Yearbook, 1962)

Country	Population mid-year 1961 (thousands)	Density 1961 (persons per square mile)	Annual rate of increase 1958-61 (per cent.)	Natural increase		Masculinity at latest census	
				Year	Rate (per thousand population)	Year	Rate (number of males per 100 females)
<b>Africa—</b>							
Nigeria	35,752	100	1.9	..	..	1953	95.6
United Arab Republic—							
Egypt	26,593	69	2.5	..	..	1960	101.1
Ethiopia	(a)20,000	44	(b)	..	..	..	(b)
South Africa	16,236	34	2.6	..	..	..	(b)
Congo (Leopoldville)	14,464	16	2.4	1955-57	23.0	1957	94.4
Sudan	12,109	13	2.8	1955	33.2	1956	102.2
Morocco	11,925	70	2.8	..	..	..	(b)
Algeria	(a)11,020	12	(c) 1.9	..	..	..	(b)
Tanganyika	9,399	26	1.8	1947-48	19.0	1957	92.9
Rhodesia and Nyasaland	8,520	18	2.4	..	..	..	(b)
Kenya	7,287	32	2.2	..	..	..	(b)
Ghana	6,957	76	(b)	1960	30.2	1960	102.2
Uganda	6,845	74	2.5	1958-59	22.0	1959	100.9
Mozambique	6,650	22	2.2	..	..	1960	92.0
Madagascar	5,577	24	2.8	..	..	..	(b)
Angola	4,870	10	2.4	..	..	1960	104.3
Upper Volta	4,400	42	(b)	1960-61	18.6	..	(b)
Tunisia	4,224	87	1.4	1961	32.5	1956	98.6
Mali	(a) 4,100	9	(b)	1960-61	28.0	..	(b)
Cameroun	(a) 4,097	22	(b)	..	..	..	(b)
Ivory Coast	3,300	27	2.2	1961	22.8	..	(b)
Guinea	(a) 3,000	32	4.3	1954-55	22.0	1955	99.8
Senegal	2,980	39	(b)	1960	26.6	1960	96.8
Niger	(a) 2,870	6	(b)	1959-60	27.0	..	(b)
Chad	2,680	5	1.0	..	..	..	(b)
Rwanda	ad 2,665	262	(b)	1957	38.3	..	(b)
Sierra Leone	2,450	88	2.7	..	..	..	(b)
Burundi	ad 2,224	207	(b)	1957	29.2	..	(b)
Dahomey	2,050	46	(b)	1961	28.0	..	(b)
Togo	2,030	8	0.8	..	..	..	(b)
Somali	1,480	68	(b)	1961	26.0	..	(b)
Liberia	(a) 1,290	30	(b)	..	..	..	(b)
Central African Republic	1,227	5	1.9	1959-60	18.0	..	(b)
Libya	1,216	2	1.8	..	..	1954	107.6
<b>North America—</b>							
United States of America	183,742	51	1.7	1962	12.9	1960	97.1
Mexico	36,091	47	3.1	1962	34.3	1960	99.5
Canada	18,269	5	2.2	1962	17.9	1961	102.8
Cuba	6,933	157	2.1	1953	21.1	1953	105.0
Haiti	4,249	397	2.2	1950-55	20.0	1950	94.5
Guatemala	3,886	92	3.1	1962	29.6	1950	102.2
Dominican Republic	3,098	165	3.4	1960	31.6	1960	102.0
El Salvador	2,709	328	3.6	1962	34.5	1961	98.0
Puerto Rico	2,409	701	1.6	1962	24.7	1960	98.0
Honduras	1,893	44	3.0	..	..	1961	99.2
Jamaica	1,634	370	(b)	1962	31.6	1960	92.3
Nicaragua	1,526	27	3.5	..	..	1950	97.0
Costa Rica	1,225	63	4.4	1962	42.0	1950	99.7
<b>South America—</b>							
Brazil	73,088	22	3.6	1940-50	22.4	..	(b)
Argentina	21,079	20	1.7	1961	14.4	1960	100.6
Colombia	14,443	33	2.2	..	..	1951	90.9
Peru	10,365	21	2.0	..	..	1961	99.1
Chile	7,827	27	2.4	1961	22.8	1960	96.2
Venezuela	7,590	22	3.3	1958	35.3	1961	102.7
Ecuador	4,455	43	3.2	..	..	1950	99.2
Bolivia	3,500	8	1.4	..	..	1950	96.2
Uruguay	(a) 2,827	39	(c) 1.3	1956	4.4	1908	103.6
Paraguay	1,812	12	2.4	..	..	1962	97.2
<b>Asia—</b>							
China (mainland)	e 646,530	175	(f) 2.4	1957	23.0	1953	107.6
India	441,631	376	3.7	1958-59	19.3	1961	100.3
Indonesia	95,655	166	2.3	1953-54	20.0	1961	97.3
Pakistan	94,547	259	2.1	..	..	1961	111.0

NOTE.—See next page for footnotes.

POPULATION, DENSITY, RATE OF INCREASE, NATURAL INCREASE  
AND MASCULINITY—SELECTED COUNTRIES—*continued*

Country	Population mid-year 1961 (thous- ands)	Density 1961 (persons per square mile)	Annual rate of increase 1958-61 (per cent.)	Natural increase		Masculinity at latest census	
				Year	Rate (per thousand popula- tion)	Year	Rate (number of males per 100 females)
<i>Asia—continued</i>							
Japan .. ..	94,050	659	0.9	1962	9.5	1960	96.5
Philippines .. ..	28,727	248	3.3	..	..	1960	101.8
Thailand .. ..	27,181	137	3.0	1956	22.0	1960	100.4
Korea, Republic of .. ..	25,375	667	2.9	..	..	1960	100.7
Turkey (in Asia) .. ..	(a) 25,290	87	(b)	..	..	..	(b)
Burma .. ..	21,527	82	2.1	1955	15.0	..	(b)
Iran .. ..	20,678	32	1.7	1959	20.0	1956	103.6
Viet-Nam, North .. ..	16,690	272	2.1	..	..	1960	93.4
Viet-Nam, Republic of .. ..	14,494	220	3.9	..	..	..	(b)
Afghanistan .. ..	(a) 13,800	55	(b)	..	..	..	(b)
China (Taiwan) .. ..	10,971	790	3.7	1962	31.0	1956	103.8
Ceylon .. ..	10,167	401	2.7	..	..	1953	111.5
Nepal .. ..	9,388	173	1.8	1952-54	15.0	1961	97.3
Korea, North .. ..	8,430	178	2.6	..	..	..	(b)
Iraq .. ..	7,263	42	3.3	..	..	1957	100.7
Malaya .. ..	7,137	141	3.2	1960	31.4	1957	106.5
Saudi Arabia .. ..	(g) 6,036	10	(b)	..	..	..	(b)
Yemen .. ..	(a) 5,000	66	(b)	..	..	..	(b)
Cambodia .. ..	(a) 4,952	74	(b)	1959	21.7	1962	100.9
Syria .. ..	4,930	69	4.8	..	..	..	(b)
Hong Kong .. ..	3,178	7,985	3.6	1961	28.3	1961	105.8
Israel (Jewish population) .. ..	2,185	273	3.0	1962	16.5	1961	103.0
Laos .. ..	1,850	20	2.7	..	..	..	(b)
Jordan .. ..	1,690	45	2.0	..	..	..	(b)
Singapore .. ..	1,687	7,531	3.7	1962	28.2	1957	111.7
Lebanon .. ..	(a) 1,646	410	(b)	..	..	..	(b)
Western New Guinea (West Irian) .. ..	750	5	2.3	..	..	..	(b)
<i>EUROPE—</i>							
<i>Germany—</i>							
Federal Republic of .. ..	54,029	563	1.2	1962	7.0	1961	89.4
Eastern Germany .. ..	16,061	385	-0.4	..	..	1950	80.2
West Berlin .. ..	2,198	11,817	-0.4	1962	-6.0	1961	73.2
East Berlin .. ..	1,064	6,821	-1.1	..	..	1950	74.2
United Kingdom .. ..	52,925	562	0.7	1962	6.4	1961	93.7
Italy .. ..	49,732	428	0.7	1962	9.1	1961	96.1
France .. ..	45,983	216	1.0	1962	6.3	..	(b)
Spain .. ..	30,559	157	1.0	1962	12.3	1960	94.2
Poland .. ..	29,965	249	1.4	1962	11.7	1960	93.6
Yugoslavia .. ..	18,607	188	1.1	1962	12.3	1961	94.9
Romania .. ..	18,567	202	0.9	1961	8.8	1956	94.6
Czechoslovakia .. ..	13,776	279	0.7	1962	5.7	1961	95.2
Netherlands .. ..	11,637	897	1.3	1962	12.9	1947	99.1
Hungary .. ..	10,028	279	0.5	1962	2.1	1960	93.3
Belgium .. ..	9,184	780	0.5	1962	4.3	..	(b)
Portugal .. ..	8,872	251	0.5	1962	13.8	1960	92.7
Greece .. ..	8,402	166	0.9	..	..	1961	95.7
Bulgaria .. ..	7,943	186	0.9	1961	9.5	1956	99.6
Sweden .. ..	7,520	43	0.5	1962	4.1	1960	99.5
Austria .. ..	7,081	219	0.3	1962	5.9	1961	88.1
Switzerland .. ..	5,496	345	1.9	1962	8.9	1960	96.9
Denmark .. ..	4,617	278	0.7	1961	7.2	..	(b)
Finland .. ..	4,467	34	0.8	1962	8.6	1960	93.0
Norway .. ..	3,611	29	0.8	1962	8.0	1950	98.3
Ireland .. ..	2,815	104	-0.4	1962	9.9	1961	101.1
Turkey (in Europe) .. ..	(a) 2,271	249	(b)	..	..	..	(b)
Albania .. ..	1,660	150	3.3	..	..	1960	105.5
<i>Oceania—</i>							
Australia .. ..	10,508	4	2.2	1962	13.5	1961	102.2
New Zealand .. ..	2,420	23	2.0	1962	17.3	1961	101.0
New Guinea (Aust. Admin.) .. ..	1,449	16	2.6	..	..	..	(b)
Papua .. ..	523	6	2.4	..	..	..	(b)
Union of Soviet Socialist Republics .. ..	218,000	25	(h) 1.8	1961	16.6	1959	81.9

(a) 1960.

(c) 1958-60.

(A) 1959-61.

(b) Not available or available information relates to a segment of population only.

(d) Indigenous population.

(e) 1957.

(f) 1957-60.

(g) 1956.

## CHAPTER X

### VITAL STATISTICS

**NOTE.**—The tables in this chapter are confined to the principal characteristics of vital statistics for Australia, and relate, in the main, to the year 1962, except for the totals of marriages, births, deaths and infant deaths, for which it has been possible to include figures for 1963. Comparisons have been restricted, in general, to the individual years 1958 to 1963 and the five-year periods 1926–30 to 1956–60, while age data have been shown in five-year groups. Comparisons over longer periods, together with more detailed figures such as single age particulars and cross-classifications of various characteristics, will be found in the annual bulletin, *Demography*. Current information is published in the *Monthly Review of Business Statistics*, the *Quarterly Summary of Australian Statistics* and the *Australian Demographic Review* (a mimeographed series issued at intervals throughout the year on population and vital statistics).

Figures of births and deaths for Australia are exclusive throughout of full-blood Aborigines.

Vital statistics for the principal countries of the world are set out in § 7. International Vital Statistics.

#### § 1. Provisions for Registration and Compilation of Statistics

In Australia, vital statistics are compiled from information supplied for the registration of births, deaths and marriages. Each State and Territory has an independent system of registration. Provisions for the civil registration of births, deaths and marriages have been in force in Tasmania from 1839, in Western Australia from 1841, in South Australia from 1842, in Victoria from 1853, and in New South Wales and Queensland (then part of New South Wales) from 1856. Registration in the Territories is administered by the Commonwealth Government, registration in respect of the Northern Territory having been taken over from South Australia in 1911 and in respect of the Australian Capital Territory from New South Wales in 1930. The authority responsible for the registration of births, deaths and marriages occurring within his particular State or Territory is the Registrar-General (the Government Statist in Victoria) or the Principal Registrar.

New Registration of Births, Deaths and Marriages Ordinances came into operation in the Northern Territory and the Australian Capital Territory on 1st September, 1963. Under the provisions of these ordinances, information concerning a birth is required to be supplied to the Registrar of Births, Deaths and Marriages within 28 days, though provision has been made for late registration. For the registration of a death the period allowed is 14 days. Prior to 1st September, 1963, information concerning a birth was required within 21 days, and information concerning a death within 14 days. The provisions for the registration of marriages are those laid down in the *Marriage Act* 1961 which came into operation on 1st September, 1963 (*see below*).

Information concerning a birth is required to be supplied within 42 days in South Australia, while in other States a period of 60 days is allowed. For the registration of a death the period allowed is 8 days in Tasmania, 10 days in South Australia, 14 days in Western Australia, 21 days in Victoria and 30 days in New South Wales and Queensland.

The *Marriage Act* 1961 came into operation on 1st September, 1963, placing the Marriage Laws of all States, the mainland Territories and Norfolk Island on a uniform basis. Provision is made for the celebration of marriage by ministers of religion registered with the Registrar of Ministers of Religion appointed in each State and Territory by the Attorney-General, and by certain civil officers. In all cases, the authorized celebrant is required to register particulars of the parties married with the appropriate registering authority in each State or Territory. The celebrant is requested to register a marriage as soon as practicable and in any case not later than fourteen days after the marriage. Prior to the coming into operation of the *Marriage Act*, the celebrant was required to register particulars of the parties married with the Registrar-General (the Government Statist in Victoria) or the Principal Registrar immediately following the ceremony in Victoria, Western Australia, the Northern Territory and the Australian Capital Territory; within 7 days in Tasmania and South Australia; and within 30 days in New South Wales and Queensland.

The registration of stillbirths is compulsory in all the States and Territories, except Tasmania. Western Australia was the first State to introduce compulsory registration in 1908, followed by the Australian Capital Territory in 1930, New South Wales in 1935, South Australia in 1937, the Northern Territory in 1949, Victoria in 1953, and Queensland in 1959.

Prior to the bringing into operation of the new Registration of Births, Deaths and Marriages Ordinances on 1st September, 1963, the registration of a stillbirth was effected in the Northern Territory and the Australian Capital Territory as a birth and subsequent death. From 1st September, 1963, the Births, Deaths and Marriages Ordinances provides that a stillbirth shall be registered in the Register of Births. Registration is effected in New South Wales and Western Australia as a birth and subsequent death and in the other States as a stillbirth. Though registration is not compulsory in Tasmania, it is believed that for various reasons nearly all stillbirths are registered voluntarily. In this chapter, stillbirths have been excluded from all tables of births and deaths and are shown only in those specially relating to stillbirths.

The data for the compilation of vital statistics are obtained from registry records and dispatched, through the Statistical Office in each State and Territory, to the Commonwealth Statistician. The compilation and publication of vital statistics for Australia is one of the functions of the Commonwealth Statistician. The Deputy Commonwealth Statisticians compile and publish statistics relating to their respective States.

## § 2. Marriages

1. Number of Marriages.—The numbers of marriages registered in each State and Territory in five-year periods from 1926–30 to 1956–60, and for each of the years 1959 to 1963, are shown in the following table. Annual averages for each five-year period from 1861 to 1950 were published in Official Year Book No. 39, page 575. A graph showing the number of marriages in each year from 1870 to 1963 appears on page 317 of this issue.

### MARRIAGES

Period	N.S.W.	Vic.	Q'land	S. Aust.	W. Aust.	Tas.	N.T.	A.C.T.	Aust.
ANNUAL AVERAGES									
1926–30 ..	19,253	12,955	6,279	4,036	3,167	1,506	23	30	47,249
1931–35 ..	18,742	12,773	6,950	3,967	3,328	1,638	29	53	47,480
1936–40 ..	25,295	17,784	8,982	5,726	4,399	2,187	83	85	64,541
1941–45 ..	28,506	19,450	10,563	6,517	4,668	2,097	71	109	71,981
1946–50 ..	30,162	20,453	10,666	6,581	5,205	2,529	114	181	75,891
1951–55 ..	28,483	20,007	10,171	6,290	5,232	2,539	146	234	73,102
1956–60 ..	28,432	20,422	10,254	6,517	5,145	2,573	190	321	73,854
ANNUAL TOTALS									
1959 ..	28,201	20,456	10,581	6,614	5,387	2,567	205	352	74,363
1960 ..	29,328	20,627	10,227	6,607	5,323	2,713	208	395	75,428
1961 ..	29,773	21,264	10,392	6,804	5,150	2,677	207	419	76,686
1962 ..	30,360	22,393	10,642	7,021	5,466	2,485	243	480	79,090
1963 ..	30,999	22,061	11,431	7,302	5,755	2,708	260	529	81,045

2. Crude Marriage Rates.—The crude marriage rates for each State and Territory from 1926–30 to 1956–60, and for each of the years 1959 to 1963, are given hereunder.

### CRUDE MARRIAGE RATES(a)

Period	N.S.W.	Vic.	Q'land	S. Aust.	W. Aust.	Tas.	N.T.	A.C.T.	Aust..
AVERAGE ANNUAL RATES									
1926–30 ..	7.86	7.42	7.10	7.12	7.80	6.97	5.11	3.86	7.52
1931–35 ..	7.20	7.02	7.35	6.83	7.58	7.19	5.92	5.74	7.16
1936–40 ..	9.29	9.52	8.80	9.65	9.49	9.25	13.28	7.22	9.35
1941–45 ..	9.97	9.86	10.04	10.61	9.74	8.61	7.18	7.57	9.94
1946–50 ..	9.90	9.72	9.41	9.87	10.01	9.56	9.39	9.36	9.77
1951–55 ..	8.41	8.34	7.91	8.11	8.44	8.35	9.13	8.20	8.29
1956–60 ..	7.70	7.50	7.14	7.26	7.36	7.69	8.63	7.51	7.50

(a) Number of marriages per 1,000 of mean population.

## CRUDE MARRIAGE RATES—continued

Period	N.S.W.	Vic.	Q'land	S. Aust.	W. Aust.	Tas.	N.T.	A.C.T.	Aust.
ANNUAL RATES									
1959 ..	7.50	7.35	7.23	7.18	7.57	7.52	8.68	7.55	7.40
1960 ..	7.65	7.22	6.86	6.99	7.36	7.82	8.28	7.51	7.34
1961 ..	7.61	7.26	6.86	7.02	6.98	7.57	7.89	7.13	7.30
1962 ..	7.63	7.49	6.91	7.10	7.24	6.91	9.01	7.31	7.39
1963 ..	7.65	7.22	7.32	7.24	7.44	7.43	9.07	7.21	7.42

The crude marriage rates for Australia and the principal countries of the world are shown for the latest available year in § 7. International Vital Statistics.

3. **Marriage Rates based on Marriageable Population.**—As the marriage rates in some international tabulations are based on the unmarried population aged 15 years and over, the corresponding rates have been calculated for Australia for the nine census periods to 1960–62. The period in each case comprises the census year with the year immediately preceding and the year immediately following, and the figures are as follows.

## PERSONS MARRYING PER 1,000 OF UNMARRIED POPULATION: AUSTRALIA

Period	Rate(a)	Period	Rate(a)
1880–82 ..	48.63	1932–34 ..	42.88
1890–92 ..	44.04	1946–48 ..	71.24
1900–02 ..	42.14	1953–55 ..	65.32
1910–12 ..	50.12	1960–62 ..	62.27
1920–22 ..	55.97		

(a) Average annual number of persons who married per 1,000 unmarried persons, including widowed and divorced, aged 15 years and over.

4. **Age and Conjugal Condition at Marriage.**—(i) *General.* Particulars of age at marriage in age groups, and previous conjugal condition of bridegrooms and brides in 1962 are given hereunder. There were 8,924 males under 21 years of age married during 1962, while the corresponding number of females was 30,991. At the other extreme, there were 1,114 bridegrooms and 541 brides in the age group 65 years and over.

AGE AND CONJUGAL CONDITION OF BRIDEGROOMS AND BRIDES:  
AUSTRALIA, 1962

Age at marriage (years)	Bridegrooms				Brides			
	Bachelors	Widowers	Divorced	Total	Spinsters	Widows	Divorced	Total
Under 20 ..	4,496	..	..	4,496	21,387	5	5	21,397
20–24 ..	35,791	14	52	35,857	36,712	69	279	37,060
25–29 ..	19,023	63	424	19,510	7,656	188	806	8,650
30–34 ..	6,888	136	889	7,913	2,512	244	1,071	3,827
35–39 ..	2,751	177	980	3,908	1,129	350	1,033	2,512
40–44 ..	1,142	249	771	2,162	563	406	761	1,730
45–49 ..	509	363	578	1,450	363	461	538	1,362
50–54 ..	339	380	435	1,154	238	407	290	935
55–59 ..	173	431	296	900	139	331	131	601
60–64 ..	110	373	143	626	86	305	84	475
65 and over ..	101	875	138	1,114	64	432	45	541
<b>Total ..</b>	<b>71,323</b>	<b>3,061</b>	<b>4,706</b>	<b>79,090</b>	<b>70,849</b>	<b>3,198</b>	<b>5,043</b>	<b>79,090</b>



(ii) *Proportional Distribution.* In the following table, the proportional distribution of bridegrooms and brides according to previous conjugal condition is shown in five-year periods from 1926-30 to 1956-60 and for each of the years 1958 to 1962.

**CONJUGAL CONDITION OF BRIDEGROOMS AND BRIDES: PROPORTIONAL DISTRIBUTION, AUSTRALIA**

(Per cent.)

Period	Bridegrooms				Brides			
	Bachelors	Widowers	Divorced	Total	Spinsters	Widows	Divorced	Total
1926-30 ..	92.31	5.93	1.76	100.00	93.46	4.55	1.99	100.00
1931-35 ..	92.63	5.39	1.98	100.00	94.37	3.53	2.10	100.00
1936-40 ..	92.59	4.82	2.59	100.00	93.94	3.38	2.68	100.00
1941-45 ..	91.44	4.77	3.79	100.00	92.11	3.93	3.96	100.00
1946-50 ..	88.82	4.74	6.44	100.00	88.71	4.74	6.55	100.00
1951-55 ..	88.77	4.63	6.60	100.00	88.04	4.81	7.15	100.00
1956-60 ..	89.86	4.18	5.96	100.00	88.80	4.47	6.73	100.00
1958 ..	90.08	4.10	5.82	100.00	89.13	4.28	6.59	100.00
1959 ..	89.66	4.21	6.13	100.00	88.62	4.44	6.94	100.00
1960 ..	90.04	4.00	5.96	100.00	88.93	4.43	6.64	100.00
1961 ..	90.13	3.95	5.92	100.00	89.47	4.30	6.23	100.00
1962 ..	90.18	3.87	5.95	100.00	89.58	4.04	6.38	100.00

(iii) *Relative Ages of Bridegrooms and Brides.* The relative ages of bridegrooms and brides in 1962 are shown below in age groups of five years.

**RELATIVE AGES OF BRIDEGROOMS AND BRIDES: AUSTRALIA, 1962**

Age of bride (years)	Total bridegrooms	Age of bride (years)							
		Under 15	15-19	20-24	25-29	30-34	35-39	40-44	45 and over
Under 20 ..	4,496	19	3,828	628	19	1	1	..	..
20-24 ..	35,857	19	13,544	20,812	1,287	154	31	3	7
25-29 ..	19,510	5	3,265	11,734	3,590	685	179	39	13
30-34 ..	7,913	..	556	2,973	2,394	1,300	477	152	61
35-39 ..	3,908	..	116	687	934	988	716	318	149
40-44 ..	2,162	..	35	166	265	434	537	423	302
45-49 ..	1,450	..	5	40	102	152	311	350	490
50-54 ..	1,154	..	4	15	37	65	147	260	626
55-59 ..	900	..	..	1	13	38	75	106	667
60-64 ..	626	..	..	1	5	7	25	47	541
65 and over ..	1,114	..	1	3	4	3	13	32	1,058
<b>Total Brides</b>	<b>79,090</b>	<b>43</b>	<b>21,354</b>	<b>37,060</b>	<b>8,650</b>	<b>3,827</b>	<b>2,512</b>	<b>1,730</b>	<b>3,914</b>

(iv) *Average Ages of Bridegrooms and Brides.* The average age at marriage of brides and bridegrooms has declined during recent years. The average ages, in years, of brides for each of the five years to 1962 were:—1958, 25.00; 1959, 25.01; 1960, 24.84; 1961, 24.73 and 1962, 24.68. The average ages, in years, of bridegrooms were 28.36 in 1958, 28.39 in 1959, 28.15 in 1960, 28.07 in 1961 and 28.03 in 1962. The difference in the average age at marriage between brides and bridegrooms is generally just over three years, the difference in 1962 being 3.35 years.

5. Previous Conjugal Condition.—The following table shows the relative conjugal condition of bridegrooms and brides in 1962.

CONJUGAL CONDITION OF BRIDEGROOMS AND BRIDES: AUSTRALIA, 1962

Conjugal condition of bridegrooms	Total bridegrooms	Conjugal condition of brides		
		Spinsters	Widows	Divorced
Bachelors .. .. .	71,323	67,361	1,193	2,769
Widowers .. .. .	3,061	1,027	1,353	681
Divorced .. .. .	4,706	2,461	652	1,593
<b>Total Brides .. .. .</b>	<b>79,090</b>	<b>70,849</b>	<b>3,198</b>	<b>5,043</b>

6. Countries of Birth of Persons Marrying.—The following table shows the relative countries of birth of bridegrooms and brides married in 1962.

RELATIVE COUNTRIES OF BIRTH OF BRIDEGROOMS AND BRIDES:  
AUSTRALIA, 1962

Country of birth of bridegroom	Country of birth of bride											Total bridegrooms
	Australia	New Zealand	United Kingdom and Ireland	Germany	Greece	Italy	Netherlands	Poland	Yugoslavia	Other European	Other and unspecified	
Australia .. .. .	54,555	208	2,555	280	50	81	345	56	39	317	421	58,907
New Zealand .. .. .	427	30	35	1	..	2	3	2	..	2	7	509
United Kingdom and Ireland .. .. .	3,560	46	1,023	37	4	7	44	14	4	60	80	4,879
Germany .. .. .	499	11	90	348	7	10	39	16	14	72	25	1,131
Greece .. .. .	121	2	13	16	2,984	3	5	3	5	10	32	3,194
Italy .. .. .	673	12	61	43	30	2,773	21	5	44	64	43	3,769
Netherlands .. .. .	625	7	71	27	1	2	366	2	2	22	31	1,156
Poland .. .. .	134	4	19	43	4	5	2	213	8	50	11	493
Yugoslavia .. .. .	229	5	29	51	53	60	27	24	437	52	18	985
Other European .. .. .	940	17	152	156	43	26	42	56	41	887	65	2,425
Other and unspecified .. .. .	831	12	91	19	99	19	25	9	7	34	496	1,642
<b>Total Brides .. .. .</b>	<b>62,594</b>	<b>354</b>	<b>4,139</b>	<b>1,021</b>	<b>3,275</b>	<b>2,988</b>	<b>919</b>	<b>400</b>	<b>601</b>	<b>1,570</b>	<b>1,229</b>	<b>79,090</b>

7. Occupation of Bridegrooms.—The distribution of the 79,090 bridegrooms for 1962 amongst classes of occupations was as follows:—craftsmen, 26,286; labourers, 9,961; administrative and clerical workers, 9,793; rural and mining workers, 8,251; professional and technical workers, 7,082; workers in transport and communication, 5,994; service, sport and other workers, 5,393; sales workers, 5,066; persons not in the work force, 1,264.

8. Celebration of Marriages.—Under the provisions of the *Marriage Act 1961*, marriages may be celebrated either by ministers of religion who are registered for that purpose with the Registrar of Ministers of Religion in each State or Territory, or by certain civil officers, in most cases district registrars. Most of the marriages are celebrated by ministers of religion. The registered ministers in 1962 belonged to more than forty different denominations, some of which, however, have only very few adherents. A number of these have been combined under the heading "Other Christian". The figures for 1962 are shown in the following table.

## MARRIAGES IN EACH DENOMINATION, 1962

Denomination	N.S.W.	Vic.	Qld	S.A.	W.A.	Tas.	N.T.	A.C.T.	Australia	
									No.	Proportion of total
Roman Catholic	8,276	6,305	2,939	1,456	1,444	522	60	180	21,182	26.78
Church of England ..	9,195	5,069	2,809	1,433	1,599	855	41	114	21,115	26.70
Methodist ..	2,541	2,726	1,636	1,634	646	367	4	24	9,578	12.11
Presbyterian ..	2,993	3,345	1,734	267	380	124	15	38	8,896	11.25
Orthodox (Greek, Russian, etc.)	1,083	1,233	99	300	67	6	21	7	2,816	3.56
Baptist ..	466	323	214	170	62	64	..	6	1,305	1.65
Lutheran ..	170	262	270	384	21	7	2	10	1,126	1.42
Congregational Churches of Christ ..	255	292	112	244	115	43	..	1	1,062	1.34
Salvation Army	117	436	71	208	96	17	..	6	951	1.20
Seventh-day Adventist ..	130	113	90	42	32	19	1	1	428	0.54
United Church ..	91	48	32	28	31	3	..	..	233	0.29
Unitarian ..	..	..	..	2	..	..	58	..	60	0.08
Other Christian	1	31	..	1	..	..	..	..	33	0.04
Hebrew ..	233	144	192	78	152	47	5	..	851	1.08
Other Non-Christian ..	121	157	2	2	6	..	..	1	289	0.37
	..	..	..	1	..	..	..	..	1	0.00
<b>Total ..</b>	<b>25,672</b>	<b>20,484</b>	<b>10,200</b>	<b>6,250</b>	<b>4,651</b>	<b>2,074</b>	<b>207</b>	<b>388</b>	<b>69,926</b>	<b>88.41</b>
Civil Officers ..	4,688	1,909	442	771	815	411	36	92	9,164	11.59
<b>Grand Total</b>	<b>30,360</b>	<b>22,393</b>	<b>10,642</b>	<b>7,021</b>	<b>5,466</b>	<b>2,485</b>	<b>243</b>	<b>480</b>	<b>79,090</b>	<b>100.00</b>

## PROPORTION OF TOTAL

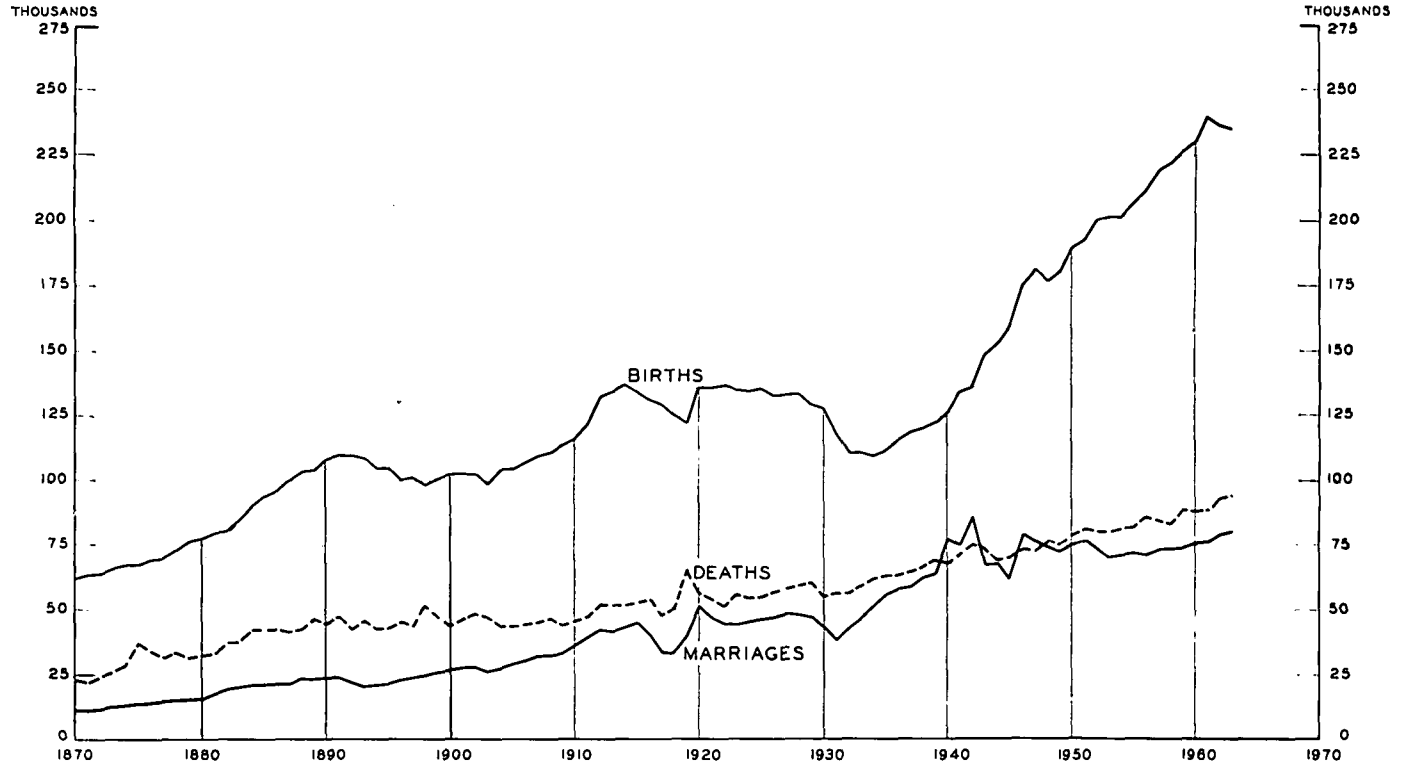
(Per cent.)

Denominational	84.56	91.48	95.85	89.02	85.09	83.46	85.19	80.83	88.41
Civil ..	15.44	8.52	4.15	10.98	14.91	16.54	14.81	19.17	11.59

## § 3. Divorce

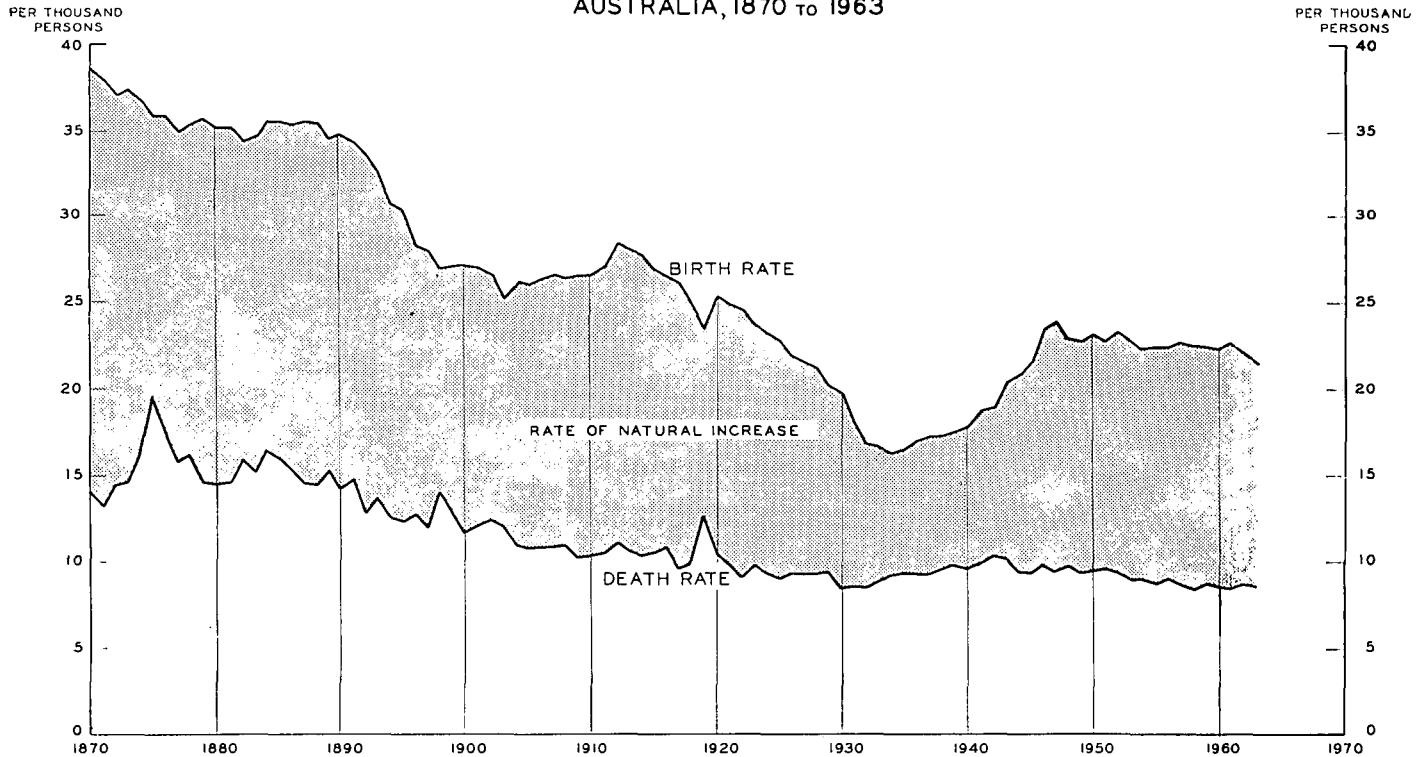
The number of dissolutions of marriage, nullities of marriage and judicial separations in 1962 was 7,265 and in 1963, 7,446. Further information may be found in Chapter XVII. Public Justice.

# BIRTHS, DEATHS, AND MARRIAGES : AUSTRALIA, 1870 to 1963

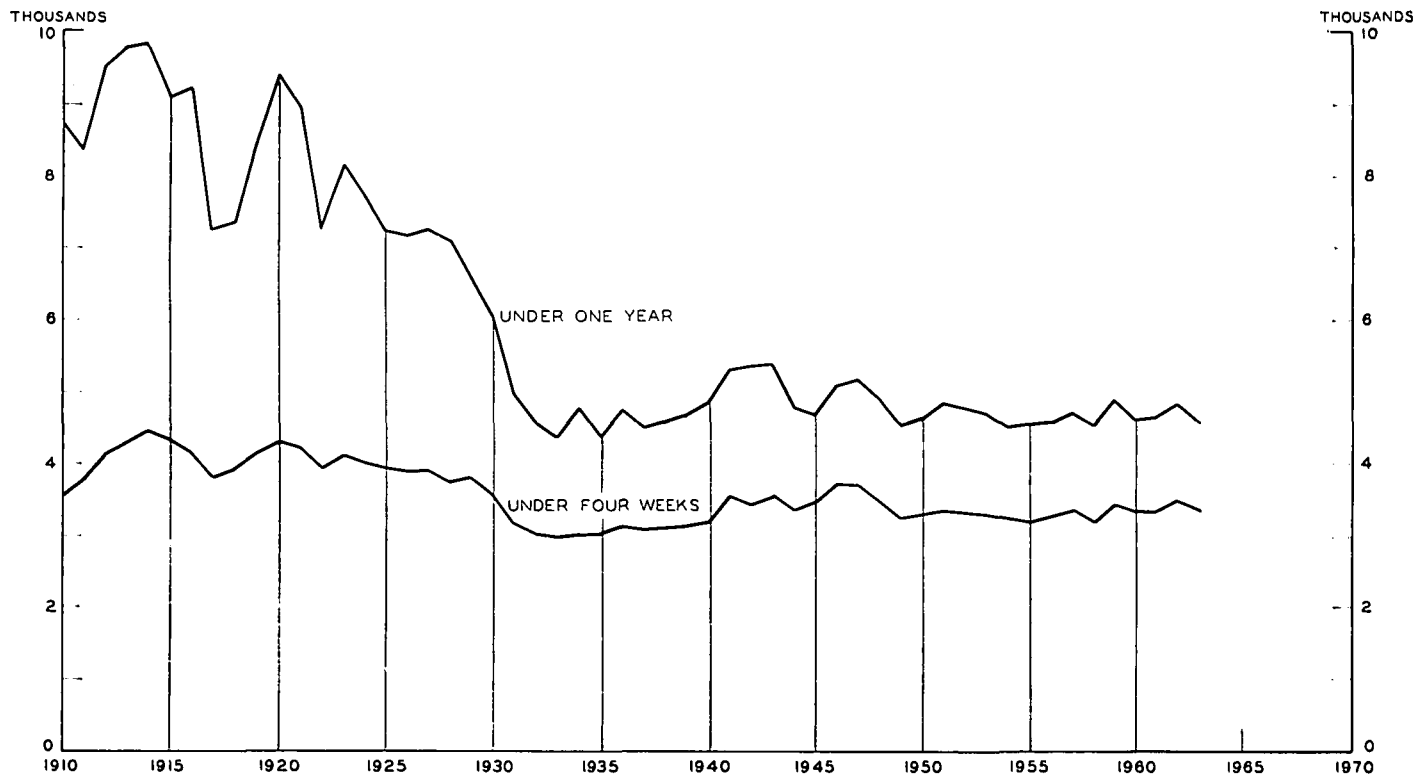


# RATES OF BIRTHS, DEATHS, AND NATURAL INCREASE

AUSTRALIA, 1870 TO 1963

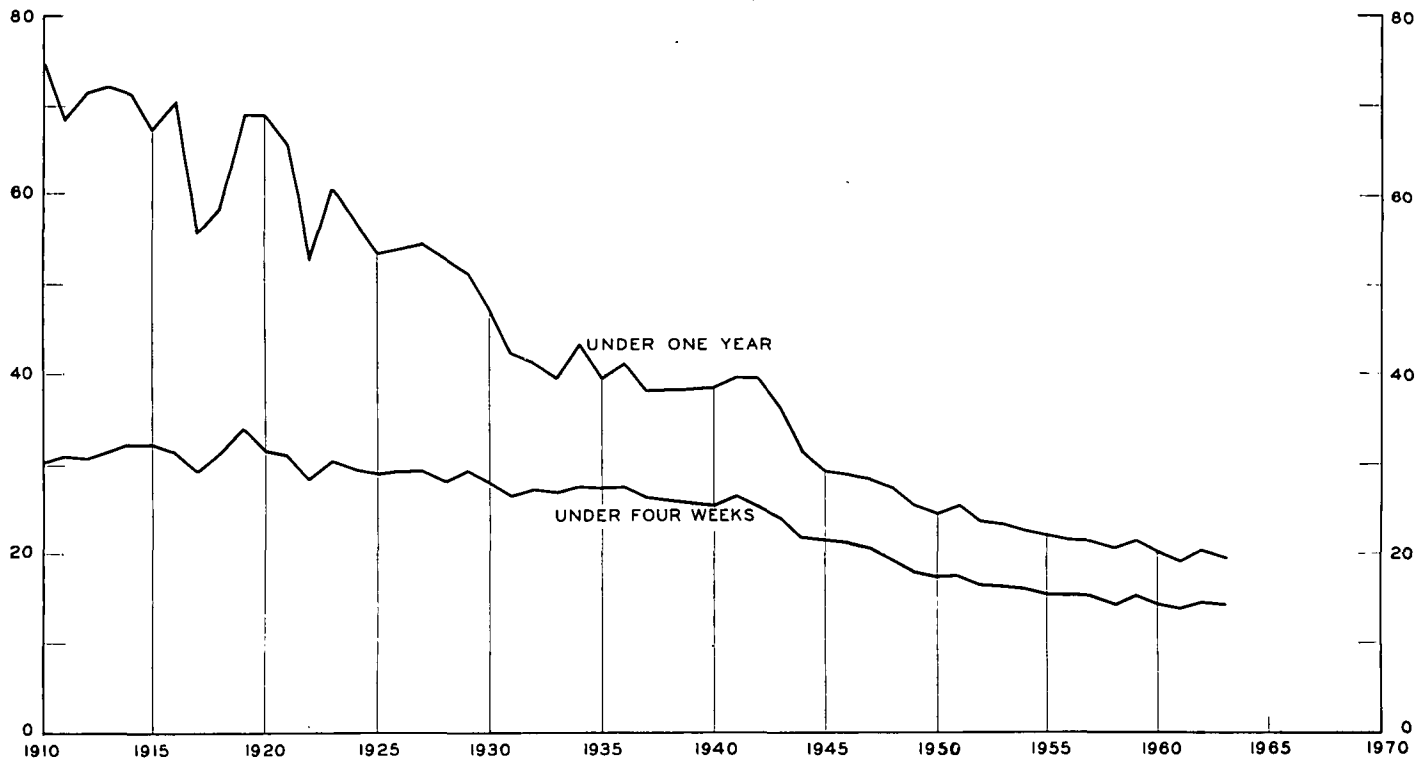


# INFANT DEATHS: AUSTRALIA, 1910 TO 1963



# INFANT MORTALITY RATES: AUSTRALIA, 1910 to 1963

(INFANT DEATHS PER 1,000 LIVE BIRTHS)



## § 4. Fertility and Reproduction

1. **Introduction.**—Of the two elements of increase in the population, natural increase and net migration, the former has been the more significant in Australia for many years. The level of natural increase depends on the excess of births over deaths, and the relation between fertility and mortality determines the rate of reproduction or replacement of the population.

2. **Number of Live Births and Confinements.**—(i) *Year 1962.* There are various methods of measuring the fertility of the population by relating the number of births to the numbers of the population. In each, the basic data are, of course, the numbers of live births.

The number of live births registered in Australia during 1962 is shown in the following table. The table shows also the number of confinements resulting in one or more live births. The figures exclude cases where the births were of still-born children only.

## LIVE BIRTHS AND CONFINEMENTS, 1962

Particulars	N.S.W.	Vic.	Q'land	S. Aust.	W.A.	Tas.	N.T.	A.C.T.	Aust.
LIVE BIRTHS									
Single births	83,522	64,391	34,994	20,883	16,763	8,671	904	1,793	231,921
Twins ..	1,875	1,462	687	475	298	220	20	26	5,063
Triples ..	38	37	9	3	3	3	..	..	93
Quadruplets	4	..	..	..	..	..	..	..	4
Males ..	44,014	33,876	18,354	11,003	8,824	4,629	495	915	122,110
Females ..	41,425	32,014	17,336	10,358	8,240	4,265	429	904	114,971
<b>Total ..</b>	<b>85,439</b>	<b>65,890</b>	<b>35,690</b>	<b>21,361</b>	<b>17,064</b>	<b>8,894</b>	<b>924</b>	<b>1,819</b>	<b>237,081</b>

## STILLBIRTHS ASSOCIATED WITH MULTIPLE BIRTHS INCLUDED ABOVE

Twins ..	43	12	11	7	4	8	2	..	87
Triples ..	4	2	..	..	..	..	..	..	6

## CONFINEMENTS RESULTING IN BIRTHS SHOWN ABOVE

Nuptial ..	79,786	62,217	32,893	20,123	15,917	8,324	814	1,783	221,857
Ex-nuptial ..	4,710	2,924	2,453	1,002	998	462	101	23	12,673
<b>Total ..</b>	<b>84,496</b>	<b>65,141</b>	<b>35,346</b>	<b>21,125</b>	<b>16,915</b>	<b>8,786</b>	<b>915</b>	<b>1,806</b>	<b>234,530</b>

NOTE.—Owing to the registration procedure adopted in some States, it is possible that in some cases where one child only of a multiple pregnancy was live-born, the confinement has been treated as a single birth. However, the numbers of multiple births are not significantly affected. See also para. 12, p. 327.

(ii) *Live Births, Years 1926 to 1963.* The average annual number of live births in each State and Territory for each five-year period from 1926 to 1960 and the total number of live births for each year from 1959 to 1963 are given in the following table. Corresponding figures for each five-year period from 1861 to 1950 were published in Year Book No. 39, page 583.



## LIVE BIRTHS

Period	N.S.W.	Vic.	Q'land	S. Aust.	W. Aust.	Tas.	N.T.	A.C.T.	Aust.
ANNUAL AVERAGES									
1926-30 ..	53,308	34,333	19,361	11,006	8,748	4,819	70	118	131,763
1931-35 ..	44,964	28,380	17,480	8,646	8,061	4,547	79	145	112,302
1936-40 ..	47,679	30,282	19,534	9,388	8,877	4,866	125	221	120,972
1941-45 ..	56,583	38,002	23,431	12,546	10,409	5,418	113	384	146,886
1946-50 ..	68,856	47,372	28,003	16,270	13,130	7,064	289	734	181,718
1951-55 ..	73,737	53,770	30,983	18,045	15,724	7,774	468	922	201,423
1956-60 ..	79,613	61,279	34,171	19,977	16,922	8,517	694	1,286	222,459

ANNUAL TOTALS									
1959 ..	80,866	62,245	35,599	20,372	17,111	8,625	796	1,362	226,976
1960 ..	81,983	64,025	35,213	20,966	16,926	8,853	777	1,583	230,326
1961 ..	86,392	65,886	36,637	22,399	17,078	8,982	878	1,734	239,986
1962 ..	85,439	65,890	35,690	21,361	17,064	8,894	924	1,819	237,081
1963 ..	84,065	65,649	35,934	21,367	17,290	8,530	859	1,995	235,689

A graph showing the number of births in each year from 1870 to 1963 will be found on page 317.

3. *Crude Birth Rates.*—The oldest and most popular method of measuring fertility is to relate the number of births to the total population, thus obtaining the *crude birth rate*. The crude birth rate measures the rate per thousand persons (irrespective of age or sex) at which the population has added to its numbers by way of births during a given period. Other methods of measuring fertility are shown on pages 323 *et seq.*

Crude birth rates for each five-year period from 1926 to 1960 and for each year from 1959 to 1963 for each State and Territory are set out below.

## CRUDE BIRTH RATES(a)

Period	N.S.W.	Vic.	Q'land	S. Aust.	W. Aust.	Tas.	N.T.	A.C.T.	Aust.
AVERAGE ANNUAL RATES									
1926-30 ..	21.76	19.65	21.90	19.41	21.54	22.29	15.60	14.96	20.98
1931-35 ..	17.28	15.60	18.48	14.89	18.36	19.95	15.99	15.77	16.94
1936-40 ..	17.51	16.20	19.48	15.82	19.16	20.58	19.96	18.68	17.52
1941-45 ..	19.79	19.27	22.28	20.43	21.72	22.23	11.40	26.82	20.28
1946-50 ..	22.60	22.51	24.69	24.41	25.24	26.71	23.77	37.92	23.39
1951-55 ..	21.78	22.42	24.11	23.25	25.37	25.58	29.37	32.22	22.86
1956-60 ..	21.55	22.52	23.80	22.27	24.20	25.45	31.49	30.10	22.59

ANNUAL RATES									
1959 ..	21.49	22.36	24.31	22.12	24.04	25.26	33.70	29.22	22.57
1960 ..	21.38	22.41	23.62	22.19	23.41	25.52	30.95	30.12	22.42
1961 ..	22.07	22.51	24.17	23.10	23.16	25.40	33.46	29.49	22.85
1962 ..	21.46	22.04	23.19	21.59	22.59	24.75	34.26	27.69	22.14
1963 ..	20.75	21.49	23.00	21.18	22.36	23.42	29.96	27.20	21.59

(a) Number of births per 1,000 of mean population.

NOTE.—The birth rates in the table above are based on *live births registered in the respective States and Territories*. Some confinements, however, take place in States other than the State in which the mother usually resides, particularly in areas near State borders.

The variations thus caused in the birth rates for the States and Territories by referring the birth registrations to the mother's usual residence are shown by the following corrected rates for 1963—New South Wales, 20.83; Victoria, 21.44; Queensland, 22.92; South Australia, 21.07; Western Australia, 22.39; Tasmania, 23.41; Northern Territory, 31.81; and Australian Capital Territory, 27.05.

See Year Book No. 47 (p. 339) for the effect of the variations in the availability of hospital facilities on the birth rate in the Australian Capital Territory and in the neighbouring town of Queanbeyan in New South Wales.

A graph showing the birth rate for each year from 1870 to 1963 will be found on page 318.

The crude birth rates of Australia and the principal countries of the world for the latest available year are shown in § 7. International Vital Statistics.

4. **Fertility Rates.**—The principal demographic factors affecting the level of crude birth rates are the proportion of women of child-bearing age in the population and the proportion of such women who are married. These factors may vary considerably at different periods and for different countries, and a population with a higher proportion of married women of child-bearing age will have a much higher crude birth rate than one with a low proportion, although the fertilities of the two populations may be identical.

In order to compare fertilities, births are sometimes related to the number of women of child-bearing age or, alternatively, nuptial births are related to the number of married women of child-bearing age. Thus births are related to potential mothers, giving the fertility rate.

The following table sets out for certain periods, commencing with 1880–82, the number of births per thousand of mean population, the number of births per thousand women of child-bearing age and the number of nuptial births per thousand married women of child-bearing age. For purposes of this table, the child-bearing age has been taken to be 15–44 years inclusive, but births to mothers who were stated to be under 15 or over 44 years have been included in the compilations.

#### CRUDE BIRTH RATES AND FERTILITY RATES: AUSTRALIA

Period	Average annual rates			Index nos. (Base: 1880–82 = 100)		
	Crude birth rate(a)	Fertility rates		Crude birth rate(a)	Fertility rates	
		Births per 1,000 women aged 15–44 years	Nuptial births per 1,000 married women aged 15–44 years		Births per 1,000 women aged 15–44 years	Nuptial births per 1,000 married women aged 15–44 years
1880–82.. ..	35.3	170	321	100	100	100
1890–92.. ..	34.5	159	332	98	94	103
1900–02.. ..	27.2	117	235	77	69	73
1910–12.. ..	27.2	117	236	77	69	74
1920–22.. ..	25.0	107	197	71	63	61
1932–34.. ..	16.7	71	131	47	42	41
1946–48.. ..	23.6	104	160	67	61	50
1953–55.. ..	22.7	109	149	64	64	46
1960–62.. ..	22.5	112	154	64	66	48

(a) Number of births per 1,000 of mean population.

The table above shows how increasing proportions both of women of child-bearing age and of married women of child-bearing age inflate the crude birth rate. Thus, while the nuptial birth rate for married women increased by only 22 per cent. over the period 1932–34 to 1946–48, the crude birth rate rose by 41 per cent. owing principally to the greatly increased number of marriages during that period.

5. **Age-specific Fertility Rates for Females.**—So long as customary ages at marriage do not change drastically, the main demographic factor affecting the number of births is the age composition of the potential mothers in the population. Within the child-bearing group, the fertility of women of different ages varies considerably, and a clearer view of the fertility of the population can be obtained from an examination of what are known as its age-specific fertility rates, that is, the number of births to women of specified ages per thousand women of those particular ages.

Age-specific fertility rates are more commonly expressed in age groups than in single ages. In the following table, such rates, calculated in terms of female births for the purpose of obtaining the gross and net reproduction rates described in para. 6, are shown in five-year age groups for Australia for the period 1926 to 1962.

#### AGE-SPECIFIC FERTILITY RATES(a): AUSTRALIA

Age group (years)	1926	1931	1936	1941	1946	1951	1956	1961	1962
15-19 .. ..	14.02	13.08	12.18	11.90	12.63	18.59	20.84	22.87	21.53
20-24 .. ..	60.23	53.08	50.33	59.42	73.52	85.84	101.46	110.01	104.53
25-29 .. ..	76.82	62.47	62.02	70.78	89.51	90.24	98.11	107.73	104.24
30-34 .. ..	61.90	51.25	46.33	49.72	65.03	59.16	59.65	63.62	62.35
35-39 .. ..	43.55	33.23	28.89	28.69	37.43	32.29	31.32	30.53	29.80
40-44 .. ..	17.63	13.61	10.19	9.52	11.87	9.97	9.48	9.36	8.80
45-49 .. ..	1.90	1.45	1.11	0.80	1.03	0.80	0.76	0.70	0.60

(a) Number of female births per 1,000 women in each age group.

6. **Gross and Net Reproduction Rates for Females.**—A single measure of reproduction, known as the gross reproduction rate, is obtained by adding together the specific fertility rates for each age in the child-bearing group. This measure indicates the number of female children who would be born on an average to women living right through the child-bearing period, if the conditions on which the rate is based continue. The rate is unaffected by the age composition of the potential mothers, and consequently it shows more clearly than the crude birth rate the reproductive propensity of the population. It is, however, an imperfect measure of reproduction because it does not take into account the females who fail to live from birth to the end of the reproductive period. A more accurate measure of this nature is obtained by multiplying the specific fertility rates by the number of females in the corresponding age group of the stationary or life table population and summing the products. Allowance is thus made for the effect of mortality, and the result is known as the net reproduction rate. The net reproduction rate indicates the average number of female children who would be born to women during their lifetime if they were subject at each age to the fertility and mortality rates on which the calculation is based. A constant net reproduction rate of unity indicates that the population will ultimately become stationary. If it continues greater than unity, the population will ultimately increase; if less than unity, it will ultimately decrease. The following table should be read in the light of the comment which follows it and of the index of marriage fertility in paragraph 8, page 325.

#### GROSS AND NET REPRODUCTION RATES: AUSTRALIA

Year	Gross reproduction rate	Net reproduction rate	Year	Gross reproduction rate	Net reproduction rate
1881(a) .. ..	2.65	(b) 1.88	1947 .. ..	1.493	(g) 1.416
1891(a) .. ..	2.30	(b) 1.73	1954 .. ..	1.558	(h) 1.497
1901(a) .. ..	1.74	(c) 1.39	1958 .. ..	1.667	(h) 1.603
1911 .. ..	1.705	(d) 1.421	1959 .. ..	1.678	(h) 1.614
1921 .. ..	1.511	(e) 1.313	1960 .. ..	1.677	(h) 1.613
1931 .. ..	1.141	(f) 1.039	1961 .. ..	1.724	(h) 1.658
1941 .. ..	1.154	(f) 1.053	1962 .. ..	1.659	(h) 1.596

(a) Approximate only. (b) 1881-1890 mortality experience used. (c) 1891-1900 mortality experience used. (d) 1901-1910 mortality experience used. (e) 1920-1922 mortality experience used. (f) 1932-1934 mortality experience used. (g) 1946-1948 mortality experience used. (h) 1953-1955 mortality experience used.

NOTE.—It is not strictly correct to assume, as in the calculations of the rates above, that a particular age-specific fertility rate can be applied to a hypothetical group of women reaching that age, without taking account of previous fertility and marriage experience. Reproduction rates are therefore unreliable when birth and marriage rates have been changing. The indexes of marriage fertility shown on the next page are also of doubtful reliability in similar circumstances.

7. **Gross and Net Reproduction Rates, Various Countries.**—In the following table, a comparison is given of the gross and net reproduction rates recorded for various countries in the period 1954 to 1962. These represent the latest available international comparisons.

GROSS AND NET REPRODUCTION RATES: VARIOUS COUNTRIES

Country	Period	Reproduction rate		Country	Period	Reproduction rate	
		Gross	Net			Gross	Net
Thailand ..	1954	2.26	1.70	England and Wales	1960	1.29	1.25
New Zealand(a) ..	1961	2.03	1.96	Finland ..	1960	1.29	1.22
Canada ..	1961	1.87	1.81	Austria ..	1960	1.28	1.19
United States of America(b) ..	1960	1.72	1.66	Belgium ..	1960	1.24	1.13
Australia(c) ..	1962	1.66	1.60	Denmark ..	1959	1.21	1.11
Ireland, Republic of	1955	1.59	1.45	Czechoslovakia ..	1959	1.16	1.04
Netherlands ..	1960	1.52	1.46	Germany—			
Portugal ..	1958	1.47	1.26	Federal Rep. ..	1959	1.16	(d)
Scotland ..	1961	1.42	1.37	Eastern ..	1955	1.13	(d)
Norway ..	1959	1.39	1.34	Switzerland ..	1959	1.15	1.09
France ..	1960	1.33	1.28	Sweden ..	1959	1.08	1.04
Yugoslavia ..	1959	1.31	1.08	Japan ..	1959	0.99	0.93
				Hungary ..	1960	0.98	0.91

(a) Excludes Maoris. (b) White population only. (c) Excludes full-blood aboriginals. (d) Not available. (e) 1960.

In comparing the reproduction rates of the countries shown above, allowance should be made for any differences in years, as the rates for any one country from year to year are affected by variations in the incidence of marriage, as well as the stationary or life table population used.

8. Fertility of Marriages.—More satisfactory estimates of the fertility of marriages may be made by relating nuptial confinements in each year to the marriages from which they could have resulted. Confinements of women of a certain number of years duration of marriage are related to the number of marriages taking place that number of years previously. The table below sets out this index of current fertility per marriage in respect of confinements in the individual years shown.

FERTILITY OF MARRIAGES: AUSTRALIA

Year	Nuptial confinements per marriage	Year	Nuptial confinements per marriage	Year	Nuptial confinements per marriage
1948 ..	2.44	1953 ..	2.66	1958 ..	2.88
1949 ..	2.45	1954 ..	2.66	1959 ..	2.93
1950 ..	2.56	1955 ..	2.71	1960 ..	2.96
1951 ..	2.55	1956 ..	2.76	1961 ..	3.05
1952 ..	2.63	1957 ..	2.87	1962 ..	2.98

NOTE.—See NOTE to table on p. 324.

The figure for a particular year gives the estimated number of children which a marriage would produce according to the fertility conditions of that year. The figures for 1949 and subsequent years present a somewhat inflated index, as many of the births which have been used to calculate the index relate to marriages of immigrants which took place overseas and consequently are not included in Australian marriage records. Partial investigation suggests that this factor probably overstated the index by very little in 1949, but that the overstatement at present is about 8 per cent.

9. Masculinity of Live Births.—The masculinity of live births, i.e., the number of males born for every 100 female births, has remained fairly stable for Australia at about 105. But when the number of births for which masculinity is being calculated is small (for example, totals for smaller States), considerable variation is shown. The averages for the ten years 1951-60 were as follows:—New South Wales, 105.38; Victoria, 105.50; Queensland, 105.80; South Australia, 104.89; Western Australia, 105.25; Tasmania, 104.96; Northern Territory, 107.16; Australian Capital Territory, 108.77; Australia, 105.43. The following table shows the figures for Australia for each ten-year period from 1901 to 1960 and for each of the years 1961 to 1963.

MASCULINITY<sup>(a)</sup> OF LIVE BIRTHS REGISTERED: AUSTRALIA

Particulars	1901-10	1911-20	1921-30	1931-40	1941-50	1951-60	1961	1962	1963
Total births ..	105.22	105.27	105.55	105.12	105.38	105.43	105.34	106.21	105.75
Ex-nuptial births	104.08	105.25	105.16	105.36	105.34	103.99	108.02	106.23	106.76

(a) Number of males born for every 100 female births.

10. Ex-nuptial Live Births.—(i) *General.* The variations in the proportions of ex-nuptial live births as between the individual States and Territories for 1963 are shown below.

## EX-NUPTIAL LIVE BIRTHS: NUMBER AND PROPORTION, 1963

Particulars	N.S.W.	Vic.	Q'land	S.A.	W.A.	Tas.	N.T.	A.C.T.	Aust.
Number ..	4,823	3,078	2,661	1,059	1,229	464	102	38	13,454
Proportion of total births %	5.74	4.69	7.41	4.96	7.11	5.44	11.87	1.90	5.71

The number and proportion of ex-nuptial births at intervals from 1901 to 1963 are as follows.

## EX-NUPTIAL LIVE BIRTHS: NUMBER AND PROPORTION, AUSTRALIA

Particulars	Annual average						1959	1960	1961	1962	1963
	1901-10	1911-20	1921-30	1931-40	1941-50	1951-60					
Number ..	6,498	6,836	6,238	5,133	6,780	9,013	10,687	10,987	12,269	12,813	13,454
Proportion of total births %	6.05	5.22	4.66	4.40	4.13	4.25	4.71	4.77	5.11	5.40	5.71

(ii) *Rate of Ex-nuptiality.* A further measure of ex-nuptiality is obtained by calculating the number of ex-nuptial births per thousand of the single, widowed and divorced female population aged from 15 to 44 years. On this basis, the number of ex-nuptial births per 1,000 unmarried women of ages 15 to 44 is as follows:—1880-82, 14.49; 1890-92, 15.93; 1900-02, 13.30; 1910-12, 12.53; 1920-22, 10.50; 1932-34, 6.91; 1946-48, 11.45; 1953-55, 14.45; and 1960-62, 18.49. Ex-nuptial births to married women, which are not recorded separately, are included in these figures and it is not possible to determine to what extent they influence the trend shown.

(iii) *Comparison of Rates.* The following table shows the relative ratios of ex-nuptial and nuptial births to the total population for periods from 1901.

## CRUDE EX-NUPTIAL, NUPTIAL, AND TOTAL BIRTH RATES (a): AUSTRALIA

Birth rate	Annual average						1961	1962	1963
	1901-10	1911-20	1921-30	1931-40	1941-50	1951-60			
Ex-nuptial ..	1.60	1.39	1.04	0.76	0.90	0.97	1.17	1.19	1.23
Nuptial ..	24.91	25.18	21.40	16.47	20.99	21.75	21.68	20.95	20.36
Total ..	26.51	26.57	22.44	17.23	21.89	22.72	22.85	22.14	21.59

(a) Number of births per 1,000 of mean population.

11. Legitimations.—Under the provisions of the *Commonwealth Marriage Act 1961*, which came into operation on 1st September, 1963, a child whose parents were not married to each other at the time of its birth becomes legitimized on the subsequent marriage of his parents. The legitimation takes place whether or not there was a legal impediment to the marriage of the parents at the time of the child's birth and whether or not the child was still living at the time of the marriage, or in the case of a child born before 1st September, 1963, at that date. Prior to the introduction of this Act, legitimations took place under Acts passed in the several States to legitimize children born before the marriage of their parents, provided that no legal impediment to the marriage existed at the time of birth. On registration in accordance with the provisions of the Legitimation Acts, any child who came within the scope of their purposes, born before or after the passing thereof, was deemed to be legitimate from birth by the post-natal union of its parents, and entitled to the status of offspring born in wedlock. During 1962, the number of children legitimized in Australia was 1,143.

12. Multiple Births.—Because the current Australian birth statistics are based only on those confinements which resulted in a live-born child, the number of confinements for multiple births for Australia is understated—firstly, because in cases where all children of a multiple birth are still-born the confinement is excluded, and secondly, because some cases of multiple births in which only one child was live-born are registered as single births.

During 1962, multiple births recorded on this basis comprised 2,575 cases of twins, 33 cases of triplets and 1 case of quadruplets, the resultant numbers of live-born and still-born children being respectively 5,063 and 87 for twins, 93 and 6 for triplets, and 4 liveborn children for quadruplets. This represents an average of 10.98 recorded cases of twins and 0.14 recorded cases of triplets per 1,000 confinements or, alternatively, mothers of twins represented 1 in every 91 mothers and mothers of triplets 1 in every 7,107. Total cases of multiple births represented 11.12 per 1,000 confinements or 1 in every 90 mothers.

The proportion of mothers of multiple births to total mothers does not vary greatly from year to year.

13. Ages of Parents.—The relative ages of the parents of children whose births were registered in 1962 have been tabulated separately for male and female births, multiple births being distinguished from single births. For total births and for multiple births, the relative ages of parents are shown in *Demography*, Bulletin No. 80. In the following table, the relative ages of parents are shown in five-year groups.

CONFINEMENTS: RELATIVE AGES OF PARENTS, AUSTRALIA, 1962

Age of father (years) and type of birth	Total	Age of mother (years)								
		Under 15	15-19	20-24	25-29	30-34	35-39	40-44	45 and over	Not stated
Under 20 .. .. .	2,649	4	2,213	425	7	..	..	..	..	..
20-24 .. .. .	39,533	6	9,936	27,046	2,374	151	17	2	..	4
25-29 .. .. .	67,559	2	2,522	32,153	29,585	2,968	298	27	..	1
30-34 .. .. .	57,758	..	485	8,964	25,879	19,724	2,534	165	6	1
35-39 .. .. .	33,360	..	99	1,707	6,807	14,099	9,710	923	15	..
40-44 .. .. .	13,927	..	29	300	1,208	3,723	6,102	2,515	50	..
45-49 .. .. .	4,967	..	5	88	334	908	1,904	1,568	160	..
50-54 .. .. .	1,498	..	3	28	94	257	521	512	83	..
55-59 .. .. .	415	..	3	12	21	68	126	153	32	..
60-64 .. .. .	133	..	..	2	10	31	47	39	4	..
65 and over .. .. .	58	..	..	3	5	10	16	20	4	..
Mothers of nuptial children	219,395	12	15,221	70,107	65,596	41,333	20,911	5,860	349	6
{ Single .. .. .	2,429	..	73	612	722	599	357	61	5	..
{ Twins .. .. .	33	..	1	9	6	7	7	3	..	..
{ Triplets(a) .. .. .	..	..	..	..	..	..	..	..	..	..
{ Total .. .. .	221,857	12	15,295	70,728	66,324	41,939	21,275	5,924	354	6
Mothers of ex-nuptial children	12,526	78	3,678	3,619	2,160	1,535	1,089	337	25	5
{ Single .. .. .	146	..	25	37	23	30	25	6	..	..
{ Twins .. .. .	1	..	..	..	1	..	..	..	..	..
{ Triplets .. .. .	..	..	..	..	..	..	..	..	..	..
{ Total .. .. .	12,673	78	3,703	3,656	2,184	1,565	1,114	343	25	5
Total Single .. .. .	231,921	90	18,899	73,726	67,756	42,868	22,000	6,197	374	11
Total Twins .. .. .	2,575	..	98	649	745	629	382	67	5	..
Total Triplets(a) .. .. .	34	..	1	9	7	7	7	3	..	..
Total .. .. .	234,530	90	18,998	74,384	68,508	43,504	22,389	6,267	379	11

(a) Includes 1 case of quadruplets.

14. Countries of Birth of Parents.—The following table shows the countries of birth of parents of children whose births from nuptial confinements were registered during 1962.

**NUPTIAL CONFINEMENTS: RELATIVE COUNTRIES OF BIRTH OF PARENTS,  
AUSTRALIA, 1962**

Country of birth of father	Country of birth of mother										Total fathers	
	Australia	New Zealand	United Kingdom and Ireland	Germany	Greece	Italy	Netherlands	Poland	Yugoslavia	Other European		Other and unspecified
Australia ..	164,647	526	5,132	317	104	222	560	77	61	449	1,012	173,107
New Zealand ..	594	143	45	4	..	..	3	..	..	8	8	805
United Kingdom and Ireland ..	7,261	75	5,541	71	4	23	56	11	5	107	246	13,400
Germany ..	729	10	103	1,268	5	12	53	20	21	120	25	2,366
Greece ..	318	2	14	12	3,734	10	4	2	12	21	60	4,189
Italy ..	1,717	12	111	51	26	8,628	46	6	76	108	79	10,860
Netherlands ..	1,068	13	150	55	4	5	2,539	4	8	34	108	3,988
Poland ..	386	5	59	140	9	12	19	620	17	120	35	1,422
Yugoslavia ..	383	2	48	96	46	101	26	27	1,041	106	23	1,899
Other European ..	1,751	18	260	294	76	82	81	82	113	2,998	139	5,894
Other and unspecified ..	1,513	21	260	41	137	32	115	12	10	87	1,699	3,927
<b>Total Mothers ..</b>	<b>180,367</b>	<b>827</b>	<b>11,723</b>	<b>2,349</b>	<b>4,145</b>	<b>9,127</b>	<b>3,502</b>	<b>861</b>	<b>1,364</b>	<b>4,158</b>	<b>3,434</b>	<b>221,857</b>

15. **Occupation of Fathers.**—In the 221,857 cases where nuptial confinements resulted in one or more live births, the classes of occupations of the fathers were distributed as follows:—craftsmen, 69,527; rural and mining workers, 30,106; administrative and clerical workers, 29,059; labourers, 23,685; workers in transport and communication, 20,588; professional and technical workers, 19,097; service, sport and other workers, 15,076; sales workers, 14,719.

16. **Age, Duration of Marriage and Issue of Mothers.**—(i) *General.* The total number of nuptial confinements resulting in live births in 1962 was 221,857, comprising 219,395 single births, 2,429 cases of twins, 32 cases of triplets and 1 case of quadruplets. The following tables relating to previous issue exclude the issue of former marriages and still-born children. On the other hand, they include in some States children by the same father who were born to the mother prior to the marriage. Children born at the present confinement are included in the total issue shown.

(ii) *Duration of Marriage and Issue of Mothers.* The following table shows that in 1962 the duration of marriage of mothers of nuptial children ranged from less than one year to over 25 years and that the average family increased fairly regularly with the duration of marriage. The average issue of married mothers who bore children in 1962 was 2.61, compared with 2.60 in 1961, 2.59 in 1960, 2.58 in 1959, and 2.56 in 1958.

**NUPTIAL CONFINEMENTS: DURATION OF MARRIAGE AND ISSUE OF  
MOTHERS, AUSTRALIA, 1962**

Duration of marriage	Total married mothers	Total issue	Average issue	Duration of marriage	Total married mothers	Total issue	Average issue
Under 1 year	30,527	31,076	1.02	15 years ..	3,031	15,405	5.08
1 year ..	25,266	32,745	1.30	16 " ..	2,277	11,992	5.27
2 years ..	25,409	45,234	1.78	17 " ..	1,466	7,913	5.40
3 " ..	22,484	47,870	2.13	18 " ..	1,172	6,704	5.72
4 " ..	19,215	47,076	2.45	19 " ..	1,023	6,064	5.93
5 " ..	16,590	45,992	2.77	20 " ..	840	5,080	6.05
6 " ..	14,438	44,203	3.06	21 " ..	535	3,404	6.36
7 " ..	11,918	39,684	3.33	22 " ..	343	2,290	6.68
8 " ..	9,885	35,185	3.56	23 " ..	199	1,411	7.09
9 " ..	8,388	32,037	3.82	24 " ..	110	798	7.25
10 " ..	7,347	29,363	4.00	25 years and over ..	131	1,129	8.62
11 " ..	6,200	26,478	4.27				
12 " ..	5,252	23,430	4.46				
13 " ..	4,141	19,363	4.68				
14 " ..	3,670	17,779	4.84				
				<b>Total ..</b>	<b>221,857</b>	<b>579,705</b>	<b>2.61</b>

(iii) *Age and Average Issue of Mothers.* The following table shows the average number of children born to mothers of different ages.

**NUPTIAL CONFINEMENTS: AGE AND AVERAGE ISSUE OF MOTHERS, AUSTRALIA**

Period	Age of mother (years)							All ages
	Under 20	20-24	25-29	30-34	35-39	40-44	45 and over	
Average issue of mothers								
1911-20 ..	1.21	1.75	2.61	3.74	5.11	6.69	8.16	3.25
1921-30 ..	1.20	1.71	2.46	3.48	4.80	6.27	7.74	3.04
1931-40 ..	1.20	1.68	2.30	3.19	4.41	5.89	7.40	2.71
1941-50 ..	1.17	1.56	2.15	2.85	3.67	4.79	6.19	2.37
1951-60 ..	1.23	1.71	2.42	3.12	3.84	4.63	5.57	2.51
1962(a) ..	1.26	1.80	2.61	3.41	4.07	4.79	5.38	2.61

(a) Excludes 6 nuptial confinements where the age of mother was not stated.

(iv) *Previous Issue of Mothers, Various Ages.* A classification of mothers by age and previous issue is given for 1962 in the following table.

**NUPTIAL CONFINEMENTS: AGE OF MOTHER AND PREVIOUS ISSUE, AUSTRALIA, 1962**

Previous issue	Age of mother (years)								Total married mothers
	Under 20	20-24	25-29	30-34	35-39	40-44	45 and over	Not stated	
0 ..	11,850	33,485	14,680	5,433	2,253	570	36	3	68,310
1 ..	3,029	23,693	20,299	8,404	2,938	558	28	..	58,949
2 ..	383	9,699	16,934	10,459	4,177	896	45	1	42,594
3 ..	43	2,920	8,744	8,189	4,319	1,037	47	1	25,300
4 ..	2	724	3,534	4,766	3,026	890	41	..	12,983
5 ..	..	180	1,390	2,399	1,988	631	46	1	6,635
6 ..	..	23	502	1,226	1,123	520	41	..	3,435
7 ..	..	4	167	600	615	310	17	..	1,713
8 ..	..	..	56	240	379	159	16	..	850
9 ..	..	..	14	144	218	136	13	..	525
10 and over ..	..	..	4	79	239	217	24	..	563
<b>Total Married Mothers ..</b>	<b>15,307</b>	<b>70,728</b>	<b>66,324</b>	<b>41,939</b>	<b>21,275</b>	<b>5,924</b>	<b>354</b>	<b>6</b>	<b>221,857</b>

(v) *Multiple Births—Previous Issue of Mothers.* Figures regarding the previous issue of married mothers of twins in 1962 show that 565 mothers had no previous issue either living or deceased, 588 had one child previously, 498 had two previous issue, 344 three, 213 four, 101 five, 65 six, 20 seven, 18 eight, 6 nine, 5 ten, 2 eleven, 2 twelve, 1 fifteen and 1 seventeen.

Of the 32 cases of nuptial triplets and one case of quadruplets registered during 1962, 8 mothers had no previous issue, 8 had one, 7 had two, 5 had three, 1 had four, and 4 had five previous issue.

17. *Nuptial First Births.*—(i) *Duration of Marriage.* The following table shows the interval between marriage and first birth for periods since 1911. In cases of multiple births, the first live-born child only is enumerated.



## NUPTIAL FIRST BIRTHS: DURATION OF MARRIAGE, AUSTRALIA

Duration of marriage	Annual average					1961	1962
	1911-20	1921-30	1931-40	1941-50	1951-60		
NUMBER OF NUPTIAL FIRST BIRTHS							
Under 8 months .. ..	9,312	10,351	10,677	8,822	11,796	15,883	16,198
8 months .. ..	1,562	1,530	1,417	2,104	2,144	2,324	2,180
9 " .. ..	3,517	3,253	2,668	4,298	4,673	5,212	4,808
10 " .. ..	2,877	2,907	2,202	3,447	3,947	4,244	3,847
11 " .. ..	2,018	2,152	1,836	2,896	3,287	3,401	3,256
<i>Total under 1 year</i> .. ..	<i>19,286</i>	<i>20,193</i>	<i>18,800</i>	<i>21,567</i>	<i>25,847</i>	<i>31,064</i>	<i>30,289</i>
1 year and under 2 years .. ..	8,563	10,133	10,595	17,762	18,463	18,722	18,167
2 years " " 3 " .. ..	2,626	3,369	4,319	8,028	7,937	7,654	7,625
3 " " " 4 " .. ..	1,230	1,743	2,214	4,361	4,373	4,406	4,213
4 " " " 5 " .. ..	700	941	1,205	2,569	2,632	2,697	2,585
5 " " " 10 " .. ..	980	1,446	1,766	3,936	4,262	4,534	4,380
10 " " " 15 " .. ..	168	240	289	501	721	901	848
15 years and over .. ..	42	55	55	94	144	199	203
<b>Total</b> .. ..	<b>33,595</b>	<b>38,120</b>	<b>39,243</b>	<b>58,818</b>	<b>64,379</b>	<b>70,177</b>	<b>68,310</b>

PROPORTION OF TOTAL NUPTIAL FIRST BIRTHS  
(Per cent.)

Under 8 months .. ..	27.72	27.15	27.21	15.00	18.32	22.63	23.71
8 months .. ..	4.65	4.01	3.61	3.58	3.33	3.31	3.19
9 " .. ..	10.47	8.53	6.80	7.31	7.26	7.43	7.04
10 " .. ..	8.56	7.63	5.61	5.86	6.13	6.05	5.63
11 " .. ..	6.01	5.65	4.68	4.92	5.11	4.85	4.77
<i>Total under 1 year</i> .. ..	<i>57.41</i>	<i>52.97</i>	<i>47.91</i>	<i>36.67</i>	<i>40.15</i>	<i>44.27</i>	<i>44.34</i>
1 year and under 2 years .. ..	25.49	26.58	27.00	30.20	28.68	26.68	26.60
2 years " " 3 " .. ..	7.82	8.84	11.01	13.65	12.33	10.91	11.16
3 " " " 4 " .. ..	3.66	4.57	5.64	7.41	6.79	6.28	6.17
4 " " " 5 " .. ..	2.08	2.47	3.07	4.37	4.09	3.84	3.78
5 " " " 10 " .. ..	2.92	3.79	4.50	6.69	6.62	6.46	6.41
10 " " " 15 " .. ..	0.50	0.63	0.73	0.85	1.12	1.28	1.24
15 years and over .. ..	0.12	0.15	0.14	0.16	0.22	0.28	0.30
<b>Total</b> .. ..	<b>100.00</b>	<b>100.00</b>	<b>100.00</b>	<b>100.00</b>	<b>100.00</b>	<b>100.00</b>	<b>100.00</b>

In 1962, the masculinity of nuptial first births was 106.66 and of total births 106.21.

(ii) *Age of Mother and Duration of Marriage.* A summary showing grouped ages and grouped durations of marriage of mothers of nuptial first-born children is given in the following table.

## NUPTIAL FIRST BIRTHS: AGE OF MOTHER AND DURATION OF MARRIAGE, AUSTRALIA, 1962

Duration of marriage	Age of mother (years)								Total
	Under 20	20-24	25-29	30-34	35-39	40-44	45 and over	Not stated	
NUMBER OF NUPTIAL FIRST BIRTHS									
Under 8 months .. ..	8,094	6,366	1,044	421	206	61	5	1	16,198
8 months .. ..	430	1,213	339	138	53	7	..	..	2,180
9 " .. ..	604	2,917	916	269	90	11	1	..	4,808
10 " .. ..	486	2,339	694	226	88	14	..	..	3,847
11 " .. ..	402	2,015	558	195	69	17	..	..	3,256
<i>Total under 1 year</i> .. ..	<i>10,016</i>	<i>14,850</i>	<i>3,551</i>	<i>1,249</i>	<i>506</i>	<i>110</i>	<i>6</i>	<i>1</i>	<i>30,289</i>
1 year and under 2 years .. ..	1,593	11,375	3,485	1,135	454	120	5	..	18,167
2 years " " 3 " .. ..	207	4,342	2,186	583	228	74	3	2	7,625
3 " " " 4 " .. ..	27	1,852	1,694	430	170	37	3	..	4,213
4 " " " 5 " .. ..	4	696	1,396	341	112	32	4	..	2,585
5 " " " 10 " .. ..	3	367	2,292	1,251	387	75	5	..	4,380
10 " " " 15 " .. ..	..	3	76	417	284	62	6	..	848
15 years and over .. ..	..	..	..	27	112	60	4	..	203
<b>Total</b> .. ..	<b>11,850</b>	<b>33,485</b>	<b>14,680</b>	<b>5,433</b>	<b>2,253</b>	<b>570</b>	<b>36</b>	<b>3</b>	<b>68,310</b>

(iii) *Nuptial First Births and Subsequent Births.* The following table provides a comparison between the numbers of nuptial first births and subsequent births in periods since 1911 and shows also the proportion of first to total nuptial confinements.

**NUPTIAL FIRST BIRTHS AND SUBSEQUENT BIRTHS: AUSTRALIA**

Period	Nuptial confinements			Proportion of first to total nuptial confinements (Per cent.)
	First births	Other births	Total	
<b>ANNUAL AVERAGES</b>				
1911-20 .. .. .	33,595	88,997	122,592	27.40
1921-30 .. .. .	38,120	88,086	126,206	30.20
1931-40 .. .. .	39,243	71,136	110,379	35.55
1941-50 .. .. .	58,818	96,994	155,812	37.75
1951-60 .. .. .	64,379	136,264	200,643	32.09
<b>ANNUAL TOTALS</b>				
1958 .. .. .	65,431	144,477	209,908	31.17
1959 .. .. .	66,717	147,145	213,862	31.20
1960 .. .. .	66,890	150,073	216,963	30.83
1961 .. .. .	70,177	155,105	225,282	31.15
1962 .. .. .	68,310	153,547	221,857	30.79

18. *Stillbirths.*—Interstate comparisons of the figures and rates in the following tables are affected by the differences in the definitions of stillbirths adopted by the various States, and only the trends in the rates for the States should be compared.

For various reasons, the registration of stillbirths is not as complete as for live births and deaths. Particulars for the Territories and smaller States are more affected on this account than are those for the larger States.

The number of stillbirths recorded in each State and Territory since 1936 is shown in the following table.

**STILLBIRTHS**

Period	N.S.W.	Vic.	Q'land	S. Aust.	W. Aust.	Tas.	N.T.	A.C.T.	Aust.
<b>ANNUAL AVERAGES</b>									
1936-40 ..	1,409	854	(a)	(b) 274	234	144	(a)	5	(a)
1941-45 ..	1,478	966	(c) 657	324	248	143	(a)	9	de 3,825
1946-50 ..	1,405	949	626	368	274	161	(a)	12	(e) 3,795
1951-55 ..	1,239	849	581	290	271	139	8	16	3,393
1956-60 ..	1,253	839	558	274	235	109	6	19	3,293
<b>ANNUAL TOTALS</b>									
1958 ..	1,208	826	548	240	225	105	5	14	3,171
1959 ..	1,241	799	553	281	225	109	5	18	3,231
1960 ..	1,261	850	551	280	226	106	13	22	3,309
1961 ..	1,306	885	553	272	240	111	17	19	3,403
1962 ..	1,099	775	520	278	203	102	9	20	3,006

(a) Not available. (b) Three years 1938-40. (c) Four years 1942-45. (d) Excludes Queensland for 1941. (e) Excludes Northern Territory.

The incidence of stillbirths in each State and Territory as measured by the rate per 1,000 of all births, both live and still, is as follows.

## PROPORTION OF STILLBIRTHS(a)

Period	N.S.W.	Vic.	Q'land	S. Aust.	W. Aust.	Tas.	N.T.	A.C.T.	Aust.
AVERAGE ANNUAL RATES									
1936-40 ..	28.71	27.43	(b)	c27.49	25.70	28.75	(b)	22.18	(b)
1941-45 ..	25.46	24.79	d26.76	25.17	23.29	25.68	(b)	22.87	ef 25.25
1946-50 ..	19.99	19.64	21.87	22.12	20.46	22.26	(b)	16.35	f 20.46
1951-55 ..	16.52	15.55	18.41	15.80	16.97	17.54	17.20	17.05	16.57
1956-60 ..	15.49	13.50	16.07	13.55	13.70	12.64	8.57	14.26	14.59
ANNUAL RATES									
1958 ..	14.87	13.30	15.92	11.83	13.27	12.11	7.12	10.86	14.05
1959 ..	15.11	12.67	15.30	13.61	12.98	12.48	6.24	13.04	14.04
1960 ..	15.15	13.10	15.41	13.18	13.18	11.83	16.46	13.71	14.16
1961 ..	14.89	13.25	14.87	12.00	13.86	12.21	18.99	10.84	13.98
1962 ..	12.70	11.63	14.36	12.85	11.76	11.34	9.65	10.88	12.52

(a) Numbers of stillbirths per 1,000 of all births (live and still). (b) Not available.  
 (c) Three years 1938-40. (d) Four years 1942-45. (e) Excludes Queensland for 1941.  
 (f) Excludes Northern Territory.

NOTE.—Because of the smallness of the numbers of stillbirths occurring in the Australian Capital Territory and the Northern Territory, the rates for these Territories (i.e. the number per thousand live births and stillbirths) are subject to considerable fluctuation.

## § 5. Mortality

1. Number of Deaths.—(i) Year 1963. The following table shows the number of deaths, male and female, registered in each State and Territory during the year. Stillbirths, although registered as both births and deaths in some States, are excluded from the death statistics published herein.

## DEATHS, 1963

Sex	N.S.W.	Vic.	Q'land	S. Aust.	W. Aust.	Tas.	N.T.	A.C.T.	Aust.
Males ..	20,594	14,709	7,878	4,678	3,444	1,601	119	189	53,212
Females ..	16,632	12,211	5,397	3,523	2,532	1,217	42	128	41,682
Persons ..	37,226	26,920	13,275	8,201	5,976	2,818	161	317	94,894

(ii) Years 1926 to 1963. A summary of the number of deaths in each State and Territory from 1926 to 1963 is given in the following table. Annual averages for each five-year period from 1861 to 1950 were published in Official Year Book No. 39, page 597.

## DEATHS

Period	N.S.W.	Vic.	Q'land	S. Aust.	W. Aust.	Tas.	N.T.	A.C.T.	Aust.
ANNUAL AVERAGES									
1926-30 ..	22,677	16,698	8,007	5,008	3,617	2,040	71	42	58,160
1931-35 ..	22,591	17,680	8,147	5,063	3,876	2,194	67	35	59,653
1936-40(a) ..	25,735	19,361	9,107	5,540	4,270	2,342	73	54	66,482
1941-45(a) ..	27,807	20,964	9,715	6,303	4,724	2,488	64	71	72,136
1946-50(a) ..	29,552	21,827	10,357	6,507	4,802	2,459	76	103	75,683
1951-55 ..	32,135	22,900	11,187	7,182	5,263	2,576	109	131	81,483
1956-60 ..	34,002	24,254	12,008	7,732	5,523	2,668	117	184	86,488
ANNUAL TOTALS									
1959 ..	35,249	25,078	12,349	7,943	5,497	2,780	124	192	89,212
1960 ..	35,030	24,547	12,370	7,804	5,697	2,670	134	212	88,464
1961 ..	35,048	24,500	12,756	7,815	5,729	2,789	128	196	88,961
1962 ..	36,861	25,847	13,182	8,232	5,810	2,870	144	217	93,163
1963 ..	37,226	26,920	13,275	8,201	5,976	2,818	161	317	94,894

(a) Excludes deaths of defence personnel and of internees and prisoners of war from overseas for the period September, 1939 to June, 1947.

A graph showing the number of deaths in each year from 1870 to 1963 will be found on page 317.

2. **Crude Death Rates.**—The commonest method of measuring the mortality rate is to relate the number of deaths for a given period to the mean population for that period, thus obtaining the crude death rate. This rate for a given period measures the number per thousand of population by which the population is depleted through deaths during that period. Crude death rates for each State and Territory from 1926 to 1963 are shown in the following table.

CRUDE DEATH RATES<sup>(a)</sup>

Period	N.S.W.	Vic.	Q'land	S. Aust.	W. Aust.	Tas.	N.T.	A.C.T.	Aust.
AVERAGE ANNUAL RATES									
1926-30 ..	9.26	9.56	9.06	8.83	8.91	9.44	15.83	5.36	9.26
1931-35 ..	8.68	9.72	8.62	8.72	8.83	9.63	13.46	3.81	9.00
1936-40 <sup>(b)</sup> ..	9.45	10.36	9.08	9.33	9.22	9.91	11.69	4.54	9.63
1941-45 <sup>(b)</sup> ..	9.73	10.63	9.24	10.26	9.86	10.21	6.43	4.98	9.96
1946-50 <sup>(b)</sup> ..	9.70	10.37	9.13	9.76	9.23	9.30	6.27	5.31	9.74
1951-55 ..	9.49	9.55	8.71	9.25	8.49	8.48	6.86	4.58	9.25
1956-60 ..	9.20	8.91	8.36	8.62	7.90	7.97	5.32	4.31	8.78

## ANNUAL RATES

1959 ..	9.37	9.01	8.43	8.62	7.72	8.14	5.25	4.12	8.87
1960 ..	9.14	8.59	8.30	8.26	7.88	7.70	5.34	4.03	8.61
1961 ..	8.95	8.37	8.42	8.06	7.77	7.89	4.88	3.33	8.47
1962 ..	9.26	8.64	8.56	8.32	7.69	7.99	5.34	3.30	8.70
1963—									
Males ..	10.12	9.58	9.92	9.19	8.76	8.68	7.01	4.92	9.66
Females ..	8.25	8.03	7.03	7.05	6.66	6.77	3.59	3.66	7.70
Persons ..	9.19	8.81	8.50	8.13	7.73	7.74	5.62	4.32	8.69

<sup>(a)</sup> Number of deaths per 1,000 of mean population.  
etc., from September, 1939 to June, 1947.

<sup>(b)</sup> Excludes deaths of defence personnel.

NOTE.—Crude death rates (i.e. the number of deaths per thousand of mean population) are affected by the particular age and sex composition of the population. In the Australian Capital Territory and the Northern Territory the population at risk in the higher ages is lower proportionately than in other States, largely as a result of the rapid increases of the population in the lower ages.

A graph showing the crude death rate for each year from 1870 to 1963 will be found on page 318.

3. **Standardized Death Rates.**—(i) *General.* The death rates quoted above are crude rates, i.e., they simply show the number of deaths per thousand of mean population without taking into consideration differences in the sex and age composition of the population. Other conditions being equal, however, the crude death rate of a community will be low if it contains a large proportion of young people (not infants), and conversely it will be relatively high if the population includes a large proportion of elderly people. The foregoing table of crude death rates, therefore, does not indicate comparative incidence of mortality either as between States in the same year or in any one State over a period of years. In order to obtain a comparison of mortality rates on a uniform basis as far as sex and age constitution are concerned, "standardized" death rates may be computed. These are computed by selecting a particular distribution of age and sex as a standard, and then calculating what would have been the general death rate if the death rates for each sex and in each age group had been as recorded, but the age and sex distribution had been the same as in the standard population. For the standardized rates which follow, the standard population compiled by the International Institute of Statistics has been used. This standard is based upon the age distribution according to sex of nineteen European countries at their censuses nearest to the year 1900.

An examination of the age distribution of deaths and the resultant age-specific death rates is made in paragraph 7, page 340.

(ii) *Comparison of Crude and Standardized Death Rates.* The relative incidence of mortality as between individual States and as between the years 1921, 1933, 1947, 1954 and 1961 is illustrated in the following statement of crude and "standardized" death rates. These years have been chosen for comparison because the census data give essential information as to sexes and ages of the State populations. Crude death rates are shown to indicate the degree to which they disguise the true position.

#### CRUDE AND STANDARDIZED DEATH RATES

Particulars	N.S.W.	Vic.	Q'land	S. Aust.	W. Aust.	Tas.	Aust.
<b>Crude death rate(a)—</b>							
1921 .. .. .	9.50	10.52	9.37	10.02	10.42	10.30	9.91
1933 .. .. .	8.58	9.59	8.84	8.44	8.64	9.60	8.92
1947 .. .. .	9.53	10.44	9.15	9.61	9.39	9.17	9.69
1954 .. .. .	9.46	9.20	8.63	9.01	8.38	8.67	9.10
1961 .. .. .	8.95	8.37	8.42	8.06	7.77	7.89	8.47
<b>Standardized death rate(b)—</b>							
1921 .. .. .	10.35	10.79	10.24	10.38	11.88	10.83	10.58
1933 .. .. .	8.52	8.74	9.10	7.66	8.74	8.86	8.62
1947 .. .. .	7.44	7.31	7.47	6.77	7.28	7.21	7.34
1954 .. .. .	7.24	6.63	6.80	6.52	6.71	7.02	6.90
1961 .. .. .	6.56	6.12	6.26	5.90	6.02	6.19	6.27

(a) Total deaths per 1,000 of mean population.  
in para. 3 (i) p. 333.

(b) See explanation of standardized death rates

The comparisons above relate to individual years in which a census of population was taken and should not be used as the basis for general conclusions as to changes in incidence of mortality for other than those years.

4. **True Death Rates.**—The main objections to standardized death rates are that the choice of a standard population is arbitrary and that the standardized rates have little value except for comparative purposes, and even then variation of the standard population may make appreciable differences. However, a correct measurement of the mortality of the population can be obtained from life tables. A life table represents the number of survivors at each age from a group of newly-born children who are subject to given mortality conditions, and from such a table the complete expectation of life at birth can be calculated. The reciprocal of this figure is known as the true death rate, since, if the complete expectation of life of a person at birth is 50 years, say, then each person will on the average die 50 years after birth, so that in a stationary population one person in 50 or 20 per thousand will die each year. The true death rate for a given period is unaffected by the particular age distribution of that period and is determined solely by the mortality experience of the period as manifested in the rate of survival from each year of age to the next. The table below sets out complete expectation of life at birth and true death rates for the periods covered by Australian life tables.

#### COMPLETE EXPECTATION OF LIFE AT BIRTH AND TRUE DEATH RATES: AUSTRALIA

Period	Complete expectation of life at birth (years)		True death rate	
	Males	Females	Males(a)	Females(b)
1881-1890 .. .. .	47.20	50.84	21.19	19.67
1891-1900 .. .. .	51.06	54.76	19.58	18.26
1901-1910 .. .. .	55.20	58.84	18.12	17.00
1920-1922 .. .. .	59.15	63.31	16.91	15.80
1932-1934 .. .. .	63.48	67.14	15.75	14.89
1946-1948 .. .. .	66.07	70.63	15.14	14.16
1953-1955 .. .. .	67.14	72.75	14.89	13.75

(a) Number of deaths per 1,000 males in stationary population.

(b) Number of deaths per 1,000 females in stationary population.

The crude death rates and the true death rates of Australia and the principal countries of the world for the latest available year are shown in the table in § 7. International Vital Statistics, pages 353-4.

5. *Australian Life Tables.*—(i) *Life Tables prior to 1954.* It has been the practice at each census from 1911 onwards to prepare Life Tables representative of the mortality experience of Australia. The mortality of the Australian population for the thirty years from 1881 to 1910 inclusive was investigated in 1911 by the Commonwealth Statistician. Tables were compiled for each State and for Australia as a whole in respect of each sex for each of the decennial periods 1881-1890, 1891-1900 and 1901-1910. These compilations furnished a comprehensive view of Australian mortality in respect of sex, time, and geographical distribution, and practically superseded all Life Tables prepared in Australia prior to 1911. In addition, monetary tables based on the experience for the whole of Australia for the ten years 1901-1910 were prepared and published.

At the Census of 1921, Life Tables were prepared by the Commonwealth Statistician from the recorded census population and the deaths in the three years 1920 to 1922. In 1933 and 1947, Life Tables based on the census population and the deaths in the years 1932 to 1934 and 1946 to 1948 respectively were compiled by the Commonwealth Actuary.

(ii) *Life Tables of Census of 1954.* On the occasion of the 1954 Census, the seventh Life Tables in the series were compiled by the Commonwealth Actuary. These were based on the population recorded at the Census, adjusted to allow for variation in the net movement into Australia over the years 1953 to 1955, and deaths during these years. Full particulars of the data used, the method of construction and the tabulations of these Life Tables will be found in the report of the Commonwealth Actuary, which was published by the Commonwealth Statistician in 1958. This report also appears in Volume VIII. of the detailed tables of the 1954 Census.

The main features of the tables are set out in the following summary table. Comparisons with earlier Australian tables and with the latest experience in the United Kingdom and New Zealand are provided in Year Book No. 48, pages 338-40.

LIFE TABLES, 1953-55

Age (x)	Males			Females		
	Rate of mortality ( $q_x$ )	Number of survivors ( $l_x$ )	Complete expectation of life ( ${}^e e_x$ )	Rate of mortality ( $q_x$ )	Number of survivors ( $l_x$ )	Complete expectation of life ( ${}^e e_x$ )
0 .. ..	.02521	100,000	67.14	.01989	100,000	72.75
10 .. ..	.00056	96,488	59.53	.00035	97,228	64.78
20 .. ..	.00186	95,460	50.10	.00064	96,774	55.06
30 .. ..	.00170	93,801	40.90	.00096	96,055	45.43
40 .. ..	.00297	91,861	31.65	.00217	94,715	36.00
50 .. ..	.00819	87,553	22.92	.00530	91,573	27.03
60 .. ..	.02221	76,256	15.47	.01203	84,665	18.78
70 .. ..	.05315	54,054	9.59	.03250	69,613	11.62
80 .. ..	.11958	23,658	5.47	.09314	39,633	6.30

$q_x$  = probability of dying within one year at specified ages.  $l_x$  = number surviving at specified ages out of 100,000 births.  ${}^e e_x$  = complete expectation of life at specified ages.

The following table shows a comparison of the complete expectation of life at selected ages for males and females as calculated from the life tables of 1920-22, 1932-34, 1946-48 and 1953-55.

COMPLETE EXPECTATION OF LIFE ( $e_x$ ) AT SELECTED AGES: AUSTRALIA

Age (x)	Males				Females			
	1920-22	1932-34	1946-48	1953-55	1920-22	1932-34	1946-48	1953-55
0 ..	59.15	63.48	66.07	67.14	63.31	67.14	70.63	72.75
10 ..	56.01	58.02	59.04	59.53	59.20	61.02	63.11	64.78
20 ..	46.99	48.81	49.64	50.10	50.03	51.67	53.47	55.06
30 ..	38.44	39.90	40.40	40.90	41.48	42.77	44.08	45.43
40 ..	30.05	31.11	31.23	31.65	33.14	34.04	34.91	36.00
50 ..	22.20	22.83	22.67	22.92	24.90	25.58	26.14	27.03
60 ..	15.08	15.57	15.36	15.47	17.17	17.74	18.11	18.78
70 ..	9.26	9.60	9.55	9.59	10.41	10.98	11.14	11.62
80 ..	5.00	5.22	5.36	5.47	5.61	6.01	6.02	6.30

6. Infant Deaths and Death Rates.—(i) States. (a) Under One Year. For each State and Territory, the number of deaths under one year of age and the rates of infant mortality during the period 1926 to 1963 were as follows.

## INFANT MORTALITY: UNDER ONE YEAR

Period	N.S.W.	Vic.	Q'land	S. Aust.	W. Aust.	Tas.	N.T.	A.C.T.	Aust.
ANNUAL AVERAGES									
1926-30 ..	2,918	1,797	918	517	431	257	5	8	6,851
1931-35 ..	1,885	1,214	690	304	329	202	6	5	4,635
1936-40 ..	1,963	1,139	718	311	352	201	6	5	4,695
1941-45 ..	2,034	1,311	804	413	347	213	7	7	5,136
1946-50 ..	1,990	1,129	770	431	370	187	11	14	4,902
1951-55 ..	1,852	1,113	730	407	384	184	17	14	4,701
1956-60 ..	1,770	1,205	717	410	362	176	25	18	4,683
ANNUAL TOTALS									
1959 ..	1,832	1,320	721	422	345	202	31	16	4,889
1960 ..	1,735	1,182	740	397	366	169	26	28	4,643
1961 ..	1,800	1,173	733	448	336	151	21	27	4,689
1962 ..	1,825	1,219	754	409	380	184	37	32	4,840
1963 ..	1,673	1,242	722	399	353	153	27	38	4,607
AVERAGE ANNUAL RATES(a)									
1926-30 ..	54.74	52.34	47.41	46.95	49.27	53.37	66.09	71.31	51.99
1931-35 ..	41.92	42.76	39.46	35.12	40.81	44.47	80.60	34.48	41.27
1936-40 ..	41.18	37.63	36.75	33.08	39.70	41.23	44.80	21.78	38.81
1941-45 ..	35.95	34.50	34.30	32.95	33.30	39.31	61.73	18.72	34.97
1946-50 ..	28.91	23.82	27.49	26.50	28.15	26.53	37.37	19.89	26.98
1951-55 ..	25.11	20.70	23.58	22.55	24.41	23.67	36.28	15.40	23.34
1956-60 ..	22.24	19.67	20.99	20.50	21.42	20.62	36.00	13.68	21.05
ANNUAL RATES(a)									
1959 ..	22.65	21.21	20.25	20.71	20.16	23.42	38.94	11.75	21.54
1960 ..	21.16	18.46	21.01	18.94	21.62	19.09	33.46	17.69	20.16
1961 ..	20.84	17.80	20.01	20.00	19.67	16.81	23.92	15.57	19.54
1962 ..	21.36	18.50	21.13	19.15	22.27	20.69	40.04	17.59	20.41
1963 ..	19.90	18.92	20.09	18.67	20.42	17.94	31.43	19.05	19.55

(a) Number of deaths of children aged under one year per 1,000 live births registered.

Compared with other countries, Australia occupies a favourable position in respect of infant mortality. In 1962, only a few countries recorded a lower rate than Australia. Rates for Australia and the principal countries of the world for the latest available year are shown in the tables in § 7. International Vital Statistics, pages 353-4.

(b) *Under Four Weeks.* The following table shows infant mortality rates under four weeks of age in each State and Territory during the period 1926 to 1962.

**INFANT MORTALITY RATES(a): UNDER FOUR WEEKS**

Period	N.S.W.	Vic.	Q'land	S. Aust.	W. Aust.	Tas.	N.T.	A.C.T.	Aust.
<b>AVERAGE ANNUAL RATES</b>									
1926-30 ..	29.63	29.75	27.66	26.84	25.10	33.12	14.37	28.86	28.96
1931-35 ..	27.62	27.78	27.91	22.99	25.11	30.09	35.26	23.45	27.27
1936-40 ..	27.63	25.94	26.15	21.62	22.62	29.56	28.80	16.33	26.19
1941-45 ..	24.52	24.40	24.41	20.86	20.60	27.24	33.57	12.54	23.97
1946-50 ..	20.53	17.55	19.95	18.38	19.53	19.34	21.45	15.80	19.34
1951-55 ..	17.34	15.18	17.09	14.95	17.27	16.34	19.63	11.28	16.45
1956-60 ..	16.04	14.50	15.15	13.67	15.01	13.29	24.19	9.64	15.07
<b>ANNUAL RATES</b>									
1958 ..	15.30	14.48	13.76	13.72	14.35	12.37	17.22	11.76	14.50
1959 ..	16.37	15.22	14.61	14.03	13.79	14.84	27.63	8.81	15.31
1960 ..	15.25	15.84	13.70	13.26	15.89	11.18	27.03	12.00	14.64
1961 ..	14.86	13.46	14.80	12.99	12.76	11.91	14.81	10.96	14.01
1962 ..	15.46	14.17	15.02	13.44	14.48	14.06	19.48	11.54	14.71

(a) Number of deaths of children aged under four weeks per 1,000 live births registered.

NOTE.—Because of the smallness of the numbers of these deaths occurring in the Australian Capital Territory and the Northern Territory, the rates for these Territories (i.e. number of such deaths per thousand live births) are subject to considerable fluctuation.

(c) *Four Weeks and under One Year.* Infant mortality rates for children aged four weeks and under one year are shown in the following table for the period 1926 to 1962.

**INFANT MORTALITY RATES(a): FOUR WEEKS AND UNDER ONE YEAR**

Period	N.S.W.	Vic.	Q'land	S. Aust.	W. Aust.	Tas.	N.T.	A.C.T.	Aust.
<b>AVERAGE ANNUAL RATES</b>									
1926-30 ..	25.11	22.59	19.75	20.11	24.17	20.25	51.72	42.45	23.03
1931-35 ..	14.30	14.98	11.55	12.13	15.70	14.38	45.34	11.03	14.00
1936-40 ..	13.55	11.69	10.60	11.46	17.08	11.67	16.00	5.45	12.62
1941-45 ..	11.77	10.33	10.14	12.34	12.77	12.30	22.40	6.21	11.27
1946-50 ..	8.38	6.27	7.54	8.12	8.62	7.19	15.92	4.09	7.64
1951-55 ..	7.77	5.52	6.49	7.60	7.14	7.33	16.65	4.12	6.89
1956-60 ..	6.19	5.17	5.85	6.84	6.41	7.33	11.81	4.04	5.98
<b>ANNUAL RATES</b>									
1958 ..	5.99	4.75	5.64	8.68	7.17	7.12	14.34	6.28	5.99
1959 ..	6.28	5.99	5.64	6.68	6.37	8.58	11.31	2.94	6.23
1960 ..	5.91	4.76	5.17	5.68	5.73	7.91	6.43	5.69	5.52
1961 ..	5.98	4.34	5.21	7.01	6.91	4.90	9.11	4.61	5.53
1962 ..	5.90	4.33	6.11	5.71	7.79	6.63	20.56	6.05	5.70

(a) Number of deaths of children aged four weeks and under one year per 1,000 live births registered.

NOTE.—Because of the smallness of the numbers of these deaths occurring in the Australian Capital Territory and the Northern Territory, the rates for these Territories (i.e. number of such deaths per thousand live births) are subject to considerable fluctuation.

(ii) *Australia. (a) Under One Year.* The fact that out of 593,835 male infants born from 1958 to 1962, 13,514 (22.76 per 1,000) died during the first year of life, while of 563,038 female infants only 10,107 (17.95 per 1,000) died during the first year, accords with the universal experience that during the first few years of life the higher death rate of male infants tends to counteract the excess of male births. Stillbirths, for which masculinity is also higher, are not included in any of the tables relating to deaths.



As shown by the following table, the disparity is greater during the first four weeks of life, termed the neonatal period, than during the remainder of the first year of life, or the post-neonatal period.

### INFANT DEATHS AND MORTALITY RATES: AUSTRALIA

Period	Number of deaths						Rates(a)					
	Neonatal— under four weeks		Post- neonatal— four weeks and under one year		Total under one year		Neonatal— under four weeks		Post- neonatal— four weeks and under one year		Total under one year	
	Males	Fe- males	Males	Fe- males	Males	Fe- males	Males	Fe- males	Males	Fe- males	Males	Fe- males
	ANNUAL AVERAGES						AVERAGE ANNUAL RATES					
1926-30 ..	2,203	1,612	1,706	1,330	3,909	2,942	32.50	25.20	25.16	20.79	57.66	45.99
1931-35 ..	1,763	1,299	886	687	2,649	1,986	30.62	23.73	15.38	12.55	46.00	36.28
1936-40 ..	1,816	1,353	863	663	2,679	2,016	29.30	22.93	13.93	11.23	43.23	34.16
1941-45 ..	2,007	1,495	914	720	2,921	2,215	26.66	20.88	12.14	10.05	38.80	30.93
1946-50 ..	2,024	1,490	784	604	2,808	2,094	21.68	16.86	8.40	6.84	30.08	23.70
1951-55 ..	1,907	1,406	776	612	2,683	2,018	18.47	14.32	7.52	6.24	25.99	20.56
1956-60 ..	1,921	1,432	741	589	2,662	2,021	16.81	13.24	6.48	5.45	23.29	18.69
	ANNUAL TOTALS						ANNUAL RATES					
1958 ..	1,822	1,404	767	567	2,589	1,971	15.99	12.93	6.73	5.23	22.72	18.16
1959 ..	2,017	1,458	777	637	2,794	2,095	17.35	13.17	6.69	5.75	24.04	18.92
1960 ..	1,934	1,437	717	555	2,651	1,992	16.33	12.84	6.06	4.96	22.39	17.80
1961 ..	1,951	1,410	739	589	2,690	1,999	15.85	12.06	6.00	5.04	21.85	17.10
1962 ..	2,038	1,451	752	599	2,790	2,050	16.69	12.62	6.16	5.21	22.85	17.83

(a) Number of deaths per 1,000 male or female live births registered.

(b) *Under Four Weeks.* The following table shows particulars of infant deaths in the first four weeks of life, or the neonatal period, from 1931 to 1962. It will be seen that for both males and females the risk of death is very much greater during the first day of life than subsequently.

### INFANT DEATHS AND MORTALITY RATES—UNDER FOUR WEEKS: AUSTRALIA

Period	Number of deaths						Rates(a)					
	Early neonatal				Late neonatal— one week and under four weeks		Early neonatal				Late neonatal— one week and under four weeks	
	Under one day		One day and under one week				Under one day		One day and under one week			
Males	Fe- males	Males	Fe- males	Males	Fe- males	Males	Fe- males	Males	Fe- males	Males	Fe- males	
	ANNUAL AVERAGES						AVERAGE ANNUAL RATES					
1931-35 ..	(b)	(b)	c 1,442	c 1,066	321	233	(b)	(b)	c 25.04	c 19.48	5.58	4.25
1936-40 ..	(b)	(b)	c 1,496	c 1,120	320	233	(b)	(b)	c 24.13	c 18.99	5.17	3.94
1941-45 ..	906	674	728	541	373	280	12.03	9.42	9.67	7.55	4.96	3.91
1946-50 ..	986	731	758	539	280	220	10.56	8.28	8.12	6.09	3.00	2.49
1951-55 ..	918	713	742	508	247	185	8.88	7.26	7.19	5.17	2.40	1.89
1956-60 ..	972	765	705	490	244	177	8.50	7.07	6.17	4.53	2.13	1.64
	ANNUAL TOTALS						ANNUAL RATES					
1958 ..	927	737	659	486	236	181	8.14	6.79	5.78	4.48	2.07	1.66
1959 ..	1,003	784	762	497	252	177	8.63	7.08	6.55	4.49	2.17	1.60
1960 ..	967	755	715	516	252	166	8.17	6.75	6.04	4.61	2.13	1.48
1961 ..	976	744	739	490	236	176	7.93	6.36	6.00	4.19	1.92	1.51
1962 ..	1,080	733	719	548	239	170	8.84	6.38	5.89	4.76	1.96	1.48

(a) Number of deaths per 1,000 male or female live births registered. (b) Not available. (c) Includes under one day.

Graphs showing infant deaths and infant mortality rates for each year from 1910 to 1963 will be found on pages 319 and 320 respectively.

(iii) *Causes of death—Children under One Year.* (a) *Numbers.* Causes of death of children under one year of age should be considered in relation to age at death, because the emphasis on various causes changes rapidly as age at death varies.

A summary for 1962 of deaths of children under one year of age, classified according to principal causes of death and age at death, is given in the following table.

## CAUSES OF DEATH: CHILDREN UNDER ONE YEAR OF AGE, AUSTRALIA, 1962

Inter-national Statistical Classification number	Cause of death	Age at death										Total under one year
		Days		Total under one week	Weeks			Months				
		Under 1	1-6		1	2	3	1-2 (a)	3-5	6-8	9-11	
	Causes mainly of pre-natal and natal origin—											
750-759	Congenital malformations ..	169	214	383	95	43	42	159	104	56	30	912
760, 761	Birth injury ..	402	261	663	23	2	..	2	..	..	..	690
762	Post-natal asphyxia and atelectasis ..	376	228	604	9	4	2	6	4	1	2	632
769	Attributed to maternal toxæmia ..	55	23	78	1	1	..	1	..	..	..	81
770	Erythroblastosis ..	81	42	123	6	1	..	..	..	..	..	130
771	Haemorrhagic disease of the newborn ..	14	36	50	1	1	2	5	..	..	..	59
773	Ill-defined diseases of early infancy ..	93	94	187	9	1	..	7	4	3	..	211
774-776	Immaturity alone, or primary to diseases other than of early infancy ..	560	258	818	23	4	3	5	..	..	..	853
	<i>Total</i> ..	1,750	1,156	2,906	167	57	49	185	112	60	32	3,568
	Causes mainly of post-natal origin—											
571, 764	Gastro-enteritis (including diarrhoea of newborn) ..	..	1	1	..	5	5	24	34	29	20	118
(b)	Pneumonia and bronchitis ..	13	49	62	28	17	22	95	114	83	45	466
(c)	Septicæmia, skin and subcutaneous tissue infections, sepsis of newborn ..	..	12	12	4	3	4	8	8	5	3	47
057, 340	Meningococcal infections and non-meningococcal meningitis ..	2	8	10	7	4	2	13	11	14	7	68
(d)	Causes classified as infective or mainly infective in origin not specified above ..	..	..	..	1	3	2	24	39	24	11	104
E921-E925	Accidental mechanical suffocation from vomit, food, foreign body or in cot ..	..	5	5	..	1	2	33	39	11	11	102
E926, E980-E985	Lack of care, neglect, infanticide ..	12	..	12	1	..	..	1	..	2	2	18
(e)	Other accidents, poisonings and violence ..	2	2	4	3	1	..	5	7	11	16	47
	<i>Total</i> ..	29	77	106	44	34	37	203	252	179	115	970
140-239	Neoplasms ..	1	3	4	2	..	..	2	6	2	5	21
Residual	Other causes remaining ..	33	31	64	10	4	5	49	69	44	36	281
	<i>All Causes</i> ..	1,813	1,267	3,080	223	95	91	439	439	285	188	4,840

(a) Age four weeks and under three months. (b) 490-493, 500-502, 763. (c) 053, 690-698, 765-768. (d) 001-052, 054-056, 058-138, 391-393, 470-483, 518, 519. (e) E800-E920, E927-E979, E990-E999.

(b) *Proportions.* The following table summarizes the detail contained in the previous table, and, in addition, shows the proportions of deaths from the various causes in each of the periods—under one week, one week and under one month, one month and under one year, and total under one year.

**CAUSES OF DEATH: CHILDREN UNDER ONE YEAR OF AGE—NUMBERS AND PROPORTIONS, AUSTRALIA, 1962**

Inter-national Statistical Classification number	Cause of death	Age at death						Total under one year	
		Under one week		One week and under one month		One month and under one year		Number	Per cent.
		Number	Per cent.	Number	Per cent.	Number	Per cent.		
	Causes mainly of pre-natal and natal origin—								
750-759	Congenital malformations ..	383	12.5	180	44.0	349	25.8	912	18.8
760, 761	Birth injury ..	663	21.5	25	6.1	2	0.2	690	14.2
762	Post-natal asphyxia and atelectasis ..	604	19.6	15	3.7	13	1.0	632	13.1
769	Attributed to maternal toxæmia ..	78	2.5	2	0.5	1	..	81	1.7
770	Erythroblastosis ..	123	4.0	7	1.7	..	..	130	2.7
771	Haemorrhagic disease of the newborn ..	50	1.6	4	1.0	5	0.4	59	1.2
773	Ill-defined diseases of early infancy ..	187	6.1	10	2.4	14	1.0	211	4.4
774-776	Immaturity alone, or primary to diseases other than of early infancy ..	818	26.6	30	7.4	5	0.4	853	17.6
	<i>Total</i> .. ..	2,906	94.4	273	66.8	389	28.8	3,568	73.7
	Causes mainly of post-natal origin—								
571, 764	Gastro-enteritis (including diarrhoea of newborn) ..	1	..	10	2.4	107	7.9	118	2.5
(a)	Pneumonia and bronchitis ..	62	2.0	67	16.4	337	25.0	466	9.6
	Other .. ..	43	1.4	38	9.3	305	22.5	386	8.0
	<i>Total</i> .. ..	106	3.4	115	28.1	749	55.4	970	20.1
140-239, residual	Neoplasms and other causes remaining .. ..	68	2.2	21	5.1	213	15.8	302	6.2
	<i>All Causes</i> .. ..	3,080 (63.6 %)	100.0	409 (8.5 %)	100.0	1,351 (27.9 %)	100.0	4,840 (100.0 %)	100.0

(a) 490-493, 500-502, 763.

7. Age Distribution.—(i) *Number of Deaths.* Age at death is recorded for statistical purposes in days for the first week of life, in weeks for the first four weeks, in months for the first year and in completed years of life thereafter. These ages are usually combined in groups for publication, the most common being weeks for the first four weeks, months or groups of months for the first year, single years of age of the first five years and thereafter the five-year groups 5-9 years, 10-14 years, etc. A summary in this form for the year 1962 is given for Australia in the following table.

## AGE AT DEATH: AUSTRALIA, 1962

Age at death	Males	Fe- males	Per- sons	Age at death	Males	Fe- males	Per- sons
Under 1 week .. .. .	1,799	1,281	3,080	5- 9 years .. .. .	291	187	478
1 week and under 2 weeks ..	132	91	223	10-14 .. .. .	232	134	366
2 weeks and under 3 weeks ..	57	38	95	15-19 .. .. .	511	211	722
3 weeks and under 4 weeks ..	50	41	91	20-24 .. .. .	625	212	837
				25-29 .. .. .	515	211	726
<i>Total under 4 weeks ..</i>	<i>2,038</i>	<i>1,451</i>	<i>3,489</i>	30-34 .. .. .	641	329	970
				35-39 .. .. .	927	533	1,460
4 weeks and under 3 months	240	199	439	40-44 .. .. .	1,277	769	2,046
3 months and under 6 months	237	202	439	45-49 .. .. .	2,106	1,177	3,283
6 months and under 12 months	275	198	473	50-54 .. .. .	3,027	1,612	4,639
				55-59 .. .. .	4,131	1,872	6,003
<i>Total under 1 year ..</i>	<i>2,790</i>	<i>2,050</i>	<i>4,840</i>	60-64 .. .. .	5,189	2,823	8,012
				65-69 .. .. .	6,215	4,034	10,249
1 year .. .. .	189	188	377	70-74 .. .. .	7,582	5,796	13,378
2 years .. .. .	143	106	249	75-79 .. .. .	6,848	6,337	13,185
3 .. .. .	98	59	157	80-84 .. .. .	4,928	5,921	10,849
4 .. .. .	70	54	124	85-89 .. .. .	2,818	3,955	6,773
				90-94 .. .. .	993	1,713	2,706
<i>Total under 5 years ..</i>	<i>3,290</i>	<i>2,457</i>	<i>5,747</i>	95-99 .. .. .	195	451	646
				100 years and over ..	15	43	58
				Age not stated .. ..	22	8	30
				<b>Total, All Ages ..</b>	<b>52,378</b>	<b>40,785</b>	<b>93,163</b>

There are different mortality rates at various stages of life, and the actual number of deaths in any period is related to the numbers living at the respective stages. Changes in the number of deaths from one period to another are associated with changes in the rate of mortality in the various age groups and by the changed proportions of persons living in the different groups.

The combined effect of various influences, i.e. the steady decline in the rate of mortality, the long-term decline in the birth-rate, and the effects of past and present migration on the age distribution of the population, is shown in the following table, which shows the proportion of deaths in various age groups in ten-year periods from 1901 to 1960 and for the year 1962.

## PROPORTION OF DEATHS IN EACH AGE GROUP: AUSTRALIA

(Per cent.)

Period	Age at death (years)								Total
	Under 1	1-4	5-19	20-39	40-59	60-64	65 and over	Unspeci- fied	
1901-10 ..	20.51	6.45	6.37	14.99	17.99	5.31	28.26	0.12	100.00
1911-20 ..	16.66	6.09	5.49	14.44	20.32	6.19	30.68	0.13	100.00
1921-30 ..	13.10	4.51	4.85	12.12	20.55	8.26	36.53	0.08	100.00
1931-40 ..	7.40	2.56	3.83	9.36	20.54	8.36	47.92	0.03	100.00
1941-50 ..	6.79	1.71	2.26	6.01	19.04	9.33	54.84	0.02	100.00
1951-60 ..	5.59	1.33	1.80	4.90	17.27	9.18	59.90	0.03	100.00
1962—									
Males ..	5.33	0.95	1.97	5.17	20.13	9.91	56.50	0.04	100.00
Females ..	5.03	1.00	1.30	3.15	13.31	6.92	69.27	0.02	100.00
Persons ..	5.20	0.97	1.68	4.29	17.14	8.60	62.09	0.03	100.00

A table showing these proportions for males and females separately for the period 1901 to 1950 was published in Year Book No. 39, page 614.

(ii) *Age-specific Death Rates.* In previous issues of the Year Book, average annual age-specific death rates were given for each State and Australia for the periods 1932-34, 1946-48 and 1953-55 (see Year Books, No. 37, pp. 778-9, No. 39, pp. 615-6 and No. 44, pp. 640-1). These rates were based on the age distribution of the population at the relevant censuses.

Intercensal estimates of the age distribution of the population are available for Australia and for the larger States. The following table shows age-specific death rates for Australia for the year 1962, for males, females and persons.

AGE-SPECIFIC DEATH RATES(a): AUSTRALIA, 1962

Age group (years)	Males	Females	Persons	Age group (years)	Males	Females	Persons
Under 1 (b) ..	22.8	17.8	20.4	45-49 ..	6.3	3.6	5.0
1-4 ..	1.1	0.9	1.0	50-54 ..	10.1	5.7	7.9
5-9 ..	0.5	0.4	0.4	55-59 ..	16.9	8.0	12.6
10-14 ..	0.4	0.3	0.4	60-64 ..	26.5	13.3	19.6
15-19 ..	1.1	0.5	0.8	65-69 ..	41.8	21.7	30.6
20-24 ..	1.7	0.6	1.2	70-74 ..	64.2	38.3	49.7
25-29 ..	1.5	0.7	1.1	75-79 ..	95.0	62.9	76.3
30-34 ..	1.7	1.0	1.3	80-84 ..	145.9	110.3	124.0
35-39 ..	2.3	1.4	1.9	85 and over ..	248.6	201.1	217.5
40-44 ..	3.6	2.2	2.9				

(a) Average number of deaths per 1,000 of mid-year population in each age group estimated in respect of 30th June, 1962. (b) Infant deaths per 1,000 live births registered.

8. *Causes of Death.*—The classification of causes of death adopted for Australia by the Commonwealth Bureau of Census and Statistics at the inception of its mortality statistics in 1907 was that introduced by the International Institute of Statistics in 1893, reviewed by that Institute in 1899, and revised by an International Commission in 1900. This classification became known as the International List of Causes of Death, and further international revisions in 1909 (Second), 1920 (Third), 1929 (Fourth), 1938 (Fifth), 1948 (Sixth), and 1955 (Seventh), were successively adapted for use in Australian statistics.

The Sixth Revision of the International Statistical Classification of Diseases, Injuries and Causes of Death was used in Australia for deaths registered in 1950 to 1957. The Seventh Revision has been used for deaths registered in 1958 and subsequent years. The Sixth Revision, for the first time in connexion with the International Classification, laid down rules for a uniform method of selecting the main cause to be tabulated if more than one cause is stated on the death certificate. These rules were maintained in the Seventh Revision, which was concerned mainly with certain essential changes and amendment of errors and inconsistencies in the previous classification. Prior to 1950, the rules adopted in Australia for the selection of the cause of death to be tabulated were those laid down in the United States Manual of Joint Causes of Death, first published in 1914 and revised to conform to successive revisions of the International List.

The adoption of the new method introduced with the Sixth Revision and maintained in the Seventh marked a fundamental change in Australian cause of death statistics, emphasis now being placed on the underlying cause of death as indicated by the certifying practitioner. This change in principle affects the comparability of the statistics for 1950 and subsequent years with those for earlier years. A complete detailed classification of causes of death for Australia for 1950 according to both the Fifth and Sixth Revisions was shown in *Demography*, Bulletin No. 68, 1950.

In order to facilitate the concise presentation of cause of death statistics, the present International Classification provides two special lists of causes for tabulation—the Intermediate List of 150 causes and the Abbreviated List of 50 causes. The latter has been used as the base of the cause of death tabulations A to C which follow. Some categories have been sub-divided to show additional particulars of interest in Australian statistics. Tables A and B show deaths of males and females, respectively, in age groups for 1962, and Table C shows the total numbers of males and females who died, the death rates per million of mean population, and the percentage of total deaths for 1962.

## A.—CAUSES OF DEATH: MALES, 1962

## ABBREVIATED LIST OF 50 CAUSES (BASED ON THE SEVENTH REVISION OF THE INTERNATIONAL LIST)

Cause of death (a)	Detailed list numbers	Age groups (years)										Total
		0	1-4	5-14	15-24	25-34	35-44	45-54	55-64	65 and over		
B 1 Tuberculosis of respiratory system	001-008	..	..	..	..	3	15	53	91	(d) 210	372	
B 2 Tuberculosis, other forms	010-019	..	..	..	..	..	1	6	4	5	16	
B 3 Syphilis and its sequelae	020-029	1	..	..	..	1	..	7	13	38	60	
B 6 Dysentery, all forms	045-048	3	1	..	..	..	..	..	1	..	5	
B 7 Scarlet fever and streptococcal sore throat	050, 051	..	1	..	..	..	1	..	..	..	2	
B 8 Diphtheria	055	..	..	1	..	..	..	..	..	..	1	
B 9 Whooping cough	056	1	..	..	..	..	..	..	..	..	1	
B10 Meningococcal infections	057	8	6	3	2	1	1	..	2	..	23	
B12 Acute poliomyelitis	080	1	..	1	1	6	3	1	2	..	15	
B14 Measles	085	2	2	2	1	..	..	..	..	..	7	
B16 Malaria	110-117	..	..	..	..	..	..	1	..	..	1	
B17 All other diseases classified as infective and parasitic	(b)	25	17	12	6	13	19	13	27	38	170	
Malignant neoplasms of:												
Digestive organs and peritoneum	150-159	2	3	2	2	14	93	310	599	1,723	2,748	
Lung	162, 163	..	..	..	1	6	45	240	608	(d) 872	1,772	
Breast	170	..	..	..	..	..	..	1	2	5	8	
B18 Genital Organs	171-179	..	3	1	7	10	11	11	68	688	799	
Urinary organs	180, 181	..	5	2	..	3	9	49	115	263	446	
Leukaemia and aleukæmia	204	1	23	42	14	20	32	44	53	(d) 129	358	
Other malignant and lymphatic neoplasms	(c)	3	21	45	35	59	121	244	349	655	1,532	
B19 Benign neoplasms and neoplasms of unspecified nature	210-239	6	1	1	4	5	11	13	15	32	88	
B20 Diabetes mellitus	260	1	2	1	1	10	26	40	95	366	542	
B21 Anaemias	290-293	2	1	5	2	3	1	3	13	78	108	
B22 Vascular lesions affecting central nervous system	330-334	2	2	7	18	39	118	341	883	e 3,853	5,263	
B23 Non-meningococcal meningitis	340	32	7	4	1	2	2	5	9	8	70	
B24 Rheumatic fever	400-402	..	..	3	2	4	4	1	2	2	18	
B25 Chronic rheumatic heart disease	410-416	..	..	4	13	14	43	63	82	104	323	
B26 Arteriosclerotic heart disease	420	..	..	..	3	46	447	1,863	3,630	e 9,218	15,207	
Degenerative heart disease	421, 422	5	..	2	6	11	54	119	229	f 1,943	2,369	
B27 Other diseases of heart	430-434	2	2	9	6	13	26	77	173	1,216	1,524	
B28 Hypertension with heart disease	440-443	..	..	..	..	1	12	52	108	(d) 529	702	
B29 Hypertension without mention of heart	444-447	..	..	..	4	5	21	62	71	231	394	
B30 Influenza	480-483	9	1	1	1	..	3	8	2	40	65	
B31 Pneumonia	490-493	162	67	15	3	..	44	39	85	165	1,085	
B32 Bronchitis	500-502	16	13	2	..	4	11	73	274	1,152	1,545	
B33 Ulcer of stomach and duodenum	540, 541	1	..	..	1	7	26	61	95	243	434	
B34 Appendicitis	550-553	..	3	4	3	3	5	11	8	27	64	
B35 Intestinal obstruction and hernia	60, 561, 570	40	2	2	3	1	7	18	33	155	261	

For footnotes see following page.

A.—CAUSES OF DEATH: MALES, 1962—*continued*ABBREVIATED LIST OF 50 CAUSES (BASED ON THE SEVENTH REVISION OF THE INTERNATIONAL LIST)—*continued*

Cause of death(a)	Detailed list numbers	Age groups (years)									Total
		0	1-4	5-14	15-24	25-34	35-44	45-54	55-64	65 and over	
B36 Gastritis, duodenitis, enteritis, and colitis, except diarrhoea of the newborn	543, 571, 572	55	24	3	1	5	8	18	29	98	241
B37 Cirrhosis of liver	581	..	1	1	2	8	41	89	111	126	379
B38 Nephritis and nephrosis	590-594	4	5	8	22	19	51	66	93	233	501
B39 Hyperplasia of prostate	610	..	..	..	..	..	..	3	22	402	427
B41 Congenital malformations	750-759	505	42	23	21	9	15	19	17	9	660
B42 Birth injuries, postnatal asphyxia and atelectasis	760-762	814	..	..	..	..	..	..	..	..	814
B43 Infections of the new-born	763-768	89	..	..	..	..	..	..	..	..	89
B44 Other diseases peculiar to early infancy, and immaturity unqualified	769-776	764	..	..	..	..	..	..	..	..	764
B45 Senility without mention of psychosis, ill-defined and unknown causes	780-795	7	3	2	5	7	11	14	8 (e)	285	342
General arteriosclerosis	450	..	..	..	1	..	4	7	53	1,071	1,136
Other diseases of circulatory system	451-468	2	..	3	1	7	17	57	124	338	549
Other diseases of respiratory system	470-475, 510-527	53	21	9	6	6	15	36	116	353	615
All other diseases	Residual	79	42	51	58	54	113	231	355 (d)	941	1,924
BE47 Motor vehicle accidents	E810-E835	6	49	110	576	317	239	207	195 (d)	299	1,998
BE48 All other accidents	E800-E802, E840-E962	81	128	138	220	221	243	254	182 (d)	390	1,857
BE49 Suicide and self-inflicted injury	E963, E970-E979	..	..	..	72	171	219	228	179 (g)	142	1,011
BE50 Homicide and operations of war	E964, E965, E980-E999	6	2	4	11	14	21	29	15	21	123
All Causes	..	2,790	500	523	1,136	1,156	2,204	5,133	9,320	29,616 (h)	52,378

(a) No male deaths were recorded in the following categories in 1962: B4, Typhoid Fever (040); B5, Cholera (043); B11, Plague (058); B13, Smallpox (084); B15, Typhus and other rickettsial diseases (100-108). (b) 030-039, 041, 042, 044, 049, 052-054, 059-074, 081-083, 086-096, 120-138. (c) All causes, 140-205, not shown above. (d) Includes 1, age "not stated". (e) Includes 3, age "not stated". (f) Includes 2, age "not stated". (g) Includes 4, age "not stated". (h) Includes 22, age "not stated".

## B.—CAUSES OF DEATH: FEMALES, 1962

## ABBREVIATED LIST OF 50 CAUSES (BASED ON THE SEVENTH REVISION OF THE INTERNATIONAL LIST)

Cause of death(a)	Detailed list numbers	Age groups (years)									Total
		0	1-4	5-14	15-24	25-34	35-44	45-54	55-64	65 and over	
B 1 Tuberculosis of respiratory system	001-008	..	..	..	..	3	8	14	12 (d)	39	76
B 2 Tuberculosis, other forms	010-019	..	..	1	..	..	..	2	6	11	11
B 3 Syphilis and its sequelae	020-029	..	..	..	..	..	1	..	10	15	26
B 6 Dysentery, all forms	045-048	..	..	..	..	..	1	..	..	5	6
B 7 Scarlet fever and streptococcal sore throat	050, 051	1	..	..	..	..	..	1	..	..	2
B 8 Diphtheria	055	..	3	1	..	..	..	..	..	..	1
B 9 Whooping Cough	056	..	..	..	..	..	..	..	..	..	3
B10 Meningococcal infections	057	4	3	1	..	..	..	1	1	2	12
B12 Acute poliomyelitis	080	..	..	2	1	3	4	..	..	..	10
B14 Measles	085	..	1	1	..	..	..	2	..	..	4
B17 All other diseases classified as infective and parasitic	(b)	22	9	10	8	6	4	10	9	39	117

For footnotes see following page.

B.—CAUSES OF DEATH: FEMALES, 1962—continued  
 ABBREVIATED LIST OF 50 CAUSES (BASED ON THE SEVENTH REVISION OF THE  
 INTERNATIONAL LIST)—continued

Cause of death(a)	Detailed list numbers	Age groups (years)									Total	
		0	1-4	5-14	15-24	25-34	35-44	45-54	55-64	65 and over		
B18 Malignant neoplasms of—	Digestive organs and peritoneum ..	150-159	1	..	1	1	19	80	220	394	1,723	2,439
	Lung .. .. .	162, 163	..	..	..	1	..	11	37	59	146	254
	Breast .. .. .	170	..	..	..	1	22	98	259	248	539	1,167
	Genital organs ..	171-179	..	..	4	4	12	99	183	250	472	1,024
	Urinary organs ..	180, 181	..	..	6	3	1	4	15	37	154	221
	Leukaemia and aleuk- aemia .. .. .	204	1	20	38	12	7	20	25	38	104	265
B19 Other malignant and lymphatic neoplasms ..	(c)	1	15	26	33	54	73	138	208	484	1,032	
B19 Benign neoplasms and neo- plasms of unspecified nature .. .. .	210-239	6	1	6	2	8	16	19	15	35	108	
B20 Diabetes mellitus ..	260	1	2	1	3	8	11	48	120	605	799	
B21 Anaemias .. .. .	290-293	4	4	4	5	4	6	6	8	112	153	
B22 Vascular lesions affecting central nervous system ..	330-334	4	2	2	12	29	132	371	697	d 5,661	6,910	
B23 Non-meningococcal men- ingitis .. .. .	340	24	5	3	1	..	..	3	3	6	42	
B24 Rheumatic fever .. ..	400-402	..	..	3	2	..	2	..	..	2	12	
B25 Chronic rheumatic heart disease .. .. .	410-416	..	..	3	8	20	30	76	100	168	405	
B26 Arteriosclerotic heart disease .. .. .	420	..	..	..	2	6	80	396	1,216	e 6,910	8,610	
B26 Degenerative heart dis- ease .. .. .	421, 422	3	2	..	4	13	31	64	135	2,482	2,734	
B27 Other diseases of heart ..	430-434	1	2	3	8	8	13	32	96	1,288	1,451	
B28 Hypertension with heart disease .. .. .	440-443	..	..	1	..	..	5	33	86	807	932	
B29 Hypertension without men- tion of heart .. .. .	444-447	..	..	..	2	5	20	24	47	330	428	
B30 Influenza .. .. .	480-483	7	2	1	..	2	2	6	5	54	79	
B31 Pneumonia .. .. .	490-493	151	56	15	14	22	26	47	75	1,008	1,414	
B32 Bronchitis .. .. .	500-502	9	10	2	1	1	6	19	38	236	322	
B33 Ulcer of stomach and duo- denum .. .. .	540, 541	..	..	..	1	2	12	22	25	118	180	
B34 Appendicitis .. .. .	550-553	..	..	1	3	8	3	1	9	3	16	44
B35 Intestinal obstruction and hernia .. .. .	560, 561, 570	18	1	2	2	..	2	16	19	166	226	
B36 Gastritis, duodenitis, en- teritis and colitis, except diarrhoea of the newborn ..	543, 571, 572	51	18	4	2	2	6	13	16	144	256	
B37 Cirrhosis of liver .. ..	581	2	1	2	1	4	18	37	37	(d) 66	168	
B38 Nephritis and nephrosis ..	590-594	1	6	9	11	13	25	54	68	189	376	
B40 Complications of preg- nancy, childbirth and the puerperium .. .. .	{ 640-652, 670-689 750-759 }	..	..	..	30	22	31	2	..	..	85	
B41 Congenital malformations	407	48	21	13	13	6	21	7	(d) 12	548		
B42 Birth injuries, post-natal asphyxia and atelectasis ..	760-762	508	..	..	..	..	..	..	..	..	508	
B43 Infections of the new born	763-768	71	..	..	..	..	..	..	..	..	71	
B44 Other diseases peculiar to early infancy, and immat- urity unqualified .. .. .	769-776	586	1	..	..	..	..	..	..	..	587	
B45 Senility without mention of psychosis, ill-defined and unknown causes .. .. .	780-795	10	2	2	..	2	6	7	3	442	474	
B46 General arteriosclerosis	450	..	..	..	..	..	..	7	20	1,203	1,230	
B46 Other diseases of circula- tory system .. .. .	451-468	..	1	3	6	7	16	25	60	253	371	
B46 Other diseases of respira- tory system .. .. .	{ 470-475, 510-527 }	32	15	5	6	7	14	17	31	156	283	
B46 All other diseases .. .. .	Residual	47	38	32	44	67	148	223	280	d 1,152	2,031	
BE47 Motor vehicle accidents ..	E810-E835	3	32	54	108	49	74	82	68	164	634	
BE48 All other accidents .. ..	E800-E802, E840-E962	69	99	44	30	26	46	78	64	(d) 671	1,127	
BE49 Suicide and self-inflicted injury .. .. .	E963, E970- E979	..	..	3	29	63	97	116	82	68	458	
BE50 Homicide and opera- tions of war .. .. .	E964, E965, E980-E999	2	3	6	6	7	17	10	2	6	59	
All Causes .. .. .	..	2,050	407	321	423	540	1,302	2,789	4,695	f 28,258	40,785	

(a) No female deaths were recorded in the following categories in 1962: B4, Typhoid fever (040); B5, Cholera (043); B11, Plague (058); B13, Smallpox (084); B15, Typhus and other rickettsial diseases (100-108); B16, Malaria (110-117).  
 (b) 030-039, 041, 042, 044, 049, 052-054, 059-074, 081-083, 086-096, 120-138. (c) All causes, 140-205, not shown above. (d) Includes 1, age "not stated". (e) Includes 2, age "not stated". (f) Includes 8, age "not stated".



**C.—CAUSES OF DEATH: AUSTRALIA, 1962**  
**ABBREVIATED LIST OF 50 CAUSES (BASED ON THE SEVENTH REVISION OF THE**  
**INTERNATIONAL LIST)**

Cause of death	Detailed list numbers	Number of deaths			Rate per 1,000,000 of mean population	Percentage of total deaths	
		Males	Females	Persons			
B 1 Tuberculosis of respiratory system ..	001-008	372	76	448	42	0.48	
B 2 Tuberculosis, other forms ..	010-019	16	11	27	3	0.03	
B 3 Syphilis and its sequelae ..	020-029	60	26	86	8	0.09	
B 4 Typhoid fever ..	040	..	..	..	..	..	
B 5 Cholera ..	043	..	..	..	..	..	
B 6 Dysentery, all forms ..	045-048	5	6	11	1	0.01	
B 7 Scarlet fever and streptococcal sore throat ..	050-051	2	2	4	..	0.00	
B 8 Diphtheria ..	055	1	1	2	..	0.00	
B 9 Whooping cough ..	056	1	3	4	..	0.00	
B10 Meningococcal infections ..	057	23	12	35	3	0.04	
B11 Plague ..	058	..	..	..	..	..	
B12 Acute poliomyelitis ..	080	15	10	25	2	0.03	
B13 Smallpox ..	084	..	..	..	..	..	
B14 Measles ..	085	7	4	11	1	0.01	
B15 Typhus and other rickettsial diseases	100-108	..	..	..	..	..	
B16 Malaria ..	110-117	1	..	1	..	0.00	
B17 All other diseases classified as infective and parasitic ..	(a)	170	117	287	27	0.31	
B18 { Malignant neoplasms of—	Digestive organs and peritoneum	150-159	2,748	2,439	5,187	485	5.57
	Lung ..	162-163	1,772	254	2,026	189	2.17
	Breast ..	170	8	1,167	1,175	110	1.26
	Genital organs ..	171-179	799	1,024	1,823	170	1.96
	Urinary organs ..	180, 181	446	221	667	62	0.72
	Leukemia and aleukemia ..	204	358	265	623	58	0.67
	Other malignant and lymphatic neoplasms ..	(b)	1,532	1,032	2,564	240	2.75
B19 Benign and unspecified neoplasms ..	210-239	88	108	196	18	0.21	
B20 Diabetes mellitus ..	260	542	799	1,341	125	1.44	
B21 Anaemias ..	290-293	108	153	261	24	0.28	
B22 Vascular lesions affecting central nervous system ..	330-334	5,263	6,910	12,173	1,137	13.07	
B23 Non-meningococcal meningitis ..	340	70	42	112	11	0.12	
B24 Rheumatic fever ..	400-402	18	12	30	3	0.03	
B25 Chronic rheumatic heart disease ..	410-416	323	405	728	68	0.78	
B26 { Arteriosclerotic heart disease ..	420	15,207	8,610	23,817	2,225	25.57	
Degenerative heart disease ..	421, 422	2,369	2,734	5,103	477	5.48	
B27 Other diseases of heart ..	430-434	1,524	1,451	2,975	278	3.19	
B28 Hypertension with heart disease ..	440-443	702	932	1,634	153	1.75	
B29 Hypertension without mention of heart ..	444-447	394	428	822	77	0.88	
B30 Influenza ..	480-483	65	79	144	13	0.15	
B31 Pneumonia ..	490-493	1,635	1,414	3,049	285	3.27	
B32 Bronchitis ..	500-502	1,545	322	1,867	174	2.00	
B33 Ulcer of stomach and duodenum ..	540, 541	434	180	614	57	0.66	
B34 Appendicitis ..	550-553	64	44	108	10	0.12	
B35 Intestinal obstruction and hernia ..	560, 561, 570	261	226	487	46	0.52	
B36 Gastritis, duodenitis, enteritis and colitis, except diarrhoea of the newborn ..	543, 571, 572	241	256	497	46	0.53	
B37 Cirrhosis of liver ..	581	379	168	547	51	0.59	
B38 Nephritis and nephrosis ..	590-594	501	376	877	82	0.94	
B39 Hyperplasia of prostate ..	610	427	..	427	40	0.46	
B40 Complications of pregnancy, child birth and the puerperium ..	{ 640-652, 670-689 }	..	85	85	8	0.09	
B41 Congenital malformations ..	750-759	660	548	1,208	113	1.30	
B42 Birth injuries, post-natal asphyxia and atelectasis ..	760-762	814	508	1,322	124	1.42	
B43 Infections of the newborn ..	763-768	89	71	160	15	0.17	
B44 Other diseases peculiar to early infancy, and immaturity unqualified ..	769-776	764	587	1,351	126	1.45	
B45 Senility without mention of psychosis, ill-defined and unknown causes ..	780-795	342	474	816	76	0.88	
B46 { General arteriosclerosis ..	450	1,136	1,230	2,366	221	2.54	
	Other diseases of circulatory system ..	451-468	549	371	920	86	0.99
	Other diseases of respiratory system ..	{ 470-475, 510-527 }	615	283	898	84	0.96
	All other diseases ..	Residual	1,524	2,031	3,555	369	4.25
BE47 Motor vehicle accidents ..	E810-E835	1,998	634	2,632	246	2.83	
BE48 All other accidents ..	E800-E802, E840-E962	1,857	1,127	2,984	279	3.20	
BE49 Suicide and self-inflicted injury ..	E963, E970-E979	1,011	458	1,469	137	1.58	
BE50 Homicide and operations of war ..	E964, E965, E980-E999	123	59	182	17	0.20	
All Causes ..	..	52,378	40,785	93,163	8,702	100.00	

(a) 030-039, 041, 042, 044, 049, 052-054, 059-074, 081-083, 086-096, 120-138.

(b) 140-48,

160, 161, 164, 165, 190-203, 205.

9. Deaths from Principal Causes.—(i) *General*. In the preceding tables, particulars have been given for each of the causes of death comprising the Abbreviated Classification according to the Seventh Revision of the International List. Certain important causes are treated in detail hereunder. The Abbreviated Classification numbers used in tables A to C (pp. 343-6) are indicated in parentheses for each cause or group of causes.

(ii) *All Forms of Tuberculosis (B1, B2)*. (a) *General*. The total number of deaths classified to all forms of tuberculosis in 1962 was 475, consisting of 388 males and 87 females. In comparing any of the figures for 1950 and subsequent years with those for 1949 and earlier years, consideration should be given to the effect of the change in basis from the Fifth to the Sixth Revision of the International List. This was discussed in Year Book No. 39, page 626.

(b) *Age at Death*. The following table shows the age groups of males and females who were classified as dying from tuberculosis in 1962, together with figures for 1931, 1941, 1951, and 1961.

TUBERCULOSIS (ALL FORMS): DEATHS IN AGE GROUPS, AUSTRALIA

Age group (years)	Males					Females				
	1931	1941	1951	1961	1962	1931	1941	1951	1961	1962
0-14 .. ..	90	63	23	5	..	81	54	35	1	1
15-29 .. ..	294	162	46	2	..	487	275	68	..	2
30-44 .. ..	585	428	135	25	19	422	319	142	20	9
45-64 .. ..	674	793	570	128	154	252	251	126	41	30
65 and over ..	193	279	306	175	214	89	110	86	50	44
Not stated ..	..	..	..	..	1	..	..	1	..	1
<b>Total ..</b>	<b>1,836</b>	<b>1,725</b>	<b>1,080</b>	<b>335</b>	<b>388</b>	<b>1,331</b>	<b>1,009</b>	<b>458</b>	<b>112</b>	<b>87</b>

(c) *Death Rates*. The reduction in mortality from tuberculosis is shown by the decline in the crude death rate from tubercular diseases, which fell from 49 per 100,000 of mean population in 1931 to 18 in 1951, and still further to 4 in 1962. The reductions in the younger age groups are much greater, as can be seen from the table above.

Death rates from tuberculosis per 100,000 of mean population for various countries for the latest available year are as follows:—Netherlands, 2.7; Denmark and Canada, 4.2; Australia, 4.4; New Zealand, 4.8; United States of America, 5.4; South Africa (European population), 7.1; England and Wales, 7.2; Northern Ireland, 7.4; Scotland, 9.3; Switzerland, 12.4; Italy, 17.5; Greece, 17.9; France, 20.4; Finland, 23.0; Japan 29.6; Portugal, 39.6.

(iii) *Malignant Neoplasms, including Neoplasms of Lymphatic and Haematopoietic Tissues (B18)*. (a) *General*. Deaths classified under this heading according to the Sixth Revision of the International List (used in Australia for deaths registered in 1950 to 1957) are not directly comparable in total with those on the Fifth Revision basis (see Year Book No. 39, p. 628). This should be kept in mind in considering the comparisons shown in the following pages.

(b) *Seat of Disease*. Tables showing the seat of disease in conjunction with age and conjugal condition of the persons dying from malignant neoplasms in 1962 are included in *Demography*, Bulletin No. 80. A summary regarding seat of disease for 1962 is given below.

**DEATHS FROM MALIGNANT NEOPLASMS AND NEOPLASMS OF LYMPHATIC AND HAEMATOPOIETIC TISSUES: AUSTRALIA, 1962.**

Seat of disease	Males	Females	Persons
<b>Malignant Neoplasms—</b>			
Buccal cavity and pharynx .. .. .	182	70	252
<b>Digestive organs and peritoneum—</b>			
Oesophagus .. .. .	186	96	282
Stomach .. .. .	967	631	1,598
Small intestine .. .. .	17	12	29
Large intestine .. .. .	687	922	1,609
Other .. .. .	891	778	1,669
Respiratory system .. .. .	1,901	296	2,197
Breast .. .. .	8	1,167	1,175
Uterus .. .. .	..	631	631
Other female genital organs .. .. .	..	393	393
Male genital organs .. .. .	799	..	799
Urinary organs .. .. .	446	221	667
Skin .. .. .	255	155	410
Other and unspecified organs .. .. .	588	472	1,060
<i>Total, Malignant Neoplasms</i> .. .. .	<b>6,927</b>	<b>5,844</b>	<b>12,771</b>
<b>Neoplasms of Lymphatic and Haematopoietic Tissues—</b>			
Lymphosarcoma and reticulosarcoma .. .. .	186	142	328
Hodgkin's disease .. .. .	82	76	158
Other forms of lymphoma (reticulosis) .. .. .	30	23	53
Multiple myeloma (plasmocytoma) .. .. .	78	51	129
Leukaemia and aleukaemia .. .. .	358	265	623
Mycosis fungoides .. .. .	2	1	3
<i>Total, Neoplasms of Lymphatic and Haematopoietic Tissues</i> .. .. .	<b>736</b>	<b>558</b>	<b>1,294</b>
<b>Grand Total</b> .. .. .	<b>7,663</b>	<b>6,402</b>	<b>14,065</b>

(c) *Age at Death.* The ages of males and females who died from malignant neoplasms in 1962 are given below, together with figures for 1931, 1941, 1951, and 1961. The increase in the number of deaths from malignant neoplasms in the years since 1931 is due principally to the increase in the number of people in the higher age groups, at which ages the risks of cancer are much greater. While the total population increased by about 64 per cent. between 1931 and 1962, the number of people aged 55 years and over increased by about 105 per cent. The increase in the number of deaths in the lower age groups from 1951 is partly due to the inclusion of neoplasms of lymphatic and haematopoietic tissues, and it is probable also that part of the increased number of deaths from cancer recorded in recent years has been due to improved diagnosis and certification on the part of the medical profession.

**MALIGNANT NEOPLASMS(a): NUMBER OF DEATHS IN AGE GROUPS, AUSTRALIA**

Age group (years)	Males					Females				
	1931	1941	1951 (a)	1961 (a)	1962 (a)	1931	1941	1951 (a)	1961 (a)	1962 (a)
Under 15 .. .. .	25	21	91	130	153	23	25	71	114	116
15-29 .. .. .	43	49	103	109	105	38	45	76	84	90
30-44 .. .. .	196	176	275	380	377	326	344	387	481	463
45-54 .. .. .	410	465	584	823	899	548	685	692	847	877
55-64 .. .. .	868	983	1,334	1,699	1,794	744	926	1,180	1,207	1,234
65 and over .. .. .	1,942	2,561	3,128	4,239	4,332	1,426	2,198	2,598	3,575	3,622
Not stated .. .. .	..	..	..	..	2	..	..	..	1	..
<b>Total</b> .. .. .	<b>3,484</b>	<b>4,255</b>	<b>5,515</b>	<b>7,380</b>	<b>7,663</b>	<b>3,105</b>	<b>4,223</b>	<b>5,104</b>	<b>6,309</b>	<b>6,402</b>

(a) Includes neoplasms of lymphatic and haematopoietic tissues.

(d) *Death Rates.* The death rates from malignant neoplasms have continued to rise over recent years. The rates are crude death rates representing the number of deaths from malignant neoplasms per 100,000 of mean population and do not take account of changes in the age constitution of the population, and to a substantial extent they reflect the increasing age of the population rather than the true change in mortality from malignant neoplasms (see previous paragraph). In 1931, the rate for Australia was 101 (males, 105; females, 97); in 1941 it was 119 (males, 119; females, 120); and in 1951 it had risen to 126 (males, 130; females, 122). Figures for 1961 gave a rate of 130 (males, 139; females, 121), and for 1962 a rate of 131 (males, 142; females, 121).

Death rates from malignant neoplasms per 100,000 of mean population for Australia and for various other countries are as follows:—Portugal, 98; Japan, 102; Canada, 130; Australia, 131; South Africa (white population), 134; New Zealand, 139; Italy, 150; United States of America, 149; Finland, 156; Northern Ireland, 160; the Netherlands, 171; Switzerland, 188; France, 198; England and Wales, 216; and Scotland, 217. The rates are for the latest available year in each case.

(iv) *Diseases of the Heart (B25 to B28).* The number of deaths classified to diseases of the heart in 1962 was 34,257 (20,125 males and 14,132 females). This class is the largest among causes of death, the rate having increased from 112 per 100,000 of mean population in 1911–15 to 320 in 1962. The increase in the number of deaths recorded from heart diseases has been particularly pronounced during the past twenty years. The rapid increase in mortality is partly a reflection of the ageing of the population, but the figures have been influenced mainly by improved diagnosis and certification by medical practitioners.

The death rates for heart diseases for various years from 1931 were as follows:—1931, 159 (males, 178; females, 142); 1941, 269 (males, 306; females, 231); 1951, 314 (males, 367; females, 259); 1961, 304 (males, 356; females, 250); and 1962, 320 (males, 372; females, 266). Deaths from heart diseases in 1962 represented 37 per cent. of the total deaths.

(v) *Puerperal Causes (B40).* It was shown in *Official Year Book No. 39*, page 634, that the changes introduced with the Sixth Revision of the International List did not significantly affect the comparability of the total number of deaths from puerperal causes. The Seventh Revision, introduced in 1958, did not affect comparability. The death rate from these causes has fallen rapidly during recent years and in 1962 the rate was 0.4 per 1,000 live births, compared with a rate of 6 per 1,000 in 1936. The 85 deaths in 1962 correspond to a death rate of 1.60 per 100,000 females. The death rate may be expressed in other terms by stating that 1 of every 2,789 women giving birth to a live child in 1962 died from puerperal causes.

The death rate per 1,000 live births from puerperal causes in various countries for the latest available year is as follows:—United States of America, 0.3; United Kingdom, New Zealand, Canada, Denmark, the Netherlands and Australia, 0.4; France, 0.5; Finland and Switzerland, 0.7; Italy, 1.1; and Japan, 1.3.

Tables showing ages at marriage and at death, duration of marriage, and issue for 1962 are given in *Demography*, Bulletin No. 80.

(vi) *Causes of Infant Mortality.* See paragraph devoted to causes of infant deaths on pages 339–40.

(vii) *Accidents, Poisonings and Violence (BE47 to BE50).* (a) *General.* Deaths in this class are classified according to external cause and not according to nature of injury. The classification provides sub-groups for accidents, including adverse reactions to prophylactic inoculations, therapeutic misadventures and late effects of accidental injury; suicide; homicide and injuries purposely inflicted by other persons; and injury resulting from operations of war, including delayed effects.

The following table, showing the death rates in the main sub-groups per 100,000 of mean population, indicates that the death rate from violence is between two and three times as great for males as for females. It can be seen also that in 1962 the proportion of deaths caused by violence was 7.80 per cent., compared with 6.76 per cent. in 1931–35.

The low level of the rates and proportions for the years 1941–45 is due largely to the exclusion of deaths of defence personnel from accidents, suicide and homicide, though the rates have been based on total mean population (including defence personnel). A further contributing factor is the decrease during this period in the number of automobile accidents. From July, 1947, deaths of defence personnel from accidents, etc., have again been included.

## ACCIDENTS, POISONINGS AND VIOLENCE: DEATH RATES(a)

Period	Death rate from—												All violence, proportion per 10,000 deaths		
	Accidents(b)			Suicide			Homicide(c)			Total violence					
	M.	F.	P.	M.	F.	P.	M.	F.	P.	M.	F.	P.	M.	F.	P.
1931-35..	71	22	47	19	5	12	2	1	2	92	28	61	929	353	676
1936-40..	86	28	58	17	5	11	2	1	1	105	34	70	979	399	724
1941-45..	67	26	46	11	4	8	1	1	1	79	31	55	730	348	558
1946-50..	76	27	51	14	5	10	1	1	1	91	33	62	844	383	640
1951-55..	82	31	57	15	5	10	2	1	1	99	37	68	964	453	740
1956-60..	75	32	53	16	6	11	2	1	2	93	39	66	957	495	754
1958 ..	73	30	51	18	6	12	2	1	2	93	37	65	988	489	769
1959 ..	74	31	53	16	6	11	2	1	1	92	38	65	931	484	736
1960 ..	72	33	52	15	6	11	2	1	2	89	40	65	934	518	751
1961 ..	72	30	52	17	7	12	2	1	1	91	38	65	966	514	769
1962 ..	71	33	52	19	9	14	2	1	2	92	43	68	952	559	780

(a) Number of deaths per 100,000 of mean population. (b) Includes "open verdict".  
(c) Includes late effects of injuries due to operations of war.

(b) *Accidents (BE47, BE48)*. In 1962, the total number of deaths from accidental causes was 5,616 (3,855 males and 1,761 females). Over half of the accidental deaths were the result of transport accidents. Of these, the numbers attributable to the major causes, and the percentages of the total accidental deaths in each case, were as follows:—Motor vehicle traffic accidents, 2,570 (45.76 per cent.); motor vehicle non-traffic accidents, 62 (1.11 per cent.); other road vehicle accidents, 63 (1.12 per cent.); railway accidents, 99 (1.76 per cent.); water transport accidents, 88 (1.57 per cent.); aircraft accidents, 49 (0.87 per cent.); a total of 2,931 (52.19 per cent.). Other important causes were accidental falls, 1,066 (18.98 per cent.); accidental drowning, 407 (7.25 per cent.); and accidents caused by fire and explosion of combustible material, 193 (3.44 per cent.).

(c) *Suicide (BE49)*. *Modes Adopted*. Deaths from suicide in 1962 numbered 1,469 (males, 1,011; females, 458). Poisoning, other than by gases, was used in 509 cases (34.65 per cent. of total deaths by suicide). Other important modes adopted, together with the numbers and relevant percentages, were as follows:—firearms and explosives, 341 (23.21 per cent.); poisoning by gases, 271 (18.45 per cent.); hanging or strangulation, 190 (12.93 per cent.); submersion (drowning), 64 (4.36 per cent.); other modes, 94 (6.40 per cent.).

Of the 1,011 males who committed suicide, 315 (31.16 per cent.) used firearms or explosives. For females the most common mode was poisoning (other than by gases). This was used in 248 cases (54.15 per cent.).

*Age at Death*. The following table shows the age of persons who committed suicide in 1962.

## AGE OF PERSONS WHO COMMITTED SUICIDE: AUSTRALIA, 1962

Age group (years)	Males	Females	Persons	Age group (years)	Males	Females	Persons
10-14 ..	..	3	3	60-64 ..	76	31	107
15-19 ..	22	11	33	65-69 ..	57	31	88
20-24 ..	50	18	68	70-74 ..	36	18	54
25-29 ..	78	27	105	75-79 ..	24	11	35
30-34 ..	93	36	129	80-84 ..	15	7	22
35-39 ..	104	48	152	85 and over	6	1	7
40-44 ..	115	49	164	Not Stated	4	..	4
45-49 ..	111	52	163				
50-54 ..	117	64	181				
55-59 ..	103	51	154				
				<b>Total Deaths ..</b>	<b>1,011</b>	<b>458</b>	<b>1,469</b>

(d) *Homicide and Operations of War (BE50)*. Of the 182 deaths recorded in 1962, there were 165 deaths from homicide and injury purposely inflicted by other persons (not in war), of which assault by firearms and explosives caused 64, assault by cutting and piercing instruments 25, and assault by other means 76. Deaths from injury resulting from the operations of war numbered 17, but all were deaths from late effects of such injuries.

10. Age at Death and Average Issue of Deceased Married Males and Females.—*Demography*, Bulletin No. 80, contains a number of tables showing, in combination with the issue, the age at marriage, age at death and occupation of married (including widowed or divorced) persons who died in Australia in 1962. Deaths of married males in 1962 numbered 40,203, and those of married females, 32,686. The tables which follow deal, however, with only 39,680 males and 32,470 females, the information regarding issue in the remaining 739 cases being incomplete. The total number of children in the families of the 39,680 males was 116,789 and of the 32,470 females, 103,323. The average number of children is shown for various age groups in the following table.

AGE AT DEATH AND AVERAGE ISSUE OF DECEASED MARRIED<sup>(a)</sup> MALES  
AND FEMALES: AUSTRALIA

Age at death (years)	Average issue									
	Males					Females				
	1931	1941	1951	1961	1962	1931	1941	1951	1961	1962
Under 20 ..	0.75	..	0.43	0.33	0.67	0.66	0.79	0.83	0.75	0.86
20-24 ..	0.81	0.73	0.96	0.93	1.04	1.13	0.95	0.86	1.12	1.13
25-29 ..	1.33	1.12	1.29	1.56	1.57	1.81	1.45	1.61	2.00	1.83
30-34 ..	1.79	1.76	1.79	2.23	2.13	2.34	1.91	1.98	2.37	2.33
35-39 ..	2.13	2.11	2.12	2.37	2.44	2.89	2.30	2.49	2.47	2.54
40-44 ..	2.77	2.49	2.30	2.44	2.48	3.29	2.77	2.39	2.44	2.56
45-49 ..	3.10	2.68	2.51	2.49	2.54	3.55	2.93	2.59	2.38	2.51
50-54 ..	3.46	2.96	2.56	2.46	2.45	3.60	3.29	2.76	2.43	2.38
55-59 ..	3.69	3.28	2.71	2.45	2.48	4.01	3.55	3.03	2.50	2.47
60-64 ..	4.02	3.55	3.07	2.58	2.63	4.21	3.79	3.29	2.69	2.72
65-69 ..	4.41	3.73	3.25	2.77	2.73	4.82	4.01	3.63	3.04	2.94
70-74 ..	5.06	4.17	3.58	3.00	2.95	5.41	4.29	3.64	3.30	3.16
75-79 ..	5.65	4.56	3.83	3.31	3.20	6.02	4.85	3.96	3.44	3.44
80-84 ..	6.17	4.93	4.30	3.62	3.53	6.26	5.39	4.19	3.58	3.52
85-89 ..	6.59	5.70	4.63	3.94	3.81	6.57	5.85	4.68	3.78	3.72
90-94 ..	6.94	6.57	5.06	4.39	4.20	6.73	6.11	5.08	3.99	4.01
95-99 ..	6.69	7.04	5.78	4.76	4.45	7.10	6.34	5.76	4.51	4.35
100 and over ..	7.00	8.69	5.71	5.38	5.33	8.20	6.73	7.72	4.63	4.97
Age not stated ..	5.00	..	8.00	..	..	5.00	..	5.50	5.00	2.50
All Ages ..	4.44	3.91	3.39	2.98	2.94	4.72	4.22	3.68	3.22	3.18

(a) Includes widowed or divorced.

11. Age at Marriage of Deceased Males and Females, and Issue.—The following table shows the average issue of males and females according to the age at marriage of the deceased parent.

**AGE AT MARRIAGE AND AVERAGE ISSUE OF DECEASED MALES  
AND FEMALES: AUSTRALIA**

Age at marriage (years)(a)	Average issue									
	Males					Females				
	1931	1941	1951	1961	1962	1931	1941	1951	1961	1962
Under 15 ..	..	..	..	..	..	6.36	7.80	4.88	4.45	4.00
15-19..	6.15	5.40	4.63	4.11	4.10	6.79	6.10	5.41	4.74	4.71
20-24..	5.56	4.89	4.23	3.65	3.63	5.23	4.80	4.28	3.77	3.70
25-29..	4.70	4.21	3.65	3.16	3.12	3.79	3.51	3.14	2.85	2.85
30-34..	3.96	3.41	3.00	2.64	2.60	2.42	2.35	2.23	1.98	1.97
35-39..	3.14	2.80	2.45	2.11	2.09	1.40	1.26	1.16	1.14	1.08
40-44..	2.36	2.01	1.69	1.49	1.46	0.39	0.35	0.36	0.31	0.33
45-49..	1.96	1.52	1.33	1.11	0.94	0.12	0.01	0.07	0.06	0.15
50-54..	1.60	1.05	0.80	0.71	0.57	..	..	..	..	..
55-59..	0.95	0.79	0.49	0.25	0.51	..	..	..	..	..
60-64..	0.63	0.29	0.24	0.25	0.06	..	..	..	..	..
65 and over ..	0.18	0.01	0.29	0.24	0.06	..	..	..	..	..
Age not stated ..	3.64	2.95	2.81	2.40	2.32	3.96	2.45	3.17	2.44	2.37
<b>All Ages ..</b>	<b>4.44</b>	<b>3.91</b>	<b>3.39</b>	<b>2.98</b>	<b>2.94</b>	<b>4.72</b>	<b>4.22</b>	<b>3.68</b>	<b>3.22</b>	<b>3.18</b>

(a) In cases where the deceased was married more than once this represents age at first marriage.

### § 6. Vital Statistics of External Territories

The following table shows, for the year 1962, the number of marriages, births and deaths registered in the external territories under the control of Australia. More detailed information will be found in a series of tables in *Demography*, Bulletin No. 80.

#### EXTERNAL TERRITORIES: VITAL STATISTICS, 1962

Territory	Marriages	Births	Deaths
Christmas Island(a) .. .. .	..	90	16
Cocos (Keeling) Islands(a) .. .. .	3	19	5
Norfolk Island(a) .. .. .	6	11	14
Papua(b) .. .. .	114	257	22
Trust Territory of New Guinea(b) .. .. .	100	369	40
Trust Territory of Nauru(b) .. .. .	4	22	4

(a) Total population.

(b) Non-indigenous population only.

### § 7. International Vital Statistics

**Vital Statistics Rates—Principal Countries.**—In the following table, vital statistics rates for selected countries are shown. Crude marriage, birth, and death rates represent the number of "events" reported for the year stated per 1,000 of the population. Infant mortality rates

are the number of deaths which occurred under one year of age per 1,000 live births. The true death rates (reciprocals of the expectation of life at birth) have been computed from the life tables for the respective countries as published in the United Nation's *Demographic Yearbook*, 1962 (see explanation of true death rates, para. 4, p. 334).

In many instances, the rates shown in the following table are estimates and the results of sample surveys only. Reference should be made to the detailed comments contained in the United Nation's *Demographic Yearbook*, 1962 (see particularly Technical Notes on Statistical Tables and footnotes to the tables).

### VITAL STATISTICS RATES: SELECTED COUNTRIES—LATEST AVAILABLE YEAR

(Source: United Nations *Demographic Yearbook*, 1962)

Country	Year	Rates(a)				Year	True death rates (b)	
		Marriage	Birth	Death	Infant mortality		Male	Female
<b>Africa—</b>								
<b>South Africa—</b>								
White population ..	1961	(c) 9.3	25.0	8.8	27.6	1950-52	15.5	14.3
Coloured population..	1961	(c) 7.3	48.0	15.9	126.8	1950-52	22.3	20.9
Asian population ..	1960	7.5	35.4	7.6	60.0	1950-52	17.9	18.3
<b>Congo (Leopoldville) (indigenous population)</b>								
..	1955-57	(d)	43	20	104	1950-52	26.6	25.0
Sudan ..	1955	(d)	51.7	18.5	93.6	..	(d)	(d)
Tanganyika ..	1947	(d)	44	25	170	..	(d)	(d)
Uganda ..	1959	(d)	42	20	160	..	(d)	(d)
<b>Ruanda-Urundi (indigenous population)</b>								
..	1957	(d)	49.5	15.4	(d)	..	(d)	(d)
Tunisia ..	1961	6.6	43.2	10.7	109.5	..	(d)	(d)
<b>Guinea</b>								
Rural ..	1954	(d)	62	40	(d)	..	Persons	(d)
Urban ..	1954	(d)	(d)	(d)	220	1954-55	32.8	
..	1954	(d)	(d)	(d)	190	1954-55	27.9	
<b>North America—</b>								
<b>United States of America</b>								
..	1962	8.5	22.4	9.5	25.4	1961	14.9	13.6
Mexico ..	1962	6.3	44.7	10.4	70.1	1940	26.4	25.1
Canada ..	1962	6.8	25.5	7.6	(h) 27.2	1955-57	14.8	13.7
Guatemala ..	1962	3.6	46.8	17.2	(h) 84.8	1949-51	22.8	23.0
El Salvador ..	1962	3.4	45.3	10.8	71.5	1960-61	17.7	16.6
Puerto Rico ..	1962	9.4	31.4	6.7	39.8	1960	14.9	13.9
Jamaica ..	1962	4.8	40.6	9.0	48.2	1950-52	17.9	17.0
Costa Rica ..	1962	6.2	50.5	8.5	(h) 71.9	1949-51	18.3	17.5
<b>South America—</b>								
<b>Brazil</b>								
..	1950	(d)	43	20.6	170	1940-50	25.4	22.0
Argentina ..	1961	(c) 6.8	22.4	8.0	61.2	1947	17.6	16.3
Chile ..	1961	7.3	34.5	11.7	116.2	1952	20.1	18.6
Venezuela ..	1960	5.6	49.6	8.0	45.1	..	(d)	(d)
Bolivia ..	1961	4.9	26.5	8.5	(f) 90.7	1949-51	20.1	20.1
Uruguay ..	1960	(e) 7.5	21.3	8.1	(g) 49.1	..	(d)	(d)
<b>Asia—</b>								
<b>China (mainland)</b>								
..	1957	(d)	34	11	(d)	..	(d)	(d)
India ..	1958	(d)	39.1	19.2	145.9	1941-50	30.8	31.6
Indonesia ..	1953-54	(d)	40	20	150	..	(d)	(d)
Japan ..	1962	(h) 9.5	17	7.5	(h) 28.6	1960	15.3	14.2
Philippines ..	1960	(h) 5.1	29.2	7.7	73.1	1946-49	20.5	18.7
Thailand ..	1956	(g) 1.5	42	20	(c) 48.7	1947-48	20.5	19.3
Korea, Republic of	1960	5.8	(i) 36.6	(f) 21.2	(d)	..	(d)	(d)
China (Taiwan) ..	1962	7.8	37.4	6.4	(h) 30.7	1959-60	16.3	15.2
Ceylon ..	1959	6.4	37.0	9.1	57.5	1954	16.6	16.8
Nepal ..	1954	(d)	45	30	(d)	..	(d)	(d)
Malaya ..	1960	0.8	40.9	9.5	68.9	1956-58	17.9	17.2
Cambodia ..	1959	(d)	41.4	19.7	127	1958-59	22.6	23.1
Hong Kong ..	1961	(d)	34.2	5.9	(j) 36.9	..	(d)	(d)
Israel (Jewish population)	1962	7.2	22.5	6.0	27.4	1961	14.2	13.6
Singapore ..	1962	(h) 3.6	34.1	5.9	31.2	..	(d)	(d)

See footnotes on following page.



VITAL STATISTICS RATES: SELECTED COUNTRIES—LATEST AVAILABLE  
YEAR—continued

Country	Year	Rates(a)				Year	True death rates (b)	
		Marriage	Birth	Death	Infant mortality		Male	Female
Europe—								
Germany, Federal Republic of .. .. .	1962	9.2	18.1	11.1	29.2	1959-60	15.0	13.9
United Kingdom of Great Britain and Northern Ireland .. .	1962	(h) 7.5	18.3	11.9	22.1	..	(d)	(d)
England and Wales ..	1962	(h) 7.5	18.0	11.9	21.4	1961	14.7	13.6
Northern Ireland ..	1962	(h) 6.9	22.8	10.7	26.6	1959-61	14.8	13.9
Scotland .. .. .	1962	7.8	20.1	12.2	26.3	1961	15.1	13.9
Italy .. .. .	1962	8.2	19.0	9.9	40.5	1954-57	15.2	14.3
France .. .. .	1962	6.8	17.8	11.5	25.9	1961	14.8	13.4
Spain .. .. .	1962	7.7	21.3	9.0	42.3	1950	17.0	15.7
Poland .. .. .	1962	7.5	19.6	7.9	55.6	1960-61	15.4	14.2
Yugoslavia .. .. .	1962	8.7	22.2	9.9	81.5	1958-59	16.2	15.5
Romania .. .. .	1961	9.7	17.5	8.7	71.0	..	(d)	(d)
Eastern Germany ..	1960	9.7	17.2	13.3	38.8	1955-58	15.1	14.1
Czechoslovakia ..	1962	7.8	15.7	10.0	22.5	1960	14.7	13.7
Netherlands .. ..	1962	7.9	20.8	7.9	15.3	1956-60	14.0	13.4
Hungary .. .. .	1962	8.1	12.9	10.8	47.6	1958	15.4	14.4
Belgium .. .. .	1962	6.7	16.8	12.5	28.3	1946-49	16.1	14.9
Portugal .. .. .	1962	7.9	24.7	10.9	(h) 88.3	1957-58	16.7	15.4
Bulgaria .. .. .	1961	8.4	17.4	7.9	37.8	1956-57	15.6	14.8
Sweden .. .. .	1962	7.1	14.2	10.1	15.3	1960	14.0	13.3
Austria .. .. .	1962	8.4	18.6	12.7	33.2	1960	15.4	14.1
Switzerland .. ..	1962	8.0	18.7	9.8	(h) 21.0	1948-53	15.1	14.1
Denmark .. .. .	1961	7.9	16.6	9.4	(c) 21.5	1956-60	14.2	13.6
Finland .. .. .	1962	7.5	18.1	9.5	19.2	1951-55	15.8	14.3
Norway .. .. .	1962	6.5	17.3	9.3	(c) 18.9	1951-55	14.1	13.4
Ireland .. .. .	1962	(h) 5.4	21.8	11.9	24.2	1950-52	15.5	14.9
Oceania—								
Australia .. .. .	1962	7.4	22.2	8.7	20.4	1953-55	14.9	13.7
New Zealand .. ..	1962	7.9	26.3	9.0	20.3	1955-57	14.7	13.7
Europeans .. .. .	..	(d)	(d)	(d)	(d)	1950-52	14.6	13.8
Maori .. .. .	..	(d)	(d)	(d)	(d)	1950-53	18.5	17.9
U.S.S.R.—								
Union of Soviet Socialist Republics .. .. .	1961	11.0	23.8	7.2	32	1958-59	15.6	13.9

(a) Crude marriage, birth and death rates, i.e., number of marriages, births and deaths per 1,000 of population. Infant mortality—number of deaths of children under one year of age per 1,000 live births. (b) Number of deaths per 1,000 males and 1,000 females respectively in stationary population (see explanation on p. 334. (c) 1960. (d) Not available, or available information relates to a segment of population only. (e) 1959. (f) 1954. (g) 1958. (h) 1961. (i) 1955. (j) 1962.

## CHAPTER XI

### HOUSING AND BUILDING

NOTE.—In § 1 of this chapter details are given of the characteristics of dwellings as obtained from censuses, § 2 provides a summary of building activities, § 3 outlines government activities in the field of housing, and § 4 relates to financial arrangements associated with the erection or purchase of homes.

For further information on dwellings as obtained from censuses, reference should be made to the results published in the detailed tables of the 1961 census and earlier censuses and in the mimeographed statements of the 1961 census (*see* Chapter XXX. Miscellaneous).

More detailed information on building activity may be found in the *Quarterly Bulletin of Building Statistics*, and current information is obtainable also in the *Quarterly Summary of Australian Statistics*, the *Monthly Review of Business Statistics*, the *Digest of Current Economic Statistics*, and in the mimeographed statements *Building Statistics: Number of New Houses and Flats* (quarterly), and *Building Approvals* (monthly). Details for a particular State are available from publications issued regularly by the Deputy Commonwealth Statistician in that State.

Commonwealth Government activities relate in the main to the provision of moneys to State Governments under Commonwealth-State Housing Agreements, to the assistance of ex-service personnel in the erection and purchase of homes, and to the provision of homes in the Territories. Further details of activities of the Commonwealth and State Housing Authorities are shown in the reports issued by these authorities.

#### § 1. Census Dwellings

1. **General.**—At each census of the population, in addition to the questions relating to the personal particulars of the individual members of households, there have been a number of important questions on the census schedule designed to elicit information concerning the dwellings in which the population was housed at the date of the census. For the purpose of the census, a "dwelling" is any habitation occupied by a household group living together as a domestic unit, whether comprising the whole or only part of a building. The term has therefore a very wide reference, and includes, *in addition to houses and flats*, a great variety of dwellings ranging from a single-roomed shack to a multi-roomed hotel or institution.

All statistics in this section are exclusive of particulars of dwellings occupied solely by full-blood Aboriginals.

2. **Number of Dwellings.**—(i) *Censuses, 1911 to 1961.* The following table shows the number of occupied and unoccupied dwellings in Australia at each census from 1911 to 1961. Occupied dwellings are classified into "private" and "other than private" dwellings (*see* para. 3, p. 357, for definitions of "private" and "other than private" dwellings). As the term "unoccupied dwellings" includes "week-enders", "holiday homes" and other dwellings whose usual occupants were temporarily absent on census night, the total number of unoccupied dwellings must not be taken as representing the number of vacant houses and flats available for occupancy. Newly completed dwellings awaiting occupancy are also included as "unoccupied".

**DWELLINGS: AUSTRALIA, CENSUSES**

Census	Occupied			Unoccupied (a)
	Private	Other than private	Total	
1911 .. .. .	894,389	29,070	923,459	33,473
1921 .. .. .	1,107,010	46,275	1,153,285	51,163
1933 .. .. .	1,509,671	37,705	1,547,376	68,772
1947 .. .. .	1,873,623	34,272	1,907,895	47,041
1954 .. .. .	2,343,421	36,932	2,380,353	112,594
1961 .. .. .	2,781,945	35,325	2,817,270	194,114

(a) *See text on page 369.*

(ii) *Census, 1961.* The following table shows the number of occupied and unoccupied dwellings in the urban and rural areas of Australia at the census of 30th June, 1961. (For definitions of "urban" and "rural" see Chapter IX. Population, para. 3, p. 269.) The boundaries of the metropolitan urban and other divisions of States differ from census to census, and consequently accurate comparison cannot be made between figures for corresponding divisions.

The total number of occupied dwellings in Australia at the census of 30th June, 1961, showed an increase of 18.4 per cent. over the corresponding figure for the 1954 census, compared with an increase of 16.9 per cent. in population. Occupied private dwellings increased by 18.7 per cent., while occupied dwellings other than private decreased by 4.4 per cent. At the 1961 census, 98.7 per cent. of the total occupied dwellings in Australia were private dwellings, compared with 98.4 per cent. in 1954. Proportional increases in total occupied dwellings over 1954 figures in each State and Territory were:—New South Wales, 16.3 per cent.; Victoria, 19.7 per cent.; Queensland, 17.4 per cent.; South Australia, 21.6 per cent.; Western Australia, 19.3 per cent.; Tasmania, 15.8 per cent.; Australian Capital Territory, 95.8 per cent.; and Northern Territory, 59.9 per cent.

Unoccupied dwellings increased by 72.4 per cent.

#### DWELLINGS: AUSTRALIA, CENSUS, 30th JUNE, 1961

Division	Occupied				Unoccupied(a)	
	Private	Other than private	Total		Number	Proportion of total
			Number	Proportion of total		
				Per cent.		Per cent.
<b>Urban—</b>						
Metropolitan ..	1,607,392	18,304	1,625,696	57.70	59,096	30.44
Other ..	706,535	9,208	715,743	25.41	58,577	30.18
Rural ..	468,018	7,813	475,831	16.89	76,441	39.38
<b>Total ..</b>	<b>2,781,945</b>	<b>35,325</b>	<b>2,817,270</b>	<b>100.00</b>	<b>194,114</b>	<b>100.00</b>

(a) See text on page 369.

(iii) *Censuses, 1954 and 1961.* The total numbers of occupied and unoccupied dwellings in each State and Territory at the censuses of 1954 and 1961 were as follows.

#### DWELLINGS: STATES AND TERRITORIES

State or Territory	Census, 30th June, 1954		Census, 30th June, 1961	
	Occupied	Unoccupied (a)	Occupied	Unoccupied (a)
New South Wales .. .. .	912,877	42,831	1,061,609	72,432
Victoria .. .. .	660,690	27,491	790,529	47,389
Queensland .. .. .	339,328	21,473	398,233	33,969
South Australia .. .. .	215,301	8,524	261,908	17,061
Western Australia .. .. .	162,823	6,614	194,317	13,705
Tasmania .. .. .	78,789	5,288	91,258	8,582
Northern Territory .. .. .	3,427	47	5,479	179
Australian Capital Territory .. .. .	7,118	326	13,937	797
<b>Australia .. .. .</b>	<b>2,380,353</b>	<b>112,594</b>	<b>2,817,270</b>	<b>194,114</b>

(a) See text on page 369.

3. **Class of Dwelling.**—The following table shows the numbers of the various classes of occupied dwellings in the metropolitan urban, other urban, and rural areas of Australia at the censuses of 1954 and 1961.

Private dwellings are classified into the following four categories:—

*Private House*—includes houses, sheds, huts, garages, etc., used for dwelling purposes, and shared private houses for which only one householder's schedule was received;

*Share of Private House*—portion of a shared private house which is occupied separately and for which portion a separate householder's schedule was received;

*Flat*—part of a house or other building which can be completely closed off and which has its own cooking and bathing facilities;

*Other Private Dwelling*—includes private dwellings such as rooms, apartments, etc., which are parts of buildings but are not self-contained units.

Other than Private dwellings include hotels; motels; boarding houses, lodging houses and hostels; educational, religious and charitable institutions; hospitals; defence and penal establishments; police and fire stations; clubs; staff barracks and quarters, etc.

It is desirable when considering the question of housing to exclude those forms of accommodation which do not represent the normal housing conditions associated with family life, and the statistics which follow relate therefore mainly to private dwellings.

### OCCUPIED DWELLINGS BY CLASS: AUSTRALIA

Class of occupied dwelling	Census, 30th June, 1954				Census, 30th June, 1961				Increase, 1954-61
	Urban(a)		Rural (a)	Total, Australia	Urban(a)		Rural (a)	Total, Australia	
	Metropolitan	Other			Metropolitan	Other			
<i>Private House(b)</i> —									
House .. .. .	1,067,674	506,128	433,069	2,006,871	1,324,627	630,072	438,470	2,393,169	386,298
Shed, hut, etc. .. .. .	14,259	12,276	22,613	49,148	10,740	11,338	19,919	41,997	-7,151
Total .. .. .	1,081,933	518,404	455,682	2,056,019	1,335,367	641,410	458,389	2,435,166	379,147
<i>Share of private house(c)</i> .. .. .	77,344	22,747	7,125	107,216	59,727	15,248	4,575	79,550	-27,666
Flat(d) .. .. .	104,603	20,784	2,033	127,420	169,934	43,134	4,518	217,586	90,166
Other .. .. .	45,308	6,744	714	52,766	42,364	6,743	536	49,643	-3,123
<i>Total Private Dwellings</i> .. .. .	1,309,188	568,679	465,554	2,343,421	1,607,392	706,535	468,018	2,781,945	438,524
Caretaker's quarters .. .. .	998	264	194	1,456	(e)	(e)	(e)	(e)	-1,456
Licensed hotel .. .. .	1,720	2,457	2,015	6,192	1,759	2,447	1,877	6,083	-109
Motel .. .. .					61	301	137	499	
Boarding house, etc. .. .. .	14,110	4,120	1,041	19,271	13,572	4,094	826	18,492	-280
Educational institution(f) .. .. .	523	488	251	1,262	308	275	102	685	-577
Religious institution (non-educational)(f) .. .. .	142	31	24	197	559	422	201	1,182	985
Hospital .. .. .	559	517	353	1,429	638	488	318	1,444	15
Charitable institution (other than hospital) .. .. .	299	107	104	510	317	117	78	512	2
Other .. .. .	852	1,091	4,672	6,615	1,090	1,064	4,274	6,428	-187
<i>Total Dwellings Other than Private</i> .. .. .	19,203	9,075	8,654	36,932	18,304	9,208	7,813	35,325	-1,607
<b>Total Occupied Dwellings</b> .. .. .	<b>1,328,391</b>	<b>577,754</b>	<b>474,208</b>	<b>2,380,353</b>	<b>1,625,696</b>	<b>715,743</b>	<b>475,831</b>	<b>2,817,270</b>	<b>436,917</b>
<b>Total Occupied Dwellings per Square Mile</b> .. .. .	<b>592.88</b>	<b>123.44</b>	<b>0.16</b>	<b>0.80</b>	<b>661.00</b>	<b>173.75</b>	<b>0.16</b>	<b>0.95</b>	<b>0.15</b>
Wagon, van, etc. (including campers-out) .. .. .	2,693	3,605	5,383	11,681	470	2,332	3,653	6,455	-5,226

(a) See text on p. 356 regarding comparability as between censuses. (b) Includes shared private houses for which only one householder's schedule was received. (c) Portion of a shared private house which is occupied separately and for which portion a separate householder's schedule was received. (d) Prior to 1961, single self-contained dwellings attached to, or situated above, offices, shops, etc., were classified as private houses irrespective of the description stated in the householder's schedule. In 1961 such dwellings, if described as self-contained flats, were classified as flats. (e) Included with Private dwellings. (f) Certain institutions previously classified as "Educational" were in 1961 classified as "Religious".

NOTE.—Minus sign (-) denotes decrease.

4. **Population According to Class of Dwelling, etc.**—The following table shows the number of the various classes of occupied dwellings at the censuses of 1954 and 1961, together with the number of inmates therein.

**OCCUPIED DWELLINGS, ETC., AND INMATES: AUSTRALIA**

Particulars	Census, 30th June, 1954			Census, 30th June, 1961		
	Number of dwellings	Inmates		Number of dwellings	Inmates	
		Number	Proportion of total		Number	Proportion of total
			%			%
<b>Private House(a)—</b>						
House .. .. .	2,006,871	7,448,978	82.89	2,393,169	8,997,586	85.62
Shed, hut, etc. .. .. .	49,148	134,187	1.49	41,997		
<b>Total .. .. .</b>	<b>2,056,019</b>	<b>7,583,165</b>	<b>84.38</b>	<b>2,435,166</b>	<b>8,997,586</b>	<b>85.62</b>
Share of private house(b) ..	107,216	290,579	3.23	79,550	224,066	2.13
Flat(c) .. .. .	127,420	329,265	3.67	217,586	552,596	5.26
Other .. .. .	52,766	111,353	1.24	49,643	96,246	0.92
<b>Total, Private Dwellings(d)</b>	<b>2,343,421</b>	<b>8,314,362</b>	<b>92.52</b>	<b>2,781,945</b>	<b>9,870,494</b>	<b>93.93</b>
<b>Dwellings Other than Private(d)</b>	<b>36,932</b>	<b>618,743</b>	<b>6.89</b>	<b>35,325</b>	<b>596,412</b>	<b>5.68</b>
<b>Total, Occupied Dwellings</b>	<b>2,380,353</b>	<b>8,933,105</b>	<b>99.41</b>	<b>2,817,270</b>	<b>10,466,906</b>	<b>99.61</b>
Wagon, van, etc. .. .. .	11,681	30,056	0.33	6,455	15,994	0.15
Migratory(e) .. .. .	..	23,369	0.26	..	25,286	0.24
<b>Total Population .. .. .</b>	<b>..</b>	<b>8,986,530</b>	<b>100.00</b>	<b>..</b>	<b>10,508,186</b>	<b>100.00</b>

(a) Includes shared private houses for which only one householder's schedule was received.  
 (b) Portion of a shared private house which is occupied separately and for which portion a separate householder's schedule was received. (c) See footnote (d) to table on p. 357. (d) See footnote (e) to table on p. 357. (e) Shipping, railway and air travellers.

5. **Occupied Private Dwellings.**—(i) *Material of Outer Walls.* In the following table, occupied private dwellings are classified according to the material of the outer walls.

Wood has been the most extensively used material in the construction of the outer walls, followed by brick and fibro-cement, and for Australia at 30th June, 1961, the respective proportions for which material of outer walls was specified, were 41.5 per cent., 34.3 per cent., and 16.3 per cent. Fibro-cement dwellings have increased from 1933, when the proportion was 1.6 per cent. (23,696 dwellings), to 6.3 per cent. in 1947 (117,631 dwellings), to 12.7 per cent. in 1954 (296,553 dwellings), and to 16.3 per cent. in 1961 (452,270 dwellings). The proportions of both brick and wooden dwellings have shown small decreases since 1954. The numbers of dwellings of all other materials except fibro-cement and concrete have decreased. Brick dwellings in 1961 represented 50.3 per cent. of all occupied private dwellings in the metropolitan urban division, while in the other urban and rural divisions wooden dwellings predominated, the percentages of such dwellings being 54.8 per cent. and 55.3 per cent. respectively.

OCCUPIED PRIVATE DWELLINGS, BY MATERIAL OF OUTER WALLS:  
AUSTRALIA

Material of outer walls	Census, 30th June, 1954				Census, 30th June, 1961				Increase, 1954-61
	Urban(a)		Rural (a)	Total, Australia	Urban(a)		Rural (a)	Total, Australia	
	Metro-politan	Other			Metro-politan	Other			
Brick ..	674,165	86,254	25,089	785,508	807,311	113,392	32,291	952,994	167,486
Stone ..	35,907	18,049	33,604	87,560	32,828	19,919	30,325	83,072	-4,488
Concrete ..	24,299	13,497	13,639	51,435	40,779	19,111	15,455	75,345	23,910
Wood ..	422,010	341,145	276,584	1,039,739	507,775	386,555	258,257	1,152,587	112,848
Iron, tin ..	7,387	19,652	31,177	58,216	4,556	17,235	24,870	46,661	-11,555
Fibro-cement ..	140,542	84,835	71,176	296,553	208,271	146,003	97,996	452,270	155,717
Calico, canvas, hessian ..	426	1,843	5,446	7,715	105	585	1,918	2,608	-5,107
Other ..	3,644	2,686	7,750	14,080	4,328	2,958	5,841	13,127	-953
Not stated ..	808	718	1,089	2,615	1,439	777	1,065	3,281	666
<b>Total ..</b>	<b>1,309,188</b>	<b>568,679</b>	<b>465,554</b>	<b>2,343,421</b>	<b>1,607,392</b>	<b>706,535</b>	<b>468,018</b>	<b>2,781,945</b>	<b>438,524</b>

(a) See text on p. 269 regarding comparability as between censuses.

NOTE.—Minus sign (-) denotes decrease.

(ii) *Number of Rooms.* For census purposes, the kitchen and any permanently enclosed sleep-out were included in the number of rooms in the dwelling, but the bathroom, pantry, laundry and storehouse were excluded.

Excluding houses with rooms unspecified, private houses of four, five and six rooms represented 80.2 per cent. of the total number of private houses in Australia at 30th June, 1961, compared with 78.3 per cent. in 1954; 90.2 per cent. of the total increase in the number of private houses since 1954 consisted of houses containing these numbers of rooms.

## OCCUPIED PRIVATE DWELLINGS, BY NUMBER OF ROOMS: AUSTRALIA

Number of rooms(a) per dwelling	Census, 30th June, 1954					Census, 30th June, 1961				
	Private house (b)	Share of private house (c)	Flat (d)	Other	Total private dwellings	Private house (b)	Share of private house (c)	Flat (d)	Other	Total private dwellings
1 ..	5,383	9,353	678	15,186	30,600	3,021	5,479	1,722	12,165	22,387
2 ..	17,177	17,018	5,723	16,126	56,044	8,277	13,325	15,389	17,063	54,054
3 ..	39,250	18,164	21,614	7,841	86,869	29,756	16,042	40,323	7,685	93,806
4 ..	192,237	13,477	40,911	3,176	249,801	204,273	12,146	61,998	2,602	281,019
5 ..	377,643	9,176	23,221	1,175	411,215	515,409	8,839	31,858	919	557,025
6 ..	302,004	5,734	9,073	594	317,405	380,193	1,626	12,521	198	394,538
7 ..	96,252	2,095	2,098	193	100,638	126,998	465	3,491	73	131,027
8 ..	31,608	869	685	92	33,254	41,128	162	1,296	40	42,626
9 ..	10,562	264	213	41	11,080	13,716	43	425	23	14,207
10 and over ..	8,841	111	83	14	9,049	10,643	57	129	36	10,865
Not stated ..	976	1,083	304	870	3,233	1,953	1,543	782	1,560	5,838
<b>Total Private Dwellings ..</b>	<b>1,081,933</b>	<b>77,344</b>	<b>104,603</b>	<b>45,308</b>	<b>1,309,188</b>	<b>1,335,367</b>	<b>59,727</b>	<b>169,934</b>	<b>42,364</b>	<b>1,607,392</b>
<b>Average number of rooms(a) per private dwelling ..</b>	<b>5.32</b>	<b>3.37</b>	<b>4.16</b>	<b>2.15</b>	<b>5.00</b>	<b>5.43</b>	<b>3.24</b>	<b>4.00</b>	<b>2.13</b>	<b>5.12</b>

## METROPOLITAN URBAN(e)

(a) Includes kitchen and permanently enclosed sleep-out, but does not include bathroom, pantry, laundry or storehouse. (b) Includes houses, sheds, huts, etc., and shared private houses for which only one householder's schedule was received. (c) Portion of a shared private house which is occupied separately and for which portion a separate householder's schedule was received. (d) See footnote (d) to table on p. 357. (e) See text on p. 356 regarding comparability as between censuses.

OCCUPIED PRIVATE DWELLINGS, BY NUMBER OF ROOMS:  
AUSTRALIA—continued.

Number of rooms(a) per dwelling	Census, 30th June, 1954					Census, 30th June, 1961				
	Private house (b)	Share of private house (c)	Flat (d)	Other	Total private dwellings	Private house (b)	Share of private house (c)	Flat (d)	Other	Total private dwellings
<b>OTHER URBAN(e)</b>										
1 .. .. .	5,693	2,232	81	1,068	9,074	4,513	1,159	466	1,062	7,200
2 .. .. .	11,669	5,446	1,453	2,374	20,942	8,349	3,472	4,706	2,440	18,967
3 .. .. .	20,429	5,854	5,121	1,907	33,311	18,637	4,078	12,039	1,892	36,646
4 .. .. .	98,504	4,254	7,910	899	111,567	106,956	3,277	14,185	823	125,241
5 .. .. .	186,088	2,565	4,098	293	193,044	253,723	2,319	7,296	270	263,608
6 .. .. .	132,573	1,399	1,522	84	135,578	167,499	377	2,891	40	170,807
7 .. .. .	41,366	485	392	24	42,267	54,222	87	855	23	55,187
8 .. .. .	13,373	163	112	6	13,654	17,102	44	327	5	17,478
9 .. .. .	4,336	56	28	6	4,426	5,194	15	124	5	5,338
10 and over ..	3,208	32	12	3	3,255	3,712	10	21	2	3,745
Not stated ..	1,165	261	55	80	1,561	1,503	410	224	181	2,318
<b>Total Private Dwellings ..</b>	<b>518,404</b>	<b>22,747</b>	<b>20,784</b>	<b>6,744</b>	<b>568,679</b>	<b>641,410</b>	<b>15,248</b>	<b>43,134</b>	<b>6,743</b>	<b>706,535</b>
<b>Average number of rooms(a) per private dwelling ..</b>	<b>5.18</b>	<b>3.31</b>	<b>4.03</b>	<b>2.61</b>	<b>5.04</b>	<b>5.29</b>	<b>3.27</b>	<b>3.88</b>	<b>2.56</b>	<b>5.13</b>
<b>RURAL(e)</b>										
1 .. .. .	12,976	544	10	82	13,612	9,769	303	94	79	10,245
2 .. .. .	16,271	1,297	157	175	17,900	11,981	809	540	141	13,471
3 .. .. .	27,458	1,698	535	207	29,898	22,552	1,160	1,223	155	25,090
4 .. .. .	89,397	1,553	727	175	91,852	76,508	1,101	1,348	111	79,068
5 .. .. .	128,313	987	382	52	129,734	134,095	748	760	35	135,638
6 .. .. .	99,843	530	157	9	100,539	108,656	165	311	7	109,139
7 .. .. .	43,694	208	35	1	43,938	50,621	57	125	1	50,804
8 .. .. .	19,111	98	9	2	19,220	22,681	24	51	..	22,756
9 .. .. .	7,532	21	3	..	7,556	9,160	12	23	..	9,195
10 and over ..	8,759	20	3	1	8,783	9,841	30	10	..	9,881
Not stated ..	2,328	169	15	10	2,522	2,525	166	33	7	2,731
<b>Total Private Dwellings ..</b>	<b>455,682</b>	<b>7,125</b>	<b>2,033</b>	<b>714</b>	<b>465,554</b>	<b>458,389</b>	<b>4,575</b>	<b>4,518</b>	<b>536</b>	<b>468,018</b>
<b>Average number of rooms(a) per private dwelling ..</b>	<b>5.19</b>	<b>3.62</b>	<b>4.00</b>	<b>2.98</b>	<b>5.16</b>	<b>5.40</b>	<b>3.54</b>	<b>3.90</b>	<b>2.82</b>	<b>5.36</b>
<b>TOTAL, AUSTRALIA</b>										
1 .. .. .	24,052	12,129	769	16,336	53,286	17,303	6,941	2,282	13,306	39,832
2 .. .. .	45,117	23,761	7,333	18,675	94,886	28,607	17,606	20,635	19,644	86,492
3 .. .. .	87,137	25,716	27,270	9,955	150,078	70,945	21,280	53,585	9,732	155,542
4 .. .. .	380,138	19,284	49,548	4,250	453,220	387,737	16,524	77,531	3,536	485,328
5 .. .. .	692,044	12,728	27,701	1,520	733,993	903,227	11,906	39,914	1,224	956,271
6 .. .. .	534,420	7,663	10,752	687	553,522	656,348	2,168	15,723	245	674,484
7 .. .. .	181,312	2,788	2,525	218	186,843	231,841	609	4,471	97	237,018
8 .. .. .	64,092	1,130	806	100	66,128	80,911	230	1,674	45	82,860
9 .. .. .	22,430	341	244	47	23,062	28,070	70	572	28	28,740
10 and over ..	20,808	163	98	18	21,087	24,196	97	160	38	24,491
Not stated ..	4,469	1,513	374	960	7,316	5,981	2,119	1,039	1,748	10,887
<b>Total Private Dwellings ..</b>	<b>2,056,019</b>	<b>107,216</b>	<b>127,420</b>	<b>52,766</b>	<b>2,343,421</b>	<b>2,435,166</b>	<b>79,550</b>	<b>217,586</b>	<b>49,643</b>	<b>2,781,945</b>
<b>Average number of rooms(a) per private dwelling ..</b>	<b>5.26</b>	<b>3.38</b>	<b>4.14</b>	<b>2.22</b>	<b>5.04</b>	<b>5.39</b>	<b>3.26</b>	<b>3.97</b>	<b>2.20</b>	<b>5.16</b>

(a) Includes kitchen and permanently enclosed sleep-out but does not include bathroom, pantry, laundry or storehouse. (b) Includes houses, sheds, huts, etc., and shared private houses for which only one householder's schedule was received. (c) Portion of a shared private house which is occupied separately and for which portion a separate householder's schedule was received. (d) See footnote (d) on p. 357. (e) See text on p. 356 regarding comparability as between censuses.

(iii) *Number of Inmates.* A classification of occupied private dwellings according to the number of inmates is shown in the following table.

For Australia as a whole, at the 1961 census, private houses with two inmates were most numerous, followed by those with four and three inmates in that order.

An increase of 21 per cent (93,420 houses) in the number of private houses occupied by two inmates brought this group from second position in 1954, to first position in 1961. Houses with two inmates in 1961 constituted 22 per cent. of the total number of occupied private houses in Australia, while private houses with four and three inmates constituted 21 per cent. and 19 per cent., respectively.

The greatest proportional increase since 1954 in the number of occupied private dwellings occurred in those with one inmate, the growth of 33.9 per cent. being due mainly to an increase of 34.5 per cent. in the number of private houses with one inmate and an increase of 108.3 per cent. in the number of flats with one inmate. The number of flats with two, three and four inmates showed increases of 66.7 per cent., 46.7 per cent. and 61.8 per cent. respectively since 1954. However, the comparison of figures for flats between 1954 and 1961 is affected by the classification as flats in 1961 of dwellings previously classified as private houses (see footnote (d) to table on p. 357).

At 30th June, 1961, dwellings with less than 6 inmates represented 86.4 per cent. of total occupied private dwellings compared with 87.2 per cent. in 1954.

#### OCCUPIED PRIVATE DWELLINGS, BY NUMBER OF INMATES: AUSTRALIA

Number of inmates per dwelling	Census, 30th June, 1954					Census, 30th June, 1961				
	Private house (a)	Share of private house (b)	Flat (c)	Other	Total private dwellings	Private house (a)	Share of private house (b)	Flat (c)	Other	Total private dwellings
<b>METROPOLITAN URBAN(d)</b>										
1 .. ..	62,022	16,509	19,345	19,203	117,079	93,646	12,993	38,288	20,353	165,280
2 .. ..	242,815	26,497	41,373	14,300	324,985	300,673	17,923	65,566	12,959	397,121
3 .. ..	241,859	16,400	23,793	6,356	288,408	265,971	12,305	33,205	5,104	316,585
4 .. ..	247,207	9,917	12,926	3,295	273,345	296,934	8,524	19,888	2,394	327,740
5 .. ..	153,006	4,449	4,743	1,229	163,427	196,258	4,201	8,249	948	209,656
6 .. ..	75,493	2,033	1,604	488	79,618	101,383	2,073	3,005	369	106,830
7 .. ..	33,245	891	549	218	34,903	44,859	958	1,143	135	47,095
8 .. ..	15,107	448	186	125	15,866	20,801	523	415	61	21,800
9 .. ..	3,983	115	55	53	6,206	7,979	132	104	21	8,236
10 and over ..	5,196	85	29	41	5,351	6,863	95	71	20	7,049
<b>Total Private Dwellings ..</b>	<b>1,081,933</b>	<b>77,344</b>	<b>104,603</b>	<b>45,308</b>	<b>1,309,188</b>	<b>1,335,367</b>	<b>59,727</b>	<b>169,934</b>	<b>42,364</b>	<b>1,607,392</b>
<b>Total Inmates</b>	<b>3,944,181</b>	<b>204,571</b>	<b>264,646</b>	<b>92,576</b>	<b>4,505,974</b>	<b>4,897,290</b>	<b>166,402</b>	<b>420,885</b>	<b>79,970</b>	<b>5,564,547</b>
<b>Average number of inmates per private dwelling ..</b>	<b>3.65</b>	<b>2.64</b>	<b>2.53</b>	<b>2.04</b>	<b>3.44</b>	<b>3.67</b>	<b>2.79</b>	<b>2.48</b>	<b>1.89</b>	<b>3.46</b>

(a) Includes houses, sheds, huts, etc. and shared private houses for which only one householder's schedule was received. (b) Portion of a shared private house which is occupied separately and for which portion a separate householder's schedule was received. (c) See footnote (d) to table on p. 357. (d) See text on p. 356 regarding comparability as between censuses.



**OCCUPIED PRIVATE DWELLINGS, BY NUMBER OF INMATES:**  
AUSTRALIA—*continued.*

Number of inmates per dwelling	Census, 30th June, 1954					Census, 30th June, 1961				
	Private house (a)	Share of private house (b)	Flat (c)	Other	Total private dwellings	Private house (a)	Share of private house (b)	Flat (c)	Other	Total private dwellings
<b>OTHER URBAN(d)</b>										
1 .. ..	39,178	4,609	2,945	1,883	48,615	55,561	3,475	7,754	2,579	69,369
2 .. ..	112,952	7,231	7,333	2,211	129,727	143,974	4,520	15,355	2,029	165,878
3 .. ..	107,678	4,986	5,085	1,389	119,138	120,090	2,987	8,928	1,085	133,090
4 .. ..	110,022	3,056	3,161	756	116,995	130,008	2,040	6,025	584	138,657
5 .. ..	73,416	1,479	1,383	278	76,556	93,958	1,109	2,918	273	98,258
6 .. ..	39,436	768	557	132	40,893	52,500	596	1,276	113	54,485
7 .. ..	18,941	353	211	51	19,576	24,630	285	532	40	25,487
8 .. ..	9,348	166	60	21	9,595	11,891	162	230	27	12,310
9 .. ..	3,777	56	32	11	3,876	4,675	48	60	8	4,791
10 and over ..	3,636	43	17	12	3,708	4,123	26	56	5	4,210
<b>Total Private Dwellings ..</b>	<b>518,404</b>	<b>22,747</b>	<b>20,784</b>	<b>6,744</b>	<b>568,679</b>	<b>641,410</b>	<b>15,248</b>	<b>45,134</b>	<b>6,743</b>	<b>706,535</b>
<b>Total Inmates</b>	<b>1,913,307</b>	<b>63,029</b>	<b>58,201</b>	<b>16,430</b>	<b>2,050,967</b>	<b>2,363,128</b>	<b>42,782</b>	<b>118,317</b>	<b>14,893</b>	<b>2,539,120</b>
<b>Average number of inmates per private dwelling ..</b>	<b>3.69</b>	<b>2.77</b>	<b>2.80</b>	<b>2.44</b>	<b>3.61</b>	<b>3.68</b>	<b>2.81</b>	<b>2.74</b>	<b>2.21</b>	<b>3.59</b>
<b>RURAL(d)</b>										
1 .. ..	46,108	964	217	105	47,394	48,943	747	848	173	50,711
2 .. ..	88,412	1,898	597	167	91,074	92,952	1,129	1,273	140	95,494
3 .. ..	86,142	1,534	473	159	88,308	79,834	884	918	78	81,714
4 .. ..	89,458	1,285	381	134	91,258	85,287	807	725	75	86,894
5 .. ..	65,284	745	209	71	66,309	66,658	491	404	43	67,596
6 .. ..	39,762	370	102	34	40,268	42,445	271	195	17	42,928
7 .. ..	20,749	185	36	25	20,995	21,916	124	104	5	22,149
8 .. ..	10,788	90	10	14	10,902	11,404	80	38	3	11,525
9 .. ..	4,508	36	5	3	4,552	4,625	24	9	1	4,659
10 and over ..	4,471	18	3	2	4,494	4,325	18	4	1	4,348
<b>Total Private Dwellings ..</b>	<b>455,682</b>	<b>7,125</b>	<b>2,033</b>	<b>714</b>	<b>465,554</b>	<b>458,389</b>	<b>4,575</b>	<b>4,518</b>	<b>536</b>	<b>468,018</b>
<b>Total Inmates</b>	<b>1,725,677</b>	<b>22,979</b>	<b>6,418</b>	<b>2,347</b>	<b>1,757,421</b>	<b>1,737,168</b>	<b>14,882</b>	<b>13,394</b>	<b>1,383</b>	<b>1,766,827</b>
<b>Average number of inmates per private dwelling ..</b>	<b>3.79</b>	<b>3.23</b>	<b>3.16</b>	<b>3.29</b>	<b>3.77</b>	<b>3.79</b>	<b>3.25</b>	<b>2.96</b>	<b>2.58</b>	<b>3.78</b>
<b>TOTAL, AUSTRALIA</b>										
1 .. ..	147,308	22,082	22,507	21,191	213,088	198,150	17,215	46,890	23,105	285,360
2 .. ..	444,179	35,626	49,303	16,678	545,786	537,599	23,572	82,194	15,128	658,493
3 .. ..	435,679	22,920	29,351	7,904	495,854	465,895	16,176	43,051	6,267	531,389
4 .. ..	446,687	14,258	16,468	4,185	481,598	512,229	11,371	26,638	3,053	553,291
5 .. ..	291,706	6,673	6,335	1,578	306,292	356,874	5,801	11,571	1,264	375,510
6 .. ..	154,691	3,171	2,263	654	160,779	196,328	2,940	4,476	499	204,243
7 .. ..	72,955	1,429	796	294	75,474	91,405	1,367	1,779	180	94,731
8 .. ..	35,243	704	256	160	36,363	44,096	765	683	91	45,635
9 .. ..	14,268	207	92	67	14,634	17,279	204	173	30	17,686
10 and over ..	13,303	146	49	55	13,553	15,311	139	131	26	15,607
<b>Total Private Dwellings ..</b>	<b>2,056,019</b>	<b>107,216</b>	<b>127,420</b>	<b>52,766</b>	<b>2,343,421</b>	<b>2,435,166</b>	<b>79,550</b>	<b>217,586</b>	<b>49,643</b>	<b>2,781,945</b>
<b>Total Inmates</b>	<b>7,583,165</b>	<b>290,579</b>	<b>329,265</b>	<b>111,353</b>	<b>8,314,362</b>	<b>8,997,586</b>	<b>224,066</b>	<b>552,596</b>	<b>96,246</b>	<b>9,870,494</b>
<b>Average number of inmates per private dwelling ..</b>	<b>3.69</b>	<b>2.71</b>	<b>2.58</b>	<b>2.11</b>	<b>3.55</b>	<b>3.69</b>	<b>2.82</b>	<b>2.54</b>	<b>1.94</b>	<b>3.55</b>

(a) Includes houses, sheds, huts, etc., and shared private houses for which only one householder's schedule was received. (b) Portion of a shared private house which is occupied separately and for which portion a separate householder's schedule was received. (c) See footnote (d) to table on p. 357. (d) See text on p. 356 regarding comparability as between censuses.

(iv) *Nature of Occupancy.* At the 1961 census, 52.0 per cent. of occupied private houses in Australia for which particulars were supplied were occupied by owners, 25.1 per cent. by purchasers by instalments, 20.7 per cent. by tenants, and 2.2 per cent. by others. The corresponding percentages in 1954 were—owners, 52.5 per cent.; purchasers by instalments, 16.8 per cent.; tenants, 28.1 per cent.; and others, 2.6 per cent. Owner-occupied houses in Australia increased by 17.3 per cent. between 1954 and 1961, and those being purchased by instalments by 76.8 per cent., the increase in these two groups combined being nearly 32 per cent., while tenant-occupied houses decreased by 12.4 per cent.

In the metropolitan areas, 80.6 per cent. of all occupied private houses were either owner-occupied or being purchased by instalments, as compared with 74.6 per cent. in the other urban areas and 70.2 per cent. in the rural areas.

Tenants occupied by far the greater proportion of flats and other private dwellings.

### OCUPIED PRIVATE DWELLINGS, BY NATURE OF OCCUPANCY: AUSTRALIA

Nature of occupancy	Census, 30th June, 1954					Census, 30th June, 1961				
	Private house (a)	Share of private house (b)	Flat (c)	Other	Total private dwellings	Private house (a)	Share of private house (b)	Flat (c)	Other	Total private dwellings
<b>METROPOLITAN URBAN(d)</b>										
Owner .. .. .	512,632	19,525	12,272	1,899	546,328	635,769	16,040	28,606	2,269	682,684
Purchaser by instalments .. .. .	249,018	5,777	1,503	481	256,779	437,431	6,864	6,363	761	451,419
Tenant (Governmental housing)(e) .. .. .	48,011	379	4,127	1,795	54,312	62,589	393	12,179	425	75,586
Tenant .. .. .	259,955	50,133	85,530	40,267	435,885	185,273	35,017	119,603	37,897	377,790
Caretaker .. .. .	6,617	449	681	391	8,138	7,291	411	1,942	392	10,036
Other methods of occupancy .. .. .	3,682	448	322	211	4,663	3,684	380	756	201	5,021
Not stated .. .. .	2,018	633	168	264	3,083	3,330	622	485	419	4,856
<b>Total Private Dwellings .. .. .</b>	<b>1,081,933</b>	<b>77,344</b>	<b>104,605</b>	<b>45,308</b>	<b>1,309,188</b>	<b>1,335,367</b>	<b>59,727</b>	<b>169,934</b>	<b>42,364</b>	<b>1,607,392</b>
<b>OTHER URBAN(d)</b>										
Owner .. .. .	279,042	6,469	3,271	426	289,208	334,748	4,613	6,469	503	346,333
Purchaser by instalments .. .. .	77,063	1,158	280	70	78,571	141,850	1,176	1,085	98	144,209
Tenant (Governmental housing)(e) .. .. .	27,414	115	712	83	28,324	36,954	80	1,726	154	38,914
Tenant .. .. .	122,146	14,367	16,214	6,043	158,770	114,963	8,877	32,437	5,846	162,123
Caretaker .. .. .	5,715	186	184	67	6,152	6,121	136	679	66	7,002
Other methods of occupancy .. .. .	4,440	150	81	28	4,699	4,133	115	581	31	4,860
Not stated .. .. .	2,584	302	42	27	2,955	2,641	251	157	45	3,094
<b>Total Private Dwellings .. .. .</b>	<b>518,404</b>	<b>22,747</b>	<b>20,784</b>	<b>6,744</b>	<b>568,679</b>	<b>641,410</b>	<b>15,248</b>	<b>43,134</b>	<b>6,743</b>	<b>706,535</b>

(a) Includes houses, sheds, huts, etc., and shared private houses for which only one householder's schedule was received. (b) Portion of a shared private house which is occupied separately and for which portion a separate householder's schedule was received. (c) See footnote (d) to table on p. 357. (d) See text on p. 356 regarding comparability as between censuses. (e) At the 1954 Census, figures were compiled from the answers furnished in response to the instruction on the householder's schedule "Tenant paying rent to a Government Authority to write 'Tenant (G)'". At the 1961 Census, householders were instructed on the schedule to write "Tenant (G)" if they paid rent to the Governmental Housing Authority in their State or Territory.

OCCUPIED PRIVATE DWELLINGS, BY NATURE OF OCCUPANCY:  
AUSTRALIA—*continued*

Nature of occupancy	Census, 30th June, 1954					Census, 30th June, 1961				
	Private house (a)	Share of private house (b)	Flat (c)	Other	Total private dwellings	Private house (a)	Share of private house (b)	Flat (c)	Other	Total private dwellings
<i>RURAL (d)</i>										
Owner .. ..	283,022	2,778	431	47	286,278	289,704	1,919	923	45	292,591
Purchaser by instalments .. ..	17,544	164	33	2	17,743	28,163	135	81	7	28,386
Tenant (Governmental housing)(e) .. ..	16,543	66	96	35	16,740	2,544	15	20	..	2,579
Tenant .. ..	99,712	3,464	1,398	625	105,199	100,253	2,049	3,070	452	105,824
Caretaker .. ..	12,975	137	23	2	13,137	12,570	112	192	10	12,884
Other methods of occupancy .. ..	19,163	271	32	2	19,468	19,510	180	186	12	19,888
Not stated .. ..	6,723	245	20	1	6,989	5,645	165	46	10	5,866
<b>Total Private Dwellings .. ..</b>	<b>455,682</b>	<b>7,125</b>	<b>2,033</b>	<b>714</b>	<b>465,554</b>	<b>458,389</b>	<b>4,575</b>	<b>4,518</b>	<b>536</b>	<b>468,018</b>
<b>TOTAL, AUSTRALIA</b>										
Owner .. ..	1,074,696	28,772	15,974	2,372	1,121,814	1,260,221	22,572	35,998	2,817	1,321,608
Purchaser by instalments .. ..	343,625	7,099	1,816	553	353,093	607,444	8,175	7,529	866	624,014
Tenant (Governmental housing)(e) .. ..	91,968	560	4,935	1,913	99,376	102,087	488	13,925	579	117,079
Tenant .. ..	481,813	67,964	103,142	46,935	699,854	400,489	45,943	155,110	44,195	645,737
Caretaker .. ..	25,307	772	888	460	27,427	25,982	659	2,813	468	29,922
Other methods of occupancy .. ..	27,285	869	435	241	28,830	27,327	675	1,523	244	29,769
Not stated .. ..	11,325	1,180	230	292	13,027	11,616	1,038	688	474	13,816
<b>Total Private Dwellings .. ..</b>	<b>2,056,019</b>	<b>107,216</b>	<b>127,420</b>	<b>52,766</b>	<b>2,343,421</b>	<b>2,435,166</b>	<b>79,550</b>	<b>217,586</b>	<b>49,643</b>	<b>2,781,945</b>

(a) Includes houses, sheds, huts, etc., and shared private houses for which only one householder's schedule was received. (b) Portion of a shared private house which is occupied separately and for which portion a separate householder's schedule was received. (c) See footnote (d) to table on p. 357. (d) See text on p. 356 regarding comparability as between censuses. (e) At the 1954 Census, figures were compiled from the answers furnished in response to the instruction on the householder's schedule "Tenant paying rent to a Government Authority to write 'Tenant (G)'". At the 1961 Census, householders were instructed on the schedule to write "Tenant (G)" if they paid rent to the Governmental Housing Authority in their State or Territory.

(v) *Weekly Rent—Tenanted Private Dwellings.* The following table shows tenanted private dwellings in the metropolitan urban, other urban and rural areas of Australia classified according to weekly rent (unfurnished).

Information tabulated concerning rents was restricted to the actual rent paid per week by tenants for unfurnished private dwellings. Particulars of rents shown in the following tables are therefore on an *unfurnished* basis. Dwellings shown as rent "Not stated" include those whose rents were shown on householders' schedules on a *furnished* basis, and those whose rents were not applicable (e.g., for shop and dwelling combined). In this section information on "tenanted private dwellings" *excludes particulars of dwellings occupied by "Tenants (Governmental Housing)" in each State, i.e. those householders who at the 1954 Census furnished answers in response to the instruction on the census householder's schedule "Tenant paying rent to a Government Authority to write 'Tenant (G)'" and those householders who at the 1961 Census furnished answers in response to the instruction on the census householder's schedule "Tenant paying rent to the Governmental Housing Authority in their State to write 'Tenant (G)'". For the Australian Capital Territory and the Northern Territory, particulars of all tenanted private dwellings are included.*

TENANTED PRIVATE DWELLINGS BY WEEKLY RENT (UNFURNISHED):  
AUSTRALIA

Weekly rent (unfurnished)	Census, 30th June, 1954(a)					Census, 30th June, 1961(a)				
	Private house (b)	Share of private house (c)	Flat (d)	Other	Total tenanted private dwellings	Private house (b)	Share of private house (c)	Flat (d)	Other	Total tenanted private dwellings
<b>METROPOLITAN URBAN(e)</b>										
Under 20s.	26,468	3,019	712	1,126	31,325	5,033	327	547	268	6,175
20s. and under 30s.	69,583	6,671	4,834	2,335	83,423	14,935	1,030	1,660	634	18,259
30s. " " 40s.	63,135	6,871	14,703	2,378	87,087	20,086	1,340	3,862	993	26,281
40s. " " 50s.	34,047	4,517	16,250	1,470	56,284	21,406	1,909	7,448	1,108	31,871
50s. " " 60s.	14,278	2,327	10,642	855	28,102	16,798	1,413	8,690	789	27,690
60s. " " 70s.	9,327	1,523	6,294	584	17,728	16,334	2,126	7,966	857	27,283
70s. " " 80s.	4,287	602	3,163	286	8,338	9,248	1,391	5,388	625	16,652
80s. " " 90s.	2,679	421	2,199	167	5,466	8,411	1,494	4,989	589	15,483
90s. " " 100s.	940	116	1,283	66	2,405	4,403	779	3,283	374	8,839
100s. and over	2,877	282	3,398	165	6,722	32,387	3,676	34,420	1,459	71,942
Not stated(f)	36,062	23,900	22,259	30,844	113,065	42,490	19,646	42,707	30,209	135,052
<i>Total Tenanted Private Dwellings</i> ..	263,683	50,249	85,737	40,276	439,945	191,531	35,131	120,960	37,905	385,527
Average weekly rent (unfurnished) per private dwelling ..	<i>s. d.</i> 34 10	<i>s. d.</i> 35 8	<i>s. d.</i> 51 11	<i>s. d.</i> 37 4	<i>s. d.</i> 38 3	<i>s. d.</i> 68 10	<i>s. d.</i> 70 10	<i>s. d.</i> 100 4	<i>s. d.</i> 65 5	<i>s. d.</i> 78 8
<b>OTHER URBAN(e)</b>										
Under 20s.	18,645	1,363	366	363	20,737	5,934	203	345	120	6,602
20s. and under 30s.	29,759	2,055	1,508	576	33,898	11,908	463	886	195	13,452
30s. " " 40s.	24,192	1,861	2,347	321	28,930	12,209	505	1,339	252	14,305
40s. " " 50s.	13,140	1,181	1,834	321	16,476	14,081	626	1,779	293	16,779
50s. " " 60s.	6,649	578	1,181	192	8,600	11,001	527	1,740	261	13,529
60s. " " 70s.	4,462	287	659	97	5,505	11,162	585	2,099	280	14,126
70s. " " 80s.	1,938	75	391	37	2,441	7,450	374	1,658	180	9,662
80s. " " 90s.	824	56	166	13	1,059	5,927	308	1,601	125	7,961
90s. " " 100s.	264	19	69	4	356	2,600	128	894	58	3,680
100s. and over	553	28	123	12	716	9,326	347	3,812	134	13,619
Not stated(f)	22,188	6,865	7,603	3,903	40,559	24,429	4,818	16,335	3,952	49,534
<i>Total Tenanted Private Dwellings</i> ..	122,614	14,368	16,247	6,048	159,277	116,027	8,884	32,488	5,850	163,249
Average weekly rent (unfurnished) per private dwelling ..	<i>s. d.</i> 31 11	<i>s. d.</i> 31 1	<i>s. d.</i> 41 10	<i>s. d.</i> 32 6	<i>s. d.</i> 32 8	<i>s. d.</i> 54 6	<i>s. d.</i> 54 4	<i>s. d.</i> 72 0	<i>s. d.</i> 52 11	<i>s. d.</i> 56 11

(a) These figures exclude dwellings occupied by "Tenants (Governmental Housing)" except those in the Northern Territory and the Australian Capital Territory. (b) Includes houses, sheds, huts, etc., and shared private houses for which only one householder's schedule was received. (c) Portion of a shared private house which is occupied separately and for which portion a separate householder's schedule was received. (d) See footnote (d) to table on p. 357. (e) See text on p. 356 regarding comparability as between censuses. (f) Includes tenanted dwellings which were rent-free, those rented on a furnished basis, and those for which the rents were not applicable (e.g. for shop and dwelling combined).

**TENANTED PRIVATE DWELLINGS BY WEEKLY RENT (UNFURNISHED):  
AUSTRALIA—continued**

Weekly rent (unfurnished)	Census, 30th June, 1954(a)					Census, 30th June, 1961(a)				
	Private house (b)	Share of private house (c)	Flat (d)	Other	Total tenanted private dwellings	Private house (b)	Share of private house (c)	Flat (d)	Other	Total tenanted private dwellings
<b>RURAL(e)</b>										
Under 20s. . .	25,979	578	113	84	26,754	13,956	135	146	38	14,275
20s. and under 30s. . .	17,494	429	217	108	18,248	14,888	156	252	31	15,327
30s. " " 40s. . .	7,292	239	137	47	7,715	9,625	97	223	23	9,968
40s. " " 50s. . .	3,682	129	96	24	3,931	9,172	127	255	30	9,584
50s. " " 60s. . .	1,560	58	51	14	1,683	4,338	71	168	18	4,595
60s. " " 70s. . .	981	20	27	5	1,033	3,678	65	174	21	3,938
70s. " " 80s. . .	359	8	7	1	375	1,491	22	101	5	1,619
80s. " " 90s. . .	248	4	5	2	259	1,252	22	79	4	1,357
90s. " " 100s. . .	75	2	..	..	77	466	8	32	1	507
100s. and over . . .	206	6	2	..	214	1,769	27	74	3	1,873
Not stated(f) . . .	42,003	1,991	745	340	45,079	39,891	1,327	1,567	278	43,063
<b>Total Tenanted Private Dwellings . . .</b>	<b>99,879</b>	<b>3,464</b>	<b>1,400</b>	<b>625</b>	<b>105,368</b>	<b>100,526</b>	<b>2,057</b>	<b>3,071</b>	<b>452</b>	<b>106,106</b>
<b>Average weekly rent (unfurnished) per private dwelling . . .</b>	<i>s. d.</i> 22 0	<i>s. d.</i> 23 4	<i>s. d.</i> 30 10	<i>s. d.</i> 25 2	<i>s. d.</i> 22 2	<i>s. d.</i> 34 11	<i>s. d.</i> 37 4	<i>s. d.</i> 46 4	<i>s. d.</i> 36 6	<i>s. d.</i> 35 2

**TOTAL, AUSTRALIA**

Under 20s. . .	71,092	4,960	1,191	1,573	78,816	24,923	665	1,038	426	27,052
20s. and under 30s. . .	116,836	9,155	6,559	3,019	135,569	41,731	1,649	2,798	860	47,038
30s. " " 40s. . .	94,619	8,971	17,187	2,955	123,732	41,920	1,942	5,424	1,268	50,554
40s. " " 50s. . .	30,869	5,827	18,180	1,815	76,691	44,659	2,662	9,482	1,431	58,234
50s. " " 60s. . .	22,487	2,963	11,874	1,061	38,385	32,137	2,011	10,598	1,068	45,814
60s. " " 70s. . .	14,770	1,830	6,980	686	24,266	31,174	2,776	10,239	1,158	45,347
70s. " " 80s. . .	6,584	685	3,561	324	11,154	18,189	1,787	7,147	810	27,933
80s. " " 90s. . .	3,751	481	2,370	182	6,784	15,590	1,824	6,669	718	24,801
90s. " " 100s. . .	1,279	137	1,352	70	2,838	7,469	915	4,209	433	13,026
100s. and over . . .	3,636	316	3,523	177	7,652	43,482	4,050	38,306	1,596	87,434
Not stated(f) . . .	100,253	32,756	30,607	35,087	198,703	106,810	25,791	60,609	34,439	227,649
<b>Total Tenanted Private Dwellings . . .</b>	<b>486,176</b>	<b>68,081</b>	<b>103,384</b>	<b>46,949</b>	<b>704,590</b>	<b>408,084</b>	<b>46,072</b>	<b>156,519</b>	<b>44,207</b>	<b>654,882</b>
<b>Average weekly rent (unfurnished) per private dwelling . . .</b>	<i>s. d.</i> 32 2	<i>s. d.</i> 34 2	<i>s. d.</i> 50 6	<i>s. d.</i> 36 2	<i>s. d.</i> 35 0	<i>s. d.</i> 57 8	<i>s. d.</i> 66 4	<i>s. d.</i> 94 9	<i>s. d.</i> 62 5	<i>s. d.</i> 66 6

(a) These figures exclude dwellings occupied by "Tenants (Governmental Housing)" except those in the Northern Territory and the Australian Capital Territory. (b) Includes houses, sheds, huts, etc., and shared private houses for which only one householder's schedule was received. (c) Portion of a shared private house which is occupied separately and for which portion a separate householder's schedule was received. (d) See footnote (d) to table on p. 357. (e) See text on p. 356 regarding comparability as between censuses. (f) Includes tenanted dwellings which were rent-free, those rented on a furnished basis, and those for which the rents were not applicable (e.g., for shop and dwelling combined).

At the 1954 census, nearly 55 per cent. of the tenanted private houses in Australia for which unfurnished rents were stated had weekly rentals of between 20s. and 40s.; at the 1961 census, only 28 per cent. were within these limits. In 1954, 18 per cent. had rentals below 20s. and 27 per cent. above 40s. In 1961, 8 per cent. had rentals below 20s. and 64 per cent. above 40s. At the 1961 census, 31 per cent. of the flats in Australia had rentals of between 40s. and 70s., 10 per cent. were below this range, and 59 per cent. above it. At the 1954 census, the corresponding proportions were:—51 per cent., 34 per cent. and 15 per cent. In 1961, 14 per cent. of tenanted private houses and 40 per cent. of tenanted flats were in the rental range 100s. and over. Dwellings whose rents were not stated were excluded in obtaining these proportions.

The average rentals shown in this table for all tenanted private dwellings in Australia at the 1961 census were 90 per cent. higher than in 1954 (79 per cent. higher for houses and 88 per cent. higher for flats). Metropolitan rentals in 1961 were higher by 106 per cent., 98 per cent. and 93 per cent., respectively, than in 1954.

In all such comparisons as these, the difference in basis between the 1954 and 1961 Censuses, referred to in the opening paragraph (p. 356), and also the differences in the urban and rural divisions (*see* p. 364), should be borne in mind.

**AVERAGE WEEKLY RENT PER ROOM OF TENANTED PRIVATE HOUSES(a),  
THREE TO SIX ROOMS, WITH WALLS OF WOOD, BRICK OR STONE:  
AUSTRALIA**

Particulars	Census, 30th June, 1954				Census, 30th June, 1961				In- crease, Aus- tralia, 1954-61
	Urban(b)		Rural (b)	Total, Aus- tralia	Urban(b)		Rural (b)	Total, Aus- tralia	
	Metro- politan	Other			Metro- politan	Other			
Private houses (a) with walls of—	<i>s. d.</i>	<i>s. d.</i>	<i>s. d.</i>	<i>s. d.</i>	<i>s. d.</i>	<i>s. d.</i>	<i>s. d.</i>	<i>s. d.</i>	<i>s. d.</i>
Wood—									
3 rooms .. .. .	7 3	7 11	5 10	7 1	16 11	13 2	8 8	13 2	6 1
4 " .. .. .	6 9	7 0	4 10	6 4	15 2	11 9	7 5	11 7	5 3
5 " .. .. .	6 8	6 4	4 6	6 1	14 1	10 9	6 11	10 9	4 8
6 " .. .. .	5 10	5 5	3 11	5 3	12 6	9 6	6 0	9 5	4 2
3 to 6 rooms .. .. .	6 6	6 3	4 6	5 11	13 11	10 7	6 10	10 7	4 8
Brick or stone—									
3 rooms .. .. .	8 3	9 4	6 8	8 3	16 7	15 11	10 7	16 3	8 0
4 " .. .. .	7 10	7 2	5 1	7 8	15 2	12 2	7 11	14 6	6 10
5 " .. .. .	7 2	6 8	4 9	7 0	13 11	11 0	7 7	13 1	6 1
6 " .. .. .	6 9	6 1	4 3	6 6	12 5	10 2	6 8	11 7	5 1
3 to 6 rooms .. .. .	7 3	6 8	4 9	7 1	13 10	11 0	7 4	13 0	5 11
Wood, brick or stone—									
3 rooms .. .. .	7 11	8 4	6 0	7 9	16 8	13 10	8 11	14 9	7 0
4 " .. .. .	7 6	7 1	4 11	7 1	15 2	11 10	7 6	13 0	5 11
5 " .. .. .	7 0	6 5	4 6	6 7	14 0	10 10	7 0	11 10	5 3
6 " .. .. .	6 5	5 7	4 0	5 11	12 5	9 9	6 1	10 6	4 7
3 to 6 rooms .. .. .	7 0	6 5	4 7	6 7	13 11	10 9	6 11	11 9	5 2

(a) These figures exclude tenanted private houses occupied by "Tenants (Governmental Housing)" in 1954, and those occupied by "Tenants (State Governmental Housing Authority)" in 1961. However, the data used for the Australian Capital Territory and Northern Territory include particulars of such dwellings. (b) *See* text on p. 356 regarding comparability as between censuses.

(vi) *Date of Building.* The numbers of occupied private dwellings in Australia at the census of 30th June, 1961, classified according to date of building from replies given to the relevant question at the 1961 census, are shown below.

## OCCUPIED PRIVATE DWELLINGS, BY DATE OF BUILDING: AUSTRALIA, CENSUS, 30TH JUNE, 1961

Date of building	Class of dwelling				Division			Total, Australia
	Private house (a)	Share of private house	Flat	Other	Urban		Rural	
					Metropolitan	Other		
<i>Before 1st July, 1954</i> ..	1,861,262	68,823	168,615	44,358	1,231,462	537,953	373,643	2,143,058
<i>After 30th June, 1954</i> —								
1954 (July–Dec.) ..	30,398	397	1,121	94	19,116	8,375	4,519	32,010
1955 ..	80,293	975	3,375	194	49,571	22,374	12,892	84,837
1956 ..	73,095	999	3,937	213	46,215	20,398	11,631	78,244
1957 ..	68,340	939	3,596	351	43,353	18,953	10,920	73,226
1958 ..	78,573	1,143	5,603	381	51,970	22,203	11,527	85,700
1959 ..	81,110	1,220	7,657	366	54,747	24,002	11,604	90,353
1960 ..	82,968	1,231	11,117	234	57,188	25,705	12,657	95,550
1961 (Jan.–June) ..	30,618	367	4,124	130	19,943	9,466	5,830	35,239
Not stated (b) ..	18,131	730	2,841	491	12,484	6,085	3,624	22,193
<i>Total, after 30th June, 1954</i> ..	543,526	8,001	43,371	2,454	354,587	157,561	85,204	597,352
Other not stated ..	30,378	2,726	5,600	2,831	21,343	11,021	9,171	41,535
<b>Grand Total</b> ..	<b>2,435,166</b>	<b>79,550</b>	<b>217,586</b>	<b>49,643</b>	<b>1,607,392</b>	<b>706,535</b>	<b>468,018</b>	<b>2,781,945</b>

(a) Includes houses, sheds, huts, etc., and shared private houses for which only one household's schedule was received. (b) After 30th June, 1954, but year not stated.

NOTE.—The information above was derived from replies of occupants of dwellings at 30th June, 1961. For a number of reasons, the figures shown on the first line of the table do not agree with the number of dwellings by class recorded at the Census of 30th June, 1954, e.g., demolitions, conversion from one class of dwelling to another and errors of memory regarding date of building. Also, the figures are not precisely comparable with 1954 data because of changes in classification of dwellings adopted at the 1961 Census, as indicated in footnotes (d) and (e) to table on p. 357.

Of those occupied private dwellings in Australia where date of building was stated, 21.8 per cent. were built after 30th June, 1954. In the metropolitan urban division, 22.4 per cent. were built after 30th June, 1954, while in the other urban and rural divisions, the proportions were 22.7 per cent. and 18.6 per cent. respectively.

(vii) *Facilities, etc.* At the 1961 census a question was asked regarding the facilities gas, electricity and television. Of those persons who answered the question on gas and electricity, 51.4 per cent. had electricity but not gas, and 45.2 per cent. had both electricity and gas, making a combined total of 96.6 per cent. with electricity. Occupied private dwellings with gas but not electricity constituted 0.2 per cent. In the metropolitan urban division 99.7 per cent. of occupied private dwellings had electricity, while in the other urban and rural divisions the proportions with electricity were 98.7 per cent. and 82.5 per cent. respectively. The proportion of private dwellings with both electricity and gas was 65.6 per cent. in metropolitan urban, 25.3 per cent. in other urban and 4.4 per cent. in rural.

Of the occupied private dwellings in Australia stated as having a television set, 81.2 per cent. were in the metropolitan urban division. In this division 64.6 per cent. of occupied private dwellings were stated as having a television set.

Similar information was not compiled for the 1954 census, but a summary of information obtained at the 1947 census was published on page 571 of Official Year Book No. 38.

**OCCUPIED PRIVATE DWELLINGS BY FACILITIES: AUSTRALIA,  
CENSUS, 30th JUNE, 1961**

Facilities	Class of dwelling				Division			Total, Australia
	Private house (a)	Share of private house	Flat	Other	Urban		Rural	
					Metro-politan	Other		
Gas or electricity—								
With gas only ..	5,386	105	171	103	1,578	614	3,573	5,765
With electricity only ..	1,322,300	28,580	63,378	9,568	546,588	517,041	360,197	1,423,826
With gas and electricity	1,008,763	49,769	153,231	39,428	1,052,980	177,974	20,237	1,251,191
Without gas or electricity ..	87,839	773	277	163	3,239	8,665	77,148	89,052
Not stated ..	10,878	323	529	381	3,007	2,241	6,863	12,111
<b>Total ..</b>	<b>2,435,166</b>	<b>79,550</b>	<b>217,586</b>	<b>49,643</b>	<b>1,607,392</b>	<b>706,535</b>	<b>468,018</b>	<b>2,781,945</b>
With television set(b) ..	1,139,578	30,126	97,226	11,731	1,038,837	168,875	70,949	1,278,661

(a) Includes houses, sheds, huts, etc., and shared private houses for which only one householder's schedule was received. (b) So stated in census schedules.

6. **Unoccupied Dwellings.**—The following table classifies unoccupied dwellings according to the reasons given by census collectors as to why the dwellings were unoccupied at the census date. Unoccupied dwellings include vacant dwellings available for sale or renting; dwellings such as "week-ender", "holiday home", "second home", "seasonal workers' quarters", which were not occupied on the night of the census; dwellings normally occupied, but whose usual occupants were temporarily absent on the night of the census; newly completed dwellings whose owners or tenants had not entered into occupation on the night of the census; dwellings described as "to be demolished", "condemned", "deceased estate", "exhibition home", etc.; and buildings constructed as dwellings, but used for non-dwelling purposes on the night of the census. The total number of unoccupied dwellings shown for any area must not, therefore, be read as representing the number of vacant houses and flats available for sale or renting.

**UNOCCUPIED DWELLINGS, BY REASON FOR BEING UNOCCUPIED:  
AUSTRALIA, CENSUS, 30th JUNE, 1961**

Reason for being unoccupied	Urban		Rural	Total, Australia	
	Metro-politan	Other		Number	Per cent.
For sale or for renting .. ..	16,159	10,920	7,189	34,268	17.65
Holiday home, week-ender, seasonal quarters .. ..	5,814	20,975	36,567	63,356	32.64
Occupants temporarily absent .. ..	22,896	16,196	14,984	54,076	27.86
To be demolished, condemned .. ..	1,828	912	1,800	4,540	2.34
Other and not stated .. ..	12,399	9,574	15,901	37,874	19.51
<b>Total .. ..</b>	<b>59,096</b>	<b>58,577</b>	<b>76,441</b>	<b>194,114</b>	<b>100.00</b>

## § 2. Building

1. **General.**—(i) *Statistics of Building Approved.* Statistics of building approvals have been compiled from (a) permits issued by local government authorities in the areas subject to building control by these authorities, and (b) contracts let or work commenced and day labour projects authorized by governmental authorities. *They relate only to approvals for buildings as distinct from the construction of roads, bridges, railways, earth works, water*



*storage, etc.* Values shown represent the estimated cost when completed (excluding cost of land) of new buildings and alterations and additions to existing buildings. Additions of £5,000 and over are included with new buildings in all States except New South Wales, where they are included in "alterations and additions".

These statistics are available from the year 1953-54.

(ii) *Statistics of Building Commenced, Completed and Under Construction.* These relate to building by private contractors, government authorities and owner-builders.

The following outlines the scope of the statistics: (a) *only the erection of new buildings as distinct from the construction of railways, bridges, earthworks, water storage, etc., is covered*; (b) major new additions to existing buildings are included as new buildings (for New South Wales, major alterations also are included as new building); (c) minor additions, alterations, renovations and repairs are excluded because of the difficulty of obtaining details of this work; (d) temporary dwellings are excluded; (e) figures for houses exclude flats and dwellings attached to other new buildings (the value of dwellings attached to other new buildings is included with the value of buildings to which they are attached); figures for flats include "home units"; (f) imported prefabricated houses are included; (g) details obtained from government authorities and building contractors refer to all areas whereas details for owner-builders cover only areas subject to building control by local government authorities.

The following definitions of terms used in this section are necessary for interpretation of the data presented.

*Government or private ownership.* A building is classified as "government" or "private" according to ownership at date of commencement. Thus "government" includes buildings erected for Commonwealth and State Governments, semi-governmental and local government authorities, either by contractor or by day-labour, whether these buildings are for their own use, for rental or sale after completion. Houses erected *for particular persons* under government sponsored home building schemes or with government financial assistance are classified as "private".

*Owner-built.* An "owner-built" house is one actually erected or being erected by the owner or under the owner's direction without the services of a contractor who is responsible for the whole job.

*Contract-built.* Includes the operations of all building contractors and government instrumentalities which undertake the erection of new buildings.

*Commenced.* A building is regarded as having been commenced when work on foundations has begun. Owing to the difficulty of defining the exact point that this represents in building operations, classifications made by informants may not be entirely uniform.

*Completed.* A building is regarded as having been completed when the contractor has fulfilled the terms of the contract. As with commencements, the classifications made may not be entirely uniform.

*Under construction.* A building is regarded as being under construction if it has been commenced but not completed, whether or not work on the building is actively proceeding.

*Values.* All values shown exclude the value of land and represent the estimated value of buildings on completion.

*Type of building.* Classification is according to the function a building is intended to serve. A building which is ancillary to other buildings or forms part of a group of related buildings is classified according to the function of the group as a whole.

*Employment.* Figures relate to persons actually working on the jobs of contractors who undertake the erection of new buildings and of government instrumentalities which erect new buildings on their own account. They include persons actually working on alterations, additions, repairs and maintenance when these jobs are undertaken by such contractors and instrumentalities.

Contractors are asked to give details of all persons working on their jobs on a specified day, including working principals, men working as or for sub-contractors and men temporarily laid off on account of weather. Because of the intermittent employment of various types of sub-contractors on any particular job, it is sometimes difficult for contractors and authorities to

provide precise particulars of the number of sub-contractors and the number of employees of sub-contractors working on their jobs on the specified day. This factor may cause some estimation by persons completing returns and some degree of understatement in figures shown in tables. On the other hand, because of frequent movement between jobs of some types of tradesmen (such as electricians) who may work on several jobs on the one day, a small element of duplication may occur.

The figures exclude persons working on owner-built houses, and employees of builders who undertake only alterations, additions, repairs and maintenance.

2. **New Houses.**—(i) *Approved, Commenced, Completed and Under Construction, 1962-63.* The next table provides a summary of the number of new houses approved, commenced, completed and under construction in each State and Territory.

A graph showing the number of new houses commenced, completed and under construction for the period 1953-54 to 1962-63, will be found on page 385.

### NEW HOUSES: NUMBER, 1962-63

(INCLUDING OWNER-BUILT HOUSES)

Particulars	N.S.W.	Vic.	Qld	S.A.	W.A.	Tas.	N.T.	A.C.T.	Aust.
Approved ..	27,392	21,819	9,544	9,975	6,393	2,471	396	1,684	79,674
Commenced ..	25,145	20,811	9,027	9,610	6,222	2,442	368	1,592	75,217
Completed ..	25,591	20,328	9,019	9,646	6,593	2,504	432	1,683	75,796
Under construction at end of year ..	10,988	12,063	2,747	4,563	2,879	1,594	239	1,062	36,135

(ii) *Approved, Government and Private, 1958-59 to 1962-63.* The following table shows the number of new houses approved in each State or Territory, according to government and private ownership.

### NEW HOUSES APPROVED: NUMBER

Year	N.S.W.	Vic.	Qld	S.A.	W.A.	Tas.	N.T. (a)	A.C.T.	Aust.
<b>GOVERNMENT</b>									
1958-59 ..	3,890	2,274	724	2,452	1,089	477	146	765	11,817
1959-60 ..	2,873	2,552	983	2,103	1,229	452	181	862	11,235
1960-61 ..	3,844	1,923	1,583	4,332	1,264	413	216	878	14,453
1961-62 ..	4,335	1,285	1,302	1,603	1,867	617	229	590	11,828
1962-63 ..	3,980	1,925	1,197	2,537	1,655	550	240	741	12,825
<b>PRIVATE</b>									
1958-59 ..	27,026	20,552	9,041	5,376	4,173	1,929	228	394	68,719
1959-60 ..	29,365	22,033	9,645	6,234	4,853	2,094	259	526	75,009
1960-61 ..	24,410	16,509	8,776	5,614	4,421	1,860	174	639	62,403
1961-62 ..	22,558	16,829	8,630	6,373	4,424	1,910	175	842	61,741
1962-63 ..	23,412	19,894	8,347	7,438	4,738	1,921	156	943	66,849
<b>TOTAL</b>									
1958-59 ..	30,916	22,826	9,765	7,828	5,262	2,406	374	1,159	80,536
1959-60 ..	32,238	24,585	10,628	8,337	6,082	2,546	440	1,388	86,244
1960-61 ..	28,254	18,432	10,359	9,946	5,685	2,273	390	1,517	76,856
1961-62 ..	26,893	18,114	9,932	7,976	6,291	2,527	404	1,432	73,569
1962-63 ..	27,392	21,819	9,544	9,975	6,393	2,471	396	1,684	79,674

(a) Includes flats for periods prior to 1961-62.

(iii) *Commenced, 1958-59 to 1962-63.* The number of new houses commenced in each State and Territory by contractors and owner-builders is shown in the following table.

**NEW HOUSES COMMENCED: NUMBER**

Year	N.S.W.	Vic.	Qld	S.A.	W.A.	Tas.	N.T. (a)	A.C.T.	Aust.
<b>CONTRACT-BUILT(b)</b>									
1958-59	.. 18,582	17,188	6,387	6,873	4,231	1,508	257	993	56,019
1959-60	.. 19,784	19,372	7,349	8,032	5,067	1,491	321	1,286	62,702
1960-61	.. 19,950	15,261	7,364	8,448	4,902	1,405	321	962	58,613
1961-62	.. 18,764	15,292	7,715	8,136	5,491	1,643	369	1,388	58,798
1962-63	.. 20,667	17,632	7,949	9,130	5,443	1,641	326	1,461	64,249
<b>OWNER-BUILT</b>									
1958-59	.. 8,049	5,255	1,613	1,252	1,011	1,055	77	172	18,484
1959-60	.. 8,283	3,829	1,610	877	879	866	105	139	16,588
1960-61	.. 7,704	3,256	1,834	820	791	843	94	215	15,557
1961-62	.. 6,594	3,247	1,451	593	825	832	58	202	13,802
1962-63	.. 4,478	3,179	1,078	480	779	801	42	131	10,968
<b>TOTAL</b>									
1958-59	.. 26,631	22,443	8,000	8,125	5,242	2,563	334	1,165	74,503
1959-60	.. 28,067	23,201	8,959	8,909	5,946	2,357	426	1,425	79,290
1960-61	.. 27,654	18,517	9,198	9,268	5,693	2,248	415	1,177	74,170
1961-62	.. 25,358	18,539	9,166	8,729	6,316	2,475	427	1,590	72,600
1962-63	.. 25,145	20,811	9,027	9,610	6,222	2,442	368	1,592	75,217

(a) Includes flats for periods prior to 1961-62. authorities.

(b) Includes operations of government

(iv) *Completed.* (a) *Contract-built and Owner-built, 1958-59 to 1962-63.* The following table shows the number of new houses completed in each State and Territory by contractors and owner-builders.

**NEW HOUSES COMPLETED: NUMBER**

Year	N.S.W.	Vic.	Qld	S.A.	W.A.	Tas.	N.T. (a)	A.C.T.	Aust.
<b>CONTRACT-BUILT(b)</b>									
1958-59	.. 18,111	17,444	6,411	6,452	4,337	1,429	270	1,105	55,559
1959-60	.. 20,104	18,200	7,339	7,714	4,765	1,473	262	974	60,831
1960-61	.. 20,099	17,276	7,564	8,309	4,997	1,520	286	1,123	61,174
1961-62	.. 18,593	14,982	7,648	8,302	5,009	1,574	335	1,298	57,741
1962-63	.. 19,939	16,355	7,827	9,059	5,661	1,649	381	1,508	62,379
<b>OWNER-BUILT</b>									
1958-59	.. 9,984	6,885	1,795	1,691	1,509	1,148	86	140	23,238
1959-60	.. 9,434	5,957	1,662	1,262	1,232	1,002	79	171	20,799
1960-61	.. 9,679	4,818	1,827	1,067	976	967	117	150	19,601
1961-62	.. 7,818	3,987	1,492	834	1,073	823	59	217	16,303
1962-63	.. 5,652	3,973	1,192	587	932	855	51	175	13,417
<b>TOTAL</b>									
1958-59	.. 28,095	24,329	8,206	8,143	5,846	2,577	356	1,245	78,797
1959-60	.. 29,538	24,157	9,001	8,976	5,997	2,475	341	1,145	81,630
1960-61	.. 29,778	22,094	9,391	9,376	5,973	2,487	403	1,273	80,775
1961-62	.. 26,411	18,969	9,140	9,136	6,082	2,397	394	1,515	74,044
1962-63	.. 25,591	20,328	9,019	9,646	6,593	2,504	432	1,683	75,796

(a) Includes flats for periods prior to 1961-62. authorities.

(b) Includes operations of government

(b) *Government and Private, 1958-59 to 1962-63.* The number of new houses completed in each State and Territory according to government and private ownership is shown in the following table.

## NEW HOUSES COMPLETED: NUMBER

Year	N.S.W.	Vic.	Qld	S.A.	W.A.	Tas.	N.T. (a)	A.C.T.	Aust.
GOVERNMENT									
1958-59 ..	3,688	2,313	1,366	2,831	1,150	506	169	976	12,999
1959-60 ..	3,544	2,081	1,338	2,868	1,112	443	146	702	12,234
1960-61 ..	3,238	1,710	1,697	3,002	1,272	473	178	729	12,299
1961-62 ..	4,170	1,903	1,747	3,123	1,404	547	252	812	13,958
1962-63 ..	3,864	1,203	1,057	2,725	1,750	563	299	721	12,182
PRIVATE									
1958-59 ..	24,407	22,016	6,840	5,312	4,696	2,071	187	269	65,798
1959-60 ..	25,994	22,076	7,663	6,108	4,885	2,032	195	443	69,396
1960-61 ..	26,540	20,384	7,694	6,374	4,701	2,014	225	544	68,476
1961-62 ..	22,241	17,066	7,393	6,013	4,678	1,850	142	703	60,086
1962-63 ..	21,727	19,125	7,962	6,921	4,843	1,941	133	962	63,614
TOTAL									
1958-59 ..	28,095	24,329	8,206	8,143	5,846	2,577	356	1,245	78,797
1959-60 ..	29,538	24,157	9,001	8,976	5,997	2,475	341	1,145	81,630
1960-61 ..	29,778	22,094	9,391	9,376	5,973	2,487	403	1,273	80,775
1961-62 ..	26,411	18,969	9,140	9,136	6,082	2,397	394	1,515	74,044
1962-63 ..	25,591	20,328	9,019	9,646	6,593	2,504	432	1,683	75,796

(a) Includes flats for periods prior to 1961-62.

(c) *Material of Outer Walls, 1962-63.* The following table shows the number of new houses completed in each State and Territory during 1962-63, classified according to the material of their outer walls.

## NEW HOUSES COMPLETED: NUMBER, BY MATERIAL OF OUTER WALLS, 1962-63

(INCLUDING OWNER-BUILT HOUSES)

Material of outer walls	N.S.W.	Vic.	Q'land	S.A.	W.A.	Tas.	N.T.	A.C.T.	Aust.
Brick, brick veneer, concrete and stone ..	8,040	13,420	1,602	9,007	5,222	1,006	238	1,659	40,194
Wood (weatherboard, etc.) ..	6,788	5,203	5,679	43	52	1,426	1	20	19,212
Fibro-cement ..	10,700	1,574	1,650	594	1,302	72	187	4	16,083
Other ..	63	131	88	2	17	..	6	..	307
<b>Total ..</b>	<b>25,591</b>	<b>20,328</b>	<b>9,019</b>	<b>9,646</b>	<b>6,593</b>	<b>2,504</b>	<b>432</b>	<b>1,683</b>	<b>75,796</b>

(d) *Material of Outer Walls, 1958-59 to 1962-63.* The following table shows the number of new houses completed in Australia, classified according to the material of their outer walls.

**NEW HOUSES<sup>(a)</sup> COMPLETED: NUMBER, BY MATERIAL OF OUTER WALLS, AUSTRALIA**

(INCLUDING OWNER-BUILT HOUSES)

Material of outer walls	1958-59	1959-60	1960-61	1961-62	1962-63
Brick, brick veneer, concrete and stone ..	29,443	33,003	35,786	34,990	40,194
Wood (weatherboard, etc.) .. ..	28,690	26,857	24,764	20,896	19,212
Fibro-cement .. .. .	20,009	21,314	19,830	17,776	16,083
Other .. .. .	655	456	395	382	307
<b>Total .. .. .</b>	<b>78,797</b>	<b>81,630</b>	<b>80,775</b>	<b>74,044</b>	<b>75,796</b>

(a) Includes Northern Territory flats for periods prior to 1961-62.

(v) *Under Construction*, 1958-59 to 1962-63. The number of new houses under construction at the end of each year 1958-59 to 1962-63 in each State and Territory is shown in the following table.

**NEW HOUSES UNDER CONSTRUCTION: NUMBER**

(INCLUDING OWNER-BUILT HOUSES)

At end of year—	N.S.W.	Vic.	Q'land	S.A.	W.A.	Tas.	N.T. (a)	A.C.T.	Aust.
1958-59 ..	16,082	16,543	2,948	5,181	3,347	1,935	177	894	47,107
1959-60 ..	14,611	15,587	2,906	5,114	3,296	1,817	262	1,174	44,767
1960-61 ..	12,487	12,010	2,713	5,006	3,016	1,578	274	1,078	38,162
1961-62 ..	11,434	11,580	2,739	4,599	3,250	1,656	303	1,153	36,714
1962-63 ..	10,988	12,063	2,747	4,563	2,879	1,594	239	1,062	36,135

(a) Includes flats for periods prior to 1961-62.

3. **New Flats.**—The figures in the foregoing tables, except those for the Northern Territory for periods prior to 1961-62, do not include particulars of new flats. It should be noted: (a) that the figures hereunder are additional to the numbers of houses shown in other tables, (b) that each flat is counted as a separate unit, and the numbers shown therefore relate to individual flats, (c) that new flats only are included, i.e., conversions of old buildings into flats are omitted, and (d) "home units" are included as flats.

A graph showing the number of new flats commenced, completed and under construction for the period 1953-54 to 1962-63 will be found on page 386.

(i) *Approved, Commenced, Completed and Under Construction*, 1962-63. The summary below shows the number of new flats approved, commenced, completed and under construction for the year 1962-63.

**NEW FLATS: NUMBER, 1962-63**

(Individual living units)

Particulars	N.S.W.	Vic.	Q'land	S.A.	W.A.	Tas.	N.T.	A.C.T.	Aust.
Approved ..	7,308	4,203	884	801	1,073	173	27	246	14,715
Commenced ..	6,730	3,662	699	683	876	125	14	263	13,052
Completed ..	5,753	3,772	780	686	642	97	59	162	11,951
Under construction at end of year ..	4,815	2,132	330	328	613	134	19	124	8,495

(ii) *Approved, Government and Private, 1958-59 to 1962-63.* The following table shows the number of new flats approved in each State or Territory, according to government and private ownership.

### NEW FLATS APPROVED: NUMBER

(Individual living units)

Year	N.S.W.	Vic.	Q'land	S.A.	W.A.	Tas.	N.T.	A.C.T.	Aust.
GOVERNMENT									
1958-59	953	728	..	187	23	65	(a)	502	2,458
1959-60	600	452	111	252	..	40	(a)	107	1,562
1960-61	674	456	100	230	63	24	(a)	262	1,809
1961-62	1,329	844	27	81	..	..	24	28	2,333
1962-63	797	934	99	14	74	28	..	144	2,090

PRIVATE									
1958-59	3,274	1,237	1,658	476	176	154	(a)	..	6,975
1959-60	8,973	4,028	1,733	739	365	146	(a)	47	16,031
1960-61	7,773	4,700	1,454	526	370	128	(a)	..	14,951
1961-62	4,418	2,447	793	479	592	117	43	..	8,889
1962-63	6,511	3,269	785	787	999	145	27	102	12,625

### TOTAL

1958-59	4,227	1,965	1,658	663	199	219	(a)	502	9,433
1959-60	9,573	4,480	1,844	991	365	186	(a)	154	17,593
1960-61	8,447	5,156	1,554	756	433	152	(a)	262	16,760
1961-62	5,747	3,291	820	560	592	117	67	28	11,222
1962-63	7,308	4,203	884	801	1,073	173	27	246	14,715

(a) Included with houses for periods prior to 1961-62.

(iii) *Commenced, 1958-59 to 1962-63.* The number of new flats commenced in each State or Territory is shown in the following table.

### NEW FLATS COMMENCED: NUMBER

(Individual living units)

Year	N.S.W.	Vic.	Q'land	S.A.	W.A.	Tas.	N.T.	A.C.T.	Aust.
1958-59	2,855	1,826	887	751	229	206	(a)	430	7,184
1959-60	5,744	3,521	1,319	816	316	184	(a)	154	12,054
1960-61	7,578	4,672	1,153	571	358	129	(a)	258	14,719
1961-62	4,927	3,001	588	605	493	166	62	28	9,870
1962-63	6,730	3,662	699	683	876	125	14	263	13,052

(a) Included with houses for periods prior to 1961-62.

(iv) *Completed, 1958-59 to 1962-63.* The following table shows the number of new flats completed in each State and Territory according to government and private ownership.

### NEW FLATS COMPLETED: NUMBER

(Individual living units)

Year	N.S.W.	Vic.	Q'land	S.A.	W.A.	Tas.	N.T.	A.C.T.	Aust.
GOVERNMENT									
1958-59 ..	313	372	..	248	103	25	(a)	354	1,415
1959-60 ..	445	632	2	152	13	82	(a)	474	1,800
1960-61 ..	375	608	14	297	39	52	(a)	139	1,524
1961-62 ..	1,188	620	99	120	24	16	..	256	2,323
1962-63 ..	716	908	96	141	..	6	26	129	2,022
PRIVATE									
1958-59 ..	1,622	1,062	651	392	109	106	(a)	4	3,946
1959-60 ..	3,425	1,430	920	451	250	115	(a)	..	6,591
1960-61 ..	6,244	3,575	1,198	590	401	123	(a)	35	12,166
1961-62 ..	4,750	3,450	829	473	241	138	2	13	9,896
1962-63 ..	5,037	2,864	684	545	642	91	33	33	9,929
TOTAL									
1958-59 ..	1,935	1,434	651	640	212	131	(a)	358	5,361
1959-60 ..	3,870	2,062	922	603	263	197	(a)	474	8,391
1960-61 ..	6,619	4,183	1,212	887	440	175	(a)	174	13,690
1961-62 ..	5,938	4,070	928	593	265	154	2	269	12,219
1962-63 ..	5,753	3,772	780	686	642	97	59	162	11,951

(a) Included with houses for periods prior to 1961-62.

(v) *Under Construction, 1958-59 to 1962-63.* The number of new flats under construction at the end of each year 1958-59 to 1962-63 in each State and Territory is shown in the table below.

### NEW FLATS UNDER CONSTRUCTION: NUMBER

(Individual living units)

At end of year—	N.S.W.	Vic.	Q'land	S.A.	W.A.	Tas.	N.T.	A.C.T.	Aust.
1958-59 ..	2,021	1,363	413	422	180	153	(a)	500	5,052
1959-60 ..	3,890	2,822	810	635	233	140	(a)	180	8,710
1960-61 ..	4,849	3,311	751	319	151	94	(a)	264	9,739
1961-62 ..	3,838	2,242	411	331	379	106	64	23	7,394
1962-63 ..	4,815	2,132	330	328	613	134	19	124	8,495

(a) Included with houses for periods prior to 1961-62.

4. *Value of New Buildings.*—(i) *Approved, Commenced, Completed and Under Construction, 1958-59 to 1962-63.* The following table summarizes the values of all new buildings approved, commenced, completed and under construction in each State and Territory. All values shown exclude the value of land and represent the estimated value of buildings on completion.

**NEW BUILDINGS: VALUE**  
(INCLUDING ESTIMATED VALUE OF OWNER-BUILT HOUSES)  
(£'000)

Year	N.S.W.	Vic.	Q'land	S.A.	W.A.	Tas.	N.T.	A.C.T.	Aust.
<b>APPROVED</b>									
1958-59 ..	147,871	135,143	47,216	41,068	25,760	12,984	2,565	12,643	425,250
1959-60 ..	192,802	160,644	55,112	46,734	31,766	18,700	3,641	13,031	522,430
1960-61 ..	185,016	147,692	64,294	60,709	32,957	14,284	2,878	15,912	523,742
1961-62 ..	185,848	139,311	56,188	49,760	36,411	17,932	3,729	18,684	507,863
1962-63 ..	201,617	164,171	64,344	57,562	39,058	17,876	4,627	22,792	572,047
<b>COMMENCED</b>									
1958-59 ..	161,731	131,607	42,829	42,738	26,717	14,409	2,237	10,104	432,372
1959-60 ..	202,250	153,604	50,560	49,468	31,716	18,243	2,778	15,292	523,911
1960-61 ..	213,737	155,376	57,820	57,923	33,282	14,140	4,434	15,307	552,019
1961-62 ..	209,598	152,093	52,917	51,746	36,762	17,693	3,982	19,035	543,826
1962-63 ..	216,409	158,241	62,326	55,858	40,959	17,306	4,123	20,310	575,532
<b>COMPLETED</b>									
1958-59 ..	159,841	137,437	45,000	44,394	30,262	13,450	2,588	10,999	443,971
1959-60 ..	177,745	148,162	50,205	47,640	30,120	15,803	2,561	14,909	487,145
1960-61 ..	209,186	163,152	59,304	53,866	36,025	17,014	3,118	13,155	554,820
1961-62 ..	208,043	148,175	55,054	52,315	34,036	16,727	3,503	15,758	533,611
1962-63 ..	206,393	166,784	56,347	60,560	43,214	17,064	4,436	19,062	573,860
<b>UNDER CONSTRUCTION AT END OF YEAR</b>									
1958-59 ..	119,473	120,179	29,709	34,104	21,285	13,053	1,721	13,929	353,453
1959-60 ..	146,819	127,773	30,620	36,822	23,331	15,591	1,998	15,502	398,456
1960-61 ..	157,932	122,187	29,961	41,727	20,922	12,964	3,410	18,080	407,183
1961-62 ..	167,408	128,296	28,448	41,508	24,503	13,888	3,928	21,825	429,804
1962-63 ..	183,413	121,955	34,997	37,866	22,686	14,206	3,677	24,381	443,181

(ii) *Completed. (a) Type of Building, 1962-63.* The following table shows the value of all new buildings completed in each State and Territory during 1962-63, according to the type of building.

**NEW BUILDINGS COMPLETED: VALUE, BY TYPE OF BUILDING, 1962-63**  
(INCLUDING ESTIMATED VALUE OF OWNER-BUILT HOUSES)  
(£'000)

Type of building	N.S.W.	Vic.	Q'land	S.A.	W.A.	Tas.	N.T.	A.C.T.	Aust.
<b>Houses—</b>									
Brick, brick veneer, concrete and stone ..	38,850	55,972	7,046	30,673	19,083	4,008	997	8,395	165,024
Wood (weatherboard, etc.) ..	22,453	16,470	18,647	137	147	4,126	9	102	62,091
Fibro-cement ..	27,530	4,263	4,051	1,635	3,637	108	882	20	42,126
Other ..	216	474	293	7	23	..	21	..	1,034
<b>Total, Houses</b> ..	<b>89,049</b>	<b>77,179</b>	<b>30,037</b>	<b>32,452</b>	<b>22,890</b>	<b>8,242</b>	<b>1,909</b>	<b>8,517</b>	<b>270,275</b>
<b>Flats ..</b>	<b>17,063</b>	<b>11,592</b>	<b>1,966</b>	<b>1,965</b>	<b>1,492</b>	<b>202</b>	<b>166</b>	<b>387</b>	<b>34,833</b>
<b>Total, Houses and Flats ..</b>	<b>106,112</b>	<b>88,771</b>	<b>32,003</b>	<b>34,417</b>	<b>24,382</b>	<b>8,444</b>	<b>2,075</b>	<b>8,904</b>	<b>305,108</b>
<b>Hotels, hostels, etc. ..</b>	<b>5,840</b>	<b>6,447</b>	<b>2,291</b>	<b>1,210</b>	<b>1,540</b>	<b>795</b>	<b>124</b>	<b>287</b>	<b>18,534</b>
<b>Shops ..</b>	<b>8,688</b>	<b>4,163</b>	<b>3,076</b>	<b>4,649</b>	<b>926</b>	<b>434</b>	<b>196</b>	<b>2,424</b>	<b>24,556</b>
<b>Factories ..</b>	<b>19,828</b>	<b>25,222</b>	<b>2,299</b>	<b>5,057</b>	<b>2,456</b>	<b>2,525</b>	<b>34</b>	<b>490</b>	<b>57,911</b>
<b>Business premises—</b>									
Office ..	18,949	6,243	1,630	4,863	794	605	629	2,185	35,898
Other ..	7,126	5,377	3,665	2,624	1,934	1,153	44	603	22,526
<b>Educational ..</b>	<b>15,684</b>	<b>10,247</b>	<b>4,771</b>	<b>4,638</b>	<b>3,862</b>	<b>978</b>	<b>645</b>	<b>1,952</b>	<b>42,777</b>
<b>Religious ..</b>	<b>3,056</b>	<b>2,241</b>	<b>1,274</b>	<b>530</b>	<b>517</b>	<b>145</b>	<b>163</b>	<b>526</b>	<b>8,452</b>
<b>Health ..</b>	<b>5,519</b>	<b>10,516</b>	<b>1,293</b>	<b>784</b>	<b>3,194</b>	<b>1,074</b>	<b>63</b>	<b>43</b>	<b>22,486</b>
<b>Entertainment and recreation ..</b>	<b>10,258</b>	<b>2,249</b>	<b>1,069</b>	<b>415</b>	<b>1,963</b>	<b>413</b>	<b>4</b>	<b>520</b>	<b>16,891</b>
<b>Miscellaneous ..</b>	<b>5,333</b>	<b>5,308</b>	<b>2,976</b>	<b>1,373</b>	<b>1,646</b>	<b>498</b>	<b>459</b>	<b>1,128</b>	<b>18,721</b>
<b>Total, Other Buildings</b> ..	<b>100,281</b>	<b>78,013</b>	<b>24,344</b>	<b>26,143</b>	<b>18,832</b>	<b>8,620</b>	<b>2,361</b>	<b>10,158</b>	<b>268,752</b>
<b>Total, New Buildings</b> ..	<b>206,393</b>	<b>166,784</b>	<b>56,347</b>	<b>60,560</b>	<b>43,214</b>	<b>17,064</b>	<b>4,436</b>	<b>19,062</b>	<b>573,860</b>



(b) *Type of Building, 1958-59 to 1962-63.* The following table shows the value of all new buildings completed in Australia.

**NEW BUILDINGS COMPLETED: VALUE, BY TYPE OF BUILDING,  
AUSTRALIA**

(INCLUDING ESTIMATED VALUE OF OWNER-BUILT HOUSES)  
(£'000)

Type of building	1958-59	1959-60	1960-61	1961-62	1962-63
<b>Houses—</b>					
Brick, brick veneer, concrete and stone ..	113,187	127,580	143,756	143,741	165,024
Wood (weatherboard, etc.) ..	85,306	80,851	77,771	66,648	62,091
Fibro-cement ..	49,088	52,694	50,624	46,466	42,126
Other ..	1,947	1,430	1,243	1,054	1,034
<b>Total, Houses ..</b>	<b>249,528</b>	<b>262,555</b>	<b>273,394</b>	<b>257,909</b>	<b>270,275</b>
Flats(a) ..	14,146	22,930	40,322	38,676	34,833
<b>Total, Houses and Flats ..</b>	<b>263,674</b>	<b>285,485</b>	<b>313,716</b>	<b>296,585</b>	<b>305,108</b>
<b>Hotels, hostels, etc. ..</b>	<b>7,204</b>	<b>8,525</b>	<b>14,580</b>	<b>15,064</b>	<b>18,534</b>
Shops ..	15,825	16,326	23,145	23,670	24,556
Factories ..	40,637	49,476	64,788	51,034	57,911
<b>Business premises—</b>					
Office ..	25,450	24,767	32,344	31,057	35,898
Other ..	20,458	28,126	23,453	21,605	22,526
Educational ..	25,569	32,227	35,318	41,343	42,777
Religious ..	5,994	6,458	7,159	7,260	8,452
Health ..	18,841	11,216	14,072	17,703	22,486
Entertainment and recreation ..	8,975	8,622	9,749	11,622	16,891
Miscellaneous ..	11,344	15,917	16,496	16,668	18,721
<b>Total, Other Buildings ..</b>	<b>180,297</b>	<b>201,660</b>	<b>241,104</b>	<b>237,026</b>	<b>268,752</b>
<b>Total, New Buildings ..</b>	<b>443,971</b>	<b>487,145</b>	<b>554,820</b>	<b>533,611</b>	<b>573,860</b>

(a) Prior to 1961-62, the value of Northern Territory flats was included with houses.

(c) *Type of Building, Government and Private Ownership, 1960-61 to 1962-63.* The following table shows the value of all new buildings completed in Australia, classified by government and private ownership.

**NEW BUILDINGS COMPLETED: VALUE, BY TYPE OF BUILDING AND  
OWNERSHIP, AUSTRALIA**

(INCLUDING ESTIMATED VALUE OF OWNER-BUILT HOUSES)  
(£'000)

Type of building	Government			Private		
	1960-61	1961-62	1962-63	1960-61	1961-62	1962-63
<b>Houses—</b>						
Brick, brick veneer, concrete and stone ..	19,518	20,720	19,901	124,238	123,021	145,123
Wood (weatherboard, etc.) ..	6,210	7,329	5,268	71,561	59,319	56,823
Fibro-cement ..	9,931	12,421	9,787	40,693	34,045	32,339
Other ..	106	75	29	1,137	979	1,005
<b>Total, Houses ..</b>	<b>35,765</b>	<b>40,545</b>	<b>34,985</b>	<b>237,629</b>	<b>217,364</b>	<b>235,290</b>
Flats(a) ..	4,333	7,096	5,669	35,989	31,580	29,164
<b>Total, Houses and Flats ..</b>	<b>40,098</b>	<b>47,641</b>	<b>40,654</b>	<b>273,618</b>	<b>248,944</b>	<b>264,454</b>
<b>Hotels, hostels, etc. ..</b>	<b>488</b>	<b>404</b>	<b>733</b>	<b>14,092</b>	<b>14,660</b>	<b>17,801</b>
Shops ..	431	1,016	389	22,714	22,654	24,167
Factories ..	10,725	6,703	5,638	54,063	44,331	52,273
<b>Business premises—</b>						
Office ..	9,912	11,075	9,993	22,432	19,982	25,905
Other ..	5,376	7,864	6,519	18,077	13,741	16,007
Educational ..	29,110	33,622	34,596	6,208	7,721	8,181
Religious ..	11,084	14,462	20,616	2,988	3,241	1,870
Health ..	1,536	2,215	5,728	8,213	9,407	11,163
Entertainment and recreation ..	10,981	10,339	12,748	5,515	6,329	5,973
Miscellaneous ..	79,643	87,700	96,960	161,461	149,326	171,792
<b>Total, Other Buildings ..</b>	<b>119,741</b>	<b>135,341</b>	<b>137,614</b>	<b>435,079</b>	<b>398,270</b>	<b>436,246</b>

(a) Prior to 1961-62, the value of Northern Territory flats was included with houses.

5. Value of Building Approved.—The following table shows the values of approvals for houses and flats, other new buildings, and alterations and additions in Australia for the years 1958–59 to 1962–63. Additions of £5,000 and over are included with new buildings in all states except New South Wales, where they are included in alterations and additions.

**BUILDING APPROVED: VALUE, AUSTRALIA**  
(£'000)

Particulars	1958–59	1959–60	1960–61	1961–62	1962–63
Houses and flats .. .. .	267,548	319,341	300,393	279,292	316,366
Other new buildings .. .. .	157,702	203,089	223,349	228,571	255,681
<i>Total, New Buildings</i> .. .. .	<i>425,250</i>	<i>522,430</i>	<i>523,742</i>	<i>507,863</i>	<i>572,047</i>
Alterations and additions .. .. .	70,516	81,284	78,400	78,105	86,128
<b>Total, Building</b> .. .. .	<b>495,766</b>	<b>603,714</b>	<b>602,142</b>	<b>585,968</b>	<b>658,175</b>
Government .. .. .	103,929	115,800	133,863	140,743	156,020
Private .. .. .	391,837	487,914	468,279	445,225	502,155

6. Persons Working on Jobs Carried out by Builders of New Buildings.—(i) *At 28th June, 1963.* The following table shows the number of contractors, sub-contractors and wage earners working on jobs carried out by builders of new buildings at 28th June, 1963. It also shows the numbers of these persons classified according to their main building occupations and the type of building on which they were working.

**PERSONS WORKING ON JOBS CARRIED OUT BY BUILDERS OF NEW BUILDINGS, 28th JUNE, 1963**

(INCLUDING CONTRACTOR AND SUB-CONTRACTOR PRINCIPALS ACTUALLY WORKING ON JOBS BUT EXCLUDING PERSONS WORKING ON OWNER-BUILT HOUSES)

Particulars	N.S.W.	Vic.	Q'land	S.A.	W.A.	Tas.	N.T.	A.C.T.	Aust.
Contractors .. .. .	3,524	2,963	2,038	709	568	534	63	204	10,603
Sub-contractors .. .. .	7,936	6,999	2,189	2,772	1,833	668	112	685	23,194
Wage earners .. .. .	33,233	27,916	15,696	9,467	7,563	4,110	403	3,508	101,896
<b>Total</b> .. .. .	<b>44,693</b>	<b>37,878</b>	<b>19,923</b>	<b>12,948</b>	<b>9,964</b>	<b>5,312</b>	<b>578</b>	<b>4,397</b>	<b>135,693</b>
Carpenters .. .. .	16,373	14,254	9,294	3,509	3,046	2,363	179	1,244	50,262
Bricklayers .. .. .	4,540	4,585	1,232	2,268	1,271	443	72	478	14,889
Painters .. .. .	3,523	3,440	1,714	1,191	913	418	57	381	11,637
Electricians .. .. .	2,391	1,976	836	732	643	238	56	342	7,114
Plumbers .. .. .	4,263	3,288	1,567	1,147	864	314	59	346	11,848
Builders' labourers .. .. .	7,010	4,848	3,276	1,756	1,571	855	87	809	20,212
Other .. .. .	6,593	5,487	2,004	2,345	1,656	681	68	897	19,731
<b>Total</b> .. .. .	<b>44,693</b>	<b>37,878</b>	<b>19,923</b>	<b>12,948</b>	<b>9,964</b>	<b>5,312</b>	<b>578</b>	<b>4,397</b>	<b>135,693</b>
New houses and flats .. .. .	18,438	18,318	7,304	7,179	4,564	2,034	319	2,113	60,269
Other new building <sup>(a)</sup> .. .. .	23,431	17,949	11,226	5,439	4,214	2,890	259	2,040	67,448
Repairs and maintenance <sup>(b)</sup> .. .. .	2,824	1,611	1,393	330	1,186	388	..	244	7,976
<b>Total</b> .. .. .	<b>44,693</b>	<b>37,878</b>	<b>19,923</b>	<b>12,948</b>	<b>9,964</b>	<b>5,312</b>	<b>578</b>	<b>4,397</b>	<b>135,693</b>

(a) Includes persons working on alterations and additions carried out by builders of new buildings.

(b) Carried out by builders of new buildings.

(ii) *Summary, 1959 to 1963.* The number of persons in each State and Territory working on jobs carried out by builders of new buildings is shown in the following table.

### PERSONS WORKING ON JOBS CARRIED OUT BY BUILDERS OF NEW BUILDINGS

(INCLUDING CONTRACTOR AND SUB-CONTRACTOR PRINCIPALS ACTUALLY WORKING ON JOBS BUT EXCLUDING PERSONS WORKING ON OWNER-BUILT HOUSES)

At—	N.S.W. (a)	Vic. (a)	Q'land	S.A.	W.A. (a)	Tas.	N.T.	A.C.T.	Aust.
30th June, 1959	36,281	32,626	20,691	12,636	9,092	5,310	401	2,900	119,937
30th " 1960	41,102	37,533	22,199	13,306	9,195	5,432	405	3,456	132,628
30th " 1961	39,981	32,195	18,192	12,416	8,456	4,793	608	2,973	119,614
29th " 1962	42,420	35,188	19,407	12,346	10,250	5,402	667	3,932	129,612
28th " 1963	44,693	37,878	19,923	12,948	9,964	5,312	578	4,397	135,693

(a) From 29th June, 1962, also includes persons working on buildings, other than houses, erected without the services of a contractor responsible for the whole job. The estimated numbers involved, at 29th June, 1962, were—New South Wales, 1,745; Victoria, 1,025; Western Australia, 133.

### § 3. Government Activities in the Housing Field

1. *Housing Agreements between Commonwealth and State Governments.*—Under the Commonwealth-State Housing Agreements the Commonwealth Government makes substantial loans to the States for the provision of housing.

(i) *The 1945 Agreement.* In November, 1945, the Commonwealth Government entered into an Agreement with the Governments of the States whereby the Commonwealth Government would provide finance for, and the State Governments would undertake the building of, housing projects. Tasmania withdrew from the Agreement in August, 1950, and South Australia did not begin to operate under it until July, 1953.

Between 1945–46 and 1955–56, under this Agreement, the Commonwealth Government advanced £88,849,000 to New South Wales; £85,781,000 to Victoria; £24,344,000 to Queensland; £11,700,000 to South Australia; £27,050,000 to Western Australia; and £2,835,000 to Tasmania. When Tasmania withdrew from the Agreement, it repaid all advances made to it.

For information on the conditions of sale, etc., under the 1945 Agreement, see Year Book No. 48, page 367. In 1961, the 1945 Agreement was amended to allow sales of dwellings on terms decided by the States, but tenants eligible under the *War Service Homes Act 1918–1962* are entitled to purchase dwellings built under the 1945 Agreement on the terms provided in the Act.

(ii) *The 1956 Agreement.* In 1956, the Commonwealth and the States entered into a new agreement, under which added emphasis was placed on the construction of homes for private ownership. The Commonwealth Government provided finance to the States over a period of five years ending 30th June, 1961, for the erection of housing projects. For the first two years of the agreement, 20 per cent. of the money allocated to each State (and 30 per cent. for the next three years) was advanced to building societies and other approved institutions for lending to private house builders. The remaining allocation to each State was used by the States for the erection of houses for either rental or sale. The States determined the type of houses to be erected, their location and the selection of tenants, and also fixed the terms of selling.

The Commonwealth was entitled to specify that a portion of the moneys be set aside for the erection of houses for serving members of the defence forces nominated by the Commonwealth. The Commonwealth provided supplementary advances to the States equal to the amounts set aside by them for this purpose.

For other features of the 1956 Commonwealth and State Housing Agreement, see Year Book No. 48, page 368.

(iii) *The 1961 Agreement.* Following the termination of the 1956 Agreement on 30th June, 1961, a new agreement running for a further period of five years was entered into by the Commonwealth and the State Governments. This Agreement continues with some amendments the terms and conditions of the 1956 Agreement, but the Commonwealth and/or a State may agree to contribute funds in excess of the previous statutory maximum of 5 per cent. of a State's allocation, for the erection of dwellings for servicemen.

Under the 1961 Agreement, each advance of money, together with interest thereon, is to be repaid in equal instalments over a period of 53 years from the date each advance is made. The rate of interest chargeable on advances is the long-term bond rate at the time the advance was made, less one per cent. per annum. The interest rates under the Agreement have been: from 1st July, 1961, to 6th February, 1962, 4½ per cent. per annum; 7th February, 1962, to 22nd July, 1963, 4 per cent. per annum; and since 23rd July, 1963, 3½ per cent. per annum.

(iv) *Operations in 1962-63.* The following table shows operations under the various Housing Agreements during 1962-63.

COMMONWEALTH AND STATE HOUSING AGREEMENTS, 1962-63

Particulars	N.S.W.	Vic.	Qld	S.A.	W.A.	Tas.	Total
ADVANCES TO STATES (£'000)							
Advances to States(a), 1956 and 1961 Agreements .. .. .	16,900	13,300	4,251	9,506	3,505	2,600	50,062
State Housing Programme (70 per cent. maximum) .. .	11,410	8,995	2,660	5,000	2,429	1,820	32,314
Home Builders' Account (30 per cent. minimum)—							
Advances .. .. .	4,890	3,855	1,240	4,491	1,041	780	16,297
Amount drawn by institutions ..	5,960	4,731	1,383	5,066	1,126	844	19,110
Service Housing Funds allocated by—							
Commonwealth .. .. .	600	450	351	15	35	..	1,451
States .. .. .	570	450	133	15	35	..	1,203

NUMBER OF DWELLINGS

State Housing Programme—								
Commenced .. .. .	4,211	2,150	1,339	1,621	942	561	10,824	
Completed .. .. .	3,882	2,022	1,124	1,567	1,084	531	10,210	
Under construction at 30th June, 1963 .. .. .	2,424	1,168	654	1,343	442	231	6,262	
Home Builders' Account—								
Purchased—New .. .. .	492	408	163	757	69	38	1,927	
Other .. .. .	42	..	..	..	..	14	56	
New construction—								
Approved .. .. .	1,655	1,537	317	1,134	385	189	5,217	
Commenced .. .. .	1,260	1,129	319	1,348	369	232	4,657	
Completed .. .. .	1,238	1,491	325	1,236	366	221	4,877	
Service Housing—								
Agreed programme .. .. .	380	220	173	10	22	..	805	
Completed(b) .. .. .	356	153	120	20	27	..	676	
Sold under—								
1945 Agreement .. .. .	774	691	87	..	39	(c)	1,591	
1956 and 1961 Agreements ..	1,824	1,100	542	96	551	311	4,424	

(a) Includes supplementary advances for Service Housing. (b) Also included in State Housing Programme above. (c) Tasmania did not operate under the 1945 Agreement after August, 1950.

(v) *Advances, 1945-46 to 1962-63.* Advances made by the Commonwealth Government to the States, under the Agreements, in each year since 1945-46, are shown in the following table.

**COMMONWEALTH AND STATE HOUSING AGREEMENTS: ADVANCES  
TO STATES<sup>(a)</sup>**  
(£'000)

Year	N.S.W.	Vic.	Qld	S.A.	W.A.	Tas. <sup>(b)</sup>	Total
1945-46 .. ..	2,525	3,100	425	..	460	285	6,795
1946-47 .. ..	5,530	4,000	750	..	735	..	11,015
1947-48 .. ..	5,345	5,000	800	..	1,260	900	13,305
1948-49 .. ..	6,295	5,200	900	..	1,647	450	14,492
1949-50 .. ..	6,600	6,300	1,250	..	1,965	1,100	17,215
1950-51 .. ..	7,890	8,600	2,700	..	2,350	100	21,640
1951-52 .. ..	8,514	10,061	4,489	..	3,483	..	26,547
1952-53 .. ..	12,100	11,270	3,730	..	2,900	..	30,000
1953-54 .. ..	12,450	12,000	4,500	4,500	3,750	..	37,200
1954-55 .. ..	10,800	9,450	1,800	3,600	3,500	..	29,150
1955-56 .. ..	10,800	10,800	3,000	3,600	5,000	..	33,200
1956-57 .. ..	11,232	10,400	2,860	3,711	3,111	2,025	33,339
1957-58 .. ..	11,440	10,400	3,286	4,160	3,015	2,034	34,335
1958-59 .. ..	12,420	10,660	3,426	5,175	3,103	2,220	37,004
1959-60 .. ..	12,782	10,660	3,602	5,092	3,049	1,957	37,142
1960-61 .. ..	13,455	10,660	3,208	5,829	3,056	2,002	38,210
1961-62 .. ..	17,633	14,001	4,397	9,063	3,721	2,928	51,743
1962-63 .. ..	16,900	13,300	4,251	9,506	3,505	2,600	50,062
<b>Total .. ..</b>	<b>184,711</b>	<b>165,862</b>	<b>49,374</b>	<b>54,236</b>	<b>49,610</b>	<b>18,601</b>	<b>522,394</b>

(a) Includes supplementary advances (Service Housing) under the 1956 and 1961 Agreements.  
(b) Tasmania withdrew from the 1945 Agreement in August, 1950, and repaid all advances made to it.

(vi) *Dwellings Provided, 1945-46 to 1962-63.* The following table shows the number of dwellings provided under the Agreements in each year since their inception.

**COMMONWEALTH AND STATE HOUSING AGREEMENTS: NUMBER OF  
DWELLINGS PROVIDED<sup>(a)</sup>**

Year	N.S.W.	Vic.	Qld	S.A.	W.A.	Tas. <sup>(b)</sup>	Total
Up to 30th June, 1946 <sup>(c)</sup>	1,589	1,787	224	..	293	154	4,047
1946-47 .. ..	2,200	1,491	472	..	509	208	4,880
1947-48 .. ..	2,582	2,179	459	..	846	218	6,284
1948-49 .. ..	3,440	2,357	546	..	1,016	184	7,543
1949-50 .. ..	3,076	2,454	649	..	952	284	7,415
1950-51 .. ..	3,273	2,699	567	..	1,261	82	7,882
1951-52 .. ..	3,708	2,970	1,102	..	1,022	..	8,802
1952-53 .. ..	4,280	3,238	1,642	..	1,104	..	10,264
1953-54 .. ..	5,109	3,590	1,656	1,006	1,501	..	12,862
1954-55 .. ..	4,932	3,960	1,382	2,013	2,031	..	14,318
1955-56 .. ..	3,529	4,200	797	1,885	1,539	..	11,950
1956-57 .. ..	3,602	3,038	1,369	1,997	958	525	11,489
1957-58 .. ..	4,494	3,369	1,113	1,959	1,472	566	12,973
1958-59 .. ..	4,440	3,673	1,461	2,023	1,225	594	13,416
1959-60 .. ..	4,736	3,924	1,221	2,318	1,009	688	13,896
1960-61 .. ..	4,309	3,447	1,293	2,457	1,056	666	13,228
1961-62 .. ..	6,163	4,569	1,642	3,101	1,242	706	17,423
1962-63 .. ..	5,654	3,921	1,612	3,560	1,519	804	17,070
<b>Total .. ..</b>	<b>71,116</b>	<b>56,866</b>	<b>19,207</b>	<b>22,319</b>	<b>20,555</b>	<b>5,679</b>	<b>195,742</b>

(a) The total number of houses and flats completed under State Housing Programmes plus, since 30th June, 1956, the numbers completed and purchased under the Home Builders' Account.

(b) Tasmania withdrew from the 1945 Agreement in August, 1950, and repaid all advances made to it.

(c) The 1945 Agreement applied also to some dwellings erected before 1945-46.

(vii) *Houses Sold, 1948-49 to 1962-63.* The table below shows the number of houses sold under the Commonwealth and State Housing Agreements in each year since 1948-49.

**COMMONWEALTH AND STATE HOUSING AGREEMENTS: NUMBER OF HOUSES SOLD**

Year	N.S.W.	Vic.	Qld	S.A.	W.A.	Tas.	Total
1948-49 .. .. .	15	..	13	..	..	..	28
1949-50 .. .. .	98	6	12	..	115	..	231
1950-51 .. .. .	122	39	94	..	508	..	763
1951-52 .. .. .	338	26	86	..	480	..	930
1952-53 .. .. .	528	13	13	..	309	..	863
1953-54 .. .. .	403	6	16	1	94	..	520
1954-55 .. .. .	165	..	26	7	96	..	294
1955-56 .. .. .	733	1,289	121	275	177	..	2,595
1956-57 .. .. .	3,197	1,732	466	231	294	207	6,127
1957-58 .. .. .	3,679	1,336	672	259	737	398	7,081
1958-59 .. .. .	2,507	2,506	720	252	222	247	6,454
1959-60 .. .. .	2,701	2,672	614	140	324	311	6,762
1960-61 .. .. .	2,004	2,704	663	88	572	329	6,360
1961-62 .. .. .	2,303	2,125	791	33	555	354	6,161
1962-63 .. .. .	2,598	1,791	629	96	590	311	6,015
<b>Total .. .. .</b>	<b>21,391</b>	<b>16,245</b>	<b>4,936</b>	<b>1,382</b>	<b>5,073</b>	<b>2,157</b>	<b>51,184</b>

2. *War Service Homes.*—(i) *General.* The provision of War Service Homes is a function of the War Service Homes Division of the Department of Housing, and the administration of the War Service Homes Act is under the control of the Director of War Service Homes. The War Service Homes Division was formerly a Division of the Department of National Development but was transferred to the Department of Housing in December, 1963.

The *War Service Homes Act 1918-1962* is a measure for the provision of homes for Australian ex-servicemen who served during the 1914-1918 War or the 1939-1945 War and to persons with service in Korea or Malaya. Provision is made also for assistance to the female dependants of Australian ex-servicemen and other classes of eligible persons as defined in the Act. Assistance may be granted to an eligible person and the wife or husband of that person as joint tenants, but the War Service Homes Division does not provide homes for occupation purely on a tenancy basis.

(ii) *Operations, 1962-63.* The following table gives details of the operations of the War Service Homes Division in the year 1962-63 and also since the inception of the Scheme on 6th March, 1919. The figures shown include operations in the Territories of Papua, New Guinea and Norfolk Island.

**WAR SERVICE HOMES DIVISION: OPERATIONS, AUSTRALIA, 1962-63, AND TO 30TH JUNE, 1963**

Particulars	1962-63			From inception to 30th June, 1963		
	Eligibility established from service in—		Total	Eligibility established from service in—		Total
	1914-18 War	1939-45 War, Korea or Malaya		1914-18 War	1939-45 War, Korea or Malaya	
Applications received No.	931	15,084	16,015	114,722	345,908	460,630
Applications approved ..	615	10,435	11,050	55,477	195,168	250,645
Homes purchased ..	380	6,475	6,855	18,192	94,250	112,442
Homes built, or assistance given to build them .. No.	66	1,878	1,944	23,878	62,338	86,216
Mortgages discharged ..	72	1,785	1,857	4,005	24,645	28,650
Total homes provided ..	518	10,138	10,656	46,075	181,233	227,308
Transfers or resales ..	105	639	744	9,253	10,850	20,103
Total capital expenditure £'000	n.a.	n.a.	37,510	n.a.	n.a.	472,643
Total receipts ..	n.a.	n.a.	24,125	n.a.	n.a.	225,545

(iii) *Operations, 1953-54 to 1962-63.* The table below gives details of certain activities of the War Service Homes Division each year from 1953-54 to 1962-63 and covers eligibility established from service in the 1914-18 War, 1939-45 War, Korea or Malaya.

#### WAR SERVICE HOMES DIVISION: ANNUAL OPERATIONS, AUSTRALIA

Year	Number of—					Total capital expenditure	Total receipts
	Applications received	Homes provided					
		Homes purchased (a)	Homes built (b)	Mortgages discharged	Total		
1953-54 .. ..	24,951	5,380	6,290	729	12,399	£'000 26,874	£'000 9,400
1954-55 .. ..	28,931	5,662	5,628	1,498	12,788	30,086	10,779
1955-56 .. ..	20,968	4,802	5,777	1,224	11,803	30,067	11,961
1956-57 .. ..	20,553	5,813	4,187	1,227	11,227	30,171	12,690
1957-58 .. ..	22,081	6,150	5,524	1,584	13,258	35,182	14,652
1958-59 .. ..	21,935	6,660	5,254	1,497	13,411	35,159	16,769
1959-60 .. ..	20,661	8,437	3,169	1,411	13,017	35,068	19,836
1960-61 .. ..	15,888	8,005	2,791	2,211	13,007	35,042	21,014
1961-62 .. ..	16,925	7,708	2,572	2,137	12,417	35,025	21,503
1962-63 .. ..	16,015	6,855	1,944	1,857	10,656	37,510	24,125

(a) Homes purchased with the assistance of War Service Homes Division. (b) Or assistance given to build a home.

(iv) *Homes Provided, 1953-54 to 1962-63.* The following table gives details of the number of homes provided by the War Service Homes Division in each State and Territory of Australia and the Territories of Papua, New Guinea and Norfolk Island each year from 1953-54 to 1962-63.

#### WAR SERVICE HOMES DIVISION: NUMBER OF HOMES PROVIDED

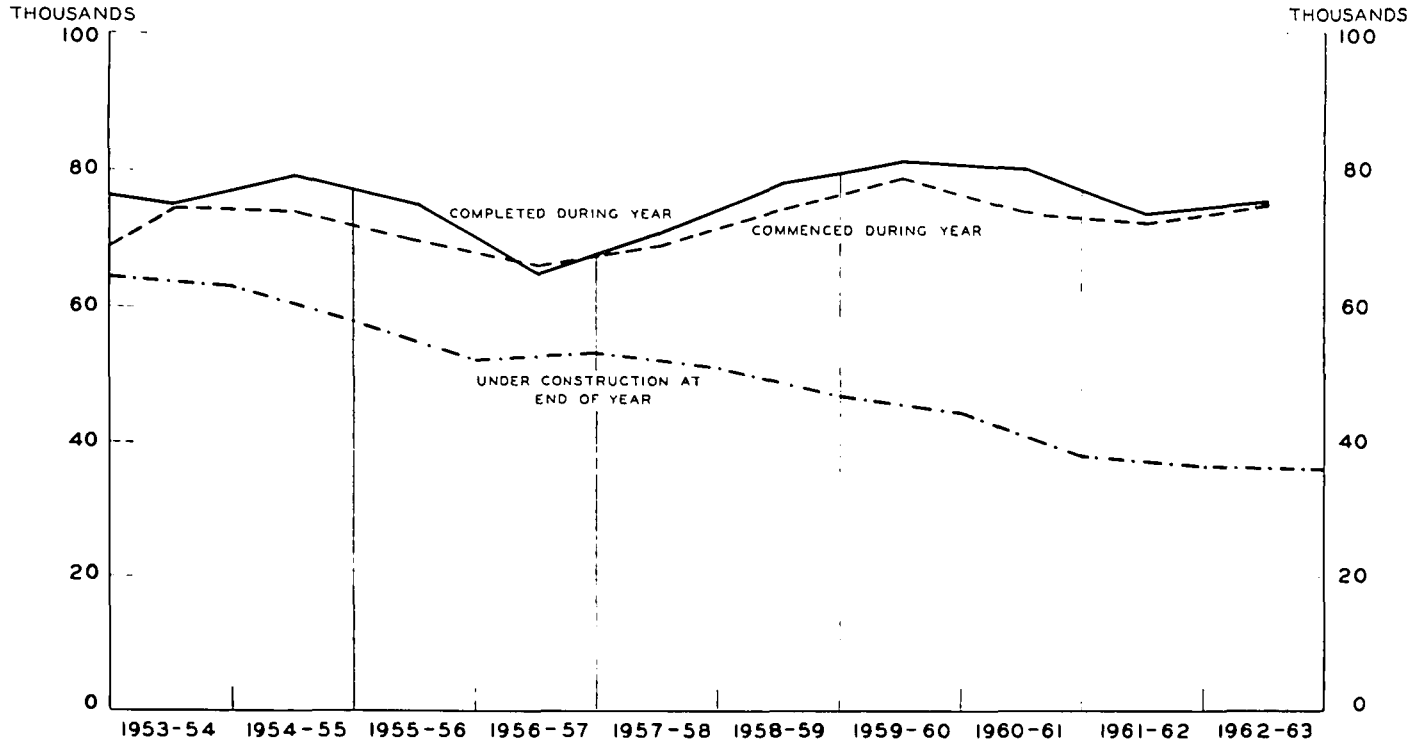
Year	N.S.W. (a)	Vic.	Qld (b)	S.A.	W.A.	Tas.	N.T.	A.C.T.	Aust.
1953-54 ..	3,301	3,857	2,113	1,146	1,582	345	5	50	12,399
1954-55 ..	4,256	4,007	1,648	885	1,561	332	10	89	12,788
1955-56 ..	4,652	3,347	1,099	797	1,522	294	8	84	11,803
1956-57 ..	4,316	3,666	883	859	1,157	259	2	85	11,227
1957-58 ..	5,236	4,132	855	1,079	1,588	297	3	68	13,258
1958-59 ..	6,176	3,939	994	889	1,002	349	8	54	13,411
1959-60 ..	5,698	3,908	1,112	853	1,096	277	7	66	13,017
1960-61 ..	6,101	3,308	1,145	876	1,288	233	9	47	13,007
1961-62 ..	4,871	3,534	1,525	912	1,243	239	6	87	12,417
1962-63 ..	4,037	2,841	1,394	889	1,139	229	5	122	10,656

(a) Includes Norfolk Island. (b) Includes Territories of Papua and New Guinea.

In addition to the homes provided under the War Service Homes Act and shown in the table above, 2,076 homes which had been provided originally under the Housing Agreements with the States have been taken over in accordance with those Agreements, 72 being taken over during 1962-63.

# NEW HOUSES: AUSTRALIA

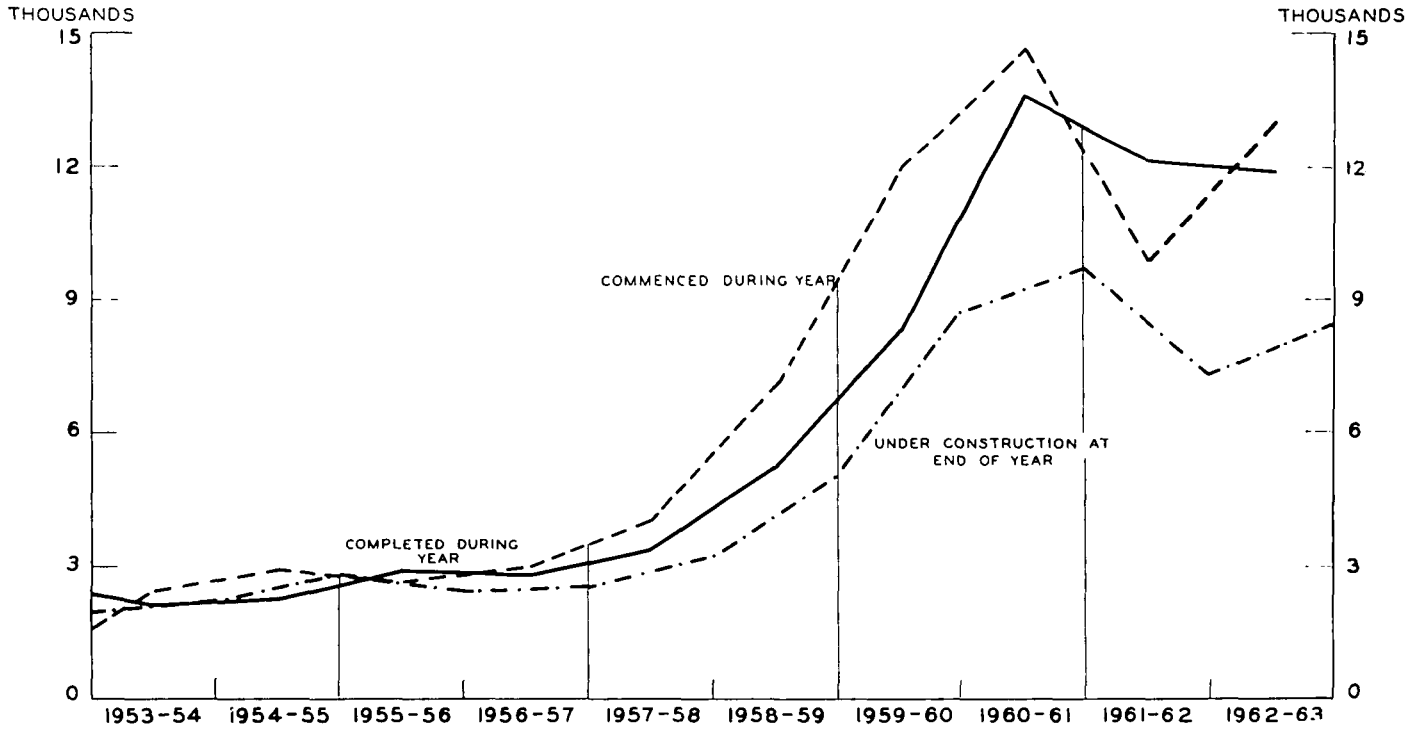
1953-54 TO 1962-63





# NEW FLATS: AUSTRALIA

1953-54 TO 1962-63



3. **State Housing Authorities.**—The following paragraphs describe briefly the organizations of the various State Housing Authorities and their activities in the fields of home construction and provision of homes on a rental basis (see § 4 for their financial advances to persons wishing to purchase or build a home). For summarized figures of total government construction of houses and flats, see pages 373 and 376.

(i) *New South Wales*—*The Housing Commission of New South Wales.* (a) *General.* The Housing Commission of New South Wales was constituted in 1942, with a full-time salaried chairman and four other members remunerated by fees. The principal function of the Commission is the provision of low-cost housing for rental or sale to persons in the lower or moderate income groups. The Commission is also empowered to make surveys of housing conditions, recommend local government building ordinances, provide assistance to private home builders, and undertake the manufacture, purchase, and supply of building materials.

Most of the permanent dwellings provided by the Commission have been erected under the Commonwealth-State Housing Agreements. In 1962, 4,892 houses and flats valued at £14,675,000 were completed by or for the Housing Commission, mostly erected by private builders on contract to the Commission.

(b) *Capital, Income and Expenditure.* Advances from the Commonwealth have provided most of the Housing Commission's capital funds. Of the £151,482,000 total capital funds available to the Commission from its inception to 30th June, 1963, £142,462,000 (or 94.1 per cent.) came from Commonwealth advances, £2,522,342 (1.7 per cent.) from Consolidated Revenue, £4,963,000 (3.1 per cent.) from General Loans Account and £1,535,000 (1.1 per cent.) from other State funds.

During the year 1962-63, the Housing Commission's income and expenditure (other than capital transactions) was—total income, £11,173,540 (consisting of rent £7,116,169, interest £2,387,991, other £1,669,380); and total expenditure, £9,359,253.

(c) *Rental Housing (other than Housing Agreements).* Upon request by other State Departments, the Housing Commission will erect houses for employees of those Departments, e.g., Education, Agriculture, Water Conservation, etc. These Departments provide the necessary land and funds needed to finance the erection of the houses. Rentals charged are fixed by the Departments in accordance with the salaries of the officers occupying the houses. In addition, the Commission erects (with State funds) dwellings for employees of industries connected with decentralization and development. The number of rental houses erected (other than under the Housing Agreements) is 1,011.

Specially designed units are erected by the Housing Commission to provide dwellings for elderly persons at rentals within their means. The rents of these units are £1 per week for elderly single persons and £1 10s. per week for elderly couples. Nine hundred and seventy-six of these units have been completed.

(d) *Sales Schemes.* Applicants for Commission housing may, when their priority has been reached, elect either to purchase or to rent the dwelling allocated to them. Should they decide to purchase, terms of sale provide for a minimum deposit of £50 with repayments spread over a maximum period of forty-five years, with interest currently at the rate of 4½ per cent. There is no limit on the amount of outstanding indebtedness. Further, those tenants who originally elect to rent may subsequently purchase the dwellings occupied by them on similar terms, with the exception that the current rate of interest is 4½ per cent.

Applicants who have established eligibility for Housing Commission accommodation may now apply to have a standard type of dwelling erected on their own block of land. At 30th June, 1963, 275 dwellings had been completed under this scheme.

During the years 1954 and 1955, the Housing Commission completed 100 houses for sale. Under this scheme, the Commission acted as the construction authority, while administrative arrangements were carried out by the Rural Bank. Houses were sold on the basis of 10 per cent. deposit with repayment of the balance over a maximum period of 40 years. Construction has been limited to 100 houses.

(ii) *Victoria*—*Housing Commission, Victoria.* (a) *General.* A preliminary investigation into housing conditions in Victoria was begun in July, 1936, when a board for the purpose was appointed by the Government. As a result of their report, the *Housing Act 1937* was passed by Parliament which provided for the appointment of a Housing Commission of four members to be the central housing authority of the State. The Housing Commission of Victoria was appointed on 1st March, 1938.

The objects of the Commission as now laid down are the improvement of existing housing conditions; the provision of suitable rental housing for persons displaced from slum reclamation areas or living under unsatisfactory conditions, and for other eligible persons; the sale of houses to eligible persons and making of advances to such persons to enable them to own their homes; the development of land for housing and related purposes; and the responsibility of maintaining housing standards. Until the 1945 Commonwealth-State Housing Agreement was entered into, with its retrospective application to all estates or projects completed after 3rd December, 1943, the construction of dwellings by the Commission was financed by loan funds provided by the State and by three specific debenture issues raised by the Commission. Since the signing of the 1945 Commonwealth-State Housing Agreement, the construction of dwellings has been financed by the Commonwealth Government.

(b) *Dwellings Provided.* At 30th June, 1963, the Housing Commission had completed 1,328 dwelling units under the State Housing Scheme, and 47,677 dwelling units under Commonwealth-State Agreements. An additional 1,862 units were either under construction or let to contract at this date.

(c) *Dwellings for Elderly Persons.* Specially designed dwelling units are erected by the Commission to provide dwellings for elderly persons at rentals within their means. To 30th June, 1963, 1,972 of these units had been completed.

(d) *Housing of Aborigines.* Under the *Aborigines Act* 1958, as amended by the *Aborigines (Housing) Act* 1959, the Housing Commission is empowered to erect houses for the Aborigines Welfare Board for occupation as dwellings by Aborigines. To 30th June, 1963, 13 of these units had been completed.

(e) *Rental Housing (other than Housing Agreements).* State Government Authorities, such as the Public Works Department, State Electricity Commission, Victorian Railways, State Rivers and Water Supply Commission, etc., provide from time to time the necessary land and finance for the erection of dwellings for employees of those departments. Rentals charged are fixed by the Government Authorities in accordance with the salaries of officers occupying the dwellings. The dwellings erected by these State Government Authorities do not come under the control of the Victorian Housing Commission.

(f) *Rural Housing.* Prior to the end of the Second World War, the Commonwealth Government and various State Governments made arrangements for the settlement of discharged soldiers on the land as part of a general scheme of rehabilitation of ex-members of the Services. In 1945, the Victorian Government completed an Agreement with the Commonwealth Government, and legislation was passed constituting the Soldier Settlement Commission. On 17th March, 1962, the Rural Finance and Settlement Commission came into being, constituted by an Act passed in December, 1961. Activities under the *Soldiers Settlement Act* 1958 and the *Land Settlement Act* 1959, previously administered by the Soldiers Settlement Commission, are now carried out by the Settlement Branch of the new Commission. At 30th June, 1963, a total of 2,954 houses had been erected and 36 were still under construction.

(iii) *Queensland—The Queensland Housing Commission.* (a) *General.* The Queensland Housing Commission was established in 1945 to assist in meeting the existing housing shortage. It took over the operations of the State Advances Corporation which was established in 1916 to make advances to home builders under the *State Advances Act* 1916 (State Housing in Queensland originally began in 1910 under the Workers' Dwelling Board). In addition, the Commission was empowered to build houses itself, either for sale or for letting.

(b) *House Units Completed.* During 1962-63, the Commission completed 1,798 house units, bringing the total completions under all schemes since the revival of housing construction in 1944-45 to 27,924. Of this number, 16,349 houses, or 58.5 per cent., were for home ownership, and 11,575, or 41.5 per cent., were for rental.

(c) *Finance.* The Housing Commission finances its operations through two Treasury Trust Funds—the Queensland Housing Commission Fund and the Commonwealth-State Housing Fund. In addition, a Home Builders' Deposit Trust Fund is available to assist eligible persons to accumulate money to acquire land and erect a Commission dwelling

thereon, or to purchase a dwelling under contract of sale conditions. Total disbursements by the Commission for the year 1962-63 amounted to £11,427,391, representing £4,530,185 from the Queensland Housing Commission Fund and £6,897,206 from the Commonwealth-State Housing Fund, while the Home Builders' Deposit Fund had a balance of £3,454 at 30th June, 1963.

(d) *Rental Schemes.* In the field of rental housing, the Commission administers and acts as the constructing authority for the Commonwealth-State Housing Agreements of 1945, 1956, and 1961. These agreements have made possible large-scale home building programmes during the post-war years, the houses so built being mainly for rental, although they may be subsequently sold.

Until 28th March, 1961, when the *Workers' Homes Acts, 1919-1957*, were repealed, the Commission administered the Workers' Homes scheme, which was described in the Commonwealth Year Book No. 48, 1962, page 371.

(e) *Sales Schemes.* Operating under the provisions of the *State Housing Acts, 1945 to 1962*, the Commission, through its scheme of Workers' Dwellings, makes advances for the construction of dwellings to eligible persons who own a suitable building site. To be eligible to participate in any of its home-ownership schemes, a person must not own, nor must his wife or her husband own, a house in Queensland or elsewhere. The number of workers' dwellings completed during 1962-63 amounted to 632, making a total of 28,618 completions since the inception of the scheme. The Commission also has power to make advances, secured by mortgage, to firms for housing of employees.

Home ownership is further assisted through the Commission's powers to sell houses under contract of sale conditions. It may sell houses already erected to eligible applicants, or it will erect a dwelling to the intending purchaser's own design, on Commission land, for subsequent sale to him. Tenants of rental houses may also purchase, under contract of sale conditions, the houses they are occupying. Contract of sale agreements were made to purchase 684 of the Commission's houses during 1962-63.

The Commission is also authorized, under the *State Housing Acts Amendment Act, 1961*, to sell freehold land, or lease vacant Crown land which has been set apart for the purposes of the *State Housing Acts*, to an eligible person for the erection of a dwelling, subject to the condition that within 18 months from the date of contract he will execute a building agreement for the erection of a dwelling thereon for his occupation.

(iv) *South Australia—The South Australian Housing Trust.* (a) *General.* The South Australian Housing Trust was constituted in 1937 under the *South Australian Housing Trust Act, 1936-37*, for the purpose of providing comfortable homes for workers in regular employment on the lower ranges of income and for tenants in serious financial straits. The Housing Trust builds houses for both rental and sale and, in addition, administers an emergency dwelling scheme for the South Australian Government. From July, 1946 to 30th June, 1963, 46,941 houses were erected by the Trust in both city and country areas.

(b) *Rental Houses.* Rents charged for Trust accommodation are generally based on the overall cost of construction, and vary not only according to the size of the dwelling but also according to date of erection. As at 1st January, 1964, the rents of 5-roomed houses (i.e., 3 bedrooms) ranged from £1 17s. 6d. a week for houses of an older type to £3 12s. 6d. a week for houses then being completed in the Metropolitan Area. Factors taken into consideration when allotting rental houses include date of application, housing need and suitability of tenant. Persons with high incomes are asked to consider purchasing their own homes. Two and three storey groups of flats with weekly rentals ranging from £3 7s. 6d. to £6 12s. 6d. per flat have been built in the Metropolitan Area and at Elizabeth. At 1st January, 1964, 1,059 of these flats had been completed in the Metropolitan Area and 220 at Elizabeth. In 1953 the Trust began building cottage or pensioner flats for elderly people. At 30th June, 1963, it had built 670 cottage flats for its own scheme and an additional 264 for, and at the expense of, charitable organizations.

In 1958, the State Government instituted the rental-grant scheme for the purpose of providing houses in the country towns for people who cannot afford to pay an economic rent, and to 30th June, 1963, 180 houses had been built.

(c) *Sales Scheme.* Houses built under this scheme, which was inaugurated in 1946, are of solid or timber-frame construction. More than 22,400 have been completed in both metropolitan and country areas since the scheme began. The Trust may receive cash payment for the house and land. More usually, the purchaser pays a deposit (which varies according to the type of house and locality—at present £160 for a timber-frame house and £200 for a 5-roomed brick house—and the purchaser's ability to pay) and raises the balance by way of mortgage. In 1956, the Trust began the erection of houses, which may be of solid or timber-frame construction or a mixture of both, for individuals on their own land. Houses are built by contract under the Trust's supervision. Prices for building and supervision of the standard houses covered by the scheme in late 1963 ranged from £3,200 for a 2-bedroom brick house to £5,000 for a 5-roomed house. During 1962–63, the Trust commenced construction of rental-purchase houses. The aim of this scheme is to provide less expensive houses for the lower-middle income wage earner, and it is expected that such houses will, as far as possible, replace the demand for the double-unit type rental houses. By 1st January, 1964, 218 rental-purchase houses had been built.

Upon request by State Government Departments, the Trust will erect houses for purchase by those Departments for the accommodation of their employees. During the financial year 1962–63, 90 houses were built for Education, Police, Highways, Aboriginal Affairs and Woods and Forests Departments, etc. Rents for the houses are determined by the Public Service Board.

(d) *Rural Housing.* In order to assist primary producers, the Trust will erect houses on the applicant's own land for his own use or that of his employees, either using local materials or transporting prefabricated houses to the site. At 30th June, 1963, prices for houses erected on level sites within 100 miles of Adelaide ranged from £2,300 for a 2-bedroom minimum type timber house to £3,000 for a 3-bedroom asbestos cement sheeted timber house.

(v) *Western Australia—State Housing Commission of Western Australia.* (a) *General.* The State Housing Commission was established in January, 1947, under the *State Housing Act, 1946* to replace the Workers' Homes Board which had been created in 1912 to "erect and dispose of workers' dwellings and to make advances to people of limited means to provide homes for themselves". The *State Housing Act, 1946–1961* has as its objects "the improvement of existing housing conditions" and "the provision of adequate and suitable housing accommodation for persons of limited means and certain other persons not adequately housed". The legislation is comprehensive in scope, providing for the erection of homes for workers, the making of advances to workers for the purchase of homes, the erection of homes for letting on a weekly rental basis, the acquisition and development of land, the clearing of slums, the erection of hostels and the planning of community facilities. The Commission, consisting of seven members, builds houses for letting or sale and lends money for home building. The houses are built by private contract on land provided by the applicant or the Commission. Government housing is primarily the responsibility of the Commission, whose functions, in addition to its operations under the *State Housing Act*, include the administration in Western Australia of the Commonwealth and State Housing Agreements and the War Service Homes Act.

(b) *Operations.* The number of houses completed under the *State Housing Act* up to 30th June, 1963, was:—freehold—2,374; leasehold—3,086; assistance by second mortgage—1,035.

Various forms of assistance have been granted by the Commission to encourage home ownership, including schemes for arranging purchase by means of loans secured by mortgage, advances made under contract of sale, advances for securing homes under leasehold conditions, second mortgage loans and loans for the completion of partly built dwellings. Under the leasehold scheme a purchaser can convert, from perpetual Crown lease or a lease for a term of years, to freehold conditions upon having a 10 per cent. equity in the improvements and by agreeing to purchase the land at the valuation determined at the date of commencement of the lease.

The Commission also conducts certain other housing schemes and has completed, or is currently engaged in, other specific projects. Among the more important of these were the building of 653 homes at Medina and Calista between 1952–53 and 1955–56 in terms of the agreement contained in the *Oil Refinery Industry (Anglo-Iranian Oil Company Limited)*

Act, 1952; the Government Employees' Housing Scheme, which commenced in 1958-59 and, up to 30th June, 1963, had provided 93 rental houses in country areas for certain government employees; the construction of 100 houses to be built under the provisions of the *Laporte Industrial Factory Agreement Act, 1961*; the construction of approximately 40 homes at Esperance to aid the development of the fertilizer industry; the building of up to 30 homes per year until 1969-70 as part of the Broken Hill Proprietary Company's Agreement with the State to establish an integrated steel industry; and the management, free of charge, of the McNeess Housing Trust, a private endowment, the income from which, together with State Government allocations and Lotteries Commission donations, is used to provide homes for aged and infirm persons not able to acquire a home from their own resources. The Commission also undertakes the construction of houses for some other State Government Departments and semi-governmental authorities.

(vi) *Tasmania—The Housing Department.* (a) *General.* The Housing Department was established in July, 1953, as a separate identity, and is responsible for administering that portion of the *Homes Act 1935* which relates to the acquisition and development of land for housing purposes and the erection of homes for rental and ultimate sale, and the *Homes (Old Age Pensioners') Act 1940*. Housing Department construction utilizes both day labour and private contractors to build houses on land developed by the Department. On-site construction is supported by the Department's factory which incorporates joinery works, timber mill, plumbing and electrical workshops, material stores, and garage. Most of the dwellings constructed by the Department are three-bedroom timber dwellings. Roofing is usually corrugated iron, but some coloured asbestos cement sheeting is used. Flats for elderly persons and multi-unit flats have also been constructed.

(b) *Construction of Dwellings.* During 1962-63, 531 dwellings were completed. Construction since 1944 is summarized in the following table.

Type of dwelling	One-bedroom	Two-bedroom	Three-bedroom	Total
Single unit—Timber .. .. .	..	510	6,114	6,624
Other material .. .. .	..	..	775	775
Elderly persons' flatettes .. .. .	50	114	..	164
Maisonettes .. .. .	..	12	10	22
Multi-unit flats .. .. .	125	157	14	296
<b>Total Dwelling Units .. .. .</b>	<b>175</b>	<b>793</b>	<b>6,913</b>	<b>7,881</b>

(c) *Dwellings for Rental.* Flats, maisonettes and elderly persons' homes are for rental only. It is the Department's policy to allot single-unit dwellings on a purchase contract basis except where the allottee would be unable to meet the full economic charges or where the dwelling would not be large enough for the allottee's future requirements. In the June quarter of 1963, rents of three-bedroom timber dwellings averaged £3 14s. 6d. per week, but on similar new dwellings allotted during 1962-63 rents averaged £5 4s. 10d. per week. Rental rebates are allowed in certain cases and the Department is reimbursed by the State Treasury. Rents of elderly persons' flatettes are graduated according to the incomes of occupiers. Under the current rental rebate formula, a married couple whose only income is the age pension pays £1 18s., while a single person solely dependent on the pension pays £1 per week.

(d) *Dwellings for Sale.* Allotments are made on a no deposit purchase contract basis with repayments over a 53-year term, but allottees are encouraged to pay a deposit if they are in a position to do so. Purchase contracts are sometimes surrendered to the Department. Net of surrenders, 4,737 purchase contracts had been entered into by June, 1963. The sale price, excluding land, of a new three-bedroom timber house in the Hobart metropolitan area was approximately £3,265 in the June quarter of 1963. Prices in the north and north-western areas were slightly lower.

The weekly instalments on a purchase contract are slightly less than the weekly rent of a similar dwelling, as the latter includes a charge for maintenance.

4. **Housing Schemes in Commonwealth Territories.**—(i) *Northern Territory.* In 1946, control of all government-owned residences in the Territory (excluding those belonging to the Defence Services or Commonwealth Railways, or attached to post offices) was vested in the Administration. The Administration provides houses for rental to officers and employees of the Commonwealth. The Northern Territory Housing Commission provides rental housing for persons of limited means who are not adequately housed and who are not officers of either the Commonwealth or the Northern Territory Public Service. The Commission was established in 1959 and operates under authority of the *Housing Ordinance 1959-1963*; to 31st October, 1963, a total of 361 houses and 24 flats had been completed and a further 43 houses and 72 flats were under construction.

(ii) *Australian Capital Territory.* The Commonwealth Government provides houses and flats for rental to persons employed in the Australian Capital Territory. At 30th June, 1963, the Department of the Interior controlled 7,308 houses and 1,765 flats for rental purposes.

Government rental houses may be purchased by tenants. Up to 30th June, 1963, 2,975 houses had been sold to tenants.

(iii) *Papua and New Guinea.* In 1960, the Administration, through the Commissioner for Housing, commenced a scheme for providing low-cost houses for rental and eventual sale where possible to indigenes, mixed race peoples and Asians. To 30th June, 1963, 214 houses had been completed.

5. **Summary of Rental Activities of Government Authorities.**—(i) *Revenue from Rentals.* The following table shows the revenue from rentals for dwellings under control of Government Housing Authorities each year from 1958-59 to 1962-63.

**GOVERNMENT HOUSING AUTHORITIES: REVENUE FROM RENTALS**  
(£'000)

Year	N.S.W.	Vic.	Old (a)	S.A. (b)	W.A.	Tas.	N.T.	A.C.T.	Aust.
1958-59 ..	5,856	5,568	1,502	2,476	1,849	426	115	823	18,615
1959-60 ..	6,094	5,562	1,599	2,687	1,914	454	138	1,045	19,493
1960-61 ..	6,272	5,537	1,642	2,993	1,983	498	170	1,188	20,283
1961-62 ..	6,575	5,549	1,791	3,397	2,076	545	200	1,598	21,731
1962-63 ..	7,116	5,705	1,983	3,752	2,192	561	244	1,761	23,314

(a) Excludes rentals in respect of tenanted temporary dwellings.

(b) Excludes rentals in respect of temporary and emergency dwellings.

(ii) *Number of Tenants Paying Rent.* The following table shows the number of tenants paying rent for dwellings under control of Government Housing Authorities at the end of each year from 1958-59 to 1962-63.

**GOVERNMENT HOUSING AUTHORITIES: NUMBER OF TENANTS  
PAYING RENT**

Year	N.S.W.	Vic.	Old (a)	S.A. (b)	W.A.	Tas.	N.T.	A.C.T. (c)	Aust.
1958-59 ..	38,123	32,496	10,233	18,038	12,509	2,704	1,026	6,768	121,897
1959-60 ..	38,673	32,386	10,345	19,309	12,853	2,755	1,095	7,723	125,139
1960-61 ..	38,756	31,894	10,629	21,114	13,041	2,803	1,210	8,349	127,796
1961-62 ..	40,796	32,146	11,079	22,983	13,338	2,935	1,366	8,832	133,475
1962-63 ..	41,207	32,371	11,575	24,632	13,848	3,144	1,678	9,073	137,528

(a) Excludes tenanted temporary dwellings.  
At 30th June, 1963, these numbered 2,549.

(b) Excludes temporary and emergency dwellings.

(c) Number of occupied dwellings at 30th June.

## § 4. Advances to Home Purchasers

Many prospective home purchasers wish to borrow for the purpose of constructing or purchasing their own homes. Usually the loan is covered by way of mortgage of the home to be constructed or bought. Such loans are provided from a number of private sources and from agencies owned or guaranteed by the State or Commonwealth Governments. The information in this section concerns the direct loans made to home purchasers by the more important institutional lenders. Loans to institutions which in turn lend moneys to home purchasers and loans to contract builders, etc., are excluded as far as possible. The loans may be for the construction of new dwellings, the purchase of existing dwellings, for additions, renovations, etc., as first or subsequent mortgages, overdrafts and so on.

While figures of all loans to home purchasers are not available, the institutions mentioned below account for a significant proportion of total loans. Details of the terms and conditions of lending are given, together with available information on the number and value of loans made.

1. State Authorities and Agencies.—(i) *New South Wales.* (a) *Housing Commission of New South Wales—Commission Financed Advances.* Under the *Housing Act, 1912–1955*, the Housing Commission is empowered to provide finance to persons to have houses erected on their own land, to purchase existing dwellings, or to effect improvements or repairs to houses. Regulations prescribing the present maximum amount that may be advanced and the limitation on income which may be received by an applicant for a loan have not been published, and at present no advances or sales are being made under this legislative provision.

(b) *Rural Bank of New South Wales—Sale of Homes Agency.* A Sale of Homes Agency was established in 1954 within the Rural Bank's Government Agency Department to arrange for the sale on terms of houses erected by the Housing Commission of New South Wales.

The Agency's operations began with the sale to selected purchasers of 100 houses made available by the Commission during 1954–55 and 1955–56. The sales were made on the basis of 10 per cent. deposit and repayment of the balance over a maximum period of 40 years, with interest at 4½ per cent. per annum. Total advances under that scheme amounted to £323,324; at 30th June, 1963, the advances outstanding amounted to £234,175 in respect of 89 houses.

Since 1956, the Sale of Homes Agency has acted as the agent of the Housing Commission in arranging the sale on terms of houses erected under the 1956 Commonwealth-State Housing Agreement. These houses are sold, in general at the Bank's valuation, to persons who have satisfied the Commission as to their housing needs and have registered as prospective purchasers. The terms of sale provide for a minimum deposit of £50 and repayment of the balance over a maximum period of 45 years, with interest at 4¾ per cent. (5½ per cent. from May, 1961, to March, 1962) per annum. The cash deposits and periodical instalments payable by purchasers are collected by the Agency as agent for the Commission. Particulars of the advances made by the Agency in connexion with the sale of houses erected under the 1956 Agreement are given in the following table.

**RURAL BANK OF NEW SOUTH WALES—SALE OF HOMES AGENCY: ADVANCES FOR HOMES SOLD UNDER THE 1956 COMMONWEALTH—STATE HOUSING AGREEMENT**

Year	Advances during year		Advances outstanding at end of year(a)	
	Number of houses	Amount	Number of houses	Amount
		£'000		£'000
1956–57	1,604	5,079	1,604	4,976
1957–58	3,012	9,983	4,612	14,715
1958–59	2,013	6,326	6,623	20,808
1959–60	2,227	7,200	8,831	27,692
1960–61	1,565	5,218	10,364	32,487
1961–62	1,826	6,537	12,129	38,508
1962–63	1,825	6,752	13,830	44,487

(a) Comprises principal outstanding and loan charges due but not paid.



(c) *Rural Bank of New South Wales—Other Loans.* The Rural Bank of New South Wales provides assistance to individuals for the erection or purchase of homes and for other approved purposes associated with homes. Advances are based on the bank's official valuation of the dwelling. The rate of interest on long-term loans for housing purposes was increased from 5 per cent. to 5½ per cent. from 1st October, 1956, and to 5¾ per cent. from 15th December, 1960. The rate of interest was reduced to 5¼ per cent. per annum from 11th April, 1963.

The following table shows particulars of Rural Bank advances for homes during the last ten years.

RURAL BANK OF NEW SOUTH WALES: ADVANCES FOR HOMES

Year	Advances during year(a)		Advances outstanding at end of year(b)	
	Number of dwellings	Amount	Number of dwellings	Amount
		£'000		£'000
1953-54	1,375	2,135	20,045	15,749
1954-55	2,133	3,488	19,615	16,750
1955-56	1,399	2,757	18,778	17,419
1956-57	1,372	2,851	18,098	18,171
1957-58	1,576	3,490	17,644	19,595
1958-59	1,176	2,722	16,915	20,212
1959-60	1,610	4,026	16,611	21,967
1960-61	2,032	5,400	17,096	25,282
1961-62	1,668	5,658	17,357	28,211
1962-63	2,014	6,542	18,017	31,381

(a) The number of advances during a year represents the number of dwellings in respect of which an advance was first made in the year, but the amount of advances includes subsequent advances made in respect of the dwellings. (b) The number of advances outstanding at the end of a year represents the number of dwellings on which a debt was still outstanding. The amounts shown comprise principal outstanding and loan charges due but not paid.

(ii) *Victoria. (a) Housing Commission, Victoria.* Very few houses were sold by the Commission until 1954. The amendments to the Commonwealth-State Housing Agreement in 1955-56 have had the effect of substantially increasing the number of houses sold. Whereas between 1949 and 1954 only about 100 houses were sold, a total of 16,081 houses were sold on terms to 30th June, 1963, the total value of terms sales exceeding £59 million.

Houses are sold on a minimum deposit of £100, with a maximum repayment term of 45 years, and interest at 4½ per cent.

An inducement to tenants of the Commission to purchase their homes was the introduction of a Death Benefit Scheme, to provide for the property under purchase to pass to the estate of the purchaser free of debt in the event of his death prior to completion of purchase. If application is made for admittance to the Death Benefit Scheme, the maximum period for repayment is reduced to 30 years, the rate of interest is fixed at 5¼ per cent. and the contract must terminate before the purchaser's 70th birthday.

(b) *Home Finance Trust.* In 1956, a Home Finance Trust was established with the object of receiving money from institutions and others in order to make loans for the erection or purchase of houses. Applicants for loans must declare that they intend to use the houses as homes for themselves, their families and dependants. Except in special circumstances, no loan will be granted if the borrower or wife or husband of the borrower already owns a house in Victoria at the date of the proposed mortgage.

Loans granted are on the basis of a first mortgage over the house. Loans are not to exceed 95 per cent. of the value of the security (house and land) and are not made if the value of the security exceeds £5,000. The house must not have been erected more than two years before the date of the mortgage. Repayment of loans may be made over a maximum period of 30 years, with interest charges determined by the Trust. At 30th June, 1963, 2,397 loans totalling £6,823,168 had been approved.

In 1963, the Trust was empowered to make housing loans on the security of second mortgages subject to conditions similar to those applying with respect to the first mortgage loans, excepting that the maximum term for repayment of a loan is ten years and no restriction is placed on the percentage of loan to valuation.

At 30th June, 1963, 97 second mortgage loans had been approved, the amount involved being £38,920.

The Trust was also empowered to make a loan to the trustees of a fund established to provide a home for a doctor or a dentist at a place located more than thirty miles from the City of Melbourne. There is no valuation limit or age limit of the dwelling in cases of this nature.

(See para. 3, Savings Banks, pp. 398-9, for activities of the Crédit Foncier Department of the State Savings Bank of Victoria.)

(iii) *Queensland.* (a) *The Queensland Housing Commission.* The present maximum advance allowable under the Acts is £3,500 for a timber, brick veneer, brick, or concrete building. Since 1st August, 1963, two rates of interest have applied, namely 5½ per cent. per annum on advances existing at that time, and 4¾ per cent. on new advances. Repayment may be made at the option of the borrower over either a 30-year or a 45-year period. A borrower or purchaser who elects to repay over a 30-year period, who is under 40 years of age, and who has passed a prescribed medical examination, is entitled to free life insurance cover to an amount sufficient to liquidate his indebtedness to the Commission in the event of his death before his loan has been fully repaid, provided that the maximum benefit payable under such insurance cover does not exceed £2,250.

(b) *Workers' Dwellings.* From 4th October, 1962, the maximum advance under this scheme was increased to £3,500 for all types of workers' dwellings. Total advances made for dwellings since operations commenced in 1910 to 30th June, 1963, amounted to £27,236,136.

(iv) *South Australia.* (a) *The South Australian Housing Trust Sales Scheme.* A minimum deposit of £50 is required for houses under the Rental-Purchase scheme for a maximum loan of £4,000, repayable at an interest rate of 4¾ per cent. per annum over a period not exceeding 40 years.

Prospective purchasers of Housing Trust houses (other than Rental-Purchase houses) can arrange or have arrangements made for a first mortgage to be granted by a lending institution of their choice. In cases where the deposit and the first mortgage so raised are insufficient, the Trust may advance the balance of the house price by way of a second mortgage, the repayment term of which is a maximum of 30 years, interest being at the rate of 6 per cent. per annum.

During 1962-63, the Trust commenced 705 second mortgages valued at £424,000. At 30th June, 1963, second mortgages totalled 6,602, and the balance outstanding at that date was £3,565,000.

(b) *State Bank of South Australia.* The State Bank, together with the Housing Trust, is the principal agent of the State Government for the distribution through the Home Builders' Fund of moneys received under the Commonwealth-State Housing Agreement.

During 1962-63, the Bank opened 1,626 new accounts worth £4,798,358 in the Home Builders' Fund. The balance of loans outstanding at 30th June, 1963, in this Fund totalled £12,987,518.

In addition, £263,127 was made available during 1962-63 by the State Government under the *Advances for Homes Act 1928-1935* which is administered by the Bank. Under this Act, 157 new accounts were opened during 1962-63, leaving a balance outstanding at 30th June, 1963, of £15,073,690.

The present maximum housing loans under either of these schemes is £3,500, repayable over a period not exceeding 50 years at a rate of interest of 5 to 5½ per cent. per annum calculated on monthly balances. Persons who have received benefit under either of these schemes are ineligible for another mortgage.

(v) *Western Australia. State Housing Commission of Western Australia.* The maximum loan is £2,500 by way of mortgage and leasehold, and £2,750 plus land for contract of sale, under the *State Housing Act 1946*. For houses built north of the 26th parallel the Minister may approve of an advance exceeding £2,750.

To proceed under the mortgage conditions, a deposit of not less than 10 per cent. is required, but under the contract of sale or leasehold provisions the minimum deposit is £100. The interest rate in both cases is  $5\frac{3}{4}$  per cent. per annum and the repayment period is 45 years. To obtain assistance, an applicant cannot have an income exceeding £1,235 a year, plus £25 for each dependent child under 16 years of age. This figure varies according to the movement of the basic wage. North of the 26th parallel, the Minister may allow a higher-income family to be assisted.

A second-mortgage scheme exists under the *State Housing Act* which provides that assistance be limited to those applicants who are building or purchasing new homes, the cost of which, excluding land, does not exceed £3,300. By policy decision, the Commission limits the second mortgages to a maximum of £1,000.

(See para. 3, Savings Banks, p. 399, for activities of the Savings Bank Division of the Rural and Industries Bank of Western Australia.)

(vi) *Tasmania. (a) The Housing Department.* Amounts outstanding in respect of loans made by the Housing Department by way of purchase contracts were as follows for the years 1958-59 to 1962-63.

#### TASMANIAN HOUSING DEPARTMENT: PURCHASE CONTRACTS

Particulars	1958-59	1959-60	1960-61	1961-62	1962-63
Number of loans outstanding .. ..	3,254	3,471	3,835	4,156	4,427
Amount outstanding .. .. £'000	8,901	10,112	11,317	12,601	13,612

The interest rate on contracts signed after February, 1962, was 4 per cent., immediately prior to which the rate was  $4\frac{3}{4}$  per cent. To be eligible for a house on purchase contract terms, an applicant must be married or about to be married, or have dependants for whom it is necessary to provide a home. Number of dependants, income and existing accommodation are considered in determining the priority of applicants.

(b) *Agricultural Bank of Tasmania.* The Agricultural Bank, as an approved institution under the Commonwealth-State Housing Agreement, receives part of those funds allocated for advances to home builders. Prior to the commencement of the agreement, the Bank borrowed from the State Loan Fund and from private institutions. To be eligible for a loan, an applicant must be married or about to be married and be over the age of 21, and when, as is usual, the advance is required to build a house, the applicant must own a block of land. The maximum amount of an advance to an applicant is £3,300 for brick or concrete block type houses in certain areas, or £3,000 for a timber dwelling, provided that the total advance does not exceed 90 per cent. of the Bank's valuation of land and dwelling. Advances to borrowers are repayable by equated instalments over 31 years. Advances made as from 1st February, 1962, were at an interest rate of  $5\frac{1}{4}$  per cent., immediately prior to which the rate was  $5\frac{3}{4}$  per cent. The following table shows details for recent years.

#### TASMANIAN AGRICULTURAL BANK: ADVANCES FOR HOUSING(a)

Particulars	1959-60	1960-61	1961-62	1962-63
Advances approved—				
Number .. ..	100	115	239	157
Value .. .. £'000	310	362	730	486
Advances outstanding(b) .. .. £'000	3,957	4,195	4,512	4,996

(a) Excludes advances to Building Societies.

(b) At 30th June.

Since November, 1945, a total of 2,357 loans amounting to £6,358,000 have been approved, of which 2,170 have been for erection of dwellings and 187 for the purchase of existing homes.

2. Commonwealth Authorities and Agencies.—(i) *Department of Housing.* In December, 1963 a Division of the Department of National Development was formed into the Department of Housing. Further details relating to this Department may be found in § 4 of Chapter III. General Government (*see p. 83*).

(ii) *War Service Homes.* The maximum amount of loan or advance which may be granted under the *War Service Homes Act 1918–1962* is £3,500. The period of repayment may be up to 45 years. In the case of a widow or widowed mother of an Australian ex-serviceman, the period may be extended to a maximum of 50 years.

The following table gives details of advances by the War Service Homes Division in each State and Territory of Australia, and the Territories of Papua, New Guinea and Norfolk Island, for the years 1953–54 to 1962–63. (*See tables on p. 384 for the number of homes provided.*)

WAR SERVICE HOMES DIVISION: ADVANCES FOR HOUSING

Period	N.S.W. (a)	Vic.	Q'land (b)	S.A.	W.A.	Tas.	N.T.	A.C.T.	Total
TOTAL CAPITAL ADVANCED DURING YEAR (£'000)									
1953–54 ..	7,508	8,146	4,063	2,505	3,784	734	11	123	26,874
1954–55 ..	10,367	9,197	3,569	2,091	3,819	783	22	238	30,086
1955–56 ..	11,815	8,859	2,708	2,125	3,572	753	15	220	30,067
1956–57 ..	11,298	9,680	2,321	2,396	3,545	684	6	241	30,171
1957–58 ..	14,013	11,090	2,298	2,898	3,891	801	16	175	35,182
1958–59 ..	15,513	10,874	2,715	2,425	2,584	890	15	143	35,159
1959–60 ..	14,957	10,977	2,987	2,342	2,888	728	18	171	35,068
1960–61 ..	16,165	9,020	3,211	2,396	3,490	612	22	126	35,042
1961–62 ..	13,157	10,263	4,461	2,658	3,500	700	16	270	35,025
1962–63 ..	13,600	10,500	4,950	3,235	3,980	775	15	455	37,510

NUMBER OF SECURITIES IN FORCE

At end of June—									
1954 ..	18,010	26,704	14,881	11,542	9,218	2,069	19	233	82,676
1955 ..	21,868	29,618	16,103	11,860	10,453	2,317	27	326	92,572
1956 ..	25,455	31,408	16,747	11,968	11,108	2,476	31	395	99,588
1957 ..	29,312	34,461	17,332	12,527	12,634	2,703	30	457	109,456
1958 ..	34,081	37,446	17,835	13,119	13,442	2,932	32	512	119,399
1959 ..	38,512	40,181	18,369	13,522	14,090	3,116	34	548	128,372
1960 ..	43,029	42,913	18,876	13,897	14,856	3,259	41	603	137,474
1961 ..	47,713	45,275	19,572	14,371	15,886	3,364	49	640	146,870
1962 ..	51,445	47,827	20,712	14,947	16,806	3,538	53	710	156,038
1963 ..	54,409	49,740	21,644	15,481	17,551	3,676	55	817	163,373

VALUE OF ADVANCES OUTSTANDING (£'000)

At end of June—									
1954 ..	23,835	40,950	22,514	17,063	13,646	2,355	(c)	(d)	120,363
1955 ..	32,813	48,349	25,437	18,509	16,989	3,661	(c)	(d)	145,758
1956 ..	44,708	55,277	27,482	20,143	20,902	4,259	(c)	(d)	172,771
1957 ..	55,870	63,416	28,885	21,912	23,503	4,810	(c)	(d)	198,396
1958 ..	68,169	72,692	30,206	24,179	27,292	5,391	(c)	(d)	227,929
1959 ..	83,019	81,239	31,943	25,824	29,504	6,130	(c)	(d)	257,659
1960 ..	96,293	89,380	33,692	27,234	31,643	6,623	(c)	(d)	284,865
1961 ..	109,575	95,312	35,719	28,753	34,367	7,018	(c)	(d)	310,744
1962 ..	119,851	102,645	39,073	30,510	36,997	7,447	(c)	(d)	336,523
1963 ..	130,118	109,831	42,662	32,735	39,730	7,979	(c)	(d)	363,055

(a) Includes Norfolk Island. (b) Includes Territory of Papua and New Guinea.  
(c) Included in South Australia. (d) Included in New South Wales.

(iii) *Northern Territory. (a) Loans Scheme.* This Scheme was commenced in 1953 and is administered by the Commissioner for Housing under the *Housing Loans Ordinance 1949-1959*. Advances may be made for the erection of a house, the purchase or enlargement of an existing house, the completion of a partially erected dwelling, or the discharge of a mortgage already existing. Loans are provided on a deposit of 5 per cent. of the first £2,000 and 10 per cent. of the balance of the Commissioner's valuation up to a maximum of £3,500. The rate of interest charged is 6 per cent. per annum reducible to 5 per cent. per annum if instalment payments are made by the due date. The maximum period of repayment is 45 years.

Up to 31st December, 1963, 929 loans totalling £2,507,045 had been approved. These were for:—erection, 654; purchase, 210; enlargement or completion, 16; discharge of mortgage, 49.

(b) *Sales Scheme.* Tenants of government-owned houses under the control of the Administration may purchase the dwellings they occupy, either for cash or on terms requiring a minimum deposit of 5 per cent. of the first £2,000 and 10 per cent. of the balance of the purchase price with repayments over a maximum period of 45 years including interest at  $4\frac{1}{2}$  per cent. per annum.

(c) *Housing Commission Sales Scheme.* Since the amendment of the *Housing Ordinance 1959-1963* in November, 1963, the Housing Commission is permitted to sell its houses to tenants in occupation. The terms require a minimum cash deposit of £100 and repayment of the remainder of the loan over a period not exceeding 45 years; there is no prescribed limit to the amount of the loan and the rate of interest is to be fixed by the Commission from time to time.

(iv) *Australian Capital Territory.* Loans may be granted by the Commissioner for Housing to enable persons to purchase or build a new house in the Australian Capital Territory. Where the Commissioner's valuation does not exceed £2,000, the maximum loan may not exceed 95 per cent. of the valuation. If the Commissioner's valuation exceeds £2,000, the maximum loan is 95 per cent. of the first £2,000 and 90 per cent. of the balance (but in no case can the amount lent exceed £3,500). Repayment may be made over a maximum period of 45 years. The current rate of interest is  $4\frac{1}{2}$  per cent. per annum. From 1st July, 1950, to 30th June, 1963, 1,902 loans were granted.

Government rental houses may be purchased by tenants. The basis of the sale is a minimum deposit of 5 per cent. of the purchase price fixed by the Department of the Interior with no limit to the amount which may be held on mortgage from the Department. Repayment of the amount covered by mortgage may be made over a maximum period of 45 years. The interest rate is  $4\frac{1}{2}$  per cent. per annum. Up to 30th June, 1963, 2,975 houses had been sold to tenants.

(v) *Papua and New Guinea.* Under authority of the *Housing Loans Ordinance 1953-1963* the Commissioner for Housing may make advances to any member of the community for the erection of a house, the purchase or enlargement of an existing house, the completion of a partially erected dwelling, or the discharge of a mortgage already existing. The maximum loan is £3,500. The maximum period of repayment is 35 years for brick, stone or concrete and 25 years for all other materials. Minimum cash deposit is 10 per cent. of the Commissioner's valuation. The effective rate of interest is  $4\frac{1}{2}$  per cent. per annum. Up to 31st December, 1963, 247 loans totalling £598,390 had been approved.

3. *Savings Banks.*—All savings banks lend funds for housing to both individuals and to building societies. Separate figures of loans to individuals are not available for all savings banks. The amounts outstanding on housing loans of all savings banks (including loans to building societies) were £306 million, £339 million and £397 million at the end of June, 1961, 1962 and 1963, respectively.

Some details in respect of three savings banks are shown below.

(i) *State Savings Bank of Victoria—Crédit Foncier Department.* The State Savings Bank of Victoria grants long-term loans to depositors to enable them to build, purchase or improve homes and to purchase or improve farms. Most, but not all, of the loans are made by the Crédit Foncier Department of the Bank.

In order to encourage new building, home loans are granted only on houses up to one year old. The maximum proportion of the valuation to be granted as loan is 80 per cent. and the maximum loan is £3,500. Interest is  $4\frac{1}{2}$  per cent. and the term of the loan is 10 years, subject to renewal.

During 1962-63, the Cr dit Foncier Department advanced £13,149,456 to 5,807 borrowers and at the end of that year £76,128,985 was owing by 40,769 borrowers.

(ii) *Savings Bank of South Australia.* The Bank grants mortgage loans for the building or purchase of houses for personal occupation. The maximum loans available on houses of solid construction are £3,750 for new homes and £4,500 for previously occupied homes. Normally advances are made up to 85 per cent. of the Bank's valuation but, if the loan is granted under the *Homes Act 1941*, 95 per cent. of such valuation may be advanced (maximum loan—£3,000). The maximum loan period is 30 years at a rate of interest of 5 per cent. per annum; this rate is subject to review after 5 years.

During 1962-63, the Bank advanced £5,828,696 on 2,076 loans for houses. At 30th June, 1963, there were 19,222 loans current with a balance outstanding of £35,570,000.

(iii) *The Rural and Industries Bank of Western Australia (Savings Bank Division).* The Rural and Industries Bank of Western Australia is authorized by the *Rural and Industries Bank Act 1944-1958* to make loans from moneys in deposit with its Savings Bank Division to a person or body for the purchase or erection of a dwelling. It is the policy of the Bank to provide funds for housing primarily for occupancy by the borrower. There is no fixed limit on the amount of a loan, but loans in excess of £3,500 are rarely made. The average loan in the case of a brick or timber house is about £2,500. The rate of interest varies with the current bank rate and is usually  $\frac{1}{2}$  per cent. lower. The rate at 30th June, 1963, was  $5\frac{1}{2}$  per cent. The average term of housing loans is 22 years.

4. **Trading Banks.**—Apart from loans by certain State banks as Government agencies (see State and Commonwealth Authorities and Agencies, paras. 1 and 2, pp. 393-8), advances for housing to individuals are also provided by the trading banks.

Amounts outstanding in respect of advances to individuals for housing purposes made by the major trading banks were £85 million, £95 million and £101 million at the second Wednesday of July, 1961, 1962 and 1963, respectively.

5. **Life Insurance Companies.**—The life insurance companies are another source of funds for housing. Details of new loans made during 1962 and 1963 (particulars for earlier years are not available) are given in the following table.

LIFE INSURANCE COMPANIES: HOUSING LOANS PAID OVER DURING  
1962 AND 1963

State or Territory	Amount (£'000)	
	1962(a)	1963
New South Wales .. .. .	9,206	10,286
Victoria .. .. .	5,670	6,576
Queensland(b) .. .. .	2,094	1,715
South Australia(c) .. .. .	1,658	1,684
Western Australia .. .. .	990	1,131
Tasmania .. .. .	791	709
Australian Capital Territory .. .. .	80	170
<b>Total .. .. .</b>	<b>20,489</b>	<b>22,271</b>

(a) Figures for 1962 shown in the previous issue of this Year Book related to total new loans by life insurance companies on mortgage of real estate. (b) Includes loans made in Papua and New Guinea. (c) Includes loans made in Northern Territory.

Amounts outstanding at the end of June, 1961, 1962 and 1963 in respect of housing loans made by insurance companies were £151 million, £153 million and £158 million respectively.

6. **Registered Building Societies.**—Including the Victorian Co-operative Housing Societies, there are 2,598 registered building societies in Australia, of which 113 are permanent societies and the remainder terminating societies. The permanent societies are in the main investment societies which make loans for housing purposes, usually on *crédit foncier* terms, and obtain their funds from share capital deposits and borrowings from banks and other lending institutions. The terminating societies are co-operative societies which make loans to members from funds obtained from lending institutions (usually government guaranteed), members' subscriptions, and, since 1956, from moneys provided under the Commonwealth-State Housing Agreements.

Details of new loans granted and net advances outstanding for each of the years ended June, 1958 to 1962, are given in the following table, which now includes particulars of Victorian Co-operative Housing Societies, previously shown in a separate table.

## REGISTERED BUILDING SOCIETIES

Year	N.S.W.	Victoria		Q'land	S. Aust.	W. Aust.	Tas.	Total
		Co-operative Housing Societies (a)	Other Building Societies (b)					
<b>LOANS GRANTED DURING YEAR (£'000)</b>								
1957-58 ..	17,985	(c)	3,611	2,736	721	1,890	1,024	(d)27,967
1958-59 ..	21,038	(c)	3,884	3,320	932	2,234	1,146	(d)32,554
1959-60 ..	20,560	(c)	4,689	4,889	1,157	2,710	1,357	(d)35,362
1960-61 ..	23,702	(c)	4,637	5,418	1,212	2,863	1,310	(d)39,142
1961-62 ..	24,369	10,587	3,841	6,323	1,123	3,173	1,494	50,910
<b>NET ADVANCES OUTSTANDING(e) AT END OF YEAR (£'000)</b>								
1957-58 ..	107,654	43,745	16,338	9,092	3,130	5,508	3,699	189,166
1958-59 ..	117,341	48,915	17,185	10,814	3,624	6,923	4,176	208,978
1959-60 ..	124,396	55,416	19,256	13,493	4,326	8,601	4,806	230,294
1960-61 ..	134,890	62,143	20,569	16,744	4,997	10,253	5,318	254,914
1961-62 ..	146,449	66,423	21,157	20,636	5,557	12,579	6,105	278,906

(a) Year ended 30th April. (b) Year ended 31st December. (c) Not available.  
 (d) Excludes Victorian Co-operative Housing Societies. (e) Net of borrowing members' funds.

7. **Other Lenders.**—Little information is available on advances made by other lenders such as superannuation and other trust funds, private finance and investment companies, etc. In South Australia, advances on first mortgage are granted under the *Homes Act* 1941 by which the State Government guarantees up to 25 per cent. of the value of the mortgage, thus raising the limit of the advance. Loans so made are limited to 95 per cent. of the Superannuation Board's valuation to a maximum of £3,000, or 85 per cent. of the Board's valuation to a maximum of £3,500. The rate of interest is 5½ per cent. per annum, calculated on quarterly balances, reducing to 5 per cent. when payments are made within a prescribed period of 21 days from the end of the quarter. The term of the mortgage may run for 30 years on a stone or brick home or 20 years on a timber-framed construction. Trustee mortgages may be granted as an alternative to the foregoing. A maximum of 70 per cent. of the Board's valuation may be granted for a trustee mortgage, other conditions being those applicable to mortgages granted under the *Homes Act*.

At 30th June, 1963, there were 4,884 loans current, the principal outstanding totalling £8,060,046. During 1962-63, the value of advances made was £1,285,525.

## CHAPTER XII

## EMPLOYMENT AND UNEMPLOYMENT

NOTE.—Further detail on subjects dealt with in this chapter is contained in other publications of this Bureau. For subjects relating to population censuses reference should be made to the series of mimeographed and printed publications listed in Chapter XXX. Miscellaneous of this Year Book. Detailed information on employment and unemployment and the Work Force Survey is contained in the monthly mimeographed bulletin *Employment and Unemployment*. Current information is also available in the *Monthly Review of Business Statistics*, the *Digest of Current Economic Statistics*, and the *Quarterly Summary of Australian Statistics*, and preliminary estimates of civilian employment are issued in a monthly statement *Wage and Salary Earners in Civilian Employment*.

## THE WORK FORCE

## § 1. General

The work force comprises two categories of persons: those who are employed and those who are unemployed. In the first category are included employers, self-employed persons, wage and salary earners, and unpaid helpers. Comprehensive details for each State and Territory and for Australia as a whole in respect of persons in the work force, classified according to characteristics such as age, sex, conjugal condition, industry, occupational status and occupation, are obtained only at a general census of population. Quarterly estimates of the civilian work force are derived from the results of surveys of a sample of households selected by area sampling methods. Estimates are at present available only for the six State capital cities combined. A summary of the information about the work force that was obtained at the population census of June, 1961, and earlier censuses is given in § 2. Estimates derived from the quarterly work force surveys appear in § 3.

In earlier issues of the Year Book, tables were published showing particulars of total occupied persons in each State and Territory and in rural and non-rural industry at various population census dates to June, 1954. Although the figures were derived from census results, they differed because of certain adjustments from recorded census figures. Corresponding particulars in respect of the population census of June, 1961, have not been compiled.

## § 2. Population Censuses\*

1. Occupational Status.—(i) *General*. Occupational status of persons classified as in the work force at population census dates covers two broad groups: those at work and those not at work. The first group comprises employers, self-employed persons, employees (on wage or salary) and unpaid helpers. The category "not at work" includes those who stated that they were usually engaged in work, but were not actively seeking a job at the time of the census by reason of sickness, accident, etc., or because they were on strike, changing jobs, or temporarily laid off, etc. It includes also persons able and willing to work but unable to secure employment, as well as casual and seasonal workers not actually in a job at the time of the census. The numbers shown as "not at work" in the following two tables therefore do not represent the number of unemployed available for work and unable to obtain it.

(ii) *Australia, 30th June, 1954 and 1961*. The following table shows the occupational status of the population at the census of 30th June, 1961, as compared with that at the 1954 census.

At the 1961 census, 79.3 per cent. of persons in the work force were wage and salary earners classified as "at work"; 9.8 per cent. were self-employed; 6.3 per cent. were employers; and 4.1 per cent. were "not at work". Persons in the work force constituted 40.2 per cent. of the population, compared with 41.2 per cent. in 1954.

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\* Particulars of full-blood Aborigines are not included in the tables in this section.



## OCCUPATIONAL STATUS OF THE POPULATION: AUSTRALIA

Occupational status	Census, 30th June, 1954			Census, 30th June, 1961			Increase 1954-61
	Males	Females	Persons	Males	Females	Persons	
<b>In work force—</b>							
<b>At work—</b>							
Employer .. .. .	220,878	30,104	250,982	224,369	42,712	267,081	16,099
Self-employed .. .. .	359,617	51,583	411,200	350,111	62,704	412,815	1,615
Employee(a) .. .. .	2,216,681	739,802	2,956,483	2,449,132	901,902	3,351,034	394,551
Helper(b) .. .. .	18,430	9,913	28,343	13,689	7,871	21,560	-6,783
<b>Total at Work .. .. .</b>	<b>2,815,606</b>	<b>831,402</b>	<b>3,647,008</b>	<b>3,037,301</b>	<b>1,015,189</b>	<b>4,052,490</b>	<b>405,482</b>
<b>Not at work(c) .. .. .</b>	<b>41,014</b>	<b>14,000</b>	<b>55,014</b>	<b>128,626</b>	<b>43,980</b>	<b>172,606</b>	<b>117,592</b>
<b>Total in Work Force .. .. .</b>	<b>2,856,620</b>	<b>845,402</b>	<b>3,702,022</b>	<b>3,165,927</b>	<b>1,059,169</b>	<b>4,225,096</b>	<b>523,074</b>
<b>Not in work force .. .. .</b>	<b>1,689,498</b>	<b>3,595,010</b>	<b>5,284,508</b>	<b>2,146,325</b>	<b>4,136,765</b>	<b>6,283,090</b>	<b>998,582</b>
<b>Grand Total .. .. .</b>	<b>4,546,118</b>	<b>4,440,412</b>	<b>8,986,530</b>	<b>5,312,252</b>	<b>5,195,934</b>	<b>10,508,186</b>	<b>1,521,656</b>

(a) On wage or salary. (b) Not on wage or salary. (c) See explanation in sub-para. (i) p. 401.

NOTE.—Minus sign (-) denotes decrease.

(iii) *States and Territories, 30th June, 1961.* The following table shows particulars of the occupational status of the population of each State and Territory at the 1961 census.

## OCCUPATIONAL STATUS OF THE POPULATION: CENSUS, 30th JUNE, 1961

Occupational status	N.S.W.	Vic.	Qld	S.A.	W.A.	Tas.	N.T.	A.C.T.	Australia
<b>In work force—</b>									
<b>At work .. .. .</b>									
Employer .. .. .	95,651	73,103	43,469	24,213	20,521	8,221	897	1,006	267,081
Self-employed .. .. .	138,571	120,867	67,806	40,978	29,784	13,191	723	895	412,815
Employee(a) .. .. .	1,298,143	958,258	438,947	298,688	217,692	104,717	12,144	22,445	3,351,034
Helper(b) .. .. .	6,452	5,923	4,833	1,952	1,624	699	55	22	21,560
<b>Total at Work .. .. .</b>	<b>1,538,817</b>	<b>1,158,151</b>	<b>555,055</b>	<b>365,831</b>	<b>269,621</b>	<b>126,828</b>	<b>13,819</b>	<b>24,368</b>	<b>4,052,490</b>
<b>Not at work(c) .. .. .</b>	<b>63,699</b>	<b>51,912</b>	<b>29,941</b>	<b>11,730</b>	<b>10,163</b>	<b>4,090</b>	<b>424</b>	<b>647</b>	<b>172,606</b>
<b>Total in Work Force .. .. .</b>	<b>1,602,516</b>	<b>1,210,063</b>	<b>584,996</b>	<b>377,561</b>	<b>279,784</b>	<b>130,918</b>	<b>14,243</b>	<b>25,015</b>	<b>4,225,096</b>
<b>Not in work force .. .. .</b>	<b>2,314,497</b>	<b>1,720,050</b>	<b>933,832</b>	<b>591,779</b>	<b>456,845</b>	<b>219,422</b>	<b>12,852</b>	<b>33,813</b>	<b>6,283,090</b>
<b>Grand Total .. .. .</b>	<b>3,917,013</b>	<b>2,930,113</b>	<b>1,518,828</b>	<b>969,340</b>	<b>736,629</b>	<b>350,340</b>	<b>27,095</b>	<b>58,828</b>	<b>10,508,186</b>

(a) On wage or salary. (b) Not on wage or salary. (c) See explanation in sub-para. (i) p. 401.

(iv) *Persons Not at Work, classified by Cause.* The total number of persons "not at work" has been recorded only at the dates of the various censuses. Since the 1947 census, this category has included all persons (usually engaged in industry, business, trade, profession or service) who were out of a job and not at work at the time of the census, for whatever reason, including any not normally associated with unemployment. The following table shows the numbers recorded as "not at work" at the censuses of 30th June, 1947, 1954 and 1961, classified according to cause. As explained in sub-para. (i) above, the totals shown as "not at work" do not represent the number of unemployed available for work and unable to obtain it.

PERSONS NOT AT WORK<sup>(a)</sup>, BY CAUSE: AUSTRALIA

Census	Unable to secure employment	Temporarily laid off	Illness	Accident	Industrial dispute	Other (b)	Total
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## MALES

1947 ..	17,314	12,458	14,639	2,985	475	18,743	66,614
1954 ..	9,912	4,423	11,879	2,804	344	11,652	41,014
1961 ..	85,455	12,153	13,931	6,262	547	10,278	128,626

## FEMALES

1947 ..	2,254	2,449	4,396	280	24	7,512	16,915
1954 ..	3,685	1,386	4,310	318	17	4,284	14,000
1961 ..	28,056	4,012	5,925	787	202	4,998	43,980

## PERSONS

1947 ..	19,568	14,907	19,035	3,265	499	26,255	83,529
1954 ..	13,597	5,809	16,189	3,122	361	15,936	55,014
1961 ..	113,511	16,165	19,856	7,049	749	15,276	172,606

(a) Persons in the work force who were "not at work" (*see* explanation p. 401) at the time of the census. (b) The majority of these persons were resting between jobs or changing jobs.

2. Industry.—(i) *General*. For census purposes, industry may be defined as any single branch of productive activity, trade or service. All persons engaged in any such branch of economic activity are classified industrially as belonging to that particular branch, irrespective of their personal occupations within the industry. Thus a single firm may employ persons performing completely different occupations in order to make a particular product, or to render a particular service, but the industrial classification of each of these persons is determined by the nature of the product made or of the service rendered by the firm that employs him.

(ii) *Australia, 30th June, 1954 and 1961*. The following table shows the number of persons in the work force in each industry group and sub-group at the censuses of 1954 and 1961. The figures include those at work and those not at work.

At the 1961 census, 60 per cent. of males and 20 per cent. of females were in the work force. Of the males in the work force, those engaged in manufacturing constituted the largest group (28.0 per cent. of the total); followed by those in commerce, 14.3 per cent.; primary production, 13.3 per cent.; building and construction, 11.5 per cent.; and transport and storage, 7.9 per cent. The more important industry groups in which females were engaged were manufacturing, 23.9 per cent.; commerce, 22.2 per cent.; community and business services, 21.5 per cent.; and amusement, hotels, personal service, etc., 12.8 per cent.

## INDUSTRY OF THE POPULATION: AUSTRALIA

Industry group and sub-group	Census, 30th June, 1954			Census, 30th June, 1961			Increase or decrease (-) 1954-61
	Males	Females	Persons	Males	Females	Persons	
<b>Primary production—</b>							
Fishing .. .. .	8,451	115	8,566	8,124	128	8,252	-314
Hunting and trapping .. .. .	1,552	11	1,563	1,361	14	1,375	-188
Rural industries .. .. .	435,933	31,890	467,823	396,519	38,892	435,411	-32,412
Forestry .. .. .	15,279	67	15,346	13,725	122	13,847	-1,499
<b>Total, Primary Production ..</b>	<b>461,215</b>	<b>32,083</b>	<b>493,298</b>	<b>419,729</b>	<b>39,156</b>	<b>458,885</b>	<b>-34,413</b>
<b>Mining and quarrying—</b>							
Mining (including open-cut mining)	55,327	909	56,236	46,220	1,174	47,394	-8,842
Quarrying .. .. .	4,983	152	5,135	6,721	286	7,007	1,872
<b>Total, Mining and Quarrying</b>	<b>60,310</b>	<b>1,061</b>	<b>61,371</b>	<b>52,941</b>	<b>1,460</b>	<b>54,401</b>	<b>-6,970</b>
<b>Manufacturing—</b>							
Cement, bricks, glass and stone ..	40,012	3,104	43,116	44,455	3,856	48,311	5,195
Products of petroleum and coal (excluding chemical and gas works) .. .. .	3,234	190	3,424	6,239	430	6,669	3,245
Founding, engineering and metal-working .. .. .	229,431	32,305	261,736	286,093	45,756	331,849	70,113
Ships, vehicles, parts and accessories .. .. .	132,653	6,463	139,116	132,435	8,345	140,780	1,664
Yarns, textiles and articles thereof (excluding clothing and furnishing drapery) .. .. .	29,620	26,243	55,863	29,009	24,501	53,510	-2,353
Clothing and knitted goods (including needleworking) .. .. .	23,144	73,367	96,511	20,285	69,382	89,667	-6,844
Boots, shoes and accessories (other than rubber) .. .. .	17,123	10,228	27,351	15,252	10,011	25,263	-2,088
Food, drink and tobacco .. .. .	117,088	27,927	145,015	121,983	31,911	153,894	8,879
Sawmilling and wood products (other than furniture) .. .. .	53,252	2,136	55,388	49,759	2,452	52,211	-3,177
Furniture and fittings (other than metal), bedding and furnishing drapery .. .. .	23,646	2,515	26,161	22,923	3,394	26,317	156
Paper and paper products, printing, bookbinding and photography ..	53,953	18,770	72,723	67,443	22,994	90,437	17,714
Chemicals, dyes, explosives, paints and non-mineral oils .. .. .	31,046	9,423	40,469	38,571	11,955	50,526	10,057
Jewellery, watchmaking, electroplating and minting .. .. .	6,491	1,275	7,766	6,098	1,163	7,261	-505
Skins and leather; goods of leather and leather substitutes (other than clothing or footwear) ..	9,044	2,903	11,947	6,931	2,632	9,563	-2,384
Rubber goods .. .. .	14,912	3,354	18,266	18,076	3,828	21,904	3,638
Musical, surgical and scientific instruments and apparatus .. .. .	4,301	1,291	5,592	5,894	2,414	8,308	2,716
Plastic products (n.e.i.) .. .. .	4,211	1,842	6,053	7,072	3,443	10,515	4,462
Other .. .. .	5,710	2,893	8,603	5,752	2,894	8,646	43
Undefined .. .. .	1,397	834	2,231	2,857	1,847	4,704	2,473
<b>Total, Manufacturing ..</b>	<b>800,268</b>	<b>227,063</b>	<b>1,027,331</b>	<b>887,127</b>	<b>253,208</b>	<b>1,140,335</b>	<b>113,004</b>
<b>Electricity, gas, water and sanitary services (production, supply and maintenance)—</b>							
Gas and electricity .. .. .	50,998	3,440	54,438	60,858	4,538	65,396	10,958
Water supply, sewerage, etc. ..	18,556	656	19,212	27,809	1,106	28,915	9,703
<b>Total, Electricity, etc., Services</b>	<b>69,554</b>	<b>4,096</b>	<b>73,650</b>	<b>88,667</b>	<b>5,644</b>	<b>94,311</b>	<b>20,661</b>
<b>Building and construction—</b>							
Construction and repair of buildings .. .. .	196,205	2,452	198,657	229,280	5,237	234,517	35,860
Construction works (other than buildings) .. .. .	125,624	1,341	126,965	135,812	2,002	137,814	10,849
<b>Total, Building and Construction ..</b>	<b>321,829</b>	<b>3,793</b>	<b>325,622</b>	<b>365,092</b>	<b>7,239</b>	<b>372,331</b>	<b>46,709</b>
<b>Transport and storage—</b>							
Road transport .. .. .	91,515	4,349	95,864	104,948	7,166	112,114	16,250
Shipping .. .. .	27,955	1,971	29,926	27,538	2,318	29,856	-70
Loading and discharging vessels ..	27,950	209	28,159	25,892	279	26,171	-1,988
Rail and air transport .. .. .	91,691	8,031	99,722	91,166	8,349	99,515	-207
Storage .. .. .	1,475	139	1,614	1,689	155	1,844	230
<b>Total, Transport and Storage</b>	<b>240,586</b>	<b>14,699</b>	<b>255,285</b>	<b>251,233</b>	<b>18,267</b>	<b>269,500</b>	<b>14,215</b>

## INDUSTRY OF THE POPULATION: AUSTRALIA—continued

Industry group and sub-group	Census, 30th June, 1954			Census, 30th June, 1961			Increase or decrease (-) 1954-61
	Males	Females	Persons	Males	Females	Persons	
Communication .. .. .	63,802	16,748	80,550	75,294	18,522	93,816	13,266
Finance and property—							
Banking .. .. .	30,746	12,159	42,905	38,564	20,600	59,164	16,259
Insurance .. .. .	18,078	13,066	31,144	25,422	19,807	45,229	14,085
Other finance and property .. .. .	12,664	7,500	20,164	22,288	14,464	36,752	16,588
Total, Finance and Property .. .. .	61,488	32,725	94,213	86,274	54,871	141,145	46,932
Commerce—							
Wholesale trade .. .. .	123,107	34,594	157,701	146,362	42,614	188,976	31,275
Livestock and primary produce dealing, etc. .. .. .	25,701	5,387	31,088	29,121	6,449	35,570	4,482
Retail trade .. .. .	238,660	149,932	388,592	276,234	185,986	462,220	73,628
Total, Commerce .. .. .	387,468	189,913	577,381	451,717	235,049	686,766	109,385
Public authority (n.e.i.) and defence services—							
Public authority activities (n.e.i.) .. .. .	72,070	25,568	97,638	84,232	29,986	114,218	16,580
Defence: enlisted personnel .. .. .	44,798	1,888	46,686	42,226	1,780	44,006	-2,680
Defence: civilian employees .. .. .	9,972	2,215	12,187	9,361	2,168	11,529	-658
Total, Public Authority (n.e.i.), etc. .. .. .	126,840	29,671	156,511	135,819	33,934	169,753	13,242
Community and business services (including professional)—							
Law, order and public safety .. .. .	25,974	8,209	34,183	33,124	12,235	45,359	11,176
Religion and social welfare .. .. .	12,830	9,821	22,651	15,033	12,610	27,643	4,992
Health, hospitals, etc. .. .. .	35,504	75,888	111,392	43,047	106,522	149,569	38,177
Education .. .. .	39,672	51,851	91,523	58,357	76,096	134,453	42,930
Other .. .. .	22,532	12,556	35,088	32,665	20,444	53,109	18,021
Total, Community and Business Services .. .. .	136,512	158,325	294,837	182,226	227,907	410,133	115,296
Amusement, hotels and other accommodation, cafés, personal service, etc.—							
Amusement, sport and recreation .. .. .	27,525	9,697	37,222	31,309	10,851	42,160	4,938
Private domestic service .. .. .	6,703	30,763	37,466	5,773	26,919	32,692	-4,774
Hotels, boarding houses, etc., and restaurants .. .. .	43,525	65,087	108,612	50,824	70,561	121,385	12,773
Other personal services .. .. .	21,250	19,939	41,189	24,622	27,277	51,899	10,710
Total, Amusement, Hotels, etc. .. .. .	99,003	125,486	224,489	112,528	135,608	248,136	23,647
Other industries .. .. .	34	22	56	69	75	144	88
Industry inadequately described or not stated .. .. .	27,711	9,717	37,428	57,211	28,229	85,440	48,012
Total in Work Force .. .. .	2,856,620	845,402	3,702,022	3,165,927	1,059,169	4,225,096	523,074
Not in work force .. .. .	1,689,498	3,595,010	5,284,508	2,146,325	4,136,765	6,283,090	998,582
Grand Total .. .. .	4,546,118	4,440,412	8,986,530	5,312,252	5,195,934	10,508,186	1,521,656

Preliminary figures of the population of each State and Territory at the 1961 census, classified according to industry group, were published in Official Year Book No. 49, 1963, page 334. For reasons of space a classification by industry group and sub-group, similar to that in the previous paragraph, cannot be shown for States and Territories. Details of individual industries, by sex, are published for each State and Territory and for Australia as a whole in the mimeographed 1961 *Census Bulletin* No. 29.

3. Industry and Occupational Status.—Males and females in the work force at the 1961 census are classified in the following table according to industry and occupational status. Only the major industry groups are shown in this table; particulars for each sub-group are available in the mimeographed 1961 *Census Bulletin* No. 34.

PERSONS IN THE WORK FORCE, BY INDUSTRY AND OCCUPATIONAL STATUS:  
AUSTRALIA, CENSUS, 30TH JUNE, 1961

Industry group	At work				Total	Not at work (c)	Total in the work force
	Employer	Self-employed	Employee (a)	Helper (b)			
MALES							
Primary production .. ..	57,374	198,774	139,132	11,273	406,553	13,176	419,729
Mining and quarrying .. ..	566	1,441	49,214	43	51,264	1,677	52,941
Manufacturing .. ..	29,140	21,550	805,857	277	856,824	30,303	887,127
Electricity, gas, water and sanitary services .. ..	320	281	87,301	5	87,907	760	88,667
Building and construction .. ..	29,611	31,071	282,215	197	343,094	21,998	365,092
Transport and storage .. ..	10,422	23,630	210,617	136	244,805	6,428	251,233
Communication .. ..	83	261	74,407	13	74,764	530	75,294
Finance and property .. ..	3,655	3,641	78,219	59	85,574	700	86,274
Commerce .. ..	54,477	44,261	341,343	715	440,796	10,921	451,717
Public authority (n.e.i.) and defence services .. ..	..	..	135,125	..	135,125	694	135,819
Community and business services (including professional) .. ..	19,945	7,243	153,354	208	180,750	1,476	182,226
Amusement, hotels and other accommodation, cafés, personal service, etc. .. ..	18,048	16,094	73,602	490	108,234	4,294	112,528
Other industries .. ..	7	19	38	1	65	4	69
Industry inadequately described or not stated .. ..	721	1,845	18,708	272	21,546	35,665	57,211
<i>Total Males in the Work Force</i>	<i>224,369</i>	<i>350,111</i>	<i>2,449,132</i>	<i>13,689</i>	<i>3,037,301</i>	<i>128,626</i>	<i>3,165,927</i>

FEMALES							
Primary production .. ..	9,552	18,599	7,650	3,023	38,824	332	39,156
Mining and quarrying .. ..	22	18	1,406	1	1,447	13	1,460
Manufacturing .. ..	4,367	3,674	233,681	359	242,081	11,127	253,208
Electricity, gas, water and sanitary services .. ..	22	3	5,598	1	5,624	20	5,644
Building and construction .. ..	958	270	5,880	32	7,140	99	7,239
Transport and storage .. ..	865	630	16,573	40	18,108	159	18,267
Communication .. ..	32	152	18,063	20	18,267	255	18,522
Finance and property .. ..	324	434	53,713	47	54,518	353	54,871
Commerce .. ..	15,097	18,106	194,518	1,901	229,622	5,427	235,049
Public authority (n.e.i.) and defence services .. ..	..	..	33,702	..	33,702	232	33,934
Community and business services (including professional) .. ..	1,989	3,616	217,954	707	224,266	3,641	227,907
Amusement, hotels and other accommodation, cafés, personal service, etc. .. ..	9,256	16,790	102,479	1,547	130,072	5,536	135,608
Other industries .. ..	12	24	33	1	70	5	75
Industry inadequately described or not stated .. ..	216	388	10,652	192	11,448	16,781	28,229
<i>Total Females in the Work Force</i>	<i>42,712</i>	<i>62,704</i>	<i>901,902</i>	<i>7,871</i>	<i>1,015,189</i>	<i>43,980</i>	<i>1,059,169</i>

(a) On wage or salary.

(b) Not on wage or salary.

(c) See explanation on page 401.

4. Occupational Status, Age and Conjugal Condition.—In the next two tables males and females at the census of 30th June, 1961, are classified according to occupational status in conjunction with age and conjugal condition.

**OCCUPATIONAL STATUS OF MALES, BY AGE AND CONJUGAL  
CONDITION: AUSTRALIA, CENSUS, 30th JUNE, 1961**

Occupational status and conjugal condition	Age last birthday (years)							Total
	15-19	20-24	25-34	35-44	45-54	55-64	65 and over	
<b>Employers—</b>								
Never married ..	715	3,313	6,052	3,311	2,413	1,525	818	(a) 18,149
Married ..	23	2,361	34,820	59,189	57,188	31,252	12,873	197,706
Married but perma- nently separated ..	..	17	266	681	815	542	249	2,570
Widowed ..	..	2	63	273	699	1,196	2,076	4,309
Divorced ..	..	2	152	496	553	321	111	1,635
<b>Total Employers ..</b>	<b>738</b>	<b>5,695</b>	<b>41,353</b>	<b>63,950</b>	<b>61,668</b>	<b>34,836</b>	<b>16,127</b>	(a) <b>224,369</b>
<b>Self-employed—</b>								
Never married ..	4,780	11,892	14,513	9,122	7,961	5,453	2,798	(b) 56,565
Married ..	62	6,677	55,607	78,157	72,253	45,361	21,083	279,200
Married but perma- nently separated ..	..	29	499	1,022	1,213	907	473	4,143
Widowed ..	1	10	93	380	1,094	2,179	3,787	7,544
Divorced ..	..	10	246	695	871	613	224	2,659
<b>Total Self-employed</b>	<b>4,843</b>	<b>18,618</b>	<b>70,958</b>	<b>89,376</b>	<b>83,392</b>	<b>54,513</b>	<b>28,365</b>	(b) <b>350,111</b>
<b>Employees (on wage of or salary)—</b>								
Never married ..	255,550	214,144	145,624	63,926	40,192	23,330	4,879	(c) 753,676
Married ..	3,346	83,212	417,637	460,436	371,751	217,073	38,995	1,592,450
Married but perma- nently separated ..	36	1,056	8,741	12,913	12,416	7,381	1,500	44,043
Widowed ..	16	112	1,040	3,433	8,467	13,278	6,964	33,310
Divorced ..	9	139	3,530	8,257	8,585	4,489	644	25,653
<b>Total Employees (on Wage or Salary) ..</b>	<b>258,957</b>	<b>298,663</b>	<b>576,572</b>	<b>548,965</b>	<b>441,411</b>	<b>265,551</b>	<b>52,982</b>	(c) <b>2,449,132</b>
<b>Helpers (not on wage or salary)—</b>								
Never married ..	6,808	1,964	821	339	288	263	207	(d) 11,546
Married ..	13	93	230	202	234	401	442	1,615
Married but perma- nently separated ..	..	1	14	23	32	36	33	139
Widowed ..	1	..	1	10	22	76	212	322
Divorced ..	..	..	2	17	19	19	10	67
<b>Total Helpers (not on Wage or Salary) ..</b>	<b>6,822</b>	<b>2,058</b>	<b>1,068</b>	<b>591</b>	<b>595</b>	<b>795</b>	<b>904</b>	(d) <b>13,689</b>
<b>Total at work—</b>								
Never married ..	267,853	231,313	167,010	76,698	50,854	30,571	8,702	(e) 839,936
Married ..	3,444	92,343	508,294	597,984	501,426	294,087	73,393	2,070,971
Married but perma- nently separated ..	36	1,103	9,520	14,639	14,476	8,866	2,255	50,895
Widowed ..	18	124	1,197	4,096	10,282	16,729	13,039	45,485
Divorced ..	9	151	3,930	9,465	10,028	5,442	989	30,014
<b>Total at Work ..</b>	<b>271,360</b>	<b>325,034</b>	<b>689,951</b>	<b>702,882</b>	<b>587,066</b>	<b>355,695</b>	<b>98,378</b>	(e) <b>3,037,301</b>

NOTE.—For footnotes see next page.

OCCUPATIONAL STATUS OF MALES, BY AGE AND CONJUGAL  
CONDITION: AUSTRALIA, CENSUS, 30TH JUNE, 1961—*continued*

Occupational status and conjugal condition	Age last birthday (years)							Total
	15-19	20-24	25-34	35-44	45-54	55-64	65 and over	
<b>Not at work(f)—</b>								
Never married ..	17,181	14,360	12,027	6,173	4,369	3,198	508	(g) 58,844
Married ..	284	3,518	13,590	14,772	13,977	11,068	2,071	59,280
Married but permanently separated ..	9	156	962	1,403	1,506	952	158	5,146
Widowed ..	1	16	73	254	656	1,188	415	2,603
Divorced ..	..	17	354	832	909	580	61	2,753
<b>Total Not at Work</b>	<b>17,475</b>	<b>18,067</b>	<b>27,006</b>	<b>23,434</b>	<b>21,417</b>	<b>16,986</b>	<b>3,213</b>	<b>(g) 128,626</b>
<b>Total in work force—</b>								
Never married ..	285,034	245,673	179,037	82,871	55,223	33,769	9,210	(h) 898,780
Married ..	3,728	95,861	521,884	612,756	515,403	305,155	75,464	2,130,251
Married but permanently separated ..	45	1,259	10,482	16,042	15,982	9,818	2,413	56,041
Widowed ..	19	140	1,270	4,350	10,938	17,917	13,454	48,088
Divorced ..	9	168	4,284	10,297	10,937	6,022	1,050	32,767
<b>Total in Work Force</b>	<b>288,835</b>	<b>343,101</b>	<b>716,957</b>	<b>726,316</b>	<b>608,483</b>	<b>372,681</b>	<b>101,591</b>	<b>h 3,165,927</b>
<b>Not in work force—</b>								
Never married ..	125,840	17,662	8,710	6,949	7,805	11,041	29,626	(i) 1,825,865
Married ..	106	701	2,457	4,653	10,219	37,195	179,128	234,459
Married but permanently separated ..	6	46	258	634	1,051	2,205	7,931	12,131
Widowed ..	1	9	47	171	590	4,348	62,831	67,997
Divorced ..	..	12	189	497	746	1,386	3,043	5,873
<b>Total Not in Work Force</b>	<b>125,953</b>	<b>18,430</b>	<b>11,661</b>	<b>12,904</b>	<b>20,411</b>	<b>56,175</b>	<b>282,559</b>	<b>(i) 2,146,325</b>
<b>Total males—</b>								
Never married ..	410,874	263,335	187,747	89,820	63,028	44,810	38,836	(j) 2,724,645
Married ..	3,834	96,562	524,341	617,409	525,622	342,350	254,592	2,364,710
Married but permanently separated ..	51	1,305	10,740	16,676	17,033	12,023	10,344	68,172
Widowed ..	20	149	1,317	4,521	11,528	22,265	76,285	116,085
Divorced ..	9	180	4,473	10,794	11,683	7,408	4,093	38,640
<b>Grand Total</b>	<b>414,788</b>	<b>361,531</b>	<b>728,618</b>	<b>739,220</b>	<b>628,894</b>	<b>428,856</b>	<b>384,150</b>	<b>(j) 5,312,252</b>

(a) Includes 2 aged 10-14 years. (b) Includes 46 aged 10-14 years. (c) Includes 6,031 aged 10-14 years. (d) Includes 856 aged 10-14 years. (e) Includes 6,935 aged 10-14 years. (f) See explanation on page 401. (g) Includes 1,028 aged 10-14 years. (h) Includes 7,963 aged 10-14 years. (i) Includes 567,742 aged 0-4 years, 536,046 aged 5-9 years, 514,444 aged 10-14 years. (j) Includes 567,742 aged 0-4 years, 536,046 aged 5-9 years, 522,407 aged 10-14 years.

**OCCUPATIONAL STATUS OF FEMALES, BY AGE AND CONJUGAL  
CONDITION: AUSTRALIA, CENSUS, 30th JUNE, 1961**

Occupational status and conjugal condition	Age last birthday (years)							Total
	15-19	20-24	25-34	35-44	45-54	55-64	65 and over	
<b>Employers—</b>								
Never married ..	105	261	412	619	913	778	522	3,610
Married ..	32	884	6,249	11,058	9,104	3,304	729	31,360
Married but permanently separated ..	1	8	92	212	227	132	29	701
Widowed ..	..	5	101	550	1,574	1,998	2,042	6,270
Divorced ..	..	1	65	248	283	131	42	771
<b>Total Employers</b>	<b>139</b>	<b>1,159</b>	<b>6,919</b>	<b>12,687</b>	<b>12,101</b>	<b>6,343</b>	<b>3,364</b>	<b>42,712</b>
<b>Self-employed—</b>								
Never married ..	421	709	939	1,295	1,980	1,956	1,396	(a) 8,697
Married ..	110	1,822	8,879	13,060	11,485	5,122	1,402	41,880
Married but permanently separated ..	4	32	221	501	621	356	155	1,890
Widowed ..	..	3	109	616	1,776	2,953	3,266	8,723
Divorced ..	..	5	132	403	551	324	99	1,514
<b>Total Self-employed</b>	<b>535</b>	<b>2,571</b>	<b>10,280</b>	<b>15,875</b>	<b>16,413</b>	<b>10,711</b>	<b>6,318</b>	<b>(a) 62,704</b>
<b>Employees (on wage or salary)—</b>								
Never married ..	231,956	111,855	50,596	32,131	29,696	19,809	6,180	(b) 488,178
Married ..	4,831	44,069	81,056	101,977	67,053	18,077	1,583	318,646
Married but permanently separated ..	143	1,864	7,729	10,480	8,774	3,525	449	32,964
Widowed ..	32	204	1,334	6,096	15,108	14,195	3,888	40,857
Divorced ..	12	320	3,901	7,653	6,689	2,450	232	21,257
<b>Total Employees (on Wage or Salary)</b>	<b>236,974</b>	<b>158,312</b>	<b>144,616</b>	<b>158,337</b>	<b>127,320</b>	<b>58,056</b>	<b>12,332</b>	<b>(b) 901,902</b>
<b>Helpers (not on wage or salary)—</b>								
Never married ..	1,659	487	325	200	171	152	117	(c) 3,288
Married ..	49	227	788	1,098	1,074	500	149	3,885
Married but permanently separated ..	3	19	56	70	54	30	6	238
Widowed ..	..	..	5	28	72	121	122	348
Divorced ..	..	2	19	27	36	20	8	112
<b>Total Helpers (not on Wage or Salary)</b>	<b>1,711</b>	<b>735</b>	<b>1,193</b>	<b>1,423</b>	<b>1,407</b>	<b>823</b>	<b>402</b>	<b>(c) 7,871</b>
<b>Total at work—</b>								
Never married ..	234,141	113,312	52,272	34,245	32,760	22,695	8,215	(d) 503,773
Married ..	5,022	47,002	96,972	127,193	88,716	27,003	3,863	395,771
Married but permanently separated ..	151	1,923	8,098	11,263	9,676	4,043	639	35,793
Widowed ..	32	212	1,549	7,290	18,530	19,267	9,318	56,198
Divorced ..	13	328	4,117	8,331	7,559	2,925	381	23,654
<b>Total at Work</b>	<b>239,359</b>	<b>162,777</b>	<b>163,008</b>	<b>188,322</b>	<b>157,241</b>	<b>75,933</b>	<b>22,416</b>	<b>d 1,015,189</b>

NOTE.—For footnotes see next page.



**OCCUPATIONAL STATUS OF FEMALES, BY AGE AND CONJUGAL  
CONDITION: AUSTRALIA, CENSUS, 30TH JUNE, 1961—continued**

Occupational status and conjugal condition	Age last birthday (years)							Total
	15-19	20-24	25-34	35-44	45-54	55-64	65 and over	
<b>Not at work(e)—</b>								
Never married ..	14,138	5,779	2,974	1,309	1,182	756	113	(f) 27,266
Married ..	352	1,766	2,659	2,819	1,691	452	22	9,761
Married but perma- nently separated ..	45	311	833	1,080	804	259	23	3,355
Widowed ..	2	15	75	383	855	518	74	1,922
Divorced ..	2	42	319	608	526	169	10	1,676
<b>Total Not at Work</b>	<b>14,539</b>	<b>7,913</b>	<b>6,860</b>	<b>6,199</b>	<b>5,058</b>	<b>2,154</b>	<b>242</b>	<b>(f) 43,980</b>
<b>Total in work force—</b>								
Never married ..	248,279	119,091	55,246	35,554	33,942	23,451	8,328	(g) 531,039
Married ..	5,374	48,768	99,631	130,012	90,407	27,455	3,885	405,532
Married but perma- nently separated ..	196	2,234	8,931	12,343	10,480	4,302	662	39,148
Widowed ..	34	227	1,624	7,673	19,385	19,785	9,392	58,120
Divorced ..	15	370	4,436	8,939	8,085	3,094	391	25,330
<b>Total in Work Force</b>	<b>253,898</b>	<b>170,690</b>	<b>169,868</b>	<b>194,521</b>	<b>162,299</b>	<b>78,087</b>	<b>22,658</b>	<b>g 1,059,169</b>
<b>Not in work force—</b>								
Never married ..	118,335	13,443	10,653	10,779	14,110	22,807	56,030	h 1,789,812
Married ..	21,665	149,908	474,750	483,091	384,226	250,894	174,688	1,939,222
Married but perma- nently separated ..	195	1,444	6,122	7,619	7,562	7,812	8,465	39,219
Widowed ..	37	271	2,326	7,898	24,454	71,252	244,265	350,503
Divorced ..	15	151	1,702	3,315	4,313	4,526	3,987	18,009
<b>Total Not in Work Force</b>	<b>140,247</b>	<b>165,217</b>	<b>495,553</b>	<b>512,702</b>	<b>434,665</b>	<b>357,291</b>	<b>487,435</b>	<b>h 4,136,765</b>
<b>Total females—</b>								
Never married ..	366,614	132,534	65,899	46,333	48,052	46,258	64,358	(j) 2,320,851
Married ..	27,039	198,676	574,381	613,103	474,633	278,349	178,573	2,344,754
Married but perma- nently separated ..	391	3,678	15,053	19,962	18,042	12,114	9,127	78,367
Widowed ..	71	498	3,950	15,571	43,839	91,037	253,657	408,623
Divorced ..	30	521	6,138	12,254	12,398	7,620	4,378	43,339
<b>Grand Total</b>	<b>394,145</b>	<b>335,907</b>	<b>665,421</b>	<b>707,223</b>	<b>596,964</b>	<b>435,378</b>	<b>510,093</b>	<b>(j) 5,195,934</b>

(a) Includes 1 aged 10-14 years. (b) Includes 5,955 aged 10-14 years. (c) Includes 177 aged 10-14 years. (d) Includes 6,133 aged 10-14 years. (e) See explanation on page 401. (f) Includes 1,015 aged 10-14 years. (g) Includes 7,148 aged 10-14 years. (h) Includes 541,751 aged 0-4 years, 511,475 aged 5-9 years and 490,429 aged 10-14 years. (i) Includes 541,751 aged 0-4 years, 511,475 aged 5-9 years and 497,577 aged 10-14 years.

5. **Married Women in the Work Force.**—At the 1961 census, 444,680 married women (including 39,148 women who were married but permanently separated, legally or otherwise) were recorded as being in the work force. This represented 42 per cent. of the total number of females in the work force. A comparison with censuses since 1933 is given in the following table.

## MARRIED WOMEN IN THE WORK FORCE: AUSTRALIA

Census	Total females in the work force	Married women in the work force <sup>(a)</sup>	
		Number	Proportion of total females in work force
			Per cent.
1933.. ..	599,068	66,000	11.02
1947.. ..	717,162	141,637	19.75
1954.. ..	845,402	(b)289,932	34.30
1961.. ..	1,059,169	(b)444,680	41.98

(a) Includes women married but permanently separated, legally or otherwise. (b) See footnotes (b) and (c) to the table following.

Between 1954 and 1961, there was an increase of 154,748 or 53.4 per cent. in the number of married women in the work force, compared with an increase of 213,767 or 25.3 per cent. in total females in the work force. The largest increase (both numerical and proportional) in any age group was for married women aged 35-39 years, where the increase in the seven years 1954-1961 was almost 82 per cent. A comparison for all age groups is given below.

## MARRIED WOMEN IN THE WORK FORCE ACCORDING TO AGE: AUSTRALIA

Age last birthday (years)	Married women in the work force <sup>(a)</sup>		Increase, 1954-61	
	Census, 30th June, 1954 <sup>(b)</sup>	Census, 30th June, 1961 <sup>(c)</sup>	Number	Per cent.
15-19 .. ..	3,549	5,570	2,021	56.95
20-24 .. ..	35,452	51,002	15,550	43.86
25-29 .. ..	43,899	49,537	5,638	12.84
30-34 .. ..	43,320	59,025	15,705	36.25
35-39 .. ..	41,046	74,660	33,614	81.89
40-44 .. ..	42,265	67,695	25,430	60.17
45-49 .. ..	33,492	59,745	26,253	78.39
50-54 .. ..	23,346	41,142	17,796	76.23
55-59 .. ..	13,539	22,415	8,876	65.56
60-64 .. ..	6,609	9,342	2,733	41.35
65 and over .. ..	3,415	4,547	1,132	33.15
Total .. ..	289,932	444,680	154,748	53.37

(a) Includes women married but permanently separated, legally or otherwise. (b) The figures shown for 1954 include an allowance for the number of women whose conjugal condition was not stated. (c) A conjugal condition was allocated prior to tabulation in all instances where this information was not stated.

6. Occupation.—(i) *General*. The working population may be classified according to distinct concepts—(i) the *occupation*, which is personal to the individual, and (ii) the *industry* in which the individual carries on his occupation. Thus the *occupation* of a person is the kind of work that he or she personally performs, while *industry* is defined as any single branch of productive activity, trade or service. Particulars of the work force classified according to industry are given in paragraphs 2 and 3 of this section; this paragraph contains particulars of the principal occupation groups (major and minor) of the work force at the census of 30th June, 1961. Details of individual categories of occupations are published in the mimeographed 1961 *Census Bulletin* No. 32.

(ii) *Australia, 30th June, 1961*. The following table shows, for Australia, the numbers of males, females and persons in the work force in each of the principal occupation groups at the 1961 census. Data of this type were last obtained at the 1947 census, but a comparison of the figures derived therefrom with those shown below is not possible because of differences in classification.

Only those persons regarded as being in the work force are classified according to occupation.

## OCCUPATIONS OF THE POPULATION: AUSTRALIA, CENSUS, 30th JUNE, 1961

Occupation group	Males	Females	Persons
<b>Professional, technical and related workers—</b>			
Architects, engineers and surveyors .. .. .	29,776	170	29,946
Chemists, physicists, geologists and other physical scientists .. .. .	8,014	637	8,651
Biologists, veterinarians, agronomists and related scientists .. .. .	3,955	342	4,297
Medical practitioners and dentists .. .. .	13,920	1,497	15,417
Nurses .. .. .	3,866	59,950	63,816
Professional medical workers, n.e.c., and medical technicians .. .. .	9,705	5,128	14,833
Teachers .. .. .	44,601	56,726	101,327
Clergy and related members of religious orders .. .. .	10,925	3,124	14,049
Law professionals .. .. .	6,484	260	6,744
Artists, entertainers, writers and related workers .. .. .	15,371	6,859	22,230
Draftsmen and technicians, n.e.c. .. .. .	36,230	6,360	42,590
Other professional, technical and related workers .. .. .	24,598	5,553	30,151
<b>Total Professional, etc., Workers .. .. .</b>	<b>207,445</b>	<b>146,606</b>	<b>354,051</b>
<b>Administrative, executive and managerial workers—</b>			
Administrators and executive officials, government, n.e.c. .. .. .	11,502	252	11,754
Employers, workers on own account, directors and managers, n.e.c. .. .. .	243,041	43,085	286,126
<b>Total Administrative, etc., Workers .. .. .</b>	<b>254,543</b>	<b>43,337</b>	<b>297,880</b>
<b>Clerical workers—</b>			
Book-keepers and cashiers .. .. .	23,880	20,109	43,989
Stenographers and typists .. .. .	..	125,509	125,509
Other clerical workers .. .. .	217,365	161,190	378,555
<b>Total Clerical Workers .. .. .</b>	<b>241,245</b>	<b>306,808</b>	<b>548,053</b>
<b>Sales Workers—</b>			
Insurance, real estate salesmen, saleswomen, auctioneers and valuers .. .. .	11,528	697	12,225
Commercial travellers and manufacturers' agents .. .. .	34,519	619	35,138
Proprietors and shop-keepers working on own account, n.e.c., retail and wholesale trade, salesmen, saleswomen, shop assistants and related workers .. .. .	141,996	133,356	275,352
<b>Total Sales Workers .. .. .</b>	<b>188,043</b>	<b>134,672</b>	<b>322,715</b>
<b>Farmers, fishermen, hunters, timber getters and related workers—</b>			
Farmers and farm managers .. .. .	257,991	28,549	286,540
Farm workers, n.e.c. .. .. .	149,723	8,227	157,950
Wool classers .. .. .	2,957	..	2,957
Hunters and trappers .. .. .	1,504	13	1,517
Fishermen and related workers .. .. .	7,454	71	7,525
Timber getters and other forestry workers .. .. .	13,666	25	13,691
<b>Total Farmers, etc. .. .. .</b>	<b>433,295</b>	<b>36,885</b>	<b>470,180</b>
<b>Miners, quarrymen and related workers—</b>			
Miners and quarrymen .. .. .	30,420	15	30,435
Well drillers and related workers .. .. .	1,071	..	1,071
Mineral treaters .. .. .	1,678	..	1,678
<b>Total Miners, Quarrymen, etc. .. .. .</b>	<b>33,169</b>	<b>15</b>	<b>33,184</b>

OCCUPATION OF THE POPULATION: AUSTRALIA,  
CENSUS, 30th JUNE, 1961—*continued*

Occupation group	Males	Females	Persons
<b>Workers in transport and communication occupations—</b>			
Deck officers, engineer officers and pilots, ship ..	4,274	13	4,287
Deck and engine room hands, ship; barge crews and boatmen .. .. .	11,639	..	11,639
Aircraft pilots, navigators and flight engineers ..	1,754	6	1,760
Drivers and firemen, railway .. .. .	14,440	..	14,440
Drivers, road transport .. .. .	146,236	527	146,763
Guards and conductors, railway .. .. .	4,238	..	4,238
Inspectors, supervisors, traffic controllers and despatchers, transport .. .. .	20,843	899	21,742
Telephone, telegraph and related telecommunication operators .. .. .	3,056	19,504	22,560
Postmasters, postmistresses, postmen and messengers	23,705	3,235	26,940
Workers in transport and communication occupations, n.e.c. .. .. .	13,600	1,649	15,249
<b>Total Workers in Transport, etc. .. .. .</b>	<b>243,785</b>	<b>25,833</b>	<b>269,618</b>
<b>Craftsmen, production-process workers and labourers, n.e.c.—</b>			
Spinners, weavers, knitters, dyers and related workers	16,534	21,209	37,743
Tailors, cutters, furriers and related workers ..	18,148	64,725	82,873
Leather cutters, lasters and sewers (except gloves and garments) and related workers .. .. .	15,149	9,965	25,114
Furnacemen, rollers, drawers, moulders and related metal making and treating workers .. .. .	20,811	..	20,811
Precision instrument makers, watchmakers, jewellers and related workers .. .. .	11,495	767	12,262
Toolmakers, machinists, plumbers, welders, platers and related workers .. .. .	319,143	5,280	324,423
Electricians and related electric and electronic workers	104,454	1,266	105,720
Metal makers, metal workers and electrical production-process workers, n.e.c. .. .. .	51,299	16,657	67,956
Carpenters, joiners, cabinetmakers and related workers .. .. .	137,167	1,354	138,521
Painters and decorators .. .. .	46,554	393	46,947
Bricklayers, plasterers and construction workers, n.e.c. .. .. .	92,187	..	92,187
Compositors, pressmen, engravers, bookbinders, and related workers .. .. .	30,993	6,759	37,752
Potters, kilnmen, glass and clay formers and related workers .. .. .	10,490	1,264	11,754
Millers, bakers, brewmasters and related food and beverage workers .. .. .	80,744	12,653	93,397
Chemical and related process workers .. .. .	16,308	3,428	19,736
Tobacco preparers and tobacco product makers ..	1,154	1,473	2,627
Craftsmen and production-process workers, n.e.c. ..	26,943	11,796	38,739
Packers, labellers and related workers .. .. .	7,238	14,727	21,965
Stationary engine, excavating, lifting equipment operators and related workers .. .. .	55,722	..	55,722
Waterside workers and related freight handlers ..	93,368	1,398	94,766
Labourers, n.e.c. .. .. .	203,044	..	203,044
<b>Total Craftsmen, etc. .. .. .</b>	<b>1,358,945</b>	<b>175,114</b>	<b>1,534,059</b>

**OCCUPATIONS OF THE POPULATION: AUSTRALIA,  
CENSUS, 30TH JUNE, 1961—continued**

Occupation group	Males	Females	Persons
<b>Service, sport and recreation workers—</b>			
Fire brigade men, policemen, policewomen, protective service and related workers .. .. .	31,629	531	32,160
Housekeepers, cooks, maids and related workers ..	17,753	87,599	105,352
Waiters, waitresses, bartenders .. .. .	13,703	22,234	35,937
Building caretakers, cleaners .. .. .	26,128	19,172	45,300
Barbers, hairdressers, beauticians and related workers	9,291	13,355	22,646
Launderers, dry cleaners and pressers .. .. .	6,992	11,287	18,279
Athletes, sportsmen and related workers .. .. .	3,215	202	3,417
Photographers and related camera operators ..	2,982	691	3,673
Embalmers and undertakers .. .. .	735	..	735
Service, sport, recreation workers, n.e.c. .. .. .	18,084	12,108	30,192
Total Service, etc., Workers .. .. .	130,512	167,179	297,691
Members of armed services, enlisted personnel ..	42,226	1,780	44,006
Occupation inadequately described or not stated ..	32,719	20,940	53,659
<i>Total in Work Force</i> .. .. .	<i>3,165,927</i>	<i>1,059,169</i>	<i>4,225,096</i>
Not in work force .. .. .	2,146,325	4,136,765	6,283,090
<b>Grand Total</b> .. .. .	<b>5,312,252</b>	<b>5,195,934</b>	<b>10,508,186</b>

n.e.c.—Not elsewhere classified.

The proportion of the work force in each major group of occupation is shown in the following table.

**PROPORTION OF THE WORK FORCE IN EACH OCCUPATION GROUP:  
AUSTRALIA, CENSUS, 30th JUNE, 1961**

Major occupation group	Proportion of total (per cent.)		
	Males	Females	Persons
Professional technical and related workers .. .. .	6.6	13.8	8.4
Administrative, executive and managerial workers ..	8.1	4.1	7.1
Clerical workers .. .. .	7.6	29.0	13.0
Sales workers .. .. .	5.9	12.7	7.6
Farmers, fishermen, hunters, timber getters and related workers	13.7	3.5	11.1
Miners, quarrymen and related workers .. .. .	1.1	..	0.8
Workers in transport and communication occupations ..	7.7	2.4	6.4
Craftsmen, production-process workers and labourers, n.e.c.	42.9	16.5	36.3
Service, sport and recreation workers .. .. .	4.1	15.8	7.0
Members of armed services, enlisted personnel .. .. .	1.3	0.2	1.0
Occupation inadequately described or not stated .. .. .	1.0	2.0	1.3
<b>Total in Work Force</b> .. .. .	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>

(iii) *States and Territories, 30th June, 1961.* The number of persons in each State and Territory in each major and minor occupation group at the 1961 census is shown in the following table.

## OCCUPATIONS OF THE POPULATION: CENSUS, 30th JUNE, 1961

(Persons)

Occupation group (abbreviated descriptions—for detailed descriptions see table on pages 412-414)	N.S.W.	Vic.	Qld.	S.A.	W.A.	Tas.	N.T.	A.C.T.	Aust.
<b>Professional, etc.—</b>									
Architects, etc. . . . .	12,465	9,215	2,797	2,566	1,443	1,014	140	306	29,946
Chemists, etc. . . . .	2,978	2,969	948	788	419	229	79	241	8,651
Biologists, etc. . . . .	1,384	1,069	754	359	339	249	34	109	4,297
Med. practnrs, den- tists . . . . .	6,184	4,239	2,032	1,331	1,063	392	45	131	15,417
Nurses . . . . .	23,496	17,582	9,305	5,742	4,845	2,280	281	285	63,816
Professional medical workers, etc. . . . .	5,925	4,425	1,947	1,183	902	368	29	54	14,833
Teachers . . . . .	36,216	29,710	13,188	9,846	7,419	3,724	287	937	101,327
Clergy, etc. . . . .	4,948	3,947	2,106	1,247	1,149	469	114	69	14,049
Law professionals . . . . .	3,139	1,900	797	366	288	167	18	69	6,744
Artists, etc. . . . .	9,734	6,277	2,596	1,573	1,291	537	52	170	22,330
Draftsmen, etc. . . . .	16,667	12,638	4,211	4,538	2,450	1,182	227	677	42,590
Other . . . . .	11,595	10,022	2,808	2,478	1,765	850	101	532	30,151
<b>Total, Profes- sional, etc. . . . .</b>	<b>134,731</b>	<b>103,993</b>	<b>43,489</b>	<b>32,017</b>	<b>23,373</b>	<b>11,461</b>	<b>1,407</b>	<b>3,580</b>	<b>354,051</b>
<b>Administrative, etc.—</b>									
Administrators, etc. . . . .	4,042	2,782	1,715	1,070	1,058	502	90	495	11,754
Employers, etc. . . . .	108,408	87,257	37,718	25,430	17,418	7,809	877	1,209	286,126
<b>Total, Admini- strative, etc. . . . .</b>	<b>112,450</b>	<b>90,039</b>	<b>39,433</b>	<b>26,500</b>	<b>18,476</b>	<b>8,311</b>	<b>967</b>	<b>1,704</b>	<b>297,880</b>
<b>Clerical—</b>									
Book-keepers, etc. . . . .	17,872	13,889	4,526	3,142	3,022	1,151	165	222	43,989
Stenographers, etc. . . . .	50,000	39,761	11,405	11,082	8,376	3,315	310	1,260	125,509
Other . . . . .	149,455	105,292	53,110	31,697	23,551	9,903	964	4,583	378,555
<b>Total, Clerical . . . . .</b>	<b>217,327</b>	<b>158,942</b>	<b>69,041</b>	<b>45,921</b>	<b>34,949</b>	<b>14,369</b>	<b>1,439</b>	<b>6,065</b>	<b>548,053</b>
<b>Sales—</b>									
Insurance, etc. . . . .	4,489	3,690	1,690	1,199	770	330	17	40	12,225
Commercial, etc. . . . .	13,725	10,627	4,527	3,041	2,311	772	24	111	35,138
Proprietors, etc. . . . .	104,222	77,105	38,698	25,739	19,063	8,852	494	1,179	275,352
<b>Total, Sales . . . . .</b>	<b>122,436</b>	<b>91,422</b>	<b>44,915</b>	<b>29,979</b>	<b>22,144</b>	<b>9,954</b>	<b>535</b>	<b>1,330</b>	<b>322,715</b>
<b>Farmers, etc.—</b>									
Farmers, etc. . . . .	86,890	77,974	55,678	30,694	24,531	10,013	472	288	286,540
Farm workers, n.e.c. . . . .	51,416	31,761	40,154	13,221	14,333	5,873	823	369	157,950
Wool classers . . . . .	1,285	768	422	224	188	65	2	3	2,957
Hunters, etc. . . . .	581	220	274	233	141	38	30	1	1,517
Fishermen, etc. . . . .	2,230	882	1,437	970	1,419	540	31	16	7,525
Timber getters, etc. . . . .	4,065	3,191	3,225	861	1,231	1,025	22	71	13,691
<b>Total, Farmers, etc. . . . .</b>	<b>146,467</b>	<b>114,796</b>	<b>101,190</b>	<b>46,203</b>	<b>41,843</b>	<b>17,554</b>	<b>1,380</b>	<b>747</b>	<b>470,180</b>
<b>Miners, etc.—</b>									
Miners, etc. . . . .	14,260	2,421	5,397	1,460	4,568	1,949	346	34	30,435
Well drillers, etc. . . . .	243	139	389	124	122	8	46	..	1,071
Mineral treaters . . . . .	453	158	292	129	283	251	108	4	1,678
<b>Total, Miners, etc. . . . .</b>	<b>14,956</b>	<b>2,718</b>	<b>6,078</b>	<b>1,713</b>	<b>4,973</b>	<b>2,208</b>	<b>500</b>	<b>38</b>	<b>33,184</b>
<b>Workers in transport, etc.—</b>									
Deck officers, etc. . . . .	1,448	772	576	647	593	212	39	..	4,287
Deck hands, etc. . . . .	4,656	2,118	1,389	1,594	1,404	423	54	1	11,639
Aircraft pilots, etc. . . . .	753	477	248	73	142	15	44	8	1,760
Drivers, etc., railway . . . . .	5,361	2,195	3,755	1,126	1,671	319	10	3	14,440
Drivers, road . . . . .	56,789	41,577	19,675	13,040	9,769	4,736	523	654	146,763
Guards, etc., railway . . . . .	1,587	702	1,012	333	482	116	6	..	4,238
Inspectors, etc. . . . .	9,063	4,555	4,087	1,923	1,502	529	53	30	21,742
Telephone, etc. opera- tors . . . . .	8,726	6,215	3,013	2,213	1,369	738	112	174	22,560
Postmasters, etc. . . . .	9,991	7,696	3,948	2,461	1,645	995	61	143	26,940
Workers, n.e.c. . . . .	5,942	4,535	2,191	1,135	1,159	205	51	31	15,249
<b>Total, Transport, etc. . . . .</b>	<b>104,316</b>	<b>70,842</b>	<b>39,894</b>	<b>24,545</b>	<b>19,736</b>	<b>8,288</b>	<b>953</b>	<b>1,044</b>	<b>269,618</b>

OCCUPATIONS OF THE POPULATION: CENSUS, 30th JUNE, 1961—*continued*

(Persons)

Occupation group (abbreviated descriptions— <i>for detailed descriptions see table on pages 412-414</i> )	N.S.W.	Vic.	Qld.	S.A.	W.A.	Tas.	N.T.	A.C.T.	Aust.
<b>Craftsmen, etc.—</b>									
Spinners, etc. . .	10,961	20,966	1,267	1,640	596	2,310	3	..	37,743
Tailors, etc. . .	33,713	33,562	7,404	4,313	2,821	934	25	101	82,873
Leather cutters, etc. . .	8,621	12,026	1,800	1,588	818	226	14	21	25,114
Furnacemen, etc. . .	9,705	4,969	1,812	2,089	1,145	1,061	19	11	20,811
Precision instrument makers, etc. . .	4,863	3,922	1,463	946	679	310	18	61	12,262
Toolmakers, etc. . .	126,082	102,082	33,863	34,959	17,753	7,783	951	950	324,423
Electricians, etc. . .	42,585	29,390	12,569	10,342	6,094	3,781	362	597	105,720
Metal makers, etc., n.e.c. . .	34,475	19,005	5,053	5,784	2,440	1,044	90	65	67,956
Carpenters, etc. . .	48,812	37,362	21,505	11,990	10,296	6,986	494	1,076	138,521
Painters, etc. . .	16,960	14,126	6,017	5,087	2,814	1,312	204	427	46,947
Bricklayers, etc. . .	34,456	25,199	11,371	10,102	6,096	3,356	379	1,228	92,187
Compositors, etc. . .	16,177	12,087	3,685	2,677	1,937	810	21	358	37,752
Potters, etc. . .	6,028	3,026	716	1,027	673	192	10	82	11,754
Millers, etc. . .	30,741	26,512	17,860	8,103	6,182	3,665	141	193	93,397
Chemical, etc., workers	8,214	6,433	1,116	1,271	819	1,883	..	..	19,736
Tobacco preparers, etc. . .	1,342	1,160	106	6	12	1	..	..	2,627
Craftsmen, etc., n.e.c.	17,005	13,981	3,242	2,534	1,404	507	22	44	38,739
Packers, etc. . .	8,788	7,761	2,301	2,028	706	368	3	10	21,965
Stationary engine, etc., workers . .	22,187	13,514	7,912	5,172	4,209	2,145	264	319	55,722
Waterside workers, etc. . .	34,517	26,319	13,023	9,533	6,972	3,864	373	165	94,766
Labourers, n.e.c. . .	78,995	54,392	31,332	17,340	13,431	6,244	570	740	203,044
<b>Total, Craftsmen, etc. . .</b>	<b>595,227</b>	<b>467,794</b>	<b>185,417</b>	<b>138,531</b>	<b>87,897</b>	<b>48,782</b>	<b>3,963</b>	<b>6,448</b>	<b>1,534,039</b>
<b>Service, sport, etc.—</b>									
Fire brigade, police, etc. . .	12,034	8,648	4,863	3,036	2,111	1,029	202	237	32,160
Housekeepers, etc. . .	38,560	28,305	16,461	9,317	7,813	3,325	808	763	105,352
Waiters, etc. . .	15,538	7,714	5,452	2,884	2,717	1,050	191	391	35,937
Building caretakers, etc. . .	20,183	12,903	4,354	3,836	2,664	968	109	283	45,300
Barbers, etc. . .	8,495	7,304	2,493	2,043	1,573	602	38	98	22,646
Laundresses, etc. . .	7,159	5,834	2,336	1,303	1,118	406	59	64	18,279
Athletes, etc. . .	1,263	895	631	315	235	65	5	8	3,417
Photographers, etc. . .	1,423	1,034	459	393	222	84	20	38	3,673
Embalmers, etc. . .	300	212	83	56	50	32	2	..	735
Workers, n.e.c. . .	11,092	7,535	4,959	2,422	3,048	896	103	137	30,192
<b>Total, Service, etc.</b>	<b>116,047</b>	<b>80,384</b>	<b>42,091</b>	<b>25,605</b>	<b>21,551</b>	<b>8,457</b>	<b>1,537</b>	<b>2,019</b>	<b>297,691</b>
<b>Members of armed ser- vices, etc. . .</b>	<b>17,303</b>	<b>12,380</b>	<b>5,970</b>	<b>2,542</b>	<b>2,283</b>	<b>273</b>	<b>1,407</b>	<b>1,848</b>	<b>44,006</b>
<b>Inad. described or not stated . . .</b>	<b>21,256</b>	<b>16,753</b>	<b>7,478</b>	<b>4,005</b>	<b>2,559</b>	<b>1,261</b>	<b>155</b>	<b>192</b>	<b>53,659</b>
<b>Total in Work Force</b>	<b>1,602,516</b>	<b>1,210,063</b>	<b>584,996</b>	<b>377,561</b>	<b>279,784</b>	<b>130,918</b>	<b>14,243</b>	<b>25,015</b>	<b>4,225,096</b>
<b>Not in work force . .</b>	<b>2,314,497</b>	<b>1,720,050</b>	<b>933,832</b>	<b>591,779</b>	<b>456,845</b>	<b>219,422</b>	<b>12,852</b>	<b>33,813</b>	<b>6,283,090</b>
<b>Grand Total . .</b>	<b>3,917,013</b>	<b>2,930,113</b>	<b>1,518,828</b>	<b>969,340</b>	<b>736,629</b>	<b>350,340</b>	<b>27,095</b>	<b>58,828</b>	<b>10,508,186</b>

### § 3. The Work Force Survey

1. **General.**—Estimates of the civilian work force are obtained in February, May, August and November of each year for the six State capital cities from surveys based on a sample of dwellings selected by area sampling methods. These surveys are now being extended to non-metropolitan urban and rural areas; the results from these surveys will enable quarterly estimates of the Australian work force to be published.

The survey information, which is obtained at sample dwellings by personal interview, enables the total civilian population fourteen years of age and over to be classified according to work force and demographic characteristics. The work force classification used conforms closely to that recommended by the Eighth International Conference of Labour Statisticians, Geneva, 1954. Under this classification, the category to which an individual is assigned depends on his actual activity or status (i.e. whether working, looking for work, etc.) during a specified week covered by the survey.

The principal categories in the following tables are the employed and the unemployed, which together constitute the total work force, and the remainder who are not in the work force. Details of these categories are as follows.

- (a) *Employed persons* comprise all those who, during the specified week, worked for pay, profit, or payment in kind, in a job or business, or on a farm, and those who had a job, business, or farm, but were temporarily absent for the whole of the specified week for reasons other than lack of work. Persons who worked as unpaid helpers in a family business, or on a farm, are included in the employed if they worked fifteen hours or more during the specified week. The category includes employees, employers and workers on own account.
- (b) *Unemployed persons* comprise all those who, during the specified week, did no work at all, did not have a job or business, and were actively looking for work. The category also includes persons absent from work for the whole of the specified week without pay because of lack of demand for their services (i.e. those laid off without pay for the whole of the specified week).
- (c) *The work force* consists of all persons who, during the specified week, were employed or unemployed in terms of the classifications given in (a) and (b) above.
- (d) *Persons not in the work force* are those who, during the specified week, were not classified as employed or unemployed in terms of the classifications given in (a) and (b) above.

Figures in the tables which follow are estimates based on a sample and are therefore subject to sampling variability, that is, variations that may occur by chance because only a sample of the population is enumerated in the surveys. For this reason, figures are rounded but not adjusted to add to totals, because such adjustments would, in some cases, exceed the sampling variability of the estimates and tend to destroy their value as indicators of movement.

2. **Occupational Status, and Work Force Participation and Unemployment Rates.**—The following table shows, for November in each of the years 1960 to 1963, the distribution, by major work force category, of the civilian population fourteen years of age and over in the six State capital cities. The table also shows changes in the work force participation rate and unemployment rate over the period. As indicated in the general notes in paragraph 1 above, the classification of the population by work force category conforms to the standard recommended by the International Conference of Labour Statisticians. This International Standard has not as yet been adopted for the population census, and consequently the figures in this table are not strictly comparable with those in the tables in the preceding section of this chapter.



**CIVILIAN POPULATION 14 YEARS OF AGE AND OVER: OCCUPATIONAL STATUS, AND WORK FORCE PARTICIPATION AND UNEMPLOYMENT RATES, SIX AUSTRALIAN STATE CAPITAL CITIES**

November—	Occupational status				Total civilian population 14 years of age and over ( <sup>'000</sup> )	Work force participation rate (b) (per cent.)	Unemployment rate (c) (per cent.)
	Civilians in the work force			Civilians not in the work force ( <sup>'000</sup> )			
	Employed (a) ( <sup>'000</sup> )	Un-employed ( <sup>'000</sup> )	Total ( <sup>'000</sup> )				
<b>MALES</b>							
1960 ..	1,682.4	11.5	1,693.9	358.1	2,052.0	82.6	0.7
1961 ..	1,689.0	38.2	1,727.1	385.4	2,112.5	81.8	2.2
1962 ..	1,731.5	24.2	1,755.6	396.0	2,151.7	81.6	1.4
1963 ..	1,764.2	18.6	1,782.8	414.5	2,197.3	81.1	1.0
<b>FEMALES</b>							
1960 ..	764.4	11.9	776.2	1,395.2	2,171.5	35.7	1.5
1961 ..	749.4	21.6	771.0	1,465.7	2,236.7	34.5	2.8
1962 ..	790.1	17.8	808.0	1,477.8	2,285.8	35.3	2.2
1963 ..	808.9	11.5	820.4	1,515.4	2,335.8	35.1	1.4
<b>PERSONS</b>							
1960 ..	2,446.8	23.4	2,470.2	1,753.3	4,223.5	58.5	0.9
1961 ..	2,438.4	59.7	2,498.1	1,851.1	4,349.3	57.4	2.4
1962 ..	2,521.6	42.0	2,563.6	1,873.8	4,437.4	57.8	1.6
1963 ..	2,573.1	30.1	2,603.2	1,929.9	4,533.1	57.4	1.2

(a) Includes employees, employers, self-employed persons, and unpaid helpers who worked 15 hours or more per week in a family business. (b) The civilian work force as a percentage of the civilian population 14 years of age and over. (c) The number unemployed as a percentage of the civilian work force.

3. Occupational Status and Age Distribution.—The following table shows the civilian population 14 years of age and over in the six State capitals at November in each of the years 1960 to 1963, classified according to occupational status and age distribution.

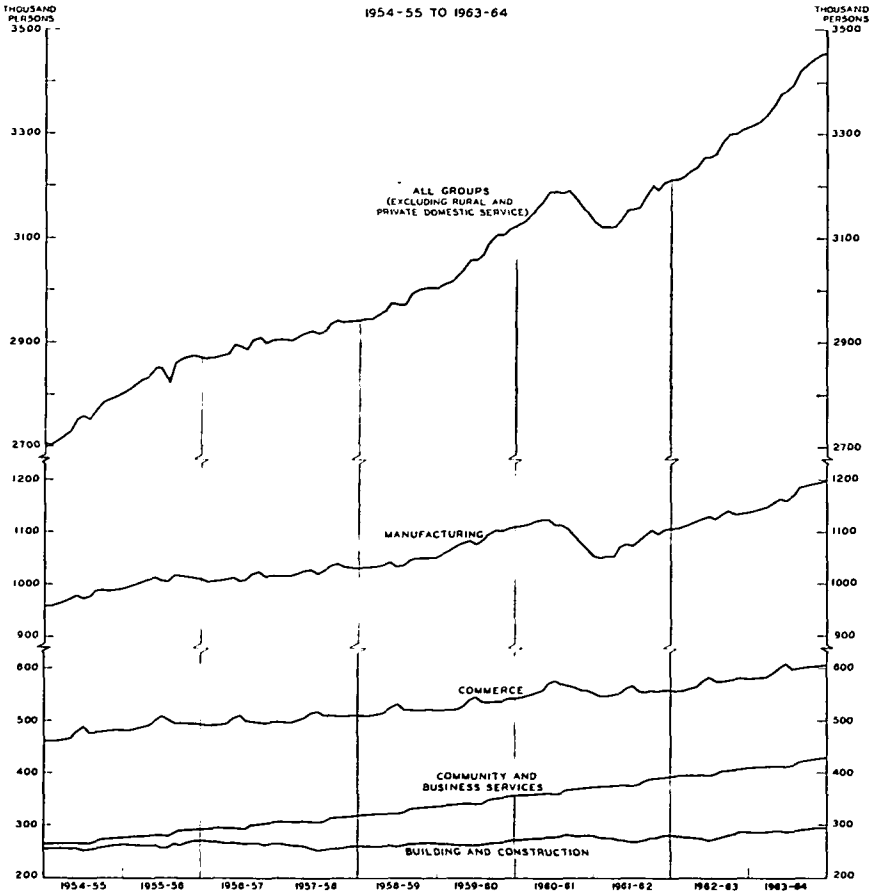
**CIVILIAN POPULATION 14 YEARS OF AGE AND OVER: OCCUPATIONAL STATUS AND AGE DISTRIBUTION, SIX AUSTRALIAN STATE CAPITAL CITIES**

(<sup>'000</sup>)

Age group (years)	Occupational status of civilians in the work force						Civilians not in the work force		Total civilians 14 years of age and over	
	Employed(a)		Unemployed		Total in civilian work force		Civilians not in the work force		Total civilians 14 years of age and over	
	Males	Females	Males	Females	Males	Females	Males	Females	Males	Females
<b>NOVEMBER, 1960</b>										
14-19 ..	148.6	152.3	*	*	151.2	154.2	128.6	124.1	279.8	278.3
20-44 ..	941.4	411.9	*	*	946.5	419.1	31.9	545.1	978.4	964.2
45-64 ..	533.4	186.2	*	*	536.7	188.8	47.6	424.0	584.2	612.8
65 and over ..	58.9	13.9	*	*	59.5	14.1	150.0	302.1	209.6	316.2
<i>Total</i> ..	<i>1,682.4</i>	<i>764.4</i>	<i>11.5</i>	<i>11.9</i>	<i>1,693.9</i>	<i>776.2</i>	<i>358.1</i>	<i>1,395.2</i>	<i>2,052.0</i>	<i>2,171.5</i>
<b>NOVEMBER, 1961</b>										
14-19 ..	148.9	148.8	7.4	7.0	156.2	155.8	132.0	131.0	288.3	286.8
20-44 ..	954.4	400.0	19.9	10.6	974.3	410.6	34.4	583.3	1,008.7	993.9
45-64 ..	539.3	187.3	9.3	*	548.6	191.1	51.2	439.3	599.8	630.4
65 and over ..	46.4	13.3	*	*	48.0	13.5	167.8	312.1	215.8	325.6
<i>Total</i> ..	<i>1,689.0</i>	<i>749.4</i>	<i>38.2</i>	<i>21.6</i>	<i>1,727.1</i>	<i>771.0</i>	<i>385.4</i>	<i>1,465.7</i>	<i>2,112.5</i>	<i>2,236.7</i>

NOTE.—For footnotes see next page.

WAGE AND SALARY EARNERS IN CIVILIAN EMPLOYMENT  
 PRINCIPAL INDUSTRY GROUPS: AUSTRALIA





**CIVILIAN POPULATION 14 YEARS OF AGE AND OVER: OCCUPATIONAL STATUS AND AGE DISTRIBUTION, SIX AUSTRALIAN STATE CAPITAL CITIES—continued**

('000)

Age group (years)	Occupational status of civilians in the work force						Civilians not in the work force		Total civilians 14 years of age and over	
	Employed(a)		Unemployed		Total in civilian work force					
	Males	Females	Males	Females	Males	Females	Males	Females	Males	Females
NOVEMBER, 1962										
14-19 ..	144.4	154.0	7.1	6.1	151.5	160.1	141.9	133.0	293.4	293.1
20-44 ..	984.1	428.7	8.6	8.7	992.6	437.4	34.6	578.3	1,027.2	1,015.7
45-64 ..	552.9	192.1	7.7	*	560.6	195.1	50.6	449.1	611.2	644.2
65 and over ..	50.1	15.3	*	*	50.9	15.3	168.9	317.4	219.8	332.7
<i>Total</i> ..	<i>1,731.5</i>	<i>790.1</i>	<i>24.2</i>	<i>17.8</i>	<i>1,755.6</i>	<i>808.0</i>	<i>396.0</i>	<i>1,477.8</i>	<i>2,151.7</i>	<i>2,285.8</i>

NOVEMBER, 1963

14-19 ..	161.7	165.5	5.0	*	166.7	169.6	149.0	144.7	315.7	314.4
20-44 ..	992.0	437.4	7.5	5.7	999.6	443.1	36.3	582.7	1,035.8	1,025.8
45-64 ..	567.0	192.3	5.2	*	572.2	194.0	51.6	461.3	623.8	655.2
65 and over ..	43.5	13.7	*	..	44.4	13.7	177.7	326.7	222.2	340.4
<i>Total</i> ..	<i>1,764.2</i>	<i>808.9</i>	<i>18.6</i>	<i>11.5</i>	<i>1,782.8</i>	<i>820.4</i>	<i>414.5</i>	<i>1,515.4</i>	<i>2,197.3</i>	<i>2,335.8</i>

(a) Includes employees, employers, self-employed persons, and unpaid helpers who worked 15 hours or more per week in a family business.

\* Estimates of less than 5,000 are not published in the table because they would be subject to sampling variability too high for most practical purposes. Although figures for these small components can, in some cases, be derived from the tables by deduction, undue significance should not be attached to them.

4. **Work Force Participation and Unemployment Rates.**—The table below shows work force participation rates and unemployment rates by conjugal condition for the civilian population 14 years of age and over in the six State capitals at November in each of the years 1960 to 1963.

**CIVILIAN POPULATION 14 YEARS OF AGE AND OVER: WORK FORCE PARTICIPATION AND UNEMPLOYMENT RATES, BY CONJUGAL CONDITION, SIX AUSTRALIAN STATE CAPITAL CITIES**

(Per cent.)

November—	Work force participation rate(a)			Unemployment rate(b)		
	Married	Not married(c)	Total	Married	Not married(c)	Total
MALES						
1960 .. ..	89.8	69.1	82.6	0.4	1.3	0.7
1961 .. ..	88.8	68.8	81.8	1.5	3.8	2.2
1962 .. ..	88.8	68.1	81.6	0.8	2.8	1.4
1963 .. ..	88.4	67.5	81.1	0.6	2.0	1.0

NOTE.—For footnotes see next page.

**CIVILIAN POPULATION 14 YEARS OF AGE AND OVER: WORK FORCE PARTICIPATION AND UNEMPLOYMENT RATES, BY CONJUGAL CONDITION, SIX AUSTRALIAN STATE CAPITAL CITIES—continued**

(Per cent.)

November—	Work force participation rate(a)			Unemployment rate(b)		
	Married	Not married(c)	Total	Married	Not married(c)	Total
<b>FEMALES</b>						
1960 .. ..	27.7	49.0	35.7	1.8	1.3	1.5
1961 .. ..	26.9	46.8	34.5	2.8	2.8	2.8
1962 .. ..	27.7	47.8	35.3	1.9	2.5	2.2
1963 .. ..	27.3	47.9	35.1	1.1	1.7	1.4
<b>PERSONS</b>						
1960 .. ..	58.5	58.4	58.5	0.7	1.3	0.9
1961 .. ..	57.7	57.1	57.4	1.8	3.3	2.4
1962 .. ..	58.1	57.2	57.8	1.1	2.6	1.6
1963 .. ..	57.7	57.0	57.4	0.7	1.9	1.2

(a) The civilian work force as a percentage of the civilian population 14 years of age and over.  
 (b) The number unemployed as a percentage of the civilian work force. (c) Includes never married, widowed and divorced.

5. **Unemployment in Industry Groups.**—(i) *Rates.* The following table shows the unemployment rate in each industry group for the six State capitals at November in each of the years 1960 to 1963. The total work force for a particular industry group comprises persons currently employed in the industry group and those unemployed persons whose last employment was in the group. The unemployment rates given in the table are the numbers unemployed in the industry groups expressed as percentages of the total work force in those groups. Because unemployed persons with no previous employment experience are excluded from the calculations used for this table, the unemployment rate shown for "All industries combined" differs from the unemployment rate for the civilian work force as a whole. This latter rate, which is given in the tables in paragraphs 2 and 4 above, takes into account all unemployed persons, including those seeking work for the first time.

**CIVILIAN POPULATION 14 YEARS OF AGE AND OVER: UNEMPLOYMENT RATES(a), BY INDUSTRY GROUP, SIX AUSTRALIAN STATE CAPITAL CITIES**

(Per cent.)

Industry group in which last employed	November—			
	1960	1961	1962	1963
Manufacturing .. ..	0.9	2.1	1.3	0.9
Building and construction .. ..	0.8	3.9	1.1	1.2
Transport, storage and communication ..	0.6	1.4	0.9	0.8
Commerce .. ..	0.9	2.1	1.4	0.9
Public authority (n.e.i.); community and business services (including professional)	0.7	0.9	0.7	0.7
Amusement, hotels and other accommodation, cafés, etc., personal service, etc.	2.1	3.0	2.3	1.4
Other industries .. ..	0.4	2.1	1.8	1.3
All industries combined(b) .. ..	0.9	2.1	1.3	1.0

(a) The numbers unemployed in the industry groups as percentages of the total work force in those groups. (b) Excludes unemployed persons who had not previously been employed.

(ii) *Proportions.* The table below shows, for the six State capitals at November in each of the years 1960 to 1963, the unemployed in each industry group as a percentage of the total unemployed civilians 14 years of age and over.

**CIVILIAN POPULATION 14 YEARS OF AGE AND OVER: DISTRIBUTION OF UNEMPLOYED BY INDUSTRY GROUP, SIX AUSTRALIAN STATE CAPITAL CITIES**

(Per cent.)

Industry group in which last employed	November—			
	1960	1961	1962	1963
Manufacturing .. .. .	32.3	30.4	27.8	27.7
Building and construction .. .. .	6.8	11.9	4.7	7.7
Transport, storage and communication .. .. .	5.7	5.0	4.3	5.2
Commerce .. .. .	17.0	17.5	16.4	15.3
Public authority (n.e.i.); community and business services (including professional)	10.4	5.9	7.1	9.6
Amusement, hotels and other accommodation, cafés, etc., personal service, etc.	14.8	8.6	9.5	8.6
Other industries .. .. .	2.9	7.0	8.5	8.5
<i>All unemployed persons who had previous employment .. .. .</i>	<i>89.9</i>	<i>86.3</i>	<i>78.3</i>	<i>82.6</i>
Unemployed persons who had not previously been employed(a) .. .. .	10.1	13.7	21.7	17.4
<b>Total Unemployed Persons .. .. .</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>

(a) Comprises mainly school-leavers seeking work for the first time.

6. *Duration of Unemployment.*—The following table shows, for the six State capitals at November in each of the years 1960 to 1963, the unemployed, classified by duration of unemployment, as a percentage of the total unemployed civilians 14 years of age and over.

**CIVILIAN POPULATION 14 YEARS OF AGE AND OVER: DISTRIBUTION OF UNEMPLOYED BY DURATION OF UNEMPLOYMENT, SIX AUSTRALIAN STATE CAPITAL CITIES**

(Per cent.)

Period of unemployment	November—			
	1960	1961	1962	1963
<b>MALES</b>				
Less than one month .. .. .	63.8	35.2	44.5	60.6
One month and less than three months .. .. .	20.8	28.4	26.0	17.9
Three months and over .. .. .	15.4	36.4	29.5	21.5
<i>Total .. .. .</i>	<i>100.0</i>	<i>100.0</i>	<i>100.0</i>	<i>100.0</i>
<b>FEMALES</b>				
Less than one month .. .. .	65.7	44.5	42.7	55.0
One month and less than three months .. .. .	16.6	19.7	26.7	21.1
Three months and over .. .. .	17.7	35.8	30.6	23.9
<i>Total .. .. .</i>	<i>100.0</i>	<i>100.0</i>	<i>100.0</i>	<i>100.0</i>
<b>PERSONS</b>				
Less than one month .. .. .	64.8	38.6	43.7	58.5
One month and less than three months .. .. .	18.7	25.2	26.3	19.1
Three months and over .. .. .	16.5	36.2	30.0	22.4
<i>Total .. .. .</i>	<i>100.0</i>	<i>100.0</i>	<i>100.0</i>	<i>100.0</i>

7. **Persons Working Less than 35 Hours per Week.**—In the work force surveys, persons who report themselves as having worked less than 35 hours per week are further questioned to ascertain their reasons for not working longer hours. In the following table employed civilians 14 years of age and over in the six State capitals who worked less than 35 hours per week are classified according to the reasons why they did not work longer hours.

**EMPLOYED CIVILIANS 14 YEARS OF AGE AND OVER WHO WORKED LESS THAN 35 HOURS PER WEEK, BY REASON: SIX AUSTRALIAN STATE CAPITAL CITIES**

November—		Reason for working less than 35 hours per week								
		Persons who usually work 35 hours or more per week			Persons who usually work less than 35 hours per week			All persons who worked less than 35 hours in the survey period		
		Lack of work(a)	Other reasons (b)	Total	Lack of work(c)	Other reasons (d)	Total	Lack of work (a)(c)	Other reasons (b)(d)	Total
NUMBER ('000)										
1960	..	13.0	165.5	178.4	11.9	185.7	197.6	24.8	351.2	376.0
1961	..	25.4	215.5	240.9	19.8	181.9	201.6	45.1	397.3	442.5
1962	..	14.7	228.3	243.0	12.2	197.4	209.6	26.9	425.7	452.6
1963	..	12.4	229.9	242.2	7.6	213.1	220.7	20.0	443.0	463.0

**PROPORTION OF THE CIVILIAN WORK FORCE OF THE SIX CAPITALS (Per cent.)**

1960	..	0.5	6.7	7.2	0.5	7.5	8.0	1.0	14.2	15.2
1961	..	1.0	8.6	9.6	0.8	7.3	8.1	1.8	15.9	17.7
1962	..	0.6	8.9	9.5	0.5	7.7	8.2	1.1	16.6	17.7
1963	..	0.5	8.8	9.3	0.3	8.2	8.5	0.8	17.0	17.8

(a) Excludes persons laid off for whole week without pay, who are included in the unemployed. The figures comprise persons working short time, those who lost their jobs or commenced in new jobs during the specified week, and those absent from work because of plant breakdowns or bad weather. (b) Own illness or injury, leave or holiday, and industrial disputes. (c) Persons who would prefer to work 35 hours or more per week if suitable work were available. (d) Persons who prefer to work less than 35 hours per week.

**WAGE AND SALARY EARNERS IN EMPLOYMENT**

1. **General.**—The series of estimates of the number of wage and salary earners in civilian employment (excluding employees in rural industry and private domestic service) published in Official Year Book No. 48, 1962, and earlier issues, has been replaced by a new series. Although covering virtually the same part of the work force, the new series, in addition to incorporating revised estimates, differs from the old in the classification of some industries and in being related to basic data derived from population censuses.

The monthly estimates are based on comprehensive data (referred to herein as "benchmarks") derived for the purpose from the population censuses of June, 1954, and June, 1961. Figures for periods between, and subsequent to, the two benchmark points of time are estimates obtained from three main sources, namely (a) current pay-roll tax returns, (b) current returns from Government bodies; and (c) some other direct current records of employment (e.g. for hospitals). Data from these sources have been supplemented by estimates of the changes in the number of wage and salary earners not covered by the foregoing collections.

Figures for current months are subject to revision. As they become available, particulars of employment obtained from other collections, such as the annual factory census and the censuses and sample surveys of retail establishments, are used to check, and, where desirable, to revise estimates in relevant sections. The work force survey now being developed (see page 417) will supply an additional check for future estimates.

The benchmark figures are derived from particulars recorded for individuals on population census schedules. The estimated monthly figures are derived mainly from reports supplied by employers relating to enterprises or establishments. These two sources differ in some cases in scope and in reporting of industry; however, the benchmark industry dissections have been adjusted, as nearly as may be, to an enterprise/establishment reporting basis. The industry classification used throughout the series is that of the population census of June, 1961.

Pay-roll tax returns are lodged at present by all employers paying more than £200 a week in wages (other than certain Commonwealth Government bodies, religious and benevolent institutions, public hospitals and other similar organizations specifically exempted under the *Pay-roll Tax Assessment Act 1941-1962*). At June, 1954, this Act required employers paying wages of more than £80 a week to lodge returns. The exemption limit was raised to £120 a week from 1st September, 1954, and to the present level of £200 a week as from 1st September, 1957.

Employees in rural industry and in private domestic service are not included in the estimates, because of the inadequacy of current data.

The terms "Employment", "Number Employed", "Employees" and "Wage Earners" used herein are synonymous with, and related to, "Wage and Salary Earners" on pay-rolls or "in employment" in the latter part of each month as distinct from numbers of employees actually working on a specific date. They include some persons working part-time.

The prime purpose of the new series is the same as that of the previous series, namely to measure, as nearly as may be with available data, *current monthly trends* in employment in the defined field. The estimates may be less reliable for longer-term measurement. Detailed revision of the old series to a basis comparable with that of the new series is impracticable for periods prior to June, 1954, but an approximate revision of total figures (since June, 1947) to this basis was published in *Employment and Unemployment*, October, 1963.

2. Total Civilian Employees and Defence Forces.—The following table shows, for Australia, the estimated numbers of private and government civilian employees (excluding employees in rural industry and private domestic service) and the numbers in the defence forces at June of each of the years 1954 and 1959 to 1963 and at December, 1963.

## WAGE AND SALARY EARNERS IN EMPLOYMENT: AUSTRALIA

(EXCLUDING EMPLOYEES IN RURAL INDUSTRY AND PRIVATE DOMESTIC SERVICE)

('000)

Particulars	June, 1954	June, 1959	June, 1960	June, 1961	June, 1962	June, 1963	Dec., 1963
MALES							
Civilian Employees—							
Private .. .. .	1,407.5	1,532.7	1,605.0	1,594.6	1,626.4	1,681.3	1,721.9
Government(a) .. .. .	596.2	652.9	651.8	669.7	681.6	695.5	696.6
Total .. .. .	2,003.7	2,185.6	2,256.8	2,264.3	2,308.0	2,376.8	2,418.5
Defence forces(b) .. .. .	50.4	45.5	45.3	44.3	45.8	47.2	47.8
Total .. .. .	2,054.1	2,231.1	2,302.1	2,308.6	2,353.8	2,424.0	2,466.3

NOTE.—For footnotes see next page.



WAGE AND SALARY EARNERS IN EMPLOYMENT: AUSTRALIA—*continued*  
(EXCLUDING EMPLOYEES IN RURAL INDUSTRY AND PRIVATE DOMESTIC SERVICE)  
(\*000)

Particulars	June, 1954	June, 1959	June, 1960	June, 1961	June, 1962	June, 1963	Dec., 1963
FEMALES							
Civilian Employees—							
Private .. .. .	589.0	678.2	722.6	714.5	744.7	769.2	796.0
Government(a) .. .. .	112.5	140.9	147.1	154.4	160.8	167.4	168.9
Total .. .. .	701.5	819.1	869.7	868.9	905.5	936.6	964.9
Defence forces(b) .. .. .	2.0	1.8	1.7	1.8	2.0	2.1	2.1
Total .. .. .	703.5	820.9	871.4	870.7	907.5	938.7	967.0

PERSONS							
Civilian Employees—							
Private .. .. .	1,996.5	2,210.9	2,327.6	2,309.1	2,371.1	2,450.5	2,517.9
Government(a) .. .. .	708.7	793.8	798.9	824.1	842.4	862.9	865.5
Total .. .. .	2,705.2	3,004.7	3,126.5	3,133.2	3,213.5	3,313.4	3,383.4
Defence forces(b) .. .. .	52.4	47.3	47.0	46.1	47.8	49.3	49.9
Total .. .. .	2,757.6	3,052.0	3,173.5	3,179.3	3,261.3	3,362.7	3,433.3

(a) Includes employees, within Australia, of government authorities (Commonwealth, State, local and semi-governmental) on services such as railways, tramways, banks, post offices, air transport, education (including universities), broadcasting, television, police, public works, factories and munitions establishments, departmental hospitals and institutions, migrant hostels, etc., as well as administrative employees. See para. 4, p. 428. (b) Permanent defence forces in Australia and overseas.

3. Civilian Employees.—(i) *Australia—Industry Groups.* The following table shows, for Australia, the estimated number of wage and salary earners in civilian employment (excluding employees in rural industry and private domestic service) in the principal industry groups at June of each of the years 1954 and 1959 to 1963 and at December, 1963.

WAGE AND SALARY EARNERS IN CIVILIAN EMPLOYMENT: INDUSTRY GROUPS, AUSTRALIA  
(EXCLUDING EMPLOYEES IN RURAL INDUSTRY AND PRIVATE DOMESTIC SERVICE, AND DEFENCE FORCES)  
(\*000)

Industry group	June, 1954	June, 1959	June, 1960	June, 1961	June, 1962	June, 1963	Dec., 1963
MALES							
Mining and quarrying .. .. .	56.2	48.4	48.6	48.2	46.3	45.9	46.3
Manufacturing(a) .. .. .	744.6	816.2	853.5	821.6	852.8	879.5	891.4
Electricity, gas, water and sanitary services .. .. .	71.3	84.3	84.8	88.5	90.2	91.5	91.8
Building and construction .. .. .	253.4	263.0	267.7	274.8	275.9	281.5	281.4
Transport and storage .. .. .	187.5	186.0	186.1	190.4	185.1	187.2	189.5
Communication .. .. .	64.1	74.1	74.6	75.2	76.0	76.8	78.1
Finance and property .. .. .	57.0	69.9	75.5	80.4	82.7	86.2	87.8
Retail trade .. .. .	161.7	181.7	188.4	191.3	193.6	204.1	215.3
Wholesale and other commerce .. .. .	134.1	151.9	157.8	161.4	161.0	164.4	170.3
Public authority activities (n.e.i.) .. .. .	83.9	92.3	92.3	95.0	97.9	101.7	103.1
Health, hospitals, etc. .. .. .	25.7	29.2	30.1	31.0	32.7	33.6	34.2
Education .. .. .	38.8	50.6	53.9	57.0	61.7	65.9	65.9
Amusement, hotels, personal service, etc. .. .. .	61.4	65.1	67.3	70.1	70.8	74.6	79.4
Other(b) .. .. .	64.0	72.9	76.2	79.4	81.3	83.9	84.0
Total .. .. .	2,003.7	2,185.6	2,256.8	2,264.3	2,308.0	2,376.8	2,418.5

NOTE.—For footnotes see next page.

**WAGE AND SALARY EARNERS IN CIVILIAN EMPLOYMENT: INDUSTRY GROUPS, AUSTRALIA—continued**  
(EXCLUDING EMPLOYEES IN RURAL INDUSTRY AND PRIVATE DOMESTIC SERVICE, AND DEFENCE FORCES)  
(’000)

Industry group	June, 1954	June, 1959	June, 1960	June, 1961	June, 1962	June, 1963	Dec., 1963
<b>FEMALES</b>							
Mining and quarrying .. .. .	1.0	1.3	1.3	1.4	1.5	1.6	1.6
Manufacturing(a) .. .. .	214.9	235.6	257.2	233.5	252.9	258.9	268.8
Electricity, gas, water and sanitary services .. .. .	4.5	5.6	5.9	6.2	6.3	6.4	6.4
Building and construction .. .. .	2.8	3.9	4.3	4.9	5.0	5.5	5.6
Transport and storage .. .. .	14.4	15.6	16.1	17.0	16.8	17.1	17.3
Communication .. .. .	16.7	18.6	18.4	18.3	17.9	18.3	19.1
Finance and property .. .. .	32.5	46.3	51.0	54.2	55.0	56.6	57.7
Retail trade .. .. .	125.4	141.3	148.6	150.7	156.5	162.7	173.4
Wholesale and other commerce .. .. .	40.4	46.0	47.9	49.2	48.6	50.0	50.9
Public authority activities (n.e.i.) .. .. .	28.3	32.2	32.9	34.6	35.7	37.2	37.7
Health, hospitals, etc. .. .. .	73.0	94.4	98.4	102.6	106.8	111.4	112.2
Education .. .. .	49.6	66.1	70.1	73.7	79.3	82.3	81.1
Amusement, hotels, personal service, etc. .. .. .	68.3	74.2	76.4	78.8	78.2	81.8	85.3
Other(b) .. .. .	29.7	38.0	41.2	43.8	45.0	46.8	47.8
<b>Total .. .. .</b>	<b>701.5</b>	<b>819.1</b>	<b>869.7</b>	<b>868.9</b>	<b>905.5</b>	<b>936.6</b>	<b>964.9</b>

<b>PERSONS</b>							
Mining and quarrying .. .. .	57.2	49.7	49.9	49.6	47.8	47.5	47.9
Manufacturing(a) .. .. .	959.5	1,051.8	1,110.7	1,055.1	1,105.7	1,138.4	1,160.2
Electricity, gas, water and sanitary services .. .. .	75.8	89.9	90.7	94.7	96.5	97.9	98.2
Building and construction .. .. .	256.2	266.9	272.0	279.7	280.9	287.0	287.0
Transport and storage .. .. .	201.9	201.6	202.2	207.4	201.9	204.3	206.8
Communication .. .. .	80.8	92.7	93.0	93.5	93.9	95.1	97.2
Finance and property .. .. .	89.5	116.2	126.5	134.6	137.7	142.8	145.5
Retail trade .. .. .	287.1	323.0	337.0	342.0	350.1	366.8	388.7
Wholesale and other commerce .. .. .	174.5	197.9	205.7	210.6	209.6	214.4	221.2
Public authority activities (n.e.i.) .. .. .	112.2	124.5	125.2	129.6	133.6	138.9	140.8
Health, hospitals, etc. .. .. .	98.7	123.6	128.5	133.6	139.5	145.0	146.4
Education .. .. .	88.4	116.7	124.0	130.7	141.0	148.2	147.0
Amusement, hotels, personal service, etc. .. .. .	129.7	139.3	143.7	148.9	149.0	156.4	164.7
Other(b) .. .. .	93.7	110.9	117.4	123.2	126.3	130.7	131.8
<b>Total .. .. .</b>	<b>2,705.2</b>	<b>3,004.7</b>	<b>3,126.5</b>	<b>3,133.2</b>	<b>3,213.5</b>	<b>3,313.4</b>	<b>3,383.4</b>

(a) As well as employees engaged directly in manufacturing activity, these figures also include the employees of manufacturing enterprises or establishments who are engaged in selling and distribution, etc.  
(b) Comprises forestry, fishing and trapping; law, order and public safety; religion and social welfare; and other community and business services.

(ii) *States and Territories—Totals.* Estimates of the number of wage and salary earners (excluding employees in rural industry, private domestic service and defence forces) are shown in the following table for each State and Territory at June of each of the years 1954 and 1959 to 1963 and at December, 1963.

**WAGE AND SALARY EARNERS IN CIVILIAN EMPLOYMENT**  
(EXCLUDING EMPLOYEES IN RURAL INDUSTRY AND PRIVATE DOMESTIC SERVICE, AND DEFENCE FORCES)  
(’000)

Month	N.S.W.	Vic.	Qld	S.A.	W.A.	Tas.	N.T.	A.C.T. (a)	Australia
<b>MALES</b>									
1954—June .. .. .	774.8	563.4	266.4	178.6	141.2	64.8	5.0	9.5	2,003.7
1959—June .. .. .	836.2	621.8	290.1	201.1	144.9	70.4	6.9	14.2	2,185.6
1960—June .. .. .	870.6	643.5	293.7	206.4	147.5	72.6	7.2	15.3	2,256.8
1961—June .. .. .	876.5	643.6	291.7	207.5	148.5	73.2	7.3	16.0	2,264.3
1962—June .. .. .	894.2	654.3	294.5	211.2	154.7	73.6	7.5	18.0	2,308.0
1963—June .. .. .	914.5	675.3	304.7	219.1	160.0	75.0	7.8	20.4	2,376.8
1963—December .. .. .	932.4	688.8	303.2	223.9	163.8	77.1	8.0	21.3	2,418.5

NOTE.—For footnote see next page.

**WAGE AND SALARY EARNERS IN CIVILIAN EMPLOYMENT—continued**  
(EXCLUDING EMPLOYEES IN RURAL INDUSTRY AND PRIVATE DOMESTIC SERVICE, AND DEFENCE FORCES)

('000)

Month	N.S.W.	Vic.	Qld	S.A.	W.A.	Tas.	N.T.	A.C.T. (a)	Australia
<b>FEMALES</b>									
1954—June ..	275.8	216.7	85.8	55.7	43.2	20.2	1.2	2.9	701.5
1959—June ..	321.2	253.5	97.7	68.4	48.4	23.2	1.9	4.8	819.1
1960—June ..	342.7	269.7	102.3	72.6	50.4	24.5	2.0	5.5	869.7
1961—June ..	343.6	266.2	102.1	72.3	51.2	24.9	2.3	6.3	868.9
1962—June ..	359.0	276.5	104.7	76.7	53.4	25.5	2.5	7.2	905.5
1963—June ..	369.7	284.7	108.8	80.8	55.5	25.5	2.9	8.7	936.6
1963—December	383.3	291.4	110.4	84.0	56.9	26.7	2.9	9.3	964.9

## PERSONS

1954—June ..	1,050.6	780.1	352.2	234.3	184.4	85.0	6.2	12.4	2,705.2
1959—June ..	1,157.4	875.3	387.8	269.5	193.3	93.6	8.8	19.0	3,004.7
1960—June ..	1,213.3	913.2	396.0	279.0	197.9	97.1	9.2	20.8	3,126.5
1961—June ..	1,220.1	909.8	393.8	279.8	199.7	98.1	9.6	22.3	3,133.2
1962—June ..	1,253.2	930.8	399.2	287.9	208.1	99.1	10.0	25.2	3,213.5
1963—June ..	1,284.2	960.0	413.5	299.9	215.5	100.5	10.7	29.1	3,313.4
1963—December	1,315.7	980.2	413.6	307.9	220.7	103.8	10.9	30.6	3,383.4

(a) Includes persons employed in the Australian Capital Territory who reside in adjoining areas.

4. **Government Employees.**—(i) *States and Territories.* The numbers of civilian employees of Commonwealth, State, local and semi-governmental authorities in each State and Territory at June, 1963, are shown in the following table. These include employees, within Australia, of government authorities on services such as railways, tramways, banks, post offices, air transport, education (including universities), broadcasting, television, police, public works, factories and munitions establishments, departmental hospitals and institutions, migrant hostels, etc., as well as administrative employees.

## CIVILIAN EMPLOYEES OF GOVERNMENT AUTHORITIES, JUNE, 1963

('000)

State or Territory	Commonwealth Government(a)			State Government(a)			Local Government			Total(a)		
	Males	Females	Persons	Males	Females	Persons	Males	Females	Persons	Males	Females	Persons
N.S.W. ..	64.5	17.5	82.0	146.8	37.6	184.4	37.9	4.3	42.2	249.2	59.4	308.6
Vic. ..	55.6	14.9	70.5	112.6	29.1	141.7	15.2	1.9	17.1	183.4	45.9	229.3
Qld ..	19.0	5.2	24.2	67.6	12.8	80.4	17.7	1.2	18.9	104.3	19.2	123.5
S.A. ..	20.2	4.3	24.5	41.9	14.5	56.4	4.0	0.4	4.4	66.1	12.0	85.3
W.A. ..	10.3	2.5	12.8	39.2	9.1	48.3	4.1	0.4	4.5	53.6	12.0	65.6
Tas. ..	4.5	1.2	5.7	16.6	4.5	21.1	2.1	0.2	2.3	23.2	5.9	29.1
N.T. ..	3.9	1.2	5.1	..	..	..	0.1	..	0.1	4.0	1.2	5.2
A.C.T. ..	11.7	4.6	16.3	..	..	..	..	..	..	11.7	4.6	16.3
<b>Australia</b>	<b>189.7</b>	<b>51.4</b>	<b>241.1</b>	<b>424.7</b>	<b>107.6</b>	<b>532.3</b>	<b>81.1</b>	<b>8.4</b>	<b>89.5</b>	<b>695.5</b>	<b>167.4</b>	<b>862.9</b>

(a) Includes semi-governmental authorities. See explanation above.

(ii) *Australia.* The following table shows at June in each of the years 1959 to 1963 and at December, 1963, the number of civilian employees of Commonwealth, State, local and semi-governmental authorities.

## CIVILIAN EMPLOYEES OF GOVERNMENT AUTHORITIES: AUSTRALIA

('000)

Date	Commonwealth Government(a)			State Government(a)			Local Government			Total(a)		
	Males	Fe- males	Persons	Males	Fe- males	Persons	Males	Fe- males	Persons	Males	Fe- males	Persons
June—												
1959 ..	176.9	47.6	224.5	406.2	86.4	492.6	69.8	6.9	76.7	652.9	140.9	793.8
1960 ..	178.5	48.5	227.0	400.6	91.3	491.9	72.7	7.3	80.0	651.8	147.1	798.9
1961 ..	182.0	49.7	231.7	411.5	96.9	508.4	76.2	7.8	84.0	669.7	154.4	824.1
1962 ..	185.3	50.0	235.3	417.2	102.8	520.0	79.1	8.0	87.1	681.6	160.8	842.4
1963 ..	189.7	51.4	241.1	424.7	107.6	532.3	81.1	8.4	89.5	695.5	167.4	862.9
Dec.—												
1963 ..	192.8	53.1	245.9	422.0	107.1	529.1	81.8	8.7	90.5	696.6	168.9	865.5

(a) Includes semi-governmental authorities. See explanation on page 428.

## COMMONWEALTH EMPLOYMENT SERVICE

1. General.—Statutory warrant for the Commonwealth Employment Service (C.E.S.) is to be found in the *Re-establishment and Employment Act* 1945–1959 (sections 47 and 48). In brief, the main functions of the Service are to assist people seeking employment to obtain positions best suited to their training, experience, abilities and qualifications; and to assist employers seeking labour to obtain employees best suited to the demands of the employers' particular class of work.

The organization and functions of the C.E.S. conform to the provisions of the Employment Service Convention, 1948 of the International Labour Organization, which was ratified by Australia in December, 1949. In addition, C.E.S. practices follow substantially the provisions of the I.L.O. Employment Service Recommendation, 1948.

The C.E.S. functions within the Employment and Industrial Services Division of the Department of Labour and National Service on a decentralized basis. The Central Office is in Melbourne and there is a Regional Office in the capital city of each State, with 144 District Employment Offices and Branch Offices in suburban and the larger provincial centres and 341 agents in the smaller country centres. The District Employment Offices and Branch Offices are distributed as follows: New South Wales, 55; Victoria, 37; Queensland, 22; South Australia, 12; Western Australia, 12; Tasmania, 4; Northern Territory, 1; Australian Capital Territory, 1.

The C.E.S. provides specialized facilities for young people, persons with physical and mental handicaps, ex-members of the defence forces, migrants, rural workers and persons with professional and technical qualifications. Vocational guidance is provided free of charge by a staff of qualified psychologists. It is available to any person, but is provided particularly for young people, ex-servicemen and the physically handicapped. In New South Wales, the State Department of Labour and Industry provides this service, mainly to young people leaving school.

The C.E.S. has responsibilities in the administration of the unemployment benefits provided under the *Social Services Act* 1947–1963. All applicants for benefits must register at a District Employment Office or agency of the C.E.S., which is responsible for certifying whether or not suitable employment can be offered to them.

The C.E.S. is responsible for placing in employment migrant workers sponsored by the Commonwealth under the Commonwealth Nomination and similar schemes. This includes arranging for them to move to their initial employment and for their admission, if necessary, to Commonwealth migrant hostels. Assistance to obtain employment is provided to other migrants as required. From the inception of the various free and assisted schemes, including the Displaced Persons Scheme, to the end of December, 1963, about 223,000 British and European migrant workers had been placed in initial employment by the C.E.S. Since 1951, it has been responsible for recruiting Australian experts for

oversea service under the Colombo Plan and the United Nations Expanded Programme of Technical Assistance. The principal spheres in which experts have been supplied are agriculture, education, engineering, geology, health, and economic and scientific research and development.

In association with placement activities, regular surveys of the labour market are carried out, and detailed information is supplied to interested Commonwealth and State Government departments and instrumentalities and to the public. Employers, employees and other interested persons are advised on labour availability and employment opportunities in various occupations and areas and on other matters concerning employment.

2. Persons Registered for Employment.—The following table shows the number of persons who claimed, when registering for employment with the Commonwealth Employment Service, that they were not employed and who were recorded as unplaced. The figures include those persons who were referred to employers and those who may have obtained employment without notifying the C.E.S. They include also persons in receipt of unemployment benefit (*see* Chapter XVI. Welfare Services).

**PERSONS REGISTERED FOR EMPLOYMENT WITH COMMONWEALTH EMPLOYMENT SERVICE**

(Source: Department of Labour and National Service.)

Month(a)	N.S.W.(b)	Vic.	Qld	S.A.(c)	W.A.	Tas.	Aust.
1954—June ..	9,250	5,231	4,557	964	1,807	555	22,364
1959—June ..	26,957	14,584	12,026	3,958	6,074	2,109	65,708
1960—June ..	15,848	11,333	8,587	4,547	4,694	2,204	47,213
1961—June ..	42,793	30,764	19,263	9,035	6,616	3,213	111,684
1962—June ..	34,869	26,160	16,284	6,886	5,320	3,609	93,128
1963—June ..	34,258	19,135	12,055	6,479	6,053	3,427	81,407
1963—July ..	33,275	18,644	9,557	6,264	6,612	3,779	78,131
August ..	28,105	16,040	8,447	5,231	5,880	3,526	67,229
September ..	23,515	13,947	7,773	4,673	5,515	3,463	58,886
October ..	20,147	11,300	7,990	4,558	4,674	3,024	51,693
November ..	25,598	10,768	12,106	3,906	4,375	2,747	59,500
December ..	29,920	15,968	18,062	5,357	5,866	4,923	80,096
1964—January ..	31,825	17,786	17,597	6,453	7,475	4,673	85,809
February ..	26,485	12,920	14,304	5,299	6,738	3,481	69,227
March ..	22,412	10,354	12,181	4,548	5,885	2,545	57,925
April ..	21,309	10,487	10,465	4,512	5,286	2,402	54,461
May ..	19,060	10,277	8,613	4,412	4,876	2,542	49,780

(a) Generally at Friday nearest end of month.

(b) Includes Australian Capital Territory.

(c) Includes Northern Territory.

## CHAPTER XIII

## LABOUR, WAGES AND PRICES

NOTE.—For particulars of the Farm Production Price Index, see Chapter XXX. Miscellaneous.

For current information on the subjects dealt with in this Chapter, see the *Monthly Review of Business Statistics*, the *Digest of Current Economic Statistics*, and the *Quarterly Summary of Australian Statistics*, also the mimeographed statements *Wage Rates and Earnings*, *Consumer Price Index*, *Wholesale Price (Basic Materials and Foodstuffs) Index*, and *Export Price Index*. For further information on these subjects, except the Export Price Index, see the *Labour Report* issued by this Bureau.

In addition, the following recent special publications were issued in mimeographed form:—*Minimum Wage Rates, January, 1961, to June, 1963* (S.B. 354); *Survey of Weekly Earnings and Hours—Australia, October, 1962* (S.B. 213).

## RETAIL PRICES AND PRICE INDEXES

## § 1. General

Retail prices of food and groceries and average rentals of houses for years extending back to 1901 were collected by the Commonwealth Statistician, and in some cases have been recorded by the Statisticians of various States for earlier years.

Retail prices of a more extensive range of commodities (including clothing) and certain services in common demand have been ascertained at frequent and regular intervals since 1923 and comparable information was ascertained for the month of November in each year from 1914 to 1922. The range of items for which retail prices data are obtained was considerably expanded in 1948 and in later years.

Average retail prices of certain food and grocery items in current periods are published in the annual *Labour Report*.

An explanation of the nature and purposes of retail price indexes is given in the various editions of the annual *Labour Report*, together with further particulars of indexes then current. In § 2 below, previous retail price indexes for Australia are briefly outlined. The current retail price index, entitled the Consumer Price Index, was published for the first time in August, 1960. It was compiled retrospectively to 1948–49. A description of the Consumer Price Index is given in § 3 on pages 432–4.

## § 2. Previous Retail Price Indexes

1. General.—Five series of retail price indexes had been compiled at various times for Australia by the Commonwealth Statistician prior to 1960. Each of these was continued until changed conditions required the compilation of indexes more directly relevant to current conditions. The respective indexes were as follows.

- (i) *The "A" Series Index* (covering food, groceries and house rents) was first compiled in 1912 with the year 1911 as base = 1,000. It was discontinued in June, 1938.
- (ii) *The "B" Series Index* (covering food, groceries and rent of 4 and 5 roomed houses) was first compiled in 1925 and continued until December Quarter, 1953. It was the food and rent constituent of the "C" Series Index and was designed to replace the "A" Series Index for general statistical purposes.
- (iii) *The "C" Series Index* (covering food and groceries, rent of 4 and 5 roomed houses, clothing, household drapery, household utensils, fuel, lighting, fares, smoking and some other miscellaneous items) was first compiled in 1921. It was last issued on its original basis for December quarter, 1960. For certain transitional purposes a "C" Series Index was issued for some quarters after that. This was calculated by varying the index numbers of December quarter, 1960, in ratio to movements shown by the Consumer Price Index.

- (iv) *The "D" Series Index*, derived by combining the "A" and "C" Series Indexes, was used by the Commonwealth Court of Conciliation and Arbitration from May, 1933, to May, 1934, and then discontinued.
- (v) *The Interim Index* (covering food and groceries, rent of 4 and 5 roomed houses, clothing, household drapery, household utensils, fuel, lighting, fares, smoking, certain services and some miscellaneous items) was first compiled in 1954 with the year 1952-53 as base = 100. As its title indicated, it was constructed as a transitional index. Its compilation was discontinued following its replacement by the Consumer Price Index in June quarter, 1960.

2. **The "Court" Index.**—In 1937, the Commonwealth Court of Conciliation and Arbitration introduced a "Court" Index for the purpose of its system of making automatic quarterly adjustments to the basic wage within its jurisdiction. By decision of the Court, the "Court" Index ceased to be issued by the Industrial Registrar as at December quarter, 1953. These "Court" Index numbers were an arithmetical conversion of the "C" Series Retail Price Index.

### § 3. Consumer Price Index

1. **General.**—This retail price index was first compiled in 1960, retrospectively to September quarter, 1948. A full description of the index up to December quarter, 1963 is given in *Labour Report* No. 49, 1961. The Consumer Price Index, a chain of "fixed weight aggregative" indexes linked at short intervals to form a continuous series, was further linked at December quarter, 1963. Details of this link were published in the bulletin *Consumer Price Index*, March quarter, 1964, S.B. 426, and will be published also in *Labour Report* No. 50, 1962-63.

2. **Origin.**—The list of component items and the weighting pattern of the "C" Series Retail Price Index, first adopted in 1921, were slightly revised by Conference of Statisticians in 1936, but otherwise continued almost unchanged until the index was discontinued in 1960. The reasons for this, and the circumstances which led to the present Consumer Price Index, appear from ensuing paragraphs.

From the outbreak of war in 1939 to late in 1948, periodic policy changes in regard to various war-time controls (including rationing) caused recurrent changes in consumption and in the pattern of expenditure. This rendered changes desirable but made it impracticable either to produce a new index, or to revise the old one, on any basis that would render the index more representative than it already was of the changing pattern of household expenditure in those years.

When commodity rationing had virtually ceased in the latter part of 1948, action was taken by the Statistician to collect price data of about 100 additional items and to gather information as to current consumption and expenditure patterns. This was done to facilitate review of the component items and weighting system of the "C" Series Retail Price Index, in the light of the new pattern of wage-earner expenditure and consumption that appeared to be emerging. But there supervened, in the next few years, conditions which caused wide price dispersion coupled with a very rapid rise in prices and a new sequence of changes in consumption and in the pattern of wage-earner expenditure. Under these conditions it was not possible to devise any new weighting pattern likely to be more continuously representative of conditions then current than was the existing "C" Series Retail Price Index on the 1936 revision.

A Conference of Statisticians considered the matter in June, 1953, and resolved (in part) as follows:—

- "(a) that, in view of the persistence of recurrent changes in the pattern of consumer expenditure in the post-war period, it is undesirable to make a general revision of the list of items and weighting system of the "C" Series Retail Price Index at present, unless industrial tribunals expressly desire some revision for special purposes;
- (b) that an Interim Retail Price Index be compiled with putative weights and components representative, as nearly as may be, of the post-war pattern of consumer usage and expenditure."

The "C" Series Index continued to be compiled on its pre-war basis without significant change in procedures. The Interim Retail Price Index was introduced in 1954 and continued until March quarter, 1960.

The Interim Index was a transitional index designed to measure retail price variations on the "C" Series model in terms of post-war consumption weights, as emerging in the early 1950's. It embraced a wider range of commodities and services than did the "C" Series Retail Price Index, but it did not take into account successive major changes in the pattern of expenditure and modes of living that began to occur early in 1950 and through to 1960. These changes could not, in fact, be detected and measured promptly, and incorporated into an index, concurrently with their happening. Nor was it envisaged as desirable to adopt fundamentally new procedures in price index construction until it was fully evident that far-reaching procedural changes were necessary to meet the situation that had developed between about 1950 and 1960.

In this period, home owning largely replaced house renting, the use of the motor car greatly increased and partly replaced use of public transport, and various items of electrical household equipment and television came into widespread use. The impact of these (and other) changes in usage upon the pattern of household expenditure was heightened by disparate movements in prices. Together, they rendered nugatory the attempt to meet the situation by devising a single Interim Retail Price Index. As studies progressed and new data became available, it was clear that no single list of items and no single set of fixed weights would be adequately representative as a basis for measuring retail price changes at all times throughout the post-war period. In consequence, the situation was met by compiling the Consumer Price Index constructed as a chain of linked indexes with significant changes in composition and weighting effected at short intervals during the period 1950-1960.

**3. Purpose, Scope and Composition.**—The Consumer Price Index is a quarterly measure of variations in retail prices for goods and services representing a high proportion of the expenditure of wage-earner households. The weighting pattern relates to estimated aggregates of wage-earner household expenditures and not to estimated expenditures of an "average" or individual household of specified size, type, or mode of living. In this way, it is possible to give appropriate representation to owner-occupied houses as well as rented houses and to include motor cars, television sets, and other major expenditures which relate to some households and not to others.

Consumer (retail) price indexes are sometimes loosely called "cost of living indexes" and are thought to measure changes in the "cost of living". Neither the Consumer Price Index, nor any other retail price index, measures those changes in the cost of living that result directly from changes in the mode or level of living. Changes of that kind are matters for consideration apart from price indexes, but the change in prices of goods and services is a very important part of the change in the cost of living and this part is measured by consumer (retail) price indexes.

The Consumer Price Index covers a wide range of commodities and services arranged in the following five major groups:—

- Food;
- Clothing and Drapery;
- Housing;
- Household Supplies and Equipment;
- Miscellaneous.

These groups do not include every item of household spending. It is both impracticable and unnecessary for them to do so. Prices are collected regularly for specified quantities and qualities of a large and representative selection of commodities and services. Movements in the prices of these items, when combined in suitable proportions, provide a representative measure of price change as affecting a high proportion of the expenditure of wage-earner households.

**4. Structure—a Chain of Linked Indexes.**—Substantial changes occurred in consumer usage and patterns of expenditure following the 1939-45 War. In order to keep the weighting pattern representative of current expenditures, it became necessary to construct indexes with additional items and changes in the weighting pattern at intervals, rather than on the basis of a list of items and set of weights that remained unchanged throughout the whole period covered. Five new series for short periods (namely, from the September quarter of 1948 to the June quarter of 1952, from the June quarter of 1952 to the June quarter of 1956, from the June quarter of 1956 to the March quarter of 1960, from the March quarter of 1960 to the December quarter of 1963, and from the December quarter of 1963 onwards) were therefore constructed and linked to form a continuous retail price index series to be known as the Consumer Price Index. During each period between links,



the items and weighting remained unchanged. At times of linking, the weighting pattern was altered and new items that had become significant in household expenditure were introduced.

Under this method, in effect, average percentage price movements are assessed on one pattern up to the time of the link and on another pattern thereafter. The process of linking ensures that the series reflects only price variations and not differences in cost of the old and new lists of items. The introduction of new items and weights by linking does not, of itself, raise or lower the level of the index.

#### § 4. Tabular Statements of Retail Price Index Numbers

**Consumer Price Index.**—(i) *General.* The index has been compiled for each quarter from September quarter, 1948, and for each year from 1948–49. "All Groups" index numbers and "Group" index numbers for each of the five major groups are compiled and published regularly for the six State capital cities separately and combined. The reference base for each of these indexes is: year 1952–53 = 100.0. Figures appearing after the decimal point possess little significance for general statistical purposes. They are inserted to avoid distortions that would occur in rounding off the figures to the nearest whole number.

Index numbers for each quarter are first issued in mimeographed statistical bulletins available from the Commonwealth Statistician about three weeks after the end of the quarter. These bulletins contain comment on the index and on significant price movements in that quarter. Tables showing index numbers for preceding quarters and years are presented.

(ii) *Consumer Price Index Numbers.* The following table shows Consumer Price Index Numbers (Total All Groups), for the six State capital cities separately and combined, for periods from the year 1948–49.

#### CONSUMER PRICE INDEX: ALL GROUPS INDEX NUMBERS

SIX CAPITAL CITIES, SEPARATELY AND COMBINED

(Base of each Index: Year 1952–53 = 100.0)

NOTE.—The separate city indexes measure price movements within each city individually. They do not compare price levels as between cities.

Period	Sydney	Melbourne	Brisbane	Adelaide	Perth	Hobart	Six Capital Cities(a)
<b>Year ended June—</b>							
1949 .. ..	60.5	61.0	62.1	61.6	60.6	60.7	60.9
1950 .. ..	65.6	66.2	67.1	66.2	66.2	64.7	66.0
1951 .. ..	74.5	74.6	75.1	74.7	74.4	73.3	74.6
1952 .. ..	91.9	91.0	91.8	91.4	90.4	90.4	91.4
1953 .. ..	100.0	100.0	100.0	100.0	100.0	100.0	100.0
1954 .. ..	101.6	102.0	102.0	102.3	103.0	105.0	102.0
1955 .. ..	102.3	102.0	102.9	103.5	105.2	104.9	102.6
1956 .. ..	105.7	108.1	106.3	106.9	107.9	110.2	106.9
1957 .. ..	112.9	114.0	112.0	111.1	112.9	116.9	113.1
1958 .. ..	114.5	114.4	114.4	111.9	113.6	117.0	114.2
1959 .. ..	115.3	116.6	118.2	114.5	114.7	118.7	116.0
1960 .. ..	117.8	120.0	121.2	118.0	116.9	120.8	118.9
1961 .. ..	122.1	125.9	125.4	122.9	121.2	127.5	123.8
1962 .. ..	122.6	126.3	127.3	122.5	121.6	128.1	124.3
1963 .. ..	123.2	126.2	127.7	122.1	122.2	128.0	124.5
<b>Quarter—</b>							
1960—December	121.6	125.5	125.1	122.4	120.8	127.1	123.3
1961—March ..	122.5	126.1	126.7	123.4	121.9	128.3	124.2
June ..	123.4	127.1	126.1	124.3	122.4	128.9	125.0
September	123.1	126.8	127.0	123.5	121.7	129.1	124.8
December	122.5	126.5	127.1	122.5	121.3	128.3	124.3
1962—March ..	122.4	125.9	127.7	122.1	121.5	127.5	124.1
June ..	122.3	125.9	127.3	121.9	121.8	127.5	124.0
September	122.7	126.2	127.5	121.9	122.1	127.6	124.3
December	123.2	126.2	127.6	121.9	121.7	128.2	124.4
1963—March ..	123.3	126.0	127.8	121.9	122.3	128.0	124.5
June ..	123.7	126.4	127.9	122.5	122.8	128.2	124.9
September	123.7	126.7	128.4	122.8	122.7	128.8	125.1
December	123.9	126.4	128.2	122.7	123.1	129.0	125.0
1964—March ..	124.6	127.1	129.2	123.5	124.2	129.8	125.8

(a) Weighted average.

The following table shows Consumer Price Index Group Index Numbers for the six State capital cities combined for periods from the year 1948-49.

CONSUMER PRICE INDEX: GROUP INDEX NUMBERS

WEIGHTED AVERAGE OF SIX CAPITAL CITIES

(Base of each Index: Year 1952-53 = 100.0)

NOTE.—The group indexes measure price movements of each group individually, and compare the degree of price change in the different groups.

Period	Food	Clothing and Drapery	Housing	Household Supplies and Equipment	Miscellaneous	All Groups
Year ended June—						
1949 .. ..	54.1	58.4	72.5	67.0	66.6	60.9
1950 .. ..	58.6	67.4	76.1	71.1	69.6	66.0
1951 .. ..	68.6	77.8	81.0	78.1	76.3	74.6
1952 .. ..	89.9	93.5	89.1	92.9	92.3	91.4
1953 .. ..	100.0	100.0	100.0	100.0	100.0	100.0
1954 .. ..	103.5	100.7	104.8	101.6	99.9	102.0
1955 .. ..	104.3	101.0	108.4	101.4	99.9	102.6
1956 .. ..	110.2	102.0	115.1	101.6	105.9	106.9
1957 .. ..	115.3	103.9	122.1	105.8	118.0	113.1
1958 .. ..	113.3	107.0	127.3	107.5	119.7	114.2
1959 .. ..	115.4	108.2	130.6	108.7	121.2	116.0
1960 .. ..	119.8	109.4	135.2	109.8	123.9	118.9
1961 .. ..	127.7	111.6	144.8	111.2	127.3	123.8
1962 .. ..	125.5	112.8	150.7	112.7	128.1	124.3
1963 .. ..	124.3	113.2	155.0	112.4	128.8	124.5
Quarter—						
1959—March ..	116.3	108.1	130.9	108.9	121.5	116.3
June .. ..	117.1	107.9	131.9	109.1	121.9	116.8
September ..	117.9	108.3	132.5	109.4	122.3	117.3
December ..	118.4	109.2	133.9	109.6	123.0	118.0
1960—March ..	120.3	109.5	134.8	110.0	123.8	119.0
June .. ..	122.6	110.5	139.4	110.2	126.4	121.1
September ..	126.0	110.7	141.4	110.6	126.7	122.5
December ..	126.7	111.5	144.1	111.0	127.2	123.3
1961—March ..	128.6	111.7	145.7	111.3	127.5	124.2
June .. ..	129.4	112.4	148.0	111.9	127.7	125.0
September ..	128.1	112.4	148.5	112.6	127.9	124.8
December ..	125.3	112.9	150.5	112.7	128.3	124.3
1962—March ..	124.7	112.9	151.0	112.7	128.0	124.1
June .. ..	123.7	112.9	152.6	112.8	128.2	124.0
September ..	124.2	113.0	153.3	112.8	128.4	124.3
December ..	124.3	113.2	154.7	112.4	128.7	124.4
1963—March ..	124.1	113.2	155.3	112.1	129.0	124.5
June .. ..	124.5	113.4	156.8	112.4	129.2	124.9
September ..	125.0	113.7	157.9	110.6	129.7	125.1
December ..	124.5	113.7	159.0	110.8	129.5	125.0
1964—March ..	126.0	113.8	159.9	111.1	130.1	125.8

The following table shows Consumer Price Index Group Index Numbers for each State capital city for recent years and quarters.

### CONSUMER PRICE INDEX: GROUP INDEX NUMBERS

(Base of each Index: Year 1952-53 = 100.0)

NOTE.—The index numbers hereunder are designed to measure movements in retail prices of specified groups of items for specified cities individually. They measure variations from time to time and not differences in price level as between cities nor comparative costs of groups of items.

City	Year ended June—						1963				1964
	1949	1953	1960	1961	1962	1963	Mar. Qtr	June Qtr	Sept. Qtr	Dec. Qtr	Mar. Qtr
<b>FOOD GROUP</b>											
Sydney .. ..	52.2	100.0	117.5	124.4	121.9	121.1	121.1	121.3	121.2	121.4	122.7
Melbourne .. ..	54.9	100.0	120.8	130.2	127.8	126.0	125.5	125.8	126.7	125.7	127.0
Brisbane .. ..	56.4	100.0	124.2	130.4	130.8	129.8	130.3	130.2	131.5	131.0	133.6
Adelaide .. ..	56.1	100.0	123.1	132.2	127.6	126.0	125.7	126.8	128.0	127.0	129.1
Perth .. ..	55.0	100.0	118.4	124.4	123.5	123.9	123.7	124.4	124.6	123.7	125.0
Hobart .. ..	56.0	100.0	118.5	132.1	129.0	127.2	127.2	127.0	128.7	127.9	129.1
Six Capitals(a) ..	54.1	100.0	119.8	127.7	125.5	124.3	124.1	124.5	125.0	124.5	126.0
<b>CLOTHING AND DRAPERY GROUP</b>											
Sydney .. ..	58.0	100.0	108.5	110.3	111.4	111.8	111.8	112.0	112.3	112.3	112.4
Melbourne .. ..	58.6	100.0	110.7	112.8	114.0	114.4	114.4	114.6	114.9	114.9	115.0
Brisbane .. ..	59.2	100.0	111.9	115.1	116.7	117.0	117.0	117.0	117.4	117.6	117.7
Adelaide .. ..	58.3	100.0	106.8	109.5	111.2	111.7	111.6	112.1	112.4	112.5	112.6
Perth .. ..	59.6	100.0	108.2	110.8	111.7	112.0	112.0	112.4	112.6	112.6	112.8
Hobart .. ..	58.0	100.0	110.7	112.4	114.0	114.5	114.4	114.8	115.0	114.9	114.9
Six Capitals(a) ..	58.4	100.0	109.4	111.6	112.8	113.2	113.2	113.4	113.7	113.7	113.8
<b>HOUSING GROUP</b>											
Sydney .. ..	74.2	100.0	133.8	140.7	147.5	153.4	153.8	155.9	157.4	159.3	160.4
Melbourne .. ..	76.0	100.0	135.8	151.2	157.5	161.1	161.3	162.7	163.7	163.8	164.6
Brisbane .. ..	67.1	100.0	132.6	137.6	140.5	144.0	144.2	144.5	145.1	145.0	145.2
Adelaide .. ..	68.7	100.0	140.0	148.7	153.5	154.9	154.7	156.0	156.5	158.2	158.9
Perth .. ..	62.7	100.0	133.5	141.7	146.4	150.9	151.2	152.6	153.3	155.7	156.8
Hobart .. ..	70.3	100.0	148.5	156.6	163.8	168.7	169.4	170.3	170.7	173.6	175.7
Six Capitals(a) ..	72.5	100.0	135.2	144.8	150.7	155.0	155.3	156.8	157.9	159.0	159.9
<b>HOUSEHOLD SUPPLIES AND EQUIPMENT GROUP</b>											
Sydney .. ..	67.0	100.0	109.6	111.5	113.2	112.8	112.4	112.7	111.0	111.2	111.6
Melbourne .. ..	66.1	100.0	110.9	112.5	114.1	114.0	113.8	114.0	112.1	112.4	112.7
Brisbane .. ..	68.6	100.0	110.6	111.3	113.0	112.8	112.5	112.9	111.2	111.5	111.7
Adelaide .. ..	69.5	100.0	106.0	106.1	106.7	106.2	105.9	106.0	104.0	104.3	104.5
Perth .. ..	66.5	100.0	107.1	107.3	107.3	107.0	106.9	107.0	105.0	104.9	105.2
Hobart .. ..	68.1	100.0	118.5	121.1	124.3	123.8	123.6	123.8	123.4	123.7	123.8
Six Capitals(a) ..	67.0	100.0	109.8	111.2	112.7	112.4	112.1	112.4	110.6	110.8	111.1
<b>MISCELLANEOUS GROUP</b>											
Sydney .. ..	67.7	100.0	124.0	127.1	127.9	129.3	129.8	129.8	130.0	129.6	130.1
Melbourne .. ..	64.4	100.0	125.5	129.2	129.3	129.7	129.6	130.1	130.7	130.3	131.0
Brisbane .. ..	69.2	100.0	125.6	129.5	133.3	134.4	134.3	134.4	135.2	135.0	135.4
Adelaide .. ..	67.2	100.0	118.8	121.4	121.9	121.6	121.6	121.7	122.2	121.8	122.4
Perth .. ..	67.7	100.0	120.9	125.2	125.3	125.5	126.0	126.1	126.2	128.2	130.3
Hobart .. ..	63.1	100.0	123.3	126.2	127.0	127.0	127.1	127.2	127.3	127.9	128.7
Six Capitals(a) ..	66.6	100.0	123.9	127.3	128.1	128.8	129.0	129.2	129.7	129.5	130.1

(a) Weighted average.

## § 5. Retail Price Index Numbers, 1901 to 1963

The index numbers shown below are presented as a continuous series, but they give only a broad indication of long-term trends in retail price levels. They are derived by linking a number of indexes that differ greatly in scope. The successive indexes used are: from 1901 to 1914, the "A" Series Retail Price Index; from 1914 to 1946-47, the "C" Series Retail Price Index; from 1946-47 to 1948-49, a composite of Consumer Price Index Housing Group (partly estimated) and "C" Series Index excluding Rent; and from 1948-49 to 1963, the Consumer Price Index.

## RETAIL PRICE INDEX NUMBERS, 1901 TO 1963

SIX STATE CAPITAL CITIES COMBINED

(Base: Year 1911 = 100)

Year	Index number	Year	Index number
1901	88	1933	133
1902	93	1934	136
1903	91	1935	138
1904	86	1936	141
1905	90	1937	145
1906	90	1938	149
1907	90	1939	153
1908	95	1940	159
1909	95	1941	167
1910	97	1942	181
1911	100	1943	188
1912	110	1944	187
1913	110	1945	187
1914(a)	114	1946	190
1915(a)	130	1947	198
1916(a)	132	1948	218
1917(a)	141	1949	240
1918(a)	150	1950	262
1919(a)	170	1951	313
1920(a)	193	1952	367
1921(a)	168	1953	383
1922(a)	162	1954	386
1923	166	1955	394
1924	164	1956	419
1925	165	1957	429
1926	168	1958	435
1927	166	1959	443
1928	167	1960	459
1929	171	1961	471
1930	162	1962	469
1931	145	1963	472
1932	138		

(a) November.

## § 6. International Comparisons

The following table shows index numbers of consumer (retail) prices for various countries. Except where otherwise noted, the year 1958 is taken as base (= 100). The index numbers show fluctuations in prices in each country, and do not measure relative price levels as between countries.

## INDEX NUMBERS OF CONSUMER (RETAIL) PRICES IN VARIOUS COUNTRIES

(Source: *Monthly Bulletin of Statistics* of the Statistical Office of the United Nations)  
(Base: 1958 = 100)

## ALL GROUPS INDEXES

Period	Argentina (Buenos Aires)	Australia (a)	Belgium	Brazil (Sao Paulo)	Canada	France (b)	Germany, Fed. Rep.	India	Indonesia (Dja- karta)	Ireland	Italy
1955 ..	54	91	93	60	93	83	94	82	..	88	93
1956 ..	60	96	96	73	94	85	96	90	..	92	96
1957 ..	76	99	99	87	97	-87	98	95	..	96	97
1958 ..	100	100	100	100	100	100	100	100	(c) 100	100	100
1959 ..	214	102	101	137	101	106	101	104	126	100	100
1960 ..	-272	106	102	185	102	110	102	106	169	100	102
1961 ..	309	108	103	256	103	114	105	108	209	103	104
1962 ..	396	108	104	390	104	119	109	112	582	108	109
1963 ..	492	109	106	677	106	105	112	115	1,254	110	117
1963—											
March qtr.	454	108	106	543	106	103	112	112	976	110	115
June ..	479	109	106	617	106	104	112	114	1,151	109	116
Sept. ..	494	109	106	717	107	106	111	117	1,278	109	117
Dec. ..	539	109	108	836	107	107	112	119	1,610	112	119

Period	Japan	Nether- lands	New Zea- land	Norway	Pakistan (Kara- chi)	Philippines (Manila)	Republic of South Africa (d)	Sweden	Switzer- land	United King- dom	United States of America
1955 ..	97	91	91	89	85	93	92	87	95	89	93
1956 ..	97	92	94	93	89	95	94	91	96	-94	94
1957 ..	100	98	96	95	97	97	97	95	98	97	97
1958 ..	100	100	100	100	100	100	-100	100	100	100	100
1959 ..	101	102	104	-102	97	99	101	101	99	101	101
1960 ..	105	103	105	102	103	103	103	105	101	102	102
1961 ..	110	105	106	105	105	105	105	107	103	105	103
1962 ..	118	108	109	111	104	111	106	112	107	-110	105
1963 ..	127	113	111	114	105	117	107	115	111	112	106
1963—											
March qtr.	124	112	110	114	104	113	107	114	110	112	105
June ..	127	114	111	114	106	114	107	115	110	112	105
Sept. ..	128	112	112	113	106	118	108	116	111	111	106
Dec. ..	128	113	113	113	106	123	108	116	113	112	107

(a) Consumer Price Index converted to base 1958 = 100 by Commonwealth Statistician. (b) Beginning 1963, new index—base: 1962 = 100. Before 1963, index for Paris. (c) Base: Average of March–December, 1958 = 100. (d) Index for Europeans only.

NOTE.—Symbol — on each side of an index number (e.g. -95-) indicates that two series have been linked at that period. Symbol — between two index numbers indicates that it is not possible to link two series (because of change in scope, etc.) and therefore the index numbers are not comparable with each other even though they are shown on the same base period.

## WHOLESALE PRICES AND PRICE INDEXES

## § 1. General

Two indexes of wholesale prices have been compiled by the Commonwealth Bureau of Census and Statistics. These are:—

- (i) The Melbourne Wholesale Price Index;
- (ii) The Wholesale Price (Basic Materials and Foodstuffs) Index.

A brief note on the Melbourne Wholesale Price Index, which is now obsolete, is given in § 3 on page 440. After reviewing the list of items and weighting of the Melbourne Wholesale Price Index, the 1930 Conference of Statisticians resolved that a new index of wholesale prices of basic materials and foodstuffs should be compiled. This index, the Wholesale Price (Basic Materials and Foodstuffs) Index, is compiled monthly and extends back to 1928.

## § 2. Wholesale Price (Basic Materials and Foodstuffs) Index

1. **Price Quotations.**—The prices used in the index have in the main been obtained directly from manufacturers and merchants, and, with a few important exceptions, from Melbourne sources. Apart from locally-produced building materials and one or two minor commodities, however, the price movements may be taken as representative of variations in wholesale prices of basic materials in most Australian markets.

Commodities in the index are priced in their primary or basic form wherever possible and in respect of imported materials as nearly as may be at the point where they first make effective impact on the local price structure. Thus the prices of imported goods are not taken at the time of import, but rather on an ex-bond (or into factory) basis.

Broadly, where home-consumption prices exist for local products, they have been used in this index. During the year 1950–51, wool for local manufacture was subsidized, and the home-consumption price for wool was used to calculate the index numbers shown in the table on page 440.

2. **Commodities and Grouping.**—For purposes of this index, “basic” materials (as opposed to certain of the foodstuffs) are commodities in the primary or basic forms in which they first enter into productive processes carried out in Australia. The list of items is divided into seven main groups, each of which is sub-divided into goods which are mainly imported, and goods which are mainly home-produced. The percentage of the total aggregate in 1962–63 contributed by each group was as follows:—Metals and coal, 17.46; oils, fats and waxes, 8.06; textiles, 3.32; chemicals, 3.79; rubber and hides, 1.56; building materials, 11.03; foodstuffs and tobacco, 54.78. Goods principally imported comprised 23.63 per cent. of the total aggregate in 1962–63, and goods principally home-produced, 76.37.

A full list of the commodities and the quantity-multipliers (weights) is published in *Labour Report* No. 49, 1961, page 40.

3. **Method of Construction.**—The index is constructed on the simple aggregative fixed-weights formula. The weights (quantity-multipliers) are based on estimates of the average annual consumption of the commodities in Australia during the period 1928–29 to 1934–35 inclusive. Changes in usage, changes of category as between “imported” and “home-produced” for some commodities, and changes in the industrial structure have affected the validity of some of the weights in the index.

During 1956, supplies and prices of potatoes and onions fluctuated violently between abnormally wide limits. These fluctuations were so great as to dominate the movement of the sections of the index in which these items were included, namely, “Foodstuffs and Tobacco”, “Goods Principally Home-produced” and “Total, All Groups”. In the circumstances, neither seasonal adjustment nor conversion of the index to a “changing weights” formula could be applied to eliminate these fluctuations. Accordingly, in order to provide a representative measure of general trend in wholesale prices, the index was reconstructed as from July, 1936, by omitting potatoes and onions.

Consideration is being given to the enlargement of the index to cover additional groups and to revision of the weighting pattern of the index.

4. **Index Numbers.**—Index numbers for each group of commodities and for all groups combined for the index of wholesale prices of basic materials and foodstuffs are given in the following table. Current index numbers, on the base: Average of three years ended June, 1939 = 100, are published monthly in the mimeographed statistical bulletin *Wholesale Price (Basic Materials and Foodstuffs) Index* and in the *Monthly Review of Business Statistics*. A table showing index numbers computed to the base 1928 = 100 is published in the *Labour Report*.

## WHOLESALE PRICE (BASIC MATERIALS AND FOODSTUFFS) INDEX NUMBERS

(Base of each Index: Average of 3 years ended June, 1939 = 100)

Period	Basic Materials							Food-stuffs and Tobacco (a)	Basic Materials and Foodstuffs		
	Metals and Coal	Oils, Fats and Waxes	Textiles	Chemicals	Rubber and Hides	Building Materials	Total		Goods principally imported (b)	Goods principally home produced (a)	Total, All Groups (a)
1928-29	127	106	129	121	115	95	114	107	91	118	110
1929-30	126	111	99	116	87	94	107	110	94	118	111
1930-31	116	117	80	117	73	96	105	91	100	99	99
1931-32	108	113	77	119	74	95	101	86	100	92	95
1932-33	104	109	75	119	69	95	98	80	97	87	90
1933-34	103	84	102	111	80	94	92	84	89	89	90
1934-35	97	90	78	102	77	93	89	87	92	89	90
1935-36	92	95	100	99	88	93	90	92	95	92	93
1936-37	96	99	118	99	111	99	99	98	99	98	99
1937-38	101	101	100	100	97	104	102	102	102	101	101
1938-39	103	100	82	101	92	97	99	101	99	100	100
1939-40	105	115	104	107	116	108	109	99	111	101	104
1940-41	107	137	111	124	126	128	122	107	133	106	114
1941-42	117	151	118	137	135	135	133	116	153	112	124
1942-43	129	167	147	142	138	163	149	126	176	120	136
1943-44	131	170	150	143	140	174	153	130	182	122	140
1944-45	131	168	152	143	140	175	152	132	182	124	141
1945-46	130	156	152	142	140	177	149	136	178	127	142
1946-47	132	145	191	140	131	180	149	139	177	130	144
1947-48	146	161	283	148	126	190	166	154	192	145	159
1948-49	185	173	342	159	130	198	188	174	201	172	180
1949-50	214	184	434	187	143	225	214	196	223	196	204
1950-51	256	196	641	242	292	268	264	229	256	240	244
1951-52	343	220	577	314	298	370	321	276	288	300	297
1952-53	392	234	607	350	224	404	350	293	292	331	319
1953-54	388	222	566	323	191	363	332	308	271	339	319
1954-55	391	214	510	314	246	372	330	315	277	340	322
1955-56	404	220	456	317	328	415	345	325	292	352	334
1956-57	409	241	520	344	302	463	367	324	311	357	344
1957-58	398	238	437	349	280	453	355	325	301	355	339
1958-59	392	231	362	327	293	423	340	332	283	358	336
1959-60	395	225	403	331	379	431	347	348	281	375	348
1960-61	399	222	387	331	341	439	346	372	278	394	360
1961-62	392	212	400	333	302	439	340	332	270	363	336
1962-63	388	209	432	317	262	439	336	342	272	368	340
1963-64—											
July ..	385	209	468	316	227	449	338	359	271	382	349
August	383	209	458	283	223	462	336	359	274	380	348
September	383	207	461	283	213	462	335	359	274	379	348
October	385	207	476	283	210	468	338	351	276	374	345
November	384	207	506	283	216	468	339	345	276	370	342
December	383	207	501	283	219	469	339	339	276	366	339
January	381	208	506	283	220	470	339	341	275	368	340
February	381	208	511	284	220	484	342	343	277	370	343
March ..	382	208	512	284	220	486	343	350	277	376	347

(a) Excludes potatoes and onions from 1936-37. See para. 3 on p. 439. (b) Represents only such imported commodities as are included in the Wholesale Price Index and does not measure charges in the prices of all imports.

## § 3. Melbourne Wholesale Price Index

An index of Melbourne wholesale prices was first compiled in 1912. It related chiefly to basic materials and foods weighted in accordance with consumption in the years immediately preceding that date. Neither the list of items nor the weighting was varied, except for some changes in the building materials group in 1949. The series has some historical significance as a measure of changes in the prices, since the year 1861, of its component items combined in the proportions in which they were in common use about the year 1910. A description of the index and a list of the commodities included in it were published in *Labour Report* No. 38, 1949, pages 43-45. Index numbers up to the year 1961, the last period for which the index was compiled, were published in *Official Year Book* No. 48, 1962.

## EXPORT PRICES AND PRICE INDEXES

## § 1. Previous Export Price Indexes

1. **1901 to 1917.**—An annual index of export prices has been published by the Bureau since its inception. The first index was compiled annually for the years 1901 to 1916–17. The method of computation was to select all articles of export which were recorded by units of quantity, and to apply to the quantities of these export commodities actually exported during any year the average price per unit ruling in the year 1901 (adopted as the base year). The "total value" so obtained was divided into the total recorded value of these exports for the year concerned and the result (multiplied by 1,000) was the export price index number for that year.

2. **1918 to 1930.**—The method was changed in 1918. Weights for all principal exports were calculated, based on the average quantities of exports for the nineteen and a half years from 1st January, 1897, to 30th June, 1916. To these weights were applied the "average unit export values" of each export in successive years, and a weighted aggregative index of "price" variations was derived. This index was published for the years 1897 to 1929–30. Particulars of this index were last published in Official Year Book No. 24, page 147.

3. **1928 to 1962.**—(i) *General.* After the 1914–18 War, the relative importance of different exports changed considerably, and the pattern of exports varied considerably from year to year. For these reasons, two new series of monthly export price indexes—one using fixed weights and the other using changing weights—were published in 1937, compiled back to 1928. The data on which both series were based differed from those used in the previous series of annual index numbers. The most important change was the use of actual (or calculated) export prices in place of the "unit values" declared at the Customs. Brief notes on these two indexes are given below. A full description of both indexes was last published in Official Year Book No. 48, 1962, pages 500–4.

(ii) *The Fixed Weights Index.* This was a weighted aggregative index of price variations. It was compiled back to 1928, with that year taken as base. In later years, it was published on the base: Average of three years ended June, 1939 = 100. The original weights (used for the period 1928 to 1936) were the average annual exports (production in the case of gold) during the five years 1928–29 to 1932–33. From July, 1936, the weights were revised and were based on average annual exports (production in the case of gold) during the three years 1933–34 to 1935–36. This index was published from 1937 until July, 1962, after which it was replaced by the current Export Price Index described in § 2 below.

(iii) *The Changing Weights Index.* This index was designed for shorter period comparisons—from one or more months of the current year to the corresponding months of the previous year. In computing these index numbers, the "quantity multipliers" were the quantities actually exported (sold, in some cases) in the months (or periods) to which the index numbers relate. This index was discontinued in 1962.

## § 2. The Current Export Price Index

1. **General.**—The current Export Price Index was first published in August, 1962, but index numbers were compiled back to July, 1959. The reference base of this index is: Year 1959–60 = 100. This index is a fixed-weights index, and its purpose (as was that of the previous fixed-weights index) is to provide comparisons monthly, over a limited number of years, of the level of export prices of the selected items, making no allowance for variations in quantities exported. The index numbers are thus measures of price change only. The price series used in the index relate to specified standards for each commodity and in most cases are combinations of prices for a number of representative grades, types, etc. For some commodities, price movements in the predominant market, or markets, are used, while for other commodities average realizations in all export markets are used. As nearly as possible, prices used are on the basis f.o.b. at the main Australian ports of export. The index is compiled by the method known as "weighted average of price relatives".

2. **Composition and Weighting.**—There are 29 items in the current index compared with 20 items in the previous index. These 29 items have constituted approximately 83 per cent. of the total value of Australian exports in recent years. (The 20 items in the previous index, which in pre-war years constituted about 85 per cent. of total exports, and for most of the post-war period averaged about 80 per cent. of total exports, in recent years constituted about 73 per cent. of total exports.) The weights for the current index are based on average



annual values of exports during the five years 1956-57 to 1960-61, whereas the weights for the previous index were based on average annual exports during the three years 1933-34 to 1935-36. A comparison of the old and new indexes, showing percentage contributions of the various items to the total index in the year 1959-60, is set out in the table below.

**COMPARISON OF PREVIOUS AND CURRENT EXPORT PRICE INDEXES**  
PERCENTAGE CONTRIBUTION OF ITEMS TO ALL GROUPS INDEXES IN 1959-60

Item	Percentage contribution to All Groups Index	
	Previous Index	Current Index
Wool .. .. .	51.24	50.73
Beef .. .. .	4.68	6.71
Lamb .. .. .	2.22	0.76
Mutton .. .. .	0.36	0.59
Pork .. .. .	0.32	(a)
Canned beef .. .. .	(a)	1.65
Canned mutton .. .. .	(a)	0.21
Processed milk .. .. .	(a)	1.36
Butter .. .. .	9.46	4.02
Cheese .. .. .	(a)	0.64
Eggs .. .. .	(a)	0.47
Wheat and flour .. .. .	15.02	10.11
Barley .. .. .	(a)	1.77
Oats .. .. .	(a)	0.66
Sultanas .. .. .	1.21	1.06
Raisins .. .. .	0.10	(b)
Currants .. .. .	0.35	0.12
Canned pineapples .. .. .	(a)	0.20
Canned apricots .. .. .	(a)	0.11
Canned peaches .. .. .	(a)	0.37
Canned pears .. .. .	(a)	0.68
Sugar .. .. .	2.89	3.99
Cattle hides .. .. .	0.55	0.72
Calf skins .. .. .	0.09	(c)
Tallow .. .. .	0.51	0.54
Coal .. .. .	(a)	0.63
Iron and steel .. .. .	(a)	3.48
Copper .. .. .	0.27	1.57
Tin .. .. .	0.27	(a)
Zinc .. .. .	2.50	1.23
Lead .. .. .	4.07	2.97
Silver .. .. .	0.61	0.66
Gold .. .. .	3.28	1.99
<b>Total</b> .. .. .	<b>100.00</b>	<b>100.00</b>

(a) Not included. (b) Included in weight for sultanas. (c) Included in weight for cattle hides.

The following table sets out a list of the items, and groups of items, in the new index, together with the percentage contribution of each item and group to the All Groups index in the reference base year 1959-60. The weights used for some of the items are adjusted to cover some related commodities which are not priced directly. The most important instances of this are wool, which includes wool exported on sheepskins, and copper, zinc, lead and silver, which include the estimated metallic content of ores and concentrates exported. In the previous index, the weight for gold was derived from production instead of export figures. For the period 1956-57 to 1960-61, production and exports of gold were similar, and therefore in the new index the weight for gold (as for the other items) is based on average annual exports during the period.

## EXPORT PRICE INDEX

LIST OF ITEMS AND PERCENTAGE CONTRIBUTION OF ITEMS AND GROUPS TO  
ALL GROUPS INDEX IN 1959-60

Group and item	Percentage contribution to All Groups Index
<i>Wool</i> .. .. .	50.73
<b>Meats—</b>	
Beef .. .. .	6.71
Lamb .. .. .	0.76
Mutton .. .. .	0.59
Canned—Beef .. .. .	1.65
Mutton .. .. .	0.21
<i>Total, Meats</i> .. .. .	9.92
<b>Dairy Produce—</b>	
Processed milk .. .. .	1.36
Butter .. .. .	4.02
Cheese .. .. .	0.64
Eggs .. .. .	0.47
<i>Total, Dairy Produce</i> .. .. .	6.49
<b>Cereals—</b>	
Wheat and flour .. .. .	10.11
Barley .. .. .	1.77
Oats .. .. .	0.66
<i>Total, Cereals</i> .. .. .	12.54
<b>Dried and Canned Fruits—</b>	
Dried—Sultanas .. .. .	1.06
Currants .. .. .	0.12
Canned—Pineapples .. .. .	0.20
Apricots .. .. .	0.11
Peaches .. .. .	0.37
Pears .. .. .	0.68
<i>Total, Dried and Canned Fruits</i> .. .. .	2.54
<i>Sugar</i> .. .. .	3.99
<b>Hides and Tallow—</b>	
Cattle hides .. .. .	0.72
Tallow .. .. .	0.54
<i>Total, Hides and Tallow</i> .. .. .	1.26
<b>Metals and Coal—</b>	
Coal .. .. .	0.63
Iron and steel .. .. .	3.48
Copper .. .. .	1.57
Zinc .. .. .	1.23
Lead .. .. .	2.97
Silver .. .. .	0.66
<i>Total, Metals and Coal</i> .. .. .	10.54
<i>Gold</i> .. .. .	1.99
<b>Total</b> .. .. .	<b>100.00</b>

3. Index Numbers.—Index numbers for each of the groups and "All Groups" are shown in the table below. The yearly index numbers are simple averages of the twelve monthly index numbers in each year.

## EXPORT PRICE INDEX NUMBERS

(Base of each Index: Year 1959-60 = 100)

Period	Wool	Meats	Dairy Produce	Cereals	Dried and Canned Fruits	Sugar	Hides and Tallow	Metals and Coal	Gold	All Groups
1959-60 ..	100	100	100	100	100	100	100	100	100	100
1960-61 ..	92	104	82	99	99	101	92	97	100	95
1961-62 ..	97	100	81	106	95	91	84	91	100	96
1962-63 ..	104	101	88	107	p 90	107	72	89	100	p101
1960-61—										
July ..	92	105	89	99	96	98	88	100	100	95
August ..	85	103	86	98	96	99	88	99	100	91
September ..	86	102	82	102	98	102	95	98	100	92
October ..	85	101	85	102	98	103	97	97	101	92
November ..	89	98	84	100	99	98	96	97	101	93
December ..	88	99	83	99	99	99	92	95	101	92
January ..	89	100	82	98	99	97	92	95	101	92
February ..	92	108	80	98	100	98	92	95	101	95
March ..	94	110	78	98	100	98	96	96	100	96
April ..	101	109	78	99	98	101	94	95	100	99
May ..	101	107	78	99	101	100	90	97	100	99
June ..	99	108	78	99	101	117	88	95	100	99
1961-62—										
July ..	(a) 99	101	78	100	100	110	90	93	100	98
August ..	99	101	78	101	98	102	92	93	101	98
September ..	98	100	78	101	98	94	90	91	100	96
October ..	94	103	77	102	96	90	86	90	100	94
November ..	92	100	79	102	95	87	83	91	100	93
December ..	92	99	84	105	96	89	83	91	100	94
January ..	92	101	83	107	95	87	83	90	100	94
February ..	98	101	83	108	93	82	82	91	100	97
March ..	99	97	83	107	93	84	81	91	100	97
April ..	99	97	82	111	93	90	81	90	100	98
May ..	99	97	82	112	93	85	79	90	100	98
June ..	99	97	86	112	92	87	78	90	100	98
1962-63—										
July ..	98	99	85	112	90	86	76	89	100	97
August ..	92	101	85	112	91	88	75	86	100	94
September ..	92	102	85	111	91	86	74	87	100	94
October ..	96	102	85	109	91	92	74	86	100	96
November ..	98	102	88	110	91	91	74	88	100	97
December ..	101	101	88	105	91	94	74	88	100	98
January ..	112	101	88	105	91	93	73	88	100	104
February ..	110	101	88	104	91	109	70	91	100	104
March ..	112	99	90	104	89	128	69	91	100	105
April ..	112	98	90	104	88	121	69	91	100	105
May ..	112	100	90	104	88	128	68	90	100	105
June ..	115	102	93	103	p 89	165	68	95	100	p109
1963-64—										
July ..	114	103	94	103	p 92	164	67	94	100	p109
August ..	110	103	94	102	p 93	165	66	96	100	p107
September ..	112	105	94	102	p 97	159	64	94	100	p108
October ..	117	105	94	107	p 98	163	68	96	100	p111
November ..	128	103	94	107	p 99	198	74	96	100	p118
December ..	126	p100	94	109	p100	187	74	101	100	p117
January ..	128	p 99	92	111	p100	rp205	73	104	100	p119
February ..	130	p101	91	111	p100	p191	73	104	100	p120
March ..	p130	p105	91	109	p 98	p192	74	p104	100	p120

(a) Nominal.

4. Link between Current and Previous Indexes.—In order to show approximate movements in export prices over a long period, the "All Groups" indexes of the previous and current series have been linked together at the year 1959-60, the earliest year for which the new index has been compiled. The table below shows this linked series and a long-term price index for wool, which is the most important single component in the movement of the "All Groups" index.

## EXPORT PRICE INDEX NUMBERS—LINKED SERIES

(Base of each Index: Year 1959-60 = 100)

Period	Wool	All Groups
1936-37 .. .. .	29	30
1937-38 .. .. .	23	27
1938-39 .. .. .	19	22
1939-40 .. .. .	23	26
1940-41 .. .. .	24	28
1941-42 .. .. .	24	28
1942-43 .. .. .	28	30
1943-44 .. .. .	28	31
1944-45 .. .. .	28	34
1945-46 .. .. .	28	39
1946-47 .. .. .	41	54
1947-48 .. .. .	68	75
1948-49 .. .. .	86	88
1949-50 .. .. .	111	101
1950-51 .. .. .	235	173
1951-52 .. .. .	133	125
1952-53 .. .. .	145	128
1953-54 .. .. .	145	125
1954-55 .. .. .	127	114
1955-56 .. .. .	109	105
1956-57 .. .. .	136	117
1957-58 .. .. .	111	102
1958-59 .. .. .	85	90
1959-60 .. .. .	100	100
1960-61 .. .. .	92	95
1961-62 .. .. .	97	96
1962-63 .. .. .	104	p 101
1963-64—		
July .. .. .	114	p 109
August .. .. .	110	p 107
September .. .. .	112	p 108
October .. .. .	117	p 111
November .. .. .	128	p 118
December .. .. .	126	p 117
January .. .. .	128	p 119
February .. .. .	130	p 120
March .. .. .	p 130	p 120

## CONTROL OF PRICES DURING AND SINCE THE 1939-45 WAR

An account of the measures taken by the Commonwealth Government to control prices from September, 1939, until 29th May, 1948 (the date of the Prices Referendum), was given in Official Year Book No. 37, pages 458-64. Subsequent measures for price control by the States consequent upon the rejection of the proposal in the Prices Referendum of 29th May, 1948, that permanent power to control rents and prices be conferred on the Commonwealth Government, are described in issues up to No. 49. Particulars of the amounts expended by the Commonwealth Government for the purpose of stabilizing prices are given in Year Book No. 38, page 414, and in later issues.

## WAGES, EARNINGS AND HOURS

## § 1. Arbitration and Wages Boards Acts and Associated Legislation

1. **General.**—Particulars regarding the operation of Commonwealth and State Laws for the regulation of wages, hours and other conditions of employment were first compiled for the year 1913, and revised particulars have appeared annually in the *Labour Report* and in issues of the Official Year Book prior to No. 38. A summary of the Commonwealth legislation and brief particulars of Commonwealth and State industrial tribunals are given in the following paragraphs.

2. **Commonwealth.**—Under placitum (xxxv) of section 51 of the Commonwealth of Australia Constitution, the Commonwealth Parliament is empowered to make laws with respect to "conciliation and arbitration for the prevention and settlement of industrial disputes extending beyond the limits of any one State". The Parliament has made such a law, namely the *Conciliation and Arbitration Act 1904-1961*.

This Act defines an "industrial dispute" as "(a) A dispute (including a threatened, impending or probable dispute) as to industrial matters which extends beyond the limits of any State; and (b) a situation which is likely to give rise to a dispute as to industrial matters which so extends; and includes—(c) such a dispute in relation to employment in an industry carried on by, or under the control of, a State or an authority of a State; (d) a dispute in relation to employment in an industry carried on by, or under the control of, the Commonwealth or an authority of the Commonwealth, whether or not the dispute extends beyond the limits of any one State; and (e) a claim which an organization is entitled to submit to the Commission under section eleven A of the *Public Service Arbitration Act 1920-1960* or an application or matter which the Public Service Arbitrator has refrained from hearing, or from further hearing, or from determining under section fourteen A of that Act, whether or not there exists in relation to the claim, application or matter a dispute as to industrial matters which extends beyond the limits of any one State."

The Conciliation and Arbitration Act was extensively amended by an Act (No. 44 of 1956) assented to on 30th June, 1956. This amendment altered the structure of the arbitration machinery by separating the judicial functions from the conciliation and arbitration functions. The Commonwealth Industrial Court was established to deal with judicial matters under the Act and the Commonwealth Conciliation and Arbitration Commission to handle the functions of conciliation and arbitration. A summary of the provisions of the *Conciliation and Arbitration Act 1904-1961* is given in the following paragraphs.

The Commonwealth Industrial Court is at present composed of a Chief Judge and three other Judges. The jurisdiction of the Court shall be exercised by not less than two Judges, except in the following circumstances. A single Judge may exercise the jurisdiction of the Court with respect to the dismissal or injury of an employee on account of industrial action, interpretation of awards, questions concerning eligibility of membership of an organization, disputes between an organization and its members and a prescribed matter of practice or procedure. A single Judge may refer a question of law for the opinion of the Court constituted by not less than two Judges. The Court is a Superior Court of Record with the same power to punish contempts of its power and authority as is possessed by the High Court. In general, decisions of the Industrial Court are final; however, an appeal lies to the High Court, but only when the latter grants leave to appeal. The Act provides for the registration of associations of employees and employers, and for inquiries to be held concerning disputed elections in organizations; and certain powers in connexion therewith are, by the Act, given to the Industrial Court. Provision is also made for the Commission to exercise the powers of the Court with regard to an application for cancellation of registration of an organization. Any such change of jurisdiction must be notified by proclamation. This provision could be used if the powers of the Court in this regard were declared, in whole or in part, to be invalid.

Special provision is made concerning the right of audience before the Commonwealth Industrial Court. Briefly, except in proceedings which, in general, involve questions of law or offences against the Act, parties are able to elect whether to appear personally or to be represented by lawyers or officials. Even in proceedings involving questions of law, except appeals from decisions by other Courts to the Industrial Court, on matters arising under this Act or the *Public Service Arbitration Act 1920-1960*, the parties may, if they wish and the Court grants leave, be represented by officials.

The Commonwealth Conciliation and Arbitration Commission at present consists of a President, five Deputy Presidents, a Senior Commissioner, ten Commissioners and three Conciliators. The Commission is empowered to prevent or settle industrial disputes by conciliation or arbitration, and to make suggestions and to do such things as appear right and proper for (a) effecting a reconciliation between parties to industrial disputes; (b) preventing and settling industrial disputes by amicable agreement; and (c) preventing and settling, by conciliation or arbitration, industrial disputes not prevented or settled by amicable agreement. The Commission may exercise its powers of its own motion or on the application of a party.

The President may assign a Commissioner to deal with industrial disputes relating to particular industries, or members of the Commission to deal with a particular industrial dispute. However, subject to the approval of the President, it is the duty of the Senior Commissioner to organize and allocate the work of the Commissioners and Conciliators.

When an industrial dispute occurs or is likely to occur, a Commissioner shall take steps for the prompt prevention or settlement of that dispute by conciliation or, if in his opinion conciliation is unlikely to succeed or has failed, by arbitration. A Commissioner may arrange with the Senior Commissioner for a Conciliator to assist the parties to reach an amicable agreement and shall do so if the parties so request. If an agreement is reached, a memorandum of its terms shall be made in writing, and may be certified by the Commission. A certified memorandum shall have the same effect as an award.

Only the Commission in Presidential Session, that is, the Commission constituted by at least three presidential members nominated by the President, has the power to make awards, or to certify agreements, concerning standard hours, basic wages and long-service leave.

Upon application by a party to an industrial dispute, a Commissioner shall consult with the President as to whether in the public interest any matter in dispute should be dealt with by a Commission constituted by not less than three members nominated by the President, at least one of whom shall be a presidential member and one, where practicable, the Commissioner concerned. The President may direct the Commission to hear the matter in dispute; however, after consideration, the Commission may refer the matter in dispute back for determination to the Commissioner originally dealing with the dispute.

An appeal against the decision of a Commissioner shall be heard by not less than three members nominated by the President, of whom at least two shall be presidential members of the Commission. However, an appeal will not be heard unless the Commission considers it is necessary as a matter of public interest. The President, after taking account of the views of the parties to a dispute, may appoint a member of the Commission to take evidence on behalf of a presidential bench of the Commission, so that it may have this evidence before it when it commences its hearing.

Full benches of the Commission not constituted by the same persons may sit in joint session at the direction of the President when he considers it desirable and has the opinion that a question is common to the matters before those benches. A joint session may be held whether the benches concerned are constituted pursuant to the Conciliation and Arbitration Act or the Public Service Arbitration Act, and whether they are constituted to hear references or appeals. However, it is left to each appropriate full bench to determine any of the matters before it.

Provision is also made in the Act for a presidential member of the Commission to handle industrial matters in connexion with the maritime industries, the Snowy Mountains Area and the stevedoring industry, except in those matters for which the Act requires that the Commission shall be constituted by more than one member.

The Commonwealth Conciliation and Arbitration Commission also deals with disputes and industrial matters, interstate or intra-state, associated with undertakings or projects of the Commonwealth Government which have been declared by the Minister to be Commonwealth projects for the purposes of this Act. In effect, this places employees of Commonwealth projects, so declared, under the jurisdiction of the Commission. The Minister has the power to exempt certain persons or classes of persons working on these projects from the jurisdiction of the Commission.

The Commission may make an award in relation to an industrial dispute concerning employees of a Commonwealth project or when the Public Service Arbitrator refrains from

dealing with claims made by a Public Service employee organization or consents to the claims being presented to the Commission, though such an award may be inconsistent with a law of the Commonwealth relating to salaries, wages, rates of pay or terms or conditions of service of employees in the Public Service as defined by section three of the *Public Service Arbitration Act* 1920-1960, not being the *Commonwealth Employees' Compensation Act* 1930-1962, the *Commonwealth Employees' Furlough Act* 1943-1959, the *Superannuation Act* 1922-1963 or any other prescribed Act.

The Act provides that where a State law, or an order, award, decision or determination of a State industrial authority is inconsistent with or deals with a matter dealt with in an award of the Commission, the latter shall prevail, and the former, to the extent of the inconsistency or in relation to the matter dealt with, shall be invalid.

For further particulars regarding Commonwealth arbitration legislation, see the annual *Labour Report*.

For information concerning the Australian Stevedoring Industry Authority and the Coal Industry Tribunal see the Transport and Communication chapter and the Mineral Industry chapter respectively of this Year Book, and for further information on the Commonwealth Public Service Arbitrator see the *Labour Report*.

3. States.—In each State, Industrial Tribunals have been established to regulate and arbitrate in industrial matters. Brief particulars are given in the following paragraphs.

(i) *New South Wales*. The controlling authority is the Industrial Commission of New South Wales, consisting of a President and seven other Judges. Subsidiary tribunals are the Conciliation Commissioners, the Apprenticeship Commissioner, Conciliation Committees and Apprenticeship Councils constituted for particular industries. Each Conciliation Committee consists of a Conciliation Commissioner as Chairman and equal numbers of representatives of employers and employees. The Apprenticeship Commissioner and the members of the Conciliation Committee for an industry constitute the Apprenticeship Council for the industry. These subsidiary tribunals may make awards binding on industries, but an appeal to the Industrial Commission may be made against any award. Special Commissioners with conciliatory powers and limited arbitration powers may be appointed. Compulsory control commenced in 1901, after the earlier Acts of 1892 and 1899 providing for voluntary submission of matters in dispute had proved abortive.

(ii) *Victoria*. The authorities are separate Wages Boards for the occupations and industries covered, each consisting of a chairman and equal numbers of representatives of employers and employees, and a Court of Industrial Appeals, the latter presided over by a Judge of the County Court. The system was instituted in the State in 1896, and represented the first example in Australia of legal regulation of wage rates.

(iii) *Queensland*. Legal control was first instituted in 1907 with the passing of the Wages Board Act. The *Industrial Conciliation and Arbitration Act* 1961 established the Industrial Conciliation and Arbitration Commission and preserved and continued in existence the Industrial Court. The Industrial Court is constituted by the President (a Judge of the Supreme Court of Queensland) sitting alone, and the Full Industrial Court by the President and two Commissioners. The Conciliation and Arbitration Commission is constituted by a Commissioner sitting alone; and the Full Bench of the Commission by at least three Commissioners. Not more than five Commissioners shall be appointed. A Commissioner shall not be capable of being a member of the Executive Council or of the Legislative Assembly, and shall not take part in the management of any business.

(iv) *South Australia*. The principal tribunal is the Industrial Court of South Australia, composed of the President (a person eligible for appointment as a Judge of the Supreme Court) who may be joined by two assessors employed in the industry concerned; Deputy Presidents may also be appointed. There are also Industrial Boards, for the various industries, consisting of a chairman and equal numbers of representatives of employers and employees. Another tribunal provided for under the Industrial Code is the Board of Industry, composed of a President, who shall be the President or a Deputy President of the Industrial Court, and four Commissioners. Broadly speaking, the functions of these three tribunals are:—(i) the Industrial Court delivers awards concerning workers who do not

come under the jurisdiction of the Industrial Boards, appoints Boards of Reference and hears appeals from decisions of Industrial Boards and Boards of Reference; (ii) the determinations of the Industrial Boards apply to most industries in the metropolitan area; however, for employees of the Public Service, Railways, and councils of a municipality or district, determinations of Industrial Boards apply to the whole of the State; (iii) the Board of Industry declares, for the whole of the State, the "living wage".

(v) *Western Australia.* The system of control comprises an Arbitration Court, Industrial Boards, Conciliation Committees and a Conciliation Commissioner. Employers and employees are equally represented on both Boards and Committees. The Court consists of a Judge of the Supreme Court and two members. Commissioners may also be appointed by the Minister for the settlement of particular disputes. Legal control dates back to 1900.

In November, 1963, an Act was passed replacing the Arbitration Court and Conciliation Commissioners with a four-man Industrial Commission and establishing a Court of Industrial Appeal to decide judicial matters. The Act became effective in February, 1964. Further particulars will be published in the next issue of this Year Book.

The Western Australian Coal Industry Tribunal, established under the *Mining Act* 1904-1963, has power to determine any industrial matter in the coal mining industry. It consists of a chairman and four other members (two representatives each of employers and employees). Boards of reference may be appointed by the Tribunal and decisions of the Tribunal may be reviewed by the Court of Arbitration on the application of a party subject to the decision.

(vi) *Tasmania.* The authority consists of Wages Boards for separate industries, comprising a Chairman (who is common to all Wages Boards), appointed by the Governor, and equal numbers of representatives of employers and employees, appointed by the Minister administering the Act. The system was instituted in 1910.

## § 2. Rates of Wage and Hours of Work

1. *General.*—This section contains indexes (with base: year 1954 = 100) of minimum weekly and hourly rates of wage and standard hours of work for adult males and adult females for Australia and each State. In the indexes, there are 15 industry groups for adult males and 8 industry groups for adult females. For relevant periods, these indexes replace cognate indexes (base: year 1911 = 1,000 for males and April, 1914 = 1,000 for females) published in issues prior to No. 46, 1960. The current indexes are based on the occupation structure existing in 1954. Weights for each industry and each occupation were derived from two sample surveys made in that year. The first was the Survey of Awards in April, 1954, which showed the number of employees covered by individual awards, determinations and agreements. This provided employee weights for each industry as well as a basis for the Survey of Award Occupations made in November, 1954. This second survey showed the number of employees in each occupation within selected awards, etc., thereby providing occupation weights.

The industrial classification used in the current indexes, shown in the table on page 451, does not differ basically from the previous classification, the alterations being largely in the arrangement of classes. The former Pastoral, Agricultural, etc., group and the Domestic part of the group Amusement, Hotels, Personal Service, etc. are excluded from the current indexes because of coverage difficulties.

The minimum wage rates and standard hours of work used in the current indexes are for representative occupations within each industry. They have been derived entirely from representative awards, determinations and agreements in force at the end of each month or quarter, commencing with March, 1939, for adult males and March, 1951, for adult females. From January, 1957, particulars for adult males have been available as at the end of each month. The index for adult males includes rates and hours for 3,424 award designations. However, as some of these designations are operative within more than one industry,



or in more than one State, the total number of individual award occupations is 2,322. For adult females, the corresponding numbers are 1,103 and 518. Using the industry and occupation weights derived from the surveys described above, these rates and hours were combined to give weighted averages for each industry group for each State and Australia. Weighted averages of the components of the total minimum weekly wage rate, i.e. basic wage, margin and loading, were calculated separately for employees covered by Commonwealth awards, etc., and for those covered by State awards, etc. (see pp. 452 and 455).

Because the indexes are designed to measure movements in prescribed minimum rates of "wages" as distinct from "salaries", those awards, etc., which relate solely or mainly to salary earners are excluded.

A more detailed description of the current indexes of minimum rates of wage and standard hours of work is given in the *Labour Report*, which also contains an extensive tabular presentation of the minimum rates of wage for adult males and females in the principal occupations in the capital city of each State. Further particulars of weekly wage rates and index numbers will be found in the statistical bulletins S.B. 123—*Minimum Weekly Wage Rates, 1939 to 1959*, S.B. 124—*Minimum Weekly Wage Rates, January, 1960 to June, 1962* (containing final figures for the period January to December, 1960) and S.B. 354—*Minimum Wage Rates, January, 1961 to June, 1963*. Current figures are published in the monthly bulletin *Wage Rates and Earnings*.

2. **Weekly Wage Rates.**—(i) *Adult Males—States.* The following table shows, for each State and Australia, the weighted average minimum weekly rates of wage payable to adult male workers for a full week's work, and index numbers at the dates specified.

#### WEEKLY WAGE RATES: ADULT MALES, ALL GROUPS(a)

WEIGHTED AVERAGE MINIMUM WEEKLY RATES(b) PAYABLE FOR A FULL WEEK'S WORK (EXCLUDING OVERTIME) AND INDEX NUMBERS OF WAGE RATES

End of—	N.S.W.	Vic.	Qld	S.A.	W.A.	Tas.	Aust.
RATES OF WAGE(c)							
December, 1945 ..	s. 122 6 d. 121 1	s. 121 1 d. 118 1	s. 118 1 d. 116 0	s. 116 0 d. 120 4	s. 120 4 d. 115 7	s. 115 7 d. 120 7	s. 120 7 d. 120 7
„ 1950 ..	206 2	201 9	195 2	197 11	200 7	198 0	202 0
„ 1955 ..	305 3	295 7	283 6	285 0	300 1	293 7	297 0
„ 1960 ..	362 10	349 11	350 8	342 2	358 1	351 6	355 0
„ 1963 ..	382 2	371 5	369 10	363 6	374 10	372 6	375 0

#### INDEX NUMBERS

(Base: Weighted Average Weekly Wage Rate for Australia, 1954 = 100)

December, 1945 ..	43.4	42.9	41.8	41.1	42.6	40.9	42.7
„ 1950 ..	73.0	71.4	69.1	70.1	71.0	70.1	71.5
„ 1955 ..	108.1	104.7	100.4	100.9	106.3	104.0	105.2
„ 1960 ..	128.5	123.9	124.2	121.2	126.8	124.5	125.7
„ 1963 ..	135.3	131.5	131.0	128.7	132.7	131.9	132.8

(a) Excludes rural. (b) As prescribed in awards, determinations and agreements. (c) The amounts shown should not be regarded as actual current averages, but as an index expressed in money terms, indicative of trends.

(ii) *Adult Males—Industry Groups.* The following table shows for Australia the weighted average minimum weekly rates of wage and index numbers in each industry group and for all groups (excluding rural) at the dates specified.

WEEKLY WAGE RATES: ADULT MALES, INDUSTRY GROUPS, AUSTRALIA  
WEIGHTED AVERAGE MINIMUM WEEKLY RATES(a) PAYABLE FOR A FULL WEEK'S WORK  
(EXCLUDING OVERTIME) AND INDEX NUMBERS OF WAGE RATES

Industry group	End of December—									
	1945	1950	1955	1960	1963					
RATES OF WAGE(b)										
Mining and quarrying .. ..	s. 138	d. 8	s. 259	d. 7	s. 366	d. 10	s. 414	d. 8	s. 438	d. 9
Manufacturing—										
Engineering, metals, vehicles, etc. ..	122	2	201	8	294	9	350	2	369	5
Textiles, clothing and footwear ..	115	10	197	5	285	0	340	5	359	1
Food, drink and tobacco ..	119	11	201	5	295	9	352	3	371	3
Sawmilling, furniture, etc. ..	117	11	196	0	288	10	346	2	363	11
Paper, printing, etc. ..	127	8	214	3	312	6	379	2	399	6
Other manufacturing ..	118	7	197	7	291	4	347	2	366	10
All Manufacturing Groups ..	120	8	200	10	294	1	350	6	369	8
Building and construction .. ..	119	8	198	7	295	6	357	6	379	2
Railway services .. ..	117	9	195	10	290	11	346	6	367	3
Road and air transport .. ..	121	7	197	11	294	3	352	6	370	8
Shipping and stevedoring(c) .. ..	117	7	196	7	276	11	344	7	368	6
Communication .. ..	123	9	213	4	316	6	384	11	411	3
Wholesale and retail trade .. ..	119	5	200	10	297	9	357	1	376	0
Public authority (n.e.i.) and community and business services .. ..	113	9	192	1	289	10	348	1	366	10
Amusement, hotels, personal service, etc. All Industry Groups(d) .. ..	115	3	192	4	283	7	337	4	354	4
	120	7	202	0	297	0	355	0	375	0

## INDEX NUMBERS

(Base: Weighted Average Weekly Wage Rate for Australia, 1954 = 100)

Mining and quarrying .. ..	49.1	91.9	129.9	146.8	155.4
Manufacturing—					
Engineering, metals, vehicles, etc. ..	43.3	71.4	104.4	124.0	130.8
Textiles, clothing and footwear ..	41.0	69.9	100.9	120.5	127.1
Food, drink and tobacco ..	42.5	71.3	104.7	124.7	131.5
Sawmilling, furniture, etc. ..	41.8	69.4	102.3	122.6	128.9
Paper, printing, etc. ..	45.2	75.9	110.7	134.3	141.5
Other manufacturing ..	42.0	70.0	103.2	122.9	129.9
All Manufacturing Groups ..	42.7	71.1	104.1	124.1	130.9
Building and construction .. ..	42.4	70.3	104.6	126.6	134.3
Railway services .. ..	41.7	69.3	103.0	122.7	130.0
Road and air transport .. ..	43.0	70.1	104.2	124.8	131.2
Shipping and stevedoring(c) .. ..	41.6	69.6	98.1	122.0	130.5
Communication .. ..	43.8	75.5	112.1	136.3	145.6
Wholesale and retail trade .. ..	42.3	71.1	105.4	126.4	133.1
Public authority (n.e.i.) and community and business services .. ..	40.3	68.0	102.6	123.2	129.9
Amusement, hotels, personal service, etc. All Industry Groups(d) .. ..	40.8	68.1	100.4	119.4	125.5
	42.7	71.5	105.2	125.7	132.8

(a) As prescribed in awards, determinations and agreements. (b) The amounts shown should not be regarded as actual current averages, but as an index expressed in money terms, indicative of trends. (c) Includes the value of keep, where supplied. (d) Excludes rural.

(iii) *Adult Males—Components of Total Wage Rate.* A dissection of weighted average minimum weekly wage rates for adult males into the three components of the total minimum wage, i.e. basic wage, margin and loading, is given in the following two tables, separate particulars being shown for employees covered by awards, etc., within Commonwealth and

State jurisdictions. For the purposes of the index, the Commonwealth jurisdiction embraces awards of, or agreements registered with, the Commonwealth Conciliation and Arbitration Commission, and determinations of the Commonwealth Public Service Arbitrator. State jurisdictions embrace awards or determinations of, or agreements registered with, State industrial tribunals, together with certain unregistered agreements, where these are dominant in the particular industries to which they refer.

The basic wage rates shown herein are weighted averages of the rates prescribed in awards, etc., for the occupations included in the index for each State. For industries other than mining, metropolitan basic wage rates have generally been used. However, there are a number of occupations for which basic wage rates other than the metropolitan rate are prescribed. Also, in some States at various times, State Government employees under Commonwealth awards have been paid State basic wage rates, and the basic wage rates of some employees have been subject to automatic quarterly adjustments while those of other employees within the same jurisdiction have remained unchanged. In all such cases, the basic wage rate actually paid is used in tables below. For these and other reasons, the weighted average basic wage rates differ, in the majority of cases, from the metropolitan basic wage rates shown in other sections of this chapter.

Margins are minimum amounts, in addition to the basic wage, awarded to particular classifications of employees for features attaching to their work, such as skill, experience, arduousness and other like factors.

Loadings are minimum amounts, in addition to the basic wage and margin (if any), awarded for various kinds of disabilities associated with the performance of work, or to meet particular circumstances. They include payments such as industry loadings and other general loadings prescribed in awards, etc., for the occupations included in the index.

For a more detailed description of this dissection of weekly wage rates into components and for tables for each State and Australia, according to jurisdiction, extending back to 1939, see the statistical bulletins S.B. 123—*Minimum Weekly Wage Rates, 1939 to 1959*, S.B. 124—*Minimum Weekly Wage Rates, January, 1960, to June, 1962* (containing final figures for the period January to December, 1960) and S.B. 354—*Minimum Wage Rates, January, 1961 to June, 1963*.

(a) States. The following table shows the components of the total minimum weekly wage rate for each State and Australia, as at 31st December, 1963, according to jurisdiction.

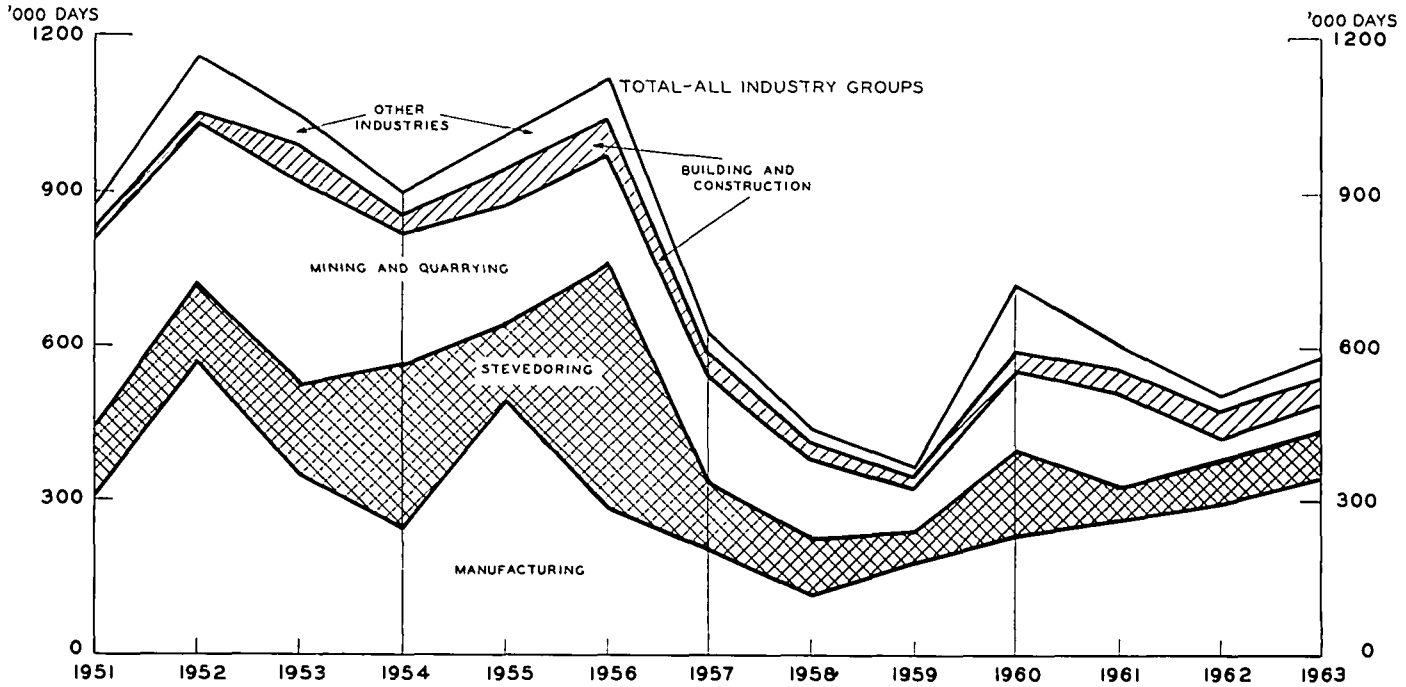
**WEEKLY WAGE RATES: ADULT MALES, COMPONENTS OF TOTAL WAGE RATE, 31st DECEMBER, 1963(a)**  
WEIGHTED AVERAGES OF MINIMUM WEEKLY RATES(b) PAYABLE FOR A FULL WEEK'S WORK (EXCLUDING OVERTIME)

Jurisdiction and components of total wage(c)	N.S.W.		Vic.		Qld		S.A.		W.A.		Tas.		Aust.	
	s.	d.	s.	d.	s.	d.	s.	d.	s.	d.	s.	d.	s.	d.
<b>Commonwealth Awards, etc.—</b>														
Basic Wage ..	295	3	287	5	279	5	283	6	288	5	293	4	289	10
Margin ..	80	3	74	6	88	1	81	6	97	10	71	2	78	7
Loading ..	5	7	3	8	5	4	2	9	2	10	3	4	4	5
<b>Total Wage ..</b>	<b>381</b>	<b>1</b>	<b>365</b>	<b>7</b>	<b>372</b>	<b>10</b>	<b>367</b>	<b>9</b>	<b>389</b>	<b>1</b>	<b>367</b>	<b>10</b>	<b>372</b>	<b>10</b>
<b>State Awards, etc.—</b>														
Basic Wage ..	302	10	287	9	286	11	283	1	300	11	294	2	295	0
Margin ..	72	10	89	5	76	9	62	4	67	3	75	11	75	6
Loading ..	7	10	7	4	5	5	8	6	4	9	9	7	6	10
<b>Total Wage ..</b>	<b>383</b>	<b>6</b>	<b>384</b>	<b>6</b>	<b>369</b>	<b>1</b>	<b>353</b>	<b>11</b>	<b>372</b>	<b>11</b>	<b>379</b>	<b>8</b>	<b>377</b>	<b>4</b>
<b>All Awards, etc.—</b>														
Basic Wage ..	298	10	287	6	285	5	283	5	299	5	293	8	292	4
Margin ..	76	8	79	2	79	1	75	7	70	10	73	0	77	1
Loading ..	6	8	4	9	5	4	4	6	4	7	5	10	5	7
<b>Total Wage ..</b>	<b>382</b>	<b>2</b>	<b>371</b>	<b>5</b>	<b>369</b>	<b>10</b>	<b>363</b>	<b>6</b>	<b>374</b>	<b>10</b>	<b>372</b>	<b>6</b>	<b>375</b>	<b>0</b>

(a) Excludes rural. The amounts shown should not be regarded as actual current averages, but as an index expressed in money terms, indicative of trends. (b) As prescribed in awards, determinations and agreements. (c) For definitions, see text above.

# INDUSTRIAL DISPUTES, AUSTRALIA, 1951 TO 1963

## WORKING DAYS LOST — INDUSTRY GROUPS





(b) *Australia, 1939 to 1963.* The components of the total minimum weekly wage rate for Australia, according to jurisdiction, are shown in the following table.

**WEEKLY WAGE RATES: ADULT MALES, COMPONENTS OF TOTAL WAGE RATE, AUSTRALIA(a)**

WEIGHTED AVERAGES OF MINIMUM WEEKLY RATES(b) PAYABLE FOR A FULL WEEK'S WORK (EXCLUDING OVERTIME)

Jurisdiction and components of total wage(c)	End of December—					
	1939	1945	1950	1955	1960	1963
	<i>s. d.</i>	<i>s. d.</i>	<i>s. d.</i>	<i>s. d.</i>	<i>s. d.</i>	<i>s. d.</i>
<b>Commonwealth Awards, etc.—</b>						
Basic Wage .. .. .	79 5	97 3	162 2	239 0	278 2	289 10
Margin .. .. .	17 3	19 4	35 8	52 8	70 1	78 7
Loading .. .. .	0 4	4 1	3 11	2 4	3 2	4 5
<i>Total Wage</i> .. .. .	97 0	120 8	201 9	294 0	351 5	372 10
<b>State Awards, etc.—</b>						
Basic Wage .. .. .	81 11	98 1	161 8	244 8	285 2	295 0
Margin .. .. .	17 4	20 0	35 3	50 6	68 5	75 6
Loading .. .. .	0 6	2 5	5 5	5 0	5 3	6 10
<i>Total Wage</i> .. .. .	99 9	120 6	202 4	300 2	358 10	377 4
<b>All Awards, etc.—</b>						
Basic Wage .. .. .	80 8	97 8	161 11	241 10	281 7	292 4
Margin .. .. .	17 3	19 8	35 6	51 7	69 3	77 1
Loading .. .. .	0 5	3 3	4 7	3 7	4 2	5 7
<i>Total Wage</i> .. .. .	98 4	120 7	202 0	297 0	355 0	375 0

For footnotes, see p. 452.

(iv) *Adult Females—States.* The following table shows, for each State and Australia, the weighted average minimum weekly rates of wage payable to adult female workers for a full week's work, and index numbers at the dates specified. This series has not been compiled for years prior to 1951.

**WEEKLY WAGE RATES: ADULT FEMALES**

WEIGHTED AVERAGE MINIMUM WEEKLY RATES(a) PAYABLE FOR A FULL WEEK'S WORK (EXCLUDING OVERTIME) AND INDEX NUMBERS OF WAGE RATES

End of—	N.S.W.	Vic.	Qld	S.A.	W.A.	Tas.	Aust.
<b>RATES OF WAGE(b)</b>							
	<i>s. d.</i>	<i>s. d.</i>	<i>s. d.</i>	<i>s. d.</i>	<i>s. d.</i>	<i>s. d.</i>	<i>s. d.</i>
December, 1951 ..	172 4	172 2	161 2	170 3	162 6	165 7	170 4
„ 1953 ..	200 6	201 4	188 2	199 1	190 2	197 2	198 9
„ 1955 ..	209 8	210 5	194 3	201 9	197 9	200 0	206 11
„ 1960 ..	261 3	246 7	239 4	242 11	251 2	238 10	251 8
„ 1963 ..	274 6	260 7	261 4	255 0	266 5	251 10	266 2

**INDEX NUMBERS**

(Base: Weighted Average Weekly Wage Rate for Australia, 1954 = 100)

December, 1951 ..	86.6	86.5	81.0	85.5	81.6	83.2	85.6
„ 1953 ..	100.7	101.1	94.5	100.0	95.5	99.0	99.8
„ 1955 ..	105.3	105.7	97.6	101.3	99.3	100.5	103.9
„ 1960 ..	131.2	123.9	120.2	122.0	126.2	120.0	126.4
„ 1963 ..	137.9	130.9	131.3	128.1	133.8	126.5	133.7

(a) As prescribed in awards, determinations and agreements. (b) The amounts shown should not be regarded as actual current averages, but as an index expressed in money terms, indicative of trends.

(v) *Adult Females—Industry Groups.* The following table shows for Australia weighted average minimum weekly rates of wage and index numbers in each of the industry groups in which the number of females employed is important, and the weighted average for all groups combined, at the dates specified.

**WEEKLY WAGE RATES: ADULT FEMALES, INDUSTRY GROUPS, AUSTRALIA**

WEIGHTED AVERAGE MINIMUM WEEKLY RATES(a) PAYABLE FOR A FULL WEEK'S WORK  
(EXCLUDING OVERTIME) AND INDEX NUMBERS OF WAGE RATES

Industry group	End of December—				
	1951	1953	1955	1960	1963
RATES OF WAGE(b)					
Manufacturing—	<i>s. d.</i>	<i>s. d.</i>	<i>s. d.</i>	<i>s. d.</i>	<i>s. d.</i>
Engineering, metals, vehicles, etc. ..	170 11	200 7	206 6	249 9	261 4
Textiles, clothing and footwear ..	171 2	198 9	200 11	240 8	252 11
Food, drink and tobacco ..	165 9	194 6	206 10	246 4	259 2
Other manufacturing ..	168 9	197 7	203 7	248 0	260 11
All Manufacturing Groups ..	169 11	198 3	203 4	244 7	256 11
Transport and communication ..	177 6	206 5	213 10	260 2	274 11
Wholesale and retail trade ..	171 1	199 7	213 0	263 7	280 8
Public authority (n.e.i.) and community and business services ..	170 1	199 1	209 8	257 9	275 5
Amusement, hotels, personal service, etc. All Industry Groups ..	166 9	194 10	201 8	245 0	258 3
	170 4	198 9	206 11	251 8	266 2

INDEX NUMBERS

(Base: Weighted Average Weekly Wage Rate for Australia, 1954 = 100)

Manufacturing—					
Engineering, metals, vehicles, etc. ..	85.9	100.8	103.7	125.5	131.3
Textiles, clothing and footwear ..	86.0	99.8	100.9	120.9	127.0
Food, drink and tobacco ..	83.3	97.7	103.9	123.7	130.2
Other manufacturing ..	84.8	99.2	102.3	124.6	131.1
All Manufacturing Groups ..	85.4	99.6	102.1	122.9	129.1
Transport and communication ..	89.2	103.7	107.4	130.7	138.1
Wholesale and retail trade ..	85.9	100.3	107.0	132.4	141.0
Public authority (n.e.i.) and community and business services ..	85.4	100.0	105.3	129.5	138.3
Amusement, hotels, personal service, etc. All Industry Groups ..	83.8	97.9	101.3	123.1	129.7
	85.6	99.8	103.9	126.4	133.7

(a) As prescribed in awards, determinations and agreements. (b) The amounts shown should not be regarded as actual current averages, but as an index expressed in money terms, indicative of trends.

3. *Standard Hours of Work.*—(i) *General.* In the fixation of weekly wage rates, most industrial tribunals prescribe the number of hours constituting a full week's work for the wage rates specified. The hours of work so prescribed form the basis of the compilation of the weighted averages and index numbers on pages 458-9. The main features of the reduction of hours to 44 and later to 40 per week are summarized below. In considering such changes, it must be remembered that even within individual States, the authority to alter conditions of work is divided between Commonwealth and State industrial tribunals and the various legislatures, and that the State legislation usually does not apply to employees covered by awards of the Commonwealth Conciliation and Arbitration Commission. However, it may do so in respect of matters not treated in Commonwealth awards.

(ii) *The 44-hour Week.* No permanent reduction to a 44-hour week was effected until 1925, although temporary reductions had been achieved earlier. In 1920, the New South Wales legislature granted a 44-hour week to most industries, but in the following year this provision was withdrawn. Also in 1920, the President of the Commonwealth Court of Conciliation and Arbitration (Higgins J.), after inquiry, granted a 44-hour week to the Timber Workers' Union, and in the following year extended the same privilege to the Amalgamated Society of Engineers. In 1921, however, a reconstituted Commonwealth Court of Conciliation and Arbitration unanimously rejected applications by five trade unions for the shorter standard week and reintroduced the 48-hour week in the case of the above-mentioned two unions then working 44 hours. During 1924, the Queensland Parliament passed legislation to operate from 1st July, 1925, granting the 44-hour standard week to employees whose conditions of work were regulated by awards and agreements of the Queensland State industrial authority. Similar legislative action in New South Wales led to the re-introduction of the 44-hour week in that State as from 4th January, 1926.

In 1927, after an exhaustive inquiry, the Commonwealth Court of Conciliation and Arbitration granted a 44-hour week to the Amalgamated Engineering Union and intimated that this reduction in standard hours of work would be extended to industries operating under conditions similar to those in the engineering industry. Applications for the shorter hours by other unions were, however, treated individually, the nature of the industry, the problem of production, the financial status and the amount of foreign competition being fully investigated. The economic depression delayed the extension of the standard 44-hour week until the subsequent improvement in economic conditions made possible its general extension to employees under Commonwealth awards.

In States other than New South Wales and Queensland, no legislation was passed to reduce the standard hours of work, so that, for employees not covered by Commonwealth awards, the change had to be effected by decisions of the appropriate industrial tribunals. In these cases, the date on which the reduction to 44 hours was implemented depended on the decision of the tribunals in particular industries, employees in some industries receiving the benefit of the reduced hours years ahead of those in others. In these States, the change to the shorter week extended over the years from 1926 to 1941.

(iii) *The 40-hour Week.* (a) *Standard Hours Inquiry, 1947.* Soon after the end of the 1939-45 War, applications were made to the Commonwealth Court of Conciliation and Arbitration for the introduction of a 40-hour week, and the hearing by the Court commenced in October, 1945. Before the Court gave its decision, the New South Wales Parliament passed legislation granting a 40-hour week, operative from 1st July, 1947, to industries and trades regulated by State awards and agreements, and in Queensland similar legislation was introduced in Parliament providing for the 40-hour week to operate from 1st January, 1948.

The Commonwealth Court of Conciliation and Arbitration, in its judgment on 8th September, 1947, granted the reduction to the 40-hour week from the beginning of the first pay-period commencing in January, 1948. The Queensland Act was passed, and was proclaimed on 10th October, 1947. On 27th October, 1947, the South Australian Industrial Court, after hearing applications by unions, approved the incorporation of the 40-hour standard week in awards of that State. The Court of Arbitration of Western Australia on 6th November, 1947, approved that, on application, provision for a 40-hour week could be incorporated in awards of the Court, commencing from 1st January, 1948.

In Victoria and Tasmania, the Wages Boards met and also incorporated the shorter working week in their determinations, so that from the beginning of 1948 practically all employees in Australia whose conditions of labour were regulated by industrial authorities had the advantages of a standard working week of 40 hours or, in certain cases, less.

(b) *Basic Wage and Standard Hours Inquiry, 1952-53.* In the 1952-53 Basic Wage and Standard Hours Inquiry, the employers sought an increase in the standard hours of work per week, claiming that one of the chief causes of the high costs and inflation had been the loss of production due to the introduction of the 40-hour week. This claim was rejected by the Court, as it considered that the employers had not proved that the existing economic situation called for a reduction of general standards in the matter of the ordinary working week. (See also § 5, para. 2 (iii) p. 469.)



(c) *Basic Wage and Standard Hours Inquiry, 1961.* In this case, the employers sought an increase in the number of ordinary working hours from 40 to 42 per week, with a concomitant increase in weekly wages by an amount equal to two hours' pay at ordinary rates. This was to be a temporary measure to have effect for four years, after which time, hours would revert to 40 and the increased wage would remain. The employers submitted that such a measure was called for by the balance of payments crisis, that it would lead to increased productivity at stable prices, and that work in excess of forty hours would be more evenly distributed with consequent financial relief for men not getting overtime work. The Commonwealth Conciliation and Arbitration Commission, which heard the application, was not persuaded that the anticipated consequences would follow, and the claim was rejected. (See also § 5, para. 2 (x) p. 475.)

4. **Hourly Wage Rates.**—(i) *General.* The average rates of wage in the preceding tables are based on the minimum rates prescribed for selected occupations in awards, etc., for a full week's work, excluding overtime. However, the number of hours constituting a full week's work differs in some instances between various occupations in each State, and between the same occupations in the several States. For some purposes, a better comparison may be obtained by reducing the results in the preceding paragraphs to a common basis, namely, the rate of wage per hour. The particulars of weighted average minimum hourly rates of wage given in the following tables relate to all industry groups except Rural, and Shipping and Stevedoring. The Rural industry is not included in the index and Shipping and Stevedoring has been excluded because, for some of the occupations in this group, definite particulars for the computation of average working hours and hourly rates of wage are not available.

(ii) *Adult Males—States.* The following table shows the weighted average minimum hourly rates of wage payable to adult male workers, and index numbers of hourly rates in each State.

#### HOURLY WAGE RATES(a): ADULT MALES

##### WEIGHTED AVERAGE MINIMUM HOURLY RATES PAYABLE AND INDEX NUMBERS OF HOURLY RATES

End of—	N.S.W.	Vic.	Qld	S.A.	W.A.	Tas.	Aust.
<b>RATES OF WAGE(b)</b>							
(Pence)							
December, 1945 ..	33.64	33.05	32.63	31.72	32.83	31.71	33.05
„ 1950 ..	61.96	60.58	58.60	59.44	60.35	59.42	60.70
„ 1955 ..	91.89	88.87	85.22	85.68	90.50	88.45	89.36
„ 1960 ..	109.09	105.08	105.35	102.73	107.87	105.70	106.71
„ 1963 ..	114.89	111.51	111.06	109.14	112.86	111.93	112.66
<b>INDEX NUMBERS</b>							
(Base: Weighted Average Hourly Wage Rate for Australia, 1954 = 100)							
December, 1945 ..	39.6	38.9	38.4	37.4	38.7	37.3	38.9
„ 1950 ..	73.0	71.4	69.0	70.0	71.1	70.0	71.5
„ 1955 ..	108.2	104.7	100.4	100.9	106.6	104.2	105.3
„ 1960 ..	128.5	123.8	124.1	121.0	127.1	124.5	125.7
„ 1963 ..	135.3	131.3	130.8	128.6	132.9	131.8	132.7

(a) Weighted average hourly rates of wage for all industry groups except rural, and shipping and stevedoring. See para. 4 (i) above. (b) The amounts shown should not be regarded as actual current averages, but as an index expressed in money terms, indicative of trends.

(iii) *Adult Females—States.* The following table shows the weighted average minimum hourly rates of wage payable to adult female workers, and index numbers of hourly rates in each State.

## HOURLY WAGE RATES: ADULT FEMALES

## WEIGHTED AVERAGE MINIMUM HOURLY RATES PAYABLE AND INDEX NUMBERS OF HOURLY RATES

End of—	N.S.W.	Vic.	Qld	S.A.	W.A.	Tas.	Aust.
RATES OF WAGE(a)							
(Pence)							
December, 1951 ..	52.30	51.90	48.72	51.37	49.02	50.23	51.51
„ 1953 ..	60.87	60.69	56.88	60.07	57.37	59.81	60.12
„ 1955 ..	63.65	63.43	58.72	60.88	59.65	60.67	62.59
„ 1960 ..	79.31	74.33	72.34	73.30	75.77	72.45	76.13
„ 1963 ..	83.33	78.55	78.99	76.94	80.37	76.39	80.52
INDEX NUMBERS							
(Base: Weighted Average Hourly Wage Rate for Australia, 1954 = 100)							
December, 1951 ..	86.9	86.2	80.9	85.3	81.4	83.4	85.6
„ 1953 ..	101.1	100.8	94.5	99.8	95.3	99.3	99.9
„ 1955 ..	105.7	105.3	97.5	101.1	99.1	100.8	104.0
„ 1960 ..	131.7	123.5	120.1	121.7	125.8	120.3	126.4
„ 1963 ..	138.4	130.5	131.2	127.8	133.5	126.9	133.7

(a) The amounts shown should not be regarded as actual current averages, but as an index expressed in money terms, indicative of trends.

5. **Weighted Average Standard Weekly Hours of Work.**—The 40-hour week has operated in Australia generally from 1st January, 1948, and in New South Wales from 1st July, 1947 (see para. 3 (iii), p. 457). However, as stated in para. 4 (i) on page 458, the number of hours constituting a full week's work (excluding overtime) differs between occupations and/or between States. The weighted average standard hours of work (excluding overtime) prescribed in awards, determinations and agreements for a full working week, in respect of adult male workers in all industrial groups except Rural, and Shipping and Stevedoring, at 31st December, 1963, were:—New South Wales, 39.95; Victoria, 39.97; Queensland, 39.98; South Australia, 39.96; Western Australia, 39.89; Tasmania, 39.97; Australia, 39.96. Corresponding figures for adult female workers at 31st December, 1962, were:—New South Wales, 39.53; Victoria, 39.81; Queensland, 39.70; South Australia, 39.77; Western Australia, 39.78; Tasmania, 39.56; Australia, 39.67.

## § 3. Average Weekly Earnings

1. **General.**—The figures in this section are derived from particulars of employment and of wages and salaries recorded on pay-roll tax returns, from other direct collections and from estimates of the unrecorded balance. Pay of members of the defence forces is not included.

Particulars of wages and salaries paid are not available for males and females separately from these sources; average weekly earnings have therefore been calculated in terms of male units. Male units represent total male employment plus a proportion of female employment based on the approximate ratio of female to male earnings. As it was not possible to estimate the ratio of male to female earnings in the several States the same ratio has been used in each State. Because the actual ratio may vary between States precise comparisons between average earnings in different States cannot be made on the basis of the figures shown in paragraph 2.

Since the previous issue of the Year Book, the series of average weekly earnings per employed male unit has been revised to incorporate the new series of employment estimates shown on pages 425–9 of the previous chapter. Opportunity was also taken to make other adjustments based on analyses of population census data.

Quarterly figures corresponding to those shown below are published in the monthly bulletin *Wage Rates and Earnings* and in the *Monthly Review of Business Statistics*.

The series of average weekly total wages and salaries paid, previously contained in this section, has been discontinued. The publications *Australian National Accounts—National Income and Expenditure* and *Quarterly Estimates of National Income and Expenditure* contain more comprehensive series of total wages, salaries and supplements. See also tables following Chapter XXX. Miscellaneous of this Year Book.

2. Average Weekly Earnings.—Particulars of average weekly earnings per employed male unit are shown in the following table for each of the years 1954–55 to 1962–63.

**AVERAGE WEEKLY EARNINGS PER EMPLOYED MALE UNIT(a)**  
(£)

Year	N.S.W. (b)	Vic.	Qld	S.A. (c)	W.A.	Tas.	Aust.
1954–55 .. ..	17.69	17.65	15.59	16.89	16.15	16.60	17.17
1955–56 .. ..	18.97	18.91	16.48	17.93	16.94	17.79	18.34
1956–57 .. ..	19.95	19.81	17.42	18.34	17.51	18.85	19.21
1957–58 .. ..	20.48	20.34	17.86	18.84	18.11	19.07	19.73
1958–59 .. ..	21.14	20.98	18.62	19.29	18.31	19.56	20.34
1959–60 .. ..	22.83	22.74	19.71	20.91	19.61	20.96	21.93
1960–61 .. ..	24.06	23.58	20.79	21.68	20.77	21.66	22.98
1961–62 .. ..	24.55	24.26	21.61	22.37	21.51	22.64	23.62
1962–63 .. ..	25.08	25.05	22.18	22.91	22.12	22.95	24.23

(a) Includes, in addition to wages at award rates, earnings of salaried employees, overtime earnings, over-award and bonus payments, etc. See explanatory notes in paragraph 1, p. 459. (b) Includes Australian Capital Territory. (c) Includes Northern Territory.

3. Index Numbers.—The following table shows, for “All industries” and for “Manufacturing”, the movement in average weekly earnings from 1953–54 to the March quarter, 1964. The “All industries” index is based on pay-roll tax returns and other data. The index for manufacturing industries for the years 1953–54 to 1962–63 is based on the average earnings of male wage and salary earners employed in factories as disclosed by annual factory censuses (see Chapter VI. Manufacturing Industry, § 8, para. 2 (iii), p. 164); figures for quarters subsequent to June quarter, 1963, are preliminary estimates based on pay-roll tax returns.

The index numbers for “All industries” and “Manufacturing” show the movement in average earnings for each group over a period of time. However, they do not give, at any point of time, a comparison of actual earnings in the two groups. The base of each series is the year 1953–54 = 100, and both series have been seasonally adjusted.

**INDEXES OF AVERAGE WEEKLY EARNINGS(a): AUSTRALIA**  
SEASONALLY ADJUSTED

(Base of each Series: 1953–54 = 100)

Year	All industries(b)	Manufacturing	Quarter	All industries(b)	Manufacturing
1953–54.. ..	100.0	100.0	1962–63—September	145.3	146.4
1954–55.. ..	105.1	106.9	December	146.9	146.3
1955–56.. ..	112.3	113.8	March .. ..	149.7	149.3
1956–57.. ..	117.7	118.3	June .. ..	151.3	148.8
1957–58.. ..	120.8	122.0	1963–64—September	150.9	150.7
1958–59.. ..	124.5	125.6	December	154.8	153.6
1959–60.. ..	134.5	135.4	March .. ..	158.6	156.7
1960–61.. ..	140.6	141.1			
1961–62.. ..	144.7	143.4			
1962–63.. ..	148.3	147.7			

(a) See footnote (a) to table above.

(b) Average earnings per employed male unit. See explanation in paragraph 1, p. 459.

#### § 4. Surveys of Wage Rates, Earnings and Hours

1. **General.**—Towards the end of 1960, a statistical survey of the wage structure of Australia was undertaken by this Bureau. The object of the survey was to obtain information as to marginal rates of wage and actual weekly earnings of adult male employees (excluding part-time and casual employees) for the last pay-period in September, 1960. A survey as at the last pay-period in October, 1961, provided similar information as to actual weekly earnings. A survey of weekly earnings and hours, carried out in respect of the last pay-period in October, 1962, provided information about the hours of work and average earnings of male and female employees in private industry.

The surveys were based on returns from stratified random samples of private employers subject to pay-roll tax. They did not include government or semi-government employment. Because of insufficient data, employees in rural industry and private domestic service were excluded, as also were employees of religious, benevolent and other similar bodies exempt from pay-roll tax. In addition, the 1960 survey excluded the shipping and stevedoring industry, the motion picture industry, certain businesses such as those of accountants and consultant engineers, and trade associations, etc.

A brief summary of the results of the 1960 and 1961 surveys is given in paras. 2 and 3 following. Only the proportions of the total employees in the various groups are shown in this issue, but more detailed particulars, including the number of employees in each group, may be found in Year Book No. 48, 1962, pages 410-18. The preliminary results of the 1962 survey were published in the previous issue of the Year Book.

2. **Survey of Wage Rates and Earnings, September, 1960.**—The sample for this survey was designed to provide accurate particulars only for Australia as a whole; hence no State details are shown in the tables below. The survey covered more than 1,100,000 adult male employees.

Definitions relevant to the survey are as follows.

- (a) *Adult Male Employees* refers to employees on the pay-roll of the last pay-day in September, 1960, and includes those who, although under 21 years of age, were paid at the adult rate prescribed in the appropriate award. Part-time and casual employees and those absent in the defence forces were excluded.
- (b) The term *awards* as used herein denotes awards or determinations of, or agreements registered with, Commonwealth or State industrial tribunals. Employees whose rates of pay and working conditions were not regulated by awards, and employees covered by formal, though unregistered, agreements between employee organizations and employers, are shown as "not covered by awards".
- (c) *Margins* are minimum amounts, in addition to the basic wage, awarded to particular classifications of employees for features attaching to their work, such as skill, experience, arduousness or other like factors. For the purposes of this survey the following were not included in margins:—special allowances prescribed in awards, such as shift, dirt, and height money, leading hand allowances, etc.; and other payments such as commission, payments above the minimum rate for contract and piece work, etc. (see sub-paras. (e) and (g) below and also § 6. Wage Margins). In the case of contract work, etc., the margin was determined by the minimum amount prescribed in the award for the class of work performed. Where the marginal rate of wage for an occupation was not specified in an award, the margin was assumed to be the difference between the total minimum prescribed rate of wage for the occupation and the appropriate Commonwealth or State basic wage. For employees not covered by awards, and whose margins were not specified in unregistered agreements, the margin was assumed to be the difference between the appropriate basic wage in the State jurisdiction and the agreed rate of pay for a standard working week (or the weekly equivalent of the agreed rate).

- (d) *Total Weekly Earnings* include ordinary time earnings at award rates (and, for employees not covered by awards, payments at agreed rates for a standard working week), overtime earnings and all other payments. Annual or other periodical bonuses were included only at the appropriate proportion for one week. For employees paid other than weekly, only the proportion of earnings equivalent to one week was included.
- (e) *Ordinary Time Earnings at Award Rates* represent the total weekly payment to adult male employees (excluding part-time and casual employees) for hours of work paid for up to the standard or award hours, calculated at award rates of pay. They include payments for sick leave, proportion of annual leave, special allowances prescribed in awards, etc. (see sub-para. (c) above). For employees not covered by awards, they include payments at agreed rates for a standard working week.
- (f) *Overtime Earnings* represent the total weekly payment to adult male employees (excluding part-time and casual employees) for time worked in excess of award or agreed hours.
- (g) *Other Earnings* include all payments other than those in sub-paras. (e) and (f) above, such as commission, payments above the minimum rate for contract work, incentive scheme, piece-work, and profit-sharing scheme payments, proportion of annual or other periodical bonuses, points system payments, attendance or good time-keeping bonuses, etc. (see sub-para. (c) above).
- (i) *Marginal Rates of Wage. (a) Industry Groups.* In the following table, adult male employees in each of the main industry groups are classified according to weekly margin above the basic wage.

**ADULT MALE EMPLOYEES (EXCLUDING PART-TIME AND CASUAL EMPLOYEES) CLASSIFIED ACCORDING TO MARGINAL RATES OF WAGE: INDUSTRY GROUPS, AUSTRALIA, SEPTEMBER, 1960 (a)**

PROPORTION OF TOTAL (PER CENT.)

Weekly margin(b)	Manufacturing			Building and construction (c)	Wholesale and retail trade	Other industries	Total
	Engineering, metals, vehicles, etc.	Other manufacturing	Total manufacturing				
Amount above basic wage—							
Less than 20s. (incl. nil) ..	2.1	2.5	2.4	1.2	1.6	3.5	2.3
20s. and less than 30s. ..	11.3	6.1	8.4	5.6	2.1	5.7	6.6
30s. " " " 40s. ..	9.1	7.4	8.2	3.5	2.6	3.7	6.0
40s. " " " 60s. ..	14.3	19.7	17.2	8.6	14.6	11.2	15.2
60s. " " " 80s. ..	13.0	15.6	14.4	15.0	22.4	12.4	15.7
80s. " " " 100s. ..	22.7	14.8	18.4	14.4	14.2	16.3	17.0
100s. " " " 120s. ..	9.3	8.5	8.9	13.0	10.6	10.3	9.7
120s. and over ..	18.2	25.4	22.1	38.7	31.9	36.9	27.5
<b>Total .. ..</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>

(a) See page 461 for particulars of the coverage of the survey. (b) For definitions, see text above.  
(c) For some employees, allowances for sick leave, public holidays, etc. have been included in the marginal rates shown.

(b) *Jurisdiction.* In the following table, adult male employees are classified according to weekly margin above the basic wage, separate particulars being shown for employees under Commonwealth or State jurisdiction and for those not covered by awards.

**ADULT MALE EMPLOYEES (EXCLUDING PART-TIME AND CASUAL EMPLOYEES) CLASSIFIED ACCORDING TO MARGINAL RATES OF WAGE: JURISDICTION, AUSTRALIA, SEPTEMBER, 1960(a)**

PROPORTION OF TOTAL (PER CENT.)

Weekly margin(b)	Under Commonwealth awards	Under State awards	Not covered by awards	Total
Amount above basic wage—				
Less than 20s. (incl. nil) ..	2.7	2.4	1.0	2.3
20s. and less than 30s. ..	9.3	6.2	0.5	6.6
30s. " " " 40s. ..	7.2	6.9	0.8	6.0
40s. " " " 60s. ..	16.2	19.2	1.6	15.2
60s. " " " 80s. ..	15.9	20.4	2.5	15.7
80s. " " " 100s. ..	24.4	15.1	2.6	17.0
100s. " " " 120s. ..	10.6	11.4	3.2	9.7
120s. and over ..	13.7	18.4	87.8	27.5
<b>Total .. ..</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>

(a) See p. 461 for particulars of the coverage of the survey.

(b) For definitions, see pp. 461-2.

(ii) *Total Weekly Earnings.* (a) *Ordinary Time, Overtime and Other Earnings.* In the following table, the total wages and salaries paid to adult male employees in each of the main industry groups are given for ordinary time earnings at award rates, overtime earnings and all other earnings.

**TOTAL WAGES AND SALARIES PAID TO ADULT MALE EMPLOYEES (EXCLUDING PART-TIME AND CASUAL EMPLOYEES) DURING LAST PAY-WEEK IN SEPTEMBER, 1960: INDUSTRY GROUPS, AUSTRALIA(a)**

Industry group	Ordinary time earnings at award rates(b)	Overtime earnings(b)	Other earnings(b)	Total
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AMOUNTS  
(£'000)

Manufacturing—				
Engineering, metals, vehicles, etc.	5,469	1,012	724	7,205
Other manufacturing ..	6,961	849	700	8,510
<i>All Manufacturing Groups ..</i>	<i>12,430</i>	<i>1,861</i>	<i>1,424</i>	<i>15,715</i>
Building and construction ..	1,672	263	169	2,104
Wholesale and retail trade ..	4,521	238	425	5,184
Other industries .. ..	3,837	380	475	4,692
<b>All Industry Groups ..</b>	<b>22,460</b>	<b>2,742</b>	<b>2,493</b>	<b>27,695</b>

PROPORTIONS OF TOTAL (PER CENT.)

Manufacturing—				
Engineering, metals, vehicles, etc.	75.9	14.0	10.1	100.0
Other manufacturing ..	81.8	10.0	8.2	100.0
<i>All Manufacturing Groups ..</i>	<i>79.1</i>	<i>11.8</i>	<i>9.1</i>	<i>100.0</i>
Building and construction ..	79.5	12.5	8.0	100.0
Wholesale and retail trade ..	87.2	4.6	8.2	100.0
Other industries .. ..	81.8	8.1	10.1	100.0
<b>All Industry Groups ..</b>	<b>81.1</b>	<b>9.9</b>	<b>9.0</b>	<b>100.0</b>

(a) See p. 461, for particulars of the coverage of the survey.

(b) For definitions, see pp. 461-2.

(b) *Industry Groups.* The proportion of adult male employees in each earnings group is shown for the main industry groups in the following table.

**ADULT MALE EMPLOYEES (EXCLUDING PART-TIME AND CASUAL EMPLOYEES) CLASSIFIED ACCORDING TO TOTAL WEEKLY EARNINGS: INDUSTRY GROUPS, AUSTRALIA, SEPTEMBER, 1960(a)**

PROPORTION OF TOTAL (PER CENT.)

Total weekly earnings(b)	Manufacturing			Building and construction	Wholesale and retail trade	Other industries	Total
	Engineering, metals, vehicles, etc.	Other manufacturing	Total manufacturing				
Less than £14(c) .. ..	2.3	2.1	2.2	2.2	0.8	1.1	1.7
£14 and less than £16 .. ..	3.1	4.8	4.0	1.7	2.0	2.9	3.3
£16 " " " £18 .. ..	8.3	12.9	10.8	6.5	17.4	9.2	11.5
£18 " " " £20 .. ..	11.6	15.9	13.9	11.1	19.7	12.3	14.6
£20 " " " £22 .. ..	13.2	13.8	13.5	13.6	14.9	11.6	13.5
£22 " " " £24 .. ..	12.6	11.1	11.8	17.7	10.7	10.5	11.8
£24 " " " £26 .. ..	10.4	9.9	10.2	9.8	8.0	10.0	9.7
£26 " " " £30 .. ..	16.5	11.8	13.9	14.2	11.0	14.9	13.5
£30 " " " £35 .. ..	11.9	8.3	10.0	12.0	6.7	12.4	9.9
£35 and over .. ..	10.1	9.4	9.7	11.2	8.8	15.1	10.5
<b>Total .. ..</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>

(a) See p. 461, for particulars of the coverage of the survey. (b) For definitions, see pp. 461-2.  
(c) Inquiry indicated that many of the adult males in this group were absent for part of the week.

3. Survey of Weekly Earnings, October, 1961.—For this survey the sample was designed so that particulars of the distribution of earnings in each State could be obtained as well as those for Australia (see p. 465), but it was not possible, without a considerable increase in the number of returns, to obtain particulars for each industry group in each State. State details were therefore restricted to the two major groups, manufacturing and non-manufacturing; those for Australia were obtained for eight separate industry groups. Because of limitations of space, it has not been possible to include all figures in the tables herein. For further details, reference should be made to Statistical Bulletin No. 22—*Survey of Weekly Earnings, October, 1961*, 14th February, 1962.

The businesses selected in the sample were allocated by States and by industry and size groups in such a way that the precision of the sample estimates for total manufacturing and total non-manufacturing, expressed as percentages of the estimates themselves, would be approximately the same in each State.

Definitions relevant to the survey are as follows.

*Adult Male Employees* refers to employees on the pay-roll of the last pay-period in October, 1961, and includes those who, although under 21 years of age, were paid at the adult rate prescribed for their particular occupation. Part-time and casual employees and those absent in the defence forces were excluded. Executive, clerical and sales staff were included, as were employees working short time who would normally have been full-time employees.

*Total Weekly Earnings* (i.e. gross earnings before taxation and other deductions) include ordinary time earnings, overtime earnings and all other payments, such as holiday and sick pay, commission, payments above the minimum rate for contract work, incentive scheme, piece-work and profit-sharing scheme payments, points system payments, attendance bonuses, etc. Annual or other periodical bonuses have been included only at the appropriate proportion for one week. For employees paid other than weekly, only the proportion of earnings equivalent to one week has been included.

(i) *States. (a) All Industries.* The following table shows the proportions of adult male employees in each earnings group in each State.

**ADULT MALE EMPLOYEES (EXCLUDING PART-TIME AND CASUAL EMPLOYEES) CLASSIFIED ACCORDING TO TOTAL WEEKLY EARNINGS, OCTOBER, 1961(a)**

PROPORTIONS OF TOTAL (PER CENT.)

Total weekly earnings(b)	N.S.W.	Vic.	Qld	S.A.	W.A.	Tas.	Total
Less than £14(c) .. ..	1.1	0.9	0.8	0.8	0.3	1.2	0.9
£14 and less than £16 ..	1.0	1.7	3.6	2.1	2.9	2.1	1.7
£16 " " " £18 ..	6.6	9.1	15.3	11.2	13.9	11.7	9.3
£18 " " " £20 ..	13.3	14.5	20.0	17.6	18.7	16.1	15.2
£20 " " " £22 ..	13.4	14.9	15.3	17.0	16.1	15.1	14.6
£22 " " " £24 ..	12.5	13.4	9.3	12.6	11.4	13.1	12.4
£24 " " " £26 ..	11.7	10.8	8.2	9.6	8.6	10.5	10.6
£26 " " " £30 ..	15.2	12.7	10.3	12.2	11.2	12.0	13.3
£30 " " " £35 ..	11.4	9.9	8.1	8.9	7.6	8.9	10.1
£35 and over .. ..	13.8	12.1	9.1	8.0	9.3	9.3	11.9
Total .. ..	100.0	100.0	100.0	100.0	100.0	100.0	100.0

(a) See p. 464 for particulars of the coverage of the survey.

(b) For definitions see p. 464.

(c) Inquiry indicated that the majority of the adult males in this group did not work a full week because of absenteeism, changing jobs, etc. Others were working short time.

(b) *Manufacturing and Non-manufacturing.* The proportion of adult male employees in each earnings group is shown for manufacturing and non-manufacturing industries in the following table.

**ADULT MALE EMPLOYEES (EXCLUDING PART-TIME AND CASUAL EMPLOYEES) CLASSIFIED ACCORDING TO TOTAL WEEKLY EARNINGS: MANUFACTURING AND NON-MANUFACTURING INDUSTRIES, OCTOBER, 1961(a)**

PROPORTIONS OF TOTAL (PER CENT.)

Total weekly earnings(b)	N.S.W.	Vic.	Qld	S.A.	W.A.	Tas.	Total
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MANUFACTURING

Less than £14(c) .. ..	1.2	1.0	1.3	1.1	0.4	1.5	1.1
£14 and less than £16 ..	1.2	2.1	5.3	2.2	4.2	2.0	2.1
£16 " " " £18 ..	7.8	11.0	18.3	10.6	16.8	12.3	10.5
£18 " " " £20 ..	12.6	14.6	20.6	17.5	20.2	13.8	14.8
£20 " " " £22 ..	13.9	15.5	16.8	17.2	17.6	15.5	15.2
£22 " " " £24 ..	13.7	12.8	9.2	13.1	10.5	12.6	12.8
£24 " " " £26 ..	11.5	10.6	8.0	10.0	8.2	11.4	10.6
£26 " " " £30 ..	15.5	12.5	9.4	12.3	10.0	12.8	13.4
£30 " " " £35 ..	11.0	9.6	5.8	9.0	5.9	8.9	9.6
£35 and over .. ..	11.6	10.3	5.3	7.0	6.2	9.2	9.9
Total .. ..	100.0	100.0	100.0	100.0	100.0	100.0	100.0

NON-MANUFACTURING

Less than £14(c) .. ..	0.9	0.6	0.4	0.5	0.3	0.8	0.7
£14 and less than £16 ..	0.7	1.0	2.2	2.0	2.0	2.3	1.2
£16 " " " £18 ..	5.0	6.2	13.0	12.1	11.9	10.8	7.7
£18 " " " £20 ..	14.3	14.5	19.6	17.7	17.7	19.2	15.8
£20 " " " £22 ..	12.8	13.9	14.2	16.8	15.0	14.5	13.9
£22 " " " £24 ..	10.8	14.2	9.3	11.8	12.0	13.8	11.8
£24 " " " £26 ..	11.8	11.1	8.5	9.1	8.8	9.4	10.6
£26 " " " £30 ..	14.7	13.1	11.0	12.0	12.1	11.0	13.2
£30 " " " £35 ..	12.1	10.5	9.8	8.7	8.8	8.8	10.7
£35 and over .. ..	16.9	14.9	12.0	9.3	11.4	9.4	14.4
Total .. ..	100.0	100.0	100.0	100.0	100.0	100.0	100.0

(a) See p. 464 for particulars of the coverage of the survey.

(b) For definitions, see p. 464.

(c) Inquiry indicated that the majority of the adult males in this group did not work a full week because of absenteeism, changing jobs, etc. Others were working short time.



(ii) *Australia, Industry Groups.* The proportions of adult male employees in the main industry groups covered by the survey are shown in the following table according to total weekly earnings.

**ADULT MALE EMPLOYEES (EXCLUDING PART-TIME AND CASUAL EMPLOYEES) CLASSIFIED ACCORDING TO TOTAL WEEKLY EARNINGS: INDUSTRY GROUPS, AUSTRALIA, OCTOBER, 1961(a)**

PROPORTION OF TOTAL (PER CENT.)

Total weekly earnings(b)	Manufacturing				Building and construction	Wholesale and retail trade	Other industries	Total
	Engineering, metals, vehicles, etc.	Food, drink and tobacco	Other manufacturing	Total manufacturing				
Less than £14(c) ..	1.3	1.3	0.9	1.1	1.5	0.4	0.6	0.9
£14 and less than £16 ..	1.7	2.2	2.4	2.1	1.0	1.2	1.4	1.7
£16 " " £18 ..	8.1	11.4	12.8	10.5	3.9	9.9	6.7	9.3
£18 " " £20 ..	13.8	19.4	14.1	14.8	10.8	21.1	11.4	15.2
£20 " " £22 ..	16.3	14.4	14.3	15.2	15.7	15.3	11.4	14.6
£22 " " £24 ..	14.2	11.8	11.6	12.8	18.1	11.8	9.4	12.4
£24 " " £26 ..	11.0	10.2	10.4	10.6	16.2	9.6	9.7	10.6
£26 " " £30 ..	13.8	12.8	13.1	13.4	12.9	11.6	15.2	13.3
£30 " " £35 ..	10.0	8.6	9.6	9.6	9.0	8.1	14.5	10.1
£35 and over ..	9.8	7.9	10.8	9.9	10.9	11.0	19.7	11.9
<b>Total .. ..</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>

(a) See p. 464 for particulars of the coverage of the survey. (b) For definitions, see p. 464. (c) Inquiry indicated that the majority of the adult males in this group did not work a full week because of absenteeism, changing jobs, etc. Others were working short time.

4. *Survey of Weekly Earnings and Hours, October, 1962.*—This survey provided, for Australia, information on average weekly and hourly earnings and average weekly hours paid for, in each of the principal industry groups. Preliminary results of the survey, which were published in Statistical Bulletin 213—*Survey of Weekly Earnings and Hours, October, 1962*, 20th March, 1963, were shown in Year Book No. 49, 1963, pages 482–5.

## § 5. Basic Wages in Australia

1. *General.*—The concept of a “basic” or “living” wage is common to rates of wage determined by industrial authorities in Australia. Initially the concept was interpreted as the “minimum” or “basic” wage necessary to maintain an average employee and his family in a reasonable state of comfort. However, it is now generally accepted “that the wage should be fixed at the highest amount which the economy can sustain and that the ‘dominant factor’ is the capacity of the community to carry the resultant wage levels”.\*

Under the *Commonwealth Conciliation and Arbitration Act 1904–1961* (see p. 446) the Commonwealth Conciliation and Arbitration Commission (previously the Commonwealth Court of Conciliation and Arbitration) may, for the purpose of preventing or settling an industrial dispute extending beyond the limits of any State, make an order or award “altering the basic wage (that is to say, that wage or that part of the wage, which is just and reasonable for an adult male [female], without regard to any circumstance pertaining to the work upon which, or the industry in which he [she] is employed) or the principles upon which it is computed”.

\* *Commonwealth Arbitration Reports*, Vol. 77, p. 494.

In the past, the Commonwealth Court of Conciliation and Arbitration held general basic wage inquiries from time to time, and its findings applied to industrial awards within its jurisdiction. Prior to the decision of the Commonwealth Court of Conciliation and Arbitration, announced on 12th September, 1953, discontinuing the automatic adjustment of basic wages in Commonwealth awards in accordance with variations occurring in retail price index numbers, the relevant basic wage of the Commonwealth Court of Conciliation and Arbitration was adopted to a considerable extent by State Industrial Tribunals. In New South Wales and South Australia, the State industrial authorities adopted the relevant Commonwealth basic wage. In Victoria and Tasmania, where Wages Boards systems operate, no provision was included in the industrial Acts for the declaration of a basic wage, although, in the past, Wages Boards generally adopted basic wages based on those of the Commonwealth Court. In Queensland and Western Australia, the determination of a basic wage is a function of the respective State Industrial or Arbitration Courts, and (subject to State law) they took into account the rates determined by the Commonwealth Court. Following the decision of the Commonwealth Court of Conciliation and Arbitration to discontinue automatic quarterly adjustments to the basic wage, the various State industrial authorities have determined State basic wages in accordance with the provisions of the respective State industrial legislation. Details of the action taken in each State and subsequent variations in State basic wages are set out in para. 5 of this section.

In addition to the basic wage, "secondary" wage payments, including margins for skill and various kinds of loadings peculiar to the occupation or industry, are determined by these authorities. The basic wage, and the "secondary" wage, where prescribed, make up the "minimum" wage for a particular occupation. The term "minimum wage" as distinct from the basic wage is used currently to express the lowest rate payable for a particular occupation or industry. (See also § 2, para. 2 (iii) *Adult Males—Components of Total Wage Rate*, pp. 452 and 455).

2. The Commonwealth Basic Wage.—(i) *Early Judgments.* The principle of a living or basic wage was propounded as far back as 1890, but it was not until 1907 that a wage, as such, was declared by a Court in Australia. The declaration was made by an order in terms of section 2 (d) of the *Excise Tariff* 1906 in the matter of an application by H. V. McKay that the remuneration of labour employed by him at the Sunshine Harvester Works, Victoria, was "fair and reasonable". Mr. Justice Higgins, President of the Commonwealth Court of Conciliation and Arbitration, defined the standard of a "fair and reasonable" minimum wage for unskilled labourers as that standard appropriate to "the normal needs of the average employee, regarded as a human being living in a civilized community".\* The rate declared was 7s. a day or £2 2s. a week for Melbourne, the amount considered reasonable for "a family of about five".

The "Harvester" standard was adopted by the Commonwealth Court of Conciliation and Arbitration for incorporation in its awards, and practically the same rates continued until 1913, when the Court took cognizance of retail price index numbers, covering food and groceries and rent of all houses ("A" Series) for the 30 more important towns of Australia, which had been published by the Commonwealth Statistician for the first time in the preceding year. The basic wage rates for towns were thereafter varied in accordance with the respective retail price index numbers. Court practice was to equate the retail price index number 875 for Melbourne for the year 1907 to the "Harvester" rate of 42s. a week (or the base of the index (1,000) to 48s. a week). At intervals thereafter as awards came before it for review, the Court usually revised the basic wage rate of the award in proportion to variations in the retail price index. In some country towns, certain "loadings" were added by the Court to wage rates so derived to offset the effect of lower housing standards, and consequently of house rents, on the index numbers for these towns.

Over the period of its operation, the adequacy or otherwise of the "Harvester" standard was the subject of much discussion, the author of the judgment himself urging on several occasions the need for its review. During the period of rapidly rising prices towards the end of the 1914-18 War, strong criticism developed that this system did not adequately maintain the "Harvester" equivalent. A Royal Commission was appointed in 1919 to inquire as to what it would actually cost a man, wife and three children under fourteen years of age to live in a reasonable standard of comfort, and as to how the basic wage might be automatically adjusted to maintain purchasing power. The Commission's

\* *Commonwealth Arbitration Reports*, Vol. 2, p. 3.

Reports were presented in 1920 and 1921. An application by the unions to have the amounts arrived at by the inquiry declared as the basic wage was not accepted by the Court, because they were considerably in advance of existing rates, and grave doubts were expressed by members of the Court as to the ability of industry to pay such rates. Further details of the recommendations of the Commission were given in *Labour Report* No. 41, page 102.

The system of making automatic quarterly adjustments to the basic wage in direct ratio to variations in the retail price index ("A" Series) was first introduced in 1921. The practice then adopted was to calculate the adjustments to the basic wage quarterly on the index number for the preceding quarter. Previously, adjustments had been made sporadically in relation to retail price indexes for the previous calendar year or the year ended with the preceding quarter. The new method would have resulted in a basic wage lower than that to which employees would have been entitled had the previous practice been continued, and in 1922\* the Court added to the basic wage a general loading of 3s. (known as the "Powers 3s."), "a sum . . . which did, to the extent of 3s. per week, relieve the employees from the detrimental effect so far as they were concerned of the change which the Court was then making in its method of fixing the basic wage".† This loading continued until 1934. The practice adopted by the Commonwealth Court in 1921 of making automatic quarterly adjustments continued until the Court's judgment of 12th September, 1953 (*see* p. 469).

For a description of the several series of retail price indexes referred to in these paragraphs, *see* pages 431-2 of this chapter.

(ii) *Basic Wage Inquiries, 1930 to 1950.* No change was made in the method of fixation and adjustment of the basic wage until the onset of the depression in 1930, when applications were made to the Court for a reduction of wages. From 1st February, 1931, the Court reduced all wages under its jurisdiction by 10 per cent. Subsequent applications in 1932 and 1933 for cancellation of this reduction were refused. In May, 1933, the Court transferred the basis of the quarterly adjustment of the basic wage from the "A" Series to the "D" Series Retail Price Index. Further particulars may be found in the *Labour Report*, Nos. 22 and 23.

The "Harvester" standard, adjusted by variations in retail price index numbers, continued to be the theoretical basis of the wage of the Commonwealth Court until the judgment of 17th April, 1934, when automatic adjustment was transferred to the "C" Series Retail Price Index, the base of the index being taken as equal to 81s. a week. The new rate for the six capital cities, £3 5s., was in effect the same as that previously paid under the "A" Series, without the "Powers 3s." and without the 10 per cent. reduction, which then ceased to operate. (*See Labour Report* No. 25, 1934.)

The following were the main features of the judgment of the 1937 Inquiry. (a) Amounts were added to the basic wage not as an integral, and therefore adjustable, part of that wage, but as "loadings" additional to the rates payable under the 1934 judgment (referred to as the "needs" portion of the basic wage). These loadings, commonly referred to as "Prosperity" loadings, ranged, for capital cities, from 4s. to 6s., that for the six capitals being 5s. (b) The minimum adjustment of the basic wage was fixed at 1s. a week instead of 2s. (c) The basis of the adjustment of the "needs" portion of the wage in accordance with the variations shown by retail price index numbers was transferred from the "C" Series to a special "Court" Series based upon the "C" Series. (d) Female and junior rates were left for adjustment by individual judges when dealing with specific awards. (*See Labour Report* No. 28, pages 77-87.)

In 1940, the combined unions applied to have the value of 1,000 (the base of the "C" Series Index upon which the "Court" Series was based) raised from 81s. to 100s. a week, and the "Prosperity" loadings incorporated in the new rate. In its judgment of 7th February, 1941, the Court unanimously refused to grant any increase, owing mainly to the uncertainty of the economic outlook under existing war conditions. The application was stood over for further consideration. (*See* p. 469.) In the course of the judgment, the Chief Judge suggested that the basic wage might be graded according to family responsibilities by means of a comprehensive system of child endowment, and that if a scheme of this nature were established, future fixations of the basic wage would be greatly simplified. (The Commonwealth *Child Endowment Act* 1941 came into operation on 1st July, 1941. For details *see* Chapter XVI. Welfare Services.)

\* 16 C.A.R., p. 32.

† *Ibid.*, p. 841.

In 1946, an application was made for restoration of the adjourned 1940 hearing (*see* p. 468). During the protracted hearing of the Standard Hours Inquiry (*see* p. 457), it became apparent that reconsideration of the amount of the basic wage was, in the public interest, a matter of increasing urgency, and the unions therefore applied for an "interim" basic wage declaration. Judgment was delivered on 13th December, 1946, whereby an increase of 7s. a week was granted in the "needs" portion of the basic wage, the rate for the six capital cities as a whole being increased from 93s. to 100s. a week. For automatic quarterly adjustments, a new "Court" Index (Second Series) (Base 1923-27 = 87.0) was adopted. All "loadings" on the basic wage were retained. Further particulars of this judgment may be obtained from *Labour Report* No. 38, page 79.

The Basic Wage Inquiry, 1949-50, completed the case begun in 1940 and continued in 1946 (*see* above). The general hearing of the unions' claims was commenced on 17th May, 1949, and separate judgments were delivered on 12th October, 1950.\* A majority of the Court (Foster and Dunphy *JJ.*) was of the opinion that the basic wage for adult males should be increased by £1 a week, and that for adult females should be 75 per cent. of the adult male rate. Kelly *C.J.* considered that no increase in either the male or the female wage was justified. On 24th October and 17th and 23rd November, 1950, the Court made further declarations concerning the "Prosperity" and other loadings. The "Prosperity" loading of 1937 (*see* p. 468), which was being paid at rates between 3s. and 6s. a week according to localities, was standardized at a uniform rate of 5s. a week for all localities and was declared to be an adjustable part of the basic wage, the "War" loadings were declared to be not part of the basic wage, and any other loading declared to be part of the basic wage ceased to be paid as a separate entity.

The new rates operated from the beginning of the first pay-period in December, 1950, being in all cases the rate based on the Court Index (2nd Series) for the September quarter, 1950, plus a flat-rate addition of £1, together with the standardized "Prosperity" loading of 5s. The new basic wage rate for the six capital cities (weighted average) was £8 2s., comprising £6 17s. Court (2nd Series) plus 5s. uniform "Prosperity" loading plus the £1 addition. The declaration provided that the whole of this basic wage would be subject to automatic quarterly adjustments as from the beginning of the first pay-period commencing in February, 1951, on the basis of the index numbers for the December quarter, 1950. For this purpose, the new rate of £8 2s. was equated to the "C" Series retail price index number 1,572 for the six capital cities (weighted average) for the September quarter, 1950. From this equation was derived a new "Court" Index (Third Series) with 103.0 equated to 1,000 in the "C" Series Index. Further particulars of the judgment may be found in *Labour Report* No. 39, page 81.

For more detailed descriptions of the foregoing inquiries, reference should be made to earlier issues of the *Labour Report* and the Year Book.

(iii) *Basic Wage and Standard Hours Inquiry, 1952-53.* On 5th August, 1952, the Commonwealth Court of Conciliation and Arbitration began hearing claims by employers' organizations that (a) the basic wage for adult males be reduced; (b) the basic wage for adult females be reduced; (c) the standard hours of work be increased; (d) the system of adjusting the basic wages in accordance with variations occurring in retail price index numbers be abandoned; and by employees' organizations, that the basic wage for adult males be increased.

The decision of the Court, announced on 12th September, 1953†, was as follows:—the employers' applications for reduction of the basic wages for adult males and females and for an increase of the standard hours of work were refused; the employers' applications for omission or deletion of clauses or sub-clauses providing for the adjustment of basic wages were granted; and the unions' applications for increases of basic wages were refused.

The Court in the course of its judgment said that nothing had been put before it during the inquiry in support of a departure from its well-established principle that the basic wage should be the highest that the capacity of the community as a whole could sustain. If the Court is at any time asked to fix a basic wage on a true needs basis, the question of whether such a method is correct in principle and all questions as to the size of the family unit remain open.

\* *Commonwealth Arbitration Reports*, Vol. 68, p. 698.  
Vol. 77, p. 477.

† *Commonwealth Arbitration Reports*,

In order to remove certain misconceptions about its function, the Court stated that it was neither a social nor an economic legislature, and that its function under section 25 of the Act was to prevent or settle specific industrial disputes. However, these must be settled upon terms which seem just to the Court, having regard to conditions which exist at the time of its decision.

The Court intimated that time would be saved in future inquiries if the parties to the disputes, in discussing the principle of the "capacity to pay", directed their attention to the broader aspects of the economy, as indicated by a study of employment, investment, production and productivity, overseas trade, overseas balances, the competitive position of secondary industry, and retail trade.

In accordance with its decision, the Court, commencing on 21st October, 1953, amended all Commonwealth awards by deleting the clauses providing for the automatic adjustment of the basic wage. Subsequently, the power of the Court to vary awards not the subject of an application by one of the parties was unsuccessfully challenged in the High Court of Australia.

For further particulars of the judgment, see *Labour Report* No. 46, page 64.

(iv) *Basic Wage Inquiry*, 1956. On 14th February, 1956, the Commonwealth Court of Conciliation and Arbitration commenced hearing an application by trade unions for an increase in the basic wage to the amount it would have reached if automatic quarterly adjustments deleted in September, 1953, had remained in force, plus a further £1; for the re-introduction of automatic quarterly adjustments; and for the abolition of what was known as the 3s. country differential. This application was regarded as a general application for variation of the basic wage in all Commonwealth awards.

All the claims made by the unions were opposed by the respondent employers. The Commonwealth Government intervened in the public interest and opposed the re-introduction of automatic adjustments. The States of New South Wales, Queensland, Western Australia and Tasmania supported the unions' claims for the re-establishment of the system of automatic adjustments and the raising of the basic wage to the levels indicated by the current "C" Series Index numbers, but the State of South Australia opposed these claims. The State of Victoria neither supported nor opposed the unions' claims.

The judgment was delivered on 26th May, 1956. The Court rejected each claim made by the unions, but decided to increase the adult male basic wage by 10s. a week, payable from the beginning of the first pay-period in June. As a result of this decision, the basic wage for adult females was increased by 7s. 6d. a week with proportionate increases for juniors of both sexes and for apprentices.

The Court took the view that its decision in 1953 to abandon the system of quarterly adjustments was clearly right and that "so long as the assessment of the basic wage is made as the highest which the capacity of the economy can sustain, the automatic adjustment of that basic wage upon price index numbers cannot be justified, since movements in the index have no relation to the movements in the capacity of the economy".\* After examining the state of the economy and the possible disastrous extension of inflation, the Court decided that the nation had not the capacity to pay a basic wage of the amount to which automatic quarterly adjustments would have brought it.

In its judgment, the Court stated that in future a yearly assessment of the capacity of Australia for the purpose of fixing a basic wage would be most appropriate and that it would encourage any steps to have the Court fulfil such a task each year.

For further details, see *Labour Report* No. 46, page 67.

(v) *Basic Wage Inquiry*, 1956-57. On 13th November, 1956, the Commonwealth Conciliation and Arbitration Commission in Presidential Session commenced to hear claims by the combined unions for an increase of the basic wage to the amount it would have reached if automatic quarterly adjustments had remained in force and for the restoration of automatic quarterly adjustments.† This application was treated by the Commission as a general application for alteration of the basic wage in all Commonwealth awards.

The unions' claims were opposed by the respondent employers. Victoria and South Australia were the only States to appear before the Commission and the Commonwealth Government intervened in the public interest. Victoria neither supported nor opposed the application by the unions. South Australia opposed the unions' claims and suggested that, if an increase in the basic wage were granted, the Commission should decide on the increase

\* *Commonwealth Arbitration Reports*, Vol. 84, p. 175.

† 87 *C.A.R.*, p. 439.

to be added to the six capitals basic wage, and then apportion that increase among the six capital cities on a basis accurately reflecting the differences in their cost of living. The Commonwealth opposed the restoration of the automatic adjustment system, whatever index was used for this purpose.

After hearing submissions by counsel for the unions that automatic quarterly adjustments of the basic wage should be restored and argument as to the appropriateness of using the "C" Series Index for this purpose, the Commission reaffirmed the decision of the Court in 1953, which, it said, "was primarily based on the view that there is no justification for automatically adjusting in accordance with a price index a wage assessed as the highest that the capacity of the community as a whole can sustain".\* Accordingly, the claim for restoration of automatic quarterly adjustments was refused.

The Commission, having considered all aspects of the state of the economy, decided that the adult male basic wage should be increased by 10s. a week, payable from the first pay-period to commence on or after 15th May, 1957. The basic wage for adult females was increased by 7s. 6d., with proportionate increases for juniors and apprentices.

The historical background of differential rates of basic wage for respective cities and towns was examined by the Commission and it acknowledged that the Federal basic wage had two components. The first and greater component differed for each capital city and represented a rate of wage calculated by the use of "C" Series retail price index numbers for the June quarter, 1953, and the second component, common to all places, was the uniform 10s. awarded by the Court in 1956. On the question of whether the increase should be of a uniform amount, the alternative open to the Commission appeared to be either to follow what the Court did in 1956, or to recalculate the inter-capital-city differentials of the newly-fixed standard basic wage according to the latest "C" Series index numbers. The Commission decided to grant an increase of a uniform amount.

Judgment was delivered on 27th April, 1957. The Commission advised that it approved an annual review of the basic wage and would be available for this purpose in February, 1958. However, although favouring an annual review of the basic wage, the Commission considered that "it would not be proper for it nor would it wish to curtail the existing right of disputants to make an application at whatever time they think it necessary to do so".†

A more detailed summary of the judgment may be found in *Labour Report* No. 46, pages 68-71.

(vi) *Basic Wage Inquiry*, 1958. On 18th February, 1958, the Conciliation and Arbitration Commission commenced hearing an application by unions respondent to the Metal Trades Award for an increase of the basic wage to the amount it would have reached had the quarterly adjustment system been retained, plus an addition of 10s., and for restoration of quarterly adjustments.‡

These claims were opposed by private employers and by the State of South Australia, which also contended that, as the cost of living was much lower in Adelaide than in Melbourne and Sydney, greater disparities in basic wage rates than then existed should be determined if, against its submission, any general increase in the basic wage were decided upon. Tasmania, the only other State represented, made no submissions. The Attorney-General of the Commonwealth intervened in the public interest, and leave to intervene was granted to a number of professional, salaried and public service organizations.

In its judgment, delivered on 12th May, 1958, the Commission rejected the submission by the Professional Officers' Association that consideration should be given to the question whether increased capacity should be reflected in an increased basic wage only or extended also to the marginal or secondary contents of aggregate wages and salaries. The Commission also rejected the submission by the Australian Council of Salaried and Professional Associations that when the Commission looked at the capacity of industry to pay and gave an increase in the basic wage, it always kept something in reserve for a subsequent marginal claim.

The claim of the unions for the restoration of the 1953 basic wage standard was rejected by the Commission on the same ground as in its 1957 judgment, i.e. that it was unsafe to assume that the economy could sustain the 1953 rate as a "standard" in real terms.

The Commission then considered the three specific issues before it, namely, (a) should the system of automatic adjustments be restored? (b) should the basic wage be increased, and if so, by what amount? and (c) should there be uniform or disparate increases?

\* 87 C.A.R. p. 445.

† *Ibid.*, p. 459.

‡ 89 C.A.R., p. 287.

Counsel for the unions submitted that the unions still regarded the "C" Series Index as a proper guide for the determination of basic wage levels, but that if this contention were unacceptable to the Commission, there should be an immediate decision upon principle, and later, if need be, an inquiry in an effort to ascertain a proper price index. He also submitted that there should be, from time to time, additions to wages to afford to workers their proper share of increased productivity and efficiency, and that although the unions had never claimed that increments for increased productivity could under present circumstances be made by way of automatic adjustment, the objective of wage increases commensurate with price increases could best be achieved by the use of an automatic adjustment system. After having considered the submissions, and without hearing arguments against the proposition, the Commission rejected the application for the restoration of automatic adjustments and for a deferred inquiry thereon. In the reasons for its judgment, the Commission stated that there was nothing in the submission to justify a departure from the decisions of 1953, 1956 and 1957 to reject automatic wage adjustments. The Commission also again expressed the opinion that a yearly assessment of the capacity of Australia for the purpose of fixing a basic wage would be most appropriate.

The Commission was unanimously of the opinion that the position of the economy regarded as a whole was such as to justify an increase in the basic wage, but a difference of opinion existed as to what the amount of the increase should be. Kirby C.J. and Gallagher J. considered that it was undesirable in the interests of all to grant an increase higher than 5s.; Wright J. considered that a basic wage level substantially higher than that proposed by the majority was justified. The decision of the majority prevailed, and the basic wage for adult males under Federal awards was therefore increased by 5s. a week.

The South Australian Government submitted that economically there was no scope at all for a basic wage increase anywhere in Australia, and again pursued the question of inter-city differentials as an answer to the union claim that the amount of the basic wage in Adelaide should be calculated by reference to the "C" Series retail price index numbers for that city. The substance of the State's case was that the actual cost of living was so much lower in Adelaide than in Melbourne and Sydney that greater disparities in basic wage rates than then existed should be determined by the Commission, if any general increase in the basic wage were decided upon. Subject to a stipulation that no reduction should be made in the existing basic wage rate for Adelaide, counsel for the South Australian Government claimed that the rate should be approximately 10 per cent. below the rate fixed for Sydney instead of approximately 5 per cent. below, as it then was. The Commission rejected the claim on the ground that it would not be wise or just to apply it in South Australia in view of the fact that it was neither sought nor supported by any other party, and its application to the government and its instrumentalities alone was not sought. The Commission indicated that the issues involved in inter-city differential wage rates were complex and could not be decided after a brief hearing.

The new basic wage rates for employees under Federal awards operated from 21st May, 1958.

(vii) *Basic Wage Inquiry, 1959.* On 24th February, 1959, the Conciliation and Arbitration Commission commenced hearing an application by unions respondent to the Metal Trades Award for an increase of the basic wage to the amount it would have reached had the quarterly adjustment system been retained, plus an addition of 10s., and for restoration of quarterly adjustments.\* A large number of applications for similar variation of other awards were ordered to be treated as involved in the inquiry, and as such to be decided upon the evidence, material and submissions made from the beginning of the hearing.

The application of the unions was opposed by private employers generally, and by the State of South Australia and two of its instrumentalities. Tasmania was the only other State represented, and it appeared in support of the application of the unions in regard to the increase of the basic wage and the restoration of the quarterly adjustment system. The Commonwealth Government intervened in the public interest and submitted that the application for restoration of the automatic adjustment system should be refused. The Commonwealth again supplied, for the benefit of the Commission and the parties, economic and statistical information and material, and, in addition, without making a particular submission as to whether there should be an increase, made a general submission on the state of the national economy.

\* *Commonwealth Arbitration Reports*, Vol. 91, pp. 683-4.

Organizations of employers in the pastoral industry asked for a reduction in the basic wage in the Pastoral Award of £1 5s., being the aggregate amount of the increases granted in 1956, 1957 and 1958. The Commission decided to join these applications in the main hearing on 17th March, 1959, as a matter of procedure only, and without deciding affirmatively that the Commission as constituted for that hearing had power to grant them in whole or in part. At the conclusion on 5th May, 1959, of submissions in support of these applications and without calling upon employees in reply, the Commission stated that it would reject the applications for reduction of the basic wage in the Pastoral Award, and again indicated that the question of jurisdiction as to whether the Commission had the power to decide a different basic wage remained "undecided and open".

On 5th June, 1959, the three Judges delivered separate judgments. On the question of whether the system of automatic quarterly adjustments should be restored, the members of the Commission were divided in opinion, and therefore the question was decided in accordance with the decision of the majority. The majority decision, namely, that of Kirby *C.J.* and Gallagher *J.*, was that the claim of the unions for restoration of quarterly adjustments should be refused. Foster *J.* dissented.

The members of the Commission were unanimous in the opinion that there should be an increase in the basic wage, but as to the amount of the increase they were divided in opinion as follows. The President, Kirby *C.J.*, was of opinion that the increase should be 15s. a week, and that the increased basic wage should become payable as from the beginning of the first pay-period commencing on or after 11th June, 1959. Foster *J.* was of opinion that the increase should be 20s. a week, payable as to 10s. as from the first pay-period in July, 1959, and as to the balance by increases of 2s. 6d. for four quarters commencing 1st January, 1960. Gallagher *J.* was of opinion that the increase should be one of 10s. a week, and that the increased wage should become payable as from the date chosen by the President. Foster *J.*, while holding his opinion, decided to concur in the decision proposed by the President.

A summary of the separate reasons for judgment was published in Official Year Book No. 46, pages 437-9.

(viii) *Basic Wage Inquiry*, 1960. On 16th February, 1960, the Conciliation and Arbitration Commission, constituted in Presidential Session by Kirby *C.J.* (President), Ashburner and Moore *J.J.* (Deputy Presidents), commenced hearing an application by respondent unions for the restoration to the Metal Trades Award of quarterly adjustments to the basic wage and for an increase in the amount of the basic wage. On the six capital cities rate, the amount of the increase sought was 22s. a week. This amount was composed of two parts—firstly, an addition of 5s. a week to restore to the basic wage the same real value as it had in 1953, and, secondly, a further amount of 17s. representing the unions' estimate of the minimum increase in productivity which had occurred in the period since the automatic adjustment system was abolished.

The Commonwealth Government intervened in the public interest and again presented a detailed analysis of the economic situation of Australia, together with comments on fiscal and budgetary policy. It also announced its opposition to the unions' application both for restoration of automatic quarterly adjustments and for an increase in the basic wage. The State of South Australia presented material to the Commission to show the effect which wage increases would have on its finances, and opposed the unions' application. Victoria, Queensland and Western Australia presented information to show how their finances would be affected by wage increases, but neither supported nor opposed the claims of the applicants. Tasmania indicated that it supported the application for restoration of quarterly adjustments, but made no submissions.

In its judgment, delivered on 12th April, 1960, the Commission refused the unions' application.\* A summary of the judgment is given in the following paragraphs. Further particulars may be found in Official Year Book, No. 47, pp. 443-6.

*Application for Restoration of Quarterly Adjustments.* Counsel for the unions criticized the decision in the 1953 inquiry to abolish automatic quarterly adjustments to the basic wage and also the decisions, in subsequent inquiries, against their re-introduction. He submitted that it would be inequitable and unjust not to restore the practice which existed for many years prior to 1953, of having the basic wage automatically adjusted each quarter in accordance with movements in a price index. He relied in particular on the 1934 basic wage judgment.

\* *Commonwealth Arbitration Reports*, Vol. 94, p. 313.



In refusing the application, the Commission stated that the decision in the 1934 case was not relevant, as the question of automatic quarterly adjustments must be decided in the light of existing situations and practices. In 1934, the basic wage was determined for an undefined period and automatic quarterly adjustments applied. In 1960, the Commission was considering a situation in which in practice the basic wage was re-assessed each year. The Commission decided that it was preferable to fix a basic wage which it considered just and reasonable for the ensuing twelve months and then review it. In the Commission's view it was not inequitable or unjust not to restore automatic adjustments.

*Application to Increase the Basic Wage.* The Commission referred to the two elements that comprised the total wage paid to most workers under federal awards, namely, the basic wage and a margin. The existence of these two elements was a result of the history of federal wage fixation and had received legislative approval. The legislation required that the basic wage and margins be dealt with by differently constituted benches of the Commission. The basic wage could be altered only by the Commission in Presidential Session, that is, by a bench constituted by three or more judges; margins could be altered by a single member of the Commission or by a full bench constituted by at least three members of whom at least one had to be a judge, and the President could, on the ground of public interest, direct that applications for alterations of margins be dealt with by a full bench. The Commission then went on to state briefly the recent history of basic wage and marginal fixation and referred to the four basic wage increases in the years 1956 to 1959 and the increases in margins in 1947, 1954 and 1959. The Commission expected that, in the light of the history of marginal fixation since 1947, it would be asked to consider the question of general marginal increases every few years. So long as its decisions regarding metal trades margins were given general application, and so long as the annual review of the basic wage continued, it followed that in one particular year the Commission constituted by a full bench of judges would review the basic wage and, constituted by a mixed bench, review margins. When the economy was found capable of sustaining an increase in both the basic wage and margins, it followed that the economic and psychological effect of each increase was affected and indeed highlighted by the other. This happened in 1959, when the basic wage was increased as from June by 15s., or an increase of 6 per cent., and margins were increased as from December by 28 per cent. of the amount of the margins existing as a result of the 1954 review by the Court. Together, the 1959 increases approximated 8 to 10 per cent. of award wages.

The Commission was required by legislation to treat the basic wage and margins separately, but although constituted differently for each task, at the time of fixation of rates it had to look forward to the period which its decision would cover; that is, a year for the basic wage and, generally speaking, a longer period for margins. In dealing with the application then before it, the Commission had to decide whether the basic wage should again be increased, although less than a year had elapsed since increases were granted in both the basic wage and margins.

The unions submitted that since 1952-53 all the economic indicators customarily used by the Commission had shown significant improvement. The employers submitted that there were two factors dominating the economic scene, namely, the two wage increases granted by the Commission in 1959, and the lifting of import restrictions by the Commonwealth Government. The whole of the economic material available to the Commission had to be discounted by the fact that the combined effect of the two wage increases had not at that time been felt by the economy. As to the lifting of import restrictions, the likelihood was that there would be an appreciable increase in the amount of imports, which would render more difficult the task of local manufacturers, a task already made difficult by the wage increases in 1959.

The Commonwealth Government stated that, although no quantitative estimate could be made of the increase in imports likely to occur as a result of the lifting of import restrictions, the significance of their removal was that it had come at a time when the effects of the 1959 wage increases had not been fully felt. The effect on the annual wages bill of the increased margins was estimated to be about £100 million and the direct cost of the 1959 basic wage increase about £65 million. In the Commonwealth's view, these increases would raise costs and price levels significantly and further secondary effects would follow. They would also give a further strong stimulus to the demand for goods and services. The Commonwealth Government submitted that what were needed were a firm rejection of any new measures that would add to current inflationary pressures and time for the adjustment of the economy to the general wage increases of 1959. The Commission considered that such a clear statement of the Commonwealth Government's attitude, supported by submissions and economic material, was a matter which it must seriously take into account.

Having referred to the substantial increases in both basic and secondary wages that had been granted in the previous twelve months to employees under federal awards, and to the fact that their effects had not at that time been reflected in the economy, the Commission concluded:—" We consider that it would be unsafe and perhaps dangerous to increase the basic wage at this point of time. We have formed this opinion with a full sense of the obligation which this Commission has to fix the basic wage from time to time at the highest amount that the economy can sustain so that the wage and salary earner may obtain his proper share of goods and services. On the other hand we are mindful of the danger to the whole community, including the wage and salary earner, of the basic wage being fixed at an amount which might increase inflation and upset the stability of the economy."\*

(ix) *Differential Basic Wage Inquiries, 1960.* On 9th August, 1960, the Commonwealth Conciliation and Arbitration Commission commenced hearing claims by:—(a) the Federated Engine Drivers and Firemen's Association of Australia to vary the Engine Drivers and Firemen's (General) Award by eliminating country differentials from basic wages prescribed therein; (b) employers' associations in South Australia to vary the Metal Trades Award by providing that future basic wage increases for Adelaide should be 25 per cent. less than basic wage increases for Sydney until the Adelaide basic wage was 90 per cent. of the Sydney basic wage, and that the basic wage applicable in areas other than Adelaide, Whyalla and Iron Knob should be £13 8s. and should remain unchanged until the Adelaide rate reached £14.

Judgment was delivered on 14th December, 1960. The Commission granted the application to eliminate specified country differentials from the Engine Drivers and Firemen's (General) Award, the new basic wages to be payable from the beginning of the first pay-period commencing on or after 1st January, 1961. Other awards were adjusted similarly on application to the Commission. The employers' applications in respect of basic wages in South Australia were both rejected.

(x) *Basic Wage and Standard Hours Inquiry, 1961.* On 14th February, 1961, the Commonwealth Conciliation and Arbitration Commission, constituted by Kirby C.J. (President), Ashburner and Moore J.J. (Deputy Presidents), commenced hearing applications by employers and unions for variation of the Metal Trades Award. In the first application the employers sought to increase the number of ordinary working hours per week from 40 to 42, with a concomitant increase in weekly wages by an amount equivalent to two hours pay at ordinary rates, and to effect certain other consequential variations. In the second the unions applied for an increase in the basic wage on a six capital cities basis by the amount of 49s. (which was amended during the hearing to 52s.) and for the re-introduction of automatic quarterly adjustments based on the "C" Series Retail Price Index. The amount claimed represented 27s. (30s.) for cost of living increases since 1953 and 22s. to reflect increases in productivity since that time.

In its judgment, delivered on 4th July, 1961, the Commission refused the employers' application and the unions' application for restoration of quarterly adjustments, and increased the basic wage of adult male employees covered by federal awards by a uniform amount of 12s. a week, payable from the beginning of the first pay-period commencing on or after 7th July, 1961.†

The applications were heard together, but although from time to time reference was made to the employers' claim, in essence it was the unions' claim which was to the forefront and with which all the parties principally concerned themselves.

*The Unions' Claims.* In dealing with the unions' claims, the Commission first discussed its own role and that of the Commonwealth and States.

In view of certain propositions put forward which seemed to be founded on the assumption that it had jurisdiction to deal with economic matters at large, the Commission once again set out the role and function of a federal arbitral tribunal in cases such as this. After citing what had been said in earlier judgments, the Commission further stated:—" We are not national economic policy makers or planners. We are confined to the legislation under which we act, and, in particular, in basic wage cases we have the function of deciding only what is a just and reasonable basic wage. This does not mean of course, that we have not to consider seriously the probable effects of our decision on the economy."

\* *Commonwealth Arbitration Reports*, Vol. 94, p. 321.  
Vol. 97, p. 378.

† *Commonwealth Arbitration Reports*,

The question of what weight the Commission should give to the attitude and submissions of the Commonwealth Government was again raised. In the 1960 Basic Wage Inquiry, the attitude of the Commonwealth was positively stated to be one of opposition to a wage increase, but in the 1961 Inquiry, although the Commonwealth followed its usual practice of supplying, for the benefit of the Commission and the parties, certain economic and statistical material, it expressed no attitude other than its opposition to the re-introduction of quarterly adjustments. The Commission stated that it was not concerned with drawing inferences, as it had been asked to do, from the material presented, as to whether the Commonwealth had an attitude, and as to what it might be. The mere fact that the Commonwealth adopted an attitude before the Commission would not result in that attitude being accepted. Any opposition to or support of any claim by the Commonwealth would be treated on its merits.

All States except New South Wales were represented at the hearing. South Australia made no submissions and called no evidence. Tasmania indicated its support for the unions' application for the restoration of automatic adjustments, plus an adjustment of the basic wage to the level indicated by the movement in the "C" Series Index, but presented no material. Victoria, Queensland and Western Australia neither supported nor opposed the application of the unions, but all presented some statistical information.

In claiming the re-introduction of automatic quarterly adjustments, counsel for the unions submitted, firstly, that the reasoning in each of the judgments of the Court and the Commission from 1952-53 to 1960 was wrong and that there was in none of them any proper reason for rejecting the principle of automatic quarterly adjustments; and secondly, that it was wrong for the Commission to fix a wage based on the capacity of the economy and not to provide some machinery which would ensure that the value of the wage was not subsequently eroded by price movements when prices increased.

The Commission considered it indisputable that at the time of its fixation the amount of a basic wage is both a money wage and a real wage, but the value of the real wage is altered by subsequent changes in price levels. Counsel for the unions submitted that a real basic wage should be determined from time to time with some interval longer than one year between determinations, and that the real value of the basic wage between determinations should be maintained automatically by adjustment in accordance with a price index. Unless this were done, the amount of goods and services that could be purchased by the basic wage would decline as prices rose.

The Commission was asked to assume that between basic wage fixations the capacity of the economy to maintain a basic wage would increase or remain constant. If capacity were to diminish, the unions argued, the Commission was of easy access and employers could seek corrective action. The Commission's duty was to fix a just and reasonable basic wage, and the provision of automatic quarterly adjustments would ensure that this was done. Further, the provision of automatic adjustments would relieve the Commission of the necessity of annual reviews of the state of the economy. The unions claimed that it was not practicable for the Commission to make a proper assessment of the economy, including movements in productivity, every twelve months, and to give proper consideration to the fixation of a new real basic wage.

The Commission rejected the employers' argument that the unions were really asking it to return to a needs basic wage as distinct from a capacity basic wage.

It went on to consider the practical difficulty which would in the past have confronted both the Court and the Commission if they had attempted to ensure that a basic wage fixed by them could be properly maintained at its real level. The Commission stated:—  
 " . . . the 'C' Series Index was over a period becoming suspect and the Court and the Commission could not have relied on it to achieve a proper result. The emergence of the Consumer Price Index, however, has removed that difficulty and we are therefore now able to seek to ensure that the basic wage which we fix should, subject to our supervision, maintain its real standard; in other words, that employees should, between fixations of the real basic wage and subject to our supervision, continue to be able to purchase the same amount of goods and services with the basic wage portion of their wage. We add that amongst other things the emergence of the Consumer Price Index has also enabled us to fix at this time a standard which, in our view, is more likely to be properly maintainable than recent past standards."\*

Having reached the conclusion that the principle of the maintenance of the purchasing power of the basic wage could be adopted, the Commission found it unnecessary to deal with the first part of the unions' argument, as to the correctness or otherwise of earlier decisions.

\* *Commonwealth Arbitration Reports*, Vol. 97, p. 385.

After comparing the "C" Series Retail Price Index and the Consumer Price Index, the Commission said:—"In our view the material available demonstrates the superiority of the Consumer Price Index over the 'C' Series Retail Price Index. The former is an index recently constructed by the Commonwealth Statistician in order to give a proper and accurate up-to-date coverage of movements in retail prices. The latter index, on a regimen constructed many years ago, can no longer in our view be considered reliable for wage-fixing purposes. We find the Consumer Price Index suitable under present circumstances for the maintenance of the purchasing power of the basic wage we will now fix."\*

It was then necessary to consider the question of how movements in the Consumer Price Index could be used. In the 1959 and 1960 basic wage decisions the Commission had stated that it was preferable to have an annual review rather than provide for automatic adjustments. However, with the publication of the Consumer Price Index, upon which greater reliance could be placed, what had been said in those two cases was no longer adequate. Nevertheless, the Commission was not prepared to return to a system whereby adjustment was purely automatic, because it thought that there should be some safeguard. Although the Consumer Price Index was preferred to the "C" Series Retail Price Index, it could not be assumed that this index would at all times so accurately measure movements in retail prices that the Commission would be prepared to apply its workings automatically to the basic wage.

In its judgment, the Commission stated:—"We consider it desirable that the application of the Consumer Price Index should always be subject to control by the Commission and the Commission should be able to decide whether a particular increase or decrease in the figures as disclosed in the Consumer Price Index should be applied to the basic wage. Our present opinion is that this consideration of prices should take place annually. We will each year make the assumption that the effect of movements in the Consumer Price Index should be reflected in the basic wage unless we are persuaded to the contrary by those seeking to oppose the change. As the basis of our decision is the desirability of maintaining the value of the real wage based on the concept of national capacity, the appropriate matter for consideration would appear to be what should be the effect on the six capital cities basic wage of movements in the six capital cities index. The resulting figure will be applied to all federal basic wages.

"Since such a consideration of price movements is to take place annually, the question remains whether the Commission should at the annual hearing continue to review all factors in the economy to decide whether or not to change the level of the real basic wage. It seems to us that once the question of prices is dealt with otherwise, a review of the economy generally and in particular of productivity increases could more properly take place at longer periods of time, say, every three or four years. This statement of our views does not, of course, preclude any party from seeking to exercise its right to come to the Commission more frequently than every three or four years to seek a change in the real basic wage but, except in unusual circumstances, we consider such a period a proper interval between reviews of this kind."†

The Commission concluded that the basic wage which it had fixed took into account increases in productivity up to June, 1960, and it therefore anticipated that a review of the real basic wage would not be necessary for some three years. The Commission went on:—"If our anticipation is correct, in the proceedings next year the only issue will be whether or not the money wage should be adjusted in accordance with any change in the Consumer Price Index. The onus will be on the party opposing such an alteration to show that it should not be made. If the price index has risen the unions may rely *prima facie* on that fact. It will then be for the employers to show that the increase in prices is of an exceptional character . . . so that it should not be reflected in a basic wage increase or that there is some special factor in the economy which would make it inadvisable to allow the increase."‡

The Commission had in the past felt some difficulty in endeavouring to make a satisfactory assessment of the economy from the long-range point of view every twelve months, and this difficulty played its part in the Commission's attempt to confine short-term considerations to price movements, and to allow a longer period of time between considerations of the long-term trends in the economy.

On the subject of departure from past practices, the Commission said:—"We consider it to be of importance that the Commission should not only consider itself open to depart from past practices when the occasion demands, but that it should make it quite clear that this will happen when the Commission, after due and careful consideration, considers it necessary. The concept is fundamental to our decision to depart from what has become the practice of having annual reviews of the basic wage in which the question of price increases is only one of a number of factors and is not given any special status."‡

\* *Commonwealth Arbitration Reports*, Vol. 97, p. 386.

† *Ibid.*, p. 387.

‡ *Ibid.*, p. 388.

*Productivity.* The unions claimed that there should be an increase of 22s. a week in the basic wage, based on an estimated one per cent. per annum increase in productivity over the previous decade, and that since 1952-53 no proper allowance had been made in the amounts awarded for increases in productivity. On this subject, the Commission stated:—"The question of productivity has been mentioned from time to time in various judgments of the Commission and there is really no dispute between the parties that workers are entitled to their share of increases in productivity. The issues between the parties are whether productivity can be measured with reasonable accuracy and whether in fact, through wage increases, workers have received their share of increased productivity."\*

In evidence presented by the unions, productivity was calculated by taking the Gross National Product for a year, deflating it by a price index and dividing the figure corrected for prices by (a) population and (b) the total of wage and salary earners in civilian employment. On the basis of these calculations, it was claimed that from 1952-53 to 1959-60 productivity had increased by about 2.6 per cent. per annum, "real" average earnings had increased by less than productivity, and the "real" basic wage had decreased. Counsel for the unions submitted that by taking 1 per cent. per annum the unions had clearly allowed for a safe margin of error.

In answer to this, the employers produced a similar type of calculation, but one that used a different deflator and 1949-50 as the base year. On this basis, it was claimed that the "real" basic wage had increased slightly more than productivity per person employed and some 10 per cent. more than productivity measured on a population basis, and "real" average weekly earnings had increased more than the "real" basic wage.

After considering the various calculations which had been submitted, the Commission concluded that 1952-53 was an abnormal year for the purpose of relevant comparison, and that 1949-50 was a more satisfactory starting point. In the Commission's view, it followed that the 1960 basic wage properly reflected increased productivity in so far as that could be approximately measured.

The employers claimed that the Commission should look at average weekly earnings as the true indicator of whether increases in productivity had been distributed to the work force, and that the only thing to be measured against productivity was what was in fact earned, and not the basic wage. In the Commission's view, the relevant consideration in fixing a basic wage was whether, if average weekly earnings properly reflected increased productivity but the basic wage did not, there was room for an increase in the basic wage based on the same increased productivity. In view of its finding that the 1960 basic wage did reflect increased productivity, the Commission concluded that it was unnecessary to decide the question on that occasion.

The Commission, having reviewed in detail indicators of the state of the economy, considered that the economy had the capacity to sustain an increase of 12s. in the basic wage and that that increase was the highest that could be sustained. This amount was sufficient to restore to the 1960 basic wage its purchasing power as measured by the Consumer Price Index.

The Commission considered the standard of the seven basic wages of the previous ten years and decided that the most appropriate one was the standard of 1960. It felt that the new basic wage combined in the result its conclusions on fundamental factors in a threefold way, because it was fixed at the highest amount the capacity of the economy allowed, it adopted as a standard that set by the basic wage of 1960, and it took account of productivity increases up to and including 1959-60.

Both the employers and the Commonwealth Government warned of the danger of inflation which might result from an increase in wages. However, the Commission pointed out that there was no legal reason why any increase in the basic wage should not be absorbed by over-award payments, although this might not be possible because of industrial pressure and scarcity of skilled labour. While the increase in wages granted would cause some increase in costs, the stimulation of demand would only restore it to the level of the previous year. The estimated increase of £60 million a year in wages and salaries would add less than 2 per cent. to the annual wages bill.

*The Employers' Claim.* The employers' claim was for an increase in standard hours from forty to forty-two per week, with a concomitant increase in the weekly wage equivalent to two hours pay at ordinary rates. This was to operate for four years, after which time weekly hours would revert to forty but the increased wage would remain. The Commission rejected arguments supporting this application, which stated that such a measure was called

\* *Commonwealth Arbitration Reports*, Vol. 97, p. 389.

for by the balance of payments crisis, and that it would lead to increased productivity at stable prices and distribute more evenly the amount of overtime worked. The Commission did not think that the state of the economy was such that standard hours should be increased.

*Employees on Lower Margins.* During the course of the proceedings, the President asked for submissions on the question of whether, by prescription of the basic wage, special consideration should or could be given to those employees who receive a margin above the basic wage of, say, £1 a week or less. The Commission decided that even if it had jurisdiction it would not, as a matter of discretion, make a differential basic wage at that time.

*Annual Leave Decision.* The Commission rejected the view that the reasons given for not granting an increase in annual leave in 1960 should impel it to refuse an increase in the basic wage. The question of wages was more fundamental and more important to the worker than the question of leave, and reasons which might delay the granting of additional leave might not be of sufficient weight to delay a basic wage increase. Also, had an increase in annual leave been granted, the Commission might not have been able to grant the increase in wages.

*Decisions.* The decisions of the Commission were as follows.

- “ 1. The employers' claim for an increase in the standard hours of work from forty to forty-two with a concomitant increase in the weekly wage equivalent to two hours' pay at ordinary rates is refused.
2. The unions' claim for restoration of automatic quarterly adjustments is refused.
3. The basic wages of adult male employees covered by federal awards will be increased by a uniform amount of 12s. per week.
4. The new rates will come into effect from the beginning of the first pay-period commencing on or after 7th July instant subject to special cases.
5. For the specific reasons set out in the judgment we consider that in February next the only issue in regard to the basic wage should be why the money wages fixed as a result of our decision should not be adjusted in accordance with any change in the Consumer Price Index and for the purpose of deciding that issue the Order giving effect to the decisions hereby announced will also provide for the adjournment of the application of the unions for increase of the basic wages under the Metal Trades Award to Tuesday, 20th February, 1962, in Melbourne, when such submissions thereon as are desired to be made will be heard.
6. The decision regarding increases in basic wages is applicable to all the applications which have been ordered by the Commission to be joined for hearing and decision with the original application and those joined applications are stood over to a date after 20th February, 1962, to be fixed by the Commission.”\*

(xi) *Basic Wage Inquiry, 1962.* In accordance with decision No. 5 in the 1961 Inquiry (see above), the adjourned hearing was held on 20th February, 1962, before Kirby C.J., and Ashburner and Moore JJ.

Counsel for the unions submitted that, although the 1961 judgment represented a recognition of union claims as to the need to maintain the real value of the basic wage, it had not met in full the demands of the trade union movement. The unions intended to return to the Commission at the appropriate time to argue at length for the implementation of their policy as to the basic wage standard and the question of quarterly adjustment.

In the employers' submission, reference was made to the Commission's 1961 judgment as indicating a firm intention to confine argument in the current hearing to the quantum of any basic wage change and to exclude any re-examination of the Commission's departure from previously accepted principles. As the Consumer Price Index had shown practically no change between the March and December quarters of 1961, there could be no change in the basic wage. However, the employers' view was that in any hearing involving movement in the basic wage the parties must be free to discuss economic capacity to sustain the basic wage at any given level and the principles upon which it is computed.

Counsel for the Commonwealth stated that at the proper time the Commonwealth would appear before the Commission to present argument as to the use of price indexes in basic wage fixation and other important issues raised by the 1961 judgment. However the matter might come before the Commission as a matter of procedure, when circumstances called for the debate of any substantive issue the Commonwealth would be in a position to make further submissions.

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\* *Commonwealth Arbitration Reports*, Vol. 97, p. 416.

The Commission decided that there would be no alteration in the amounts of the existing basic wages until further order; and further adjourned the application before it until 19th February, 1963. At the adjourned hearing the issues would be: (a) The issue set out in paragraph 5 of the decisions of 4th July, 1961 (*see p. 479*); (b) Any issue which a party desired to raise and of which it had given notice to the Industrial Registrar, the other parties and to the Attorney-General by 31st January, 1963. The applications referred to in paragraph 6 of the decision of 4th July, 1961, were stood over to a date after 19th February, 1963, to be fixed by the Commission with liberty to any of the parties to those applications to apply in the meantime.

(xii) *Basic Wage Inquiry*, 1963. This was an adjourned inquiry which arose out of an order made by the Commission on 20th February, 1962 (*see p. 479*). The hearing was held on 5th February, 1963 before Kirby C.J., Ashburner and Moore J.J.

During the proceedings, counsel for the unions discussed the various methods by which changes in the rates of basic wage could be calculated by using changes in the index numbers of the Consumer Price Index. Counsel asked for a direction by the Commission as to which method should be used.

In conformity with the decision in the 1962 Basic Wage Inquiry (*see above*), counsel for the employers gave notice to the Commission that issues and procedures referred to in the 1961 Basic Wage Judgment that related to the fixation of wages or conditions of employment by reference to the capacity of the national economy would, of necessity, be argued at the present hearings.

The employers submitted that the following matters were essential considerations in the hearing and determining of any application seeking to alter wages and conditions of employment on a national basis.

- (a) The role of the Commission in relation to government economic or fiscal policies, inflation, etc.
- (b) The justification for adjustment of wages by reference to a price index either automatically or *prima facie*, including the relationship between movements in a price index and variations in capacity of the national economy.
- (c) The relationship between the capacity of the economy to absorb increases in wages or labour costs and the movements or likely movements in national productivity.

Counsel for the unions pointed out that the matters raised by the employers could be discussed only before a Presidential Bench of the Commission and that the employers could not seek the right to argue the 1961 basic wage decisions before a bench of the Commission constituted otherwise.

In the judgment given on 5th February, 1963 the Commission said:—

“1. There will be no alteration in the amounts of the existing basic wage until further order of the Commission.

2. The application before the Commission is further adjourned until 18th February, 1964.

3. At such adjourned hearing the issues will be:

- (a) The issue set out in paragraph (5) of the decision of 4th July, 1961 (*see page 479*), and
- (b) Any issue which a party desires to raise and of which it has given notice to the Industrial Registrar, the other parties, and the Attorney-General, by the 31st January, 1964.”

With regard to the matter of the use of statistics, which had been raised by counsel for the unions, the Commission felt that it was not the appropriate time to deal with the matter, but it would be further considered when it was appropriate.

The Commission referred to the matter raised by the employers concerning the considerations to be taken into account by the Commission when hearing applications to alter wages and conditions of employment, and ruled that it was not the appropriate time to deal with the submissions made.

If submissions were made before benches of the Commission differently constituted from the present one, then those benches were the ones to deal with their relevance, admissibility or otherwise.

The application referred to in para. 6 of the decision of 4th July, 1961, were further stood over to a date after 18th February, 1964, to be fixed by the Commission with liberty to any of the parties to these applications to apply in the meantime.

(xiii) *Basic Wage Inquiry, 1964.* The Commonwealth Conciliation and Arbitration Commission announced on 9th June, 1964, its decision on trade union claims for an increase in basic wages for adult males covered by federal awards. The Commission was unanimous that an increase be granted, but was divided equally in opinion on the amount of the increase, the President (Kirby C.J.) and Moore J. being of the opinion that it should be 20s. and Gallagher and Nimmo J.J. that it should be 10s. The Commission being equally divided in opinion, the matter was decided according to the opinion of the President, as provided in the Conciliation and Arbitration Act. The increase of 20s. a week would apply to adult male employees covered by federal awards and would operate from the beginning of the first pay period commencing on or after 19th June, 1964. The Commission refused the unions' application for restoration of automatic quarterly adjustments of the basic wage. The 1s. per week disparity in the basic wage for station hands under the Pastoral Award was abolished. A summary of the reasons for these decisions will be included in the next issue of the Year Book.

(xiv) *Employers' Total Wage Case, 1964.* On 9th June, 1964, the Commonwealth Conciliation and Arbitration Commission announced its decision rejecting the application of employers for deletion from the Commission's awards, generally, of the basic wage provisions and for the insertion in those awards of a wage expressed as a total wage. A summary of the reasons for this decision will be included in the next issue of the Year Book.

(xv) *Rates Operative, Principal Towns.* The basic wage rates of the Commonwealth Conciliation and Arbitration Commission for adult males and females, operative as from the beginning of the first pay period commencing on or after 19th June, 1964, are as shown in the following table.

COMMONWEALTH BASIC WAGE: WEEKLY RATES(a), 1964

City or town	Rate of wage		City or town	Rate of wage	
	Adult males	Adult females		Adult males	Adult females
	£ s. d.	£ s. d.		£ s. d.	£ s. d.
New South Wales—			Western Australia—		
Sydney ..	15 15 0	11 16 0	Perth ..	15 8 0	11 11 0
Newcastle ..	15 15 0	11 16 0	Kalgoorlie ..	15 15 0	11 16 0
Port Kembla—			Geraldton ..	16 1 0	12 0 6
Wollongong ..	15 15 0	11 16 0	Five Towns ..	15 9 0	11 11 6
Broken Hill ..	15 19 0	11 19 0	Tasmania—		
Five Towns ..	15 14 0	11 15 0	Hobart ..	15 14 0	11 15 6
Victoria—			Launceston ..	15 10 0	11 12 6
Melbourne ..	15 7 0	11 10 0	Queenstown ..	15 5 0	11 8 6
Geelong ..	15 7 0	11 10 0	Five Towns ..	15 12 0	11 14 0
Warrnambool ..	15 7 0	11 10 0	Thirty Towns ..	15 8 0	11 11 0
Mildura ..	15 7 0	11 10 0	Six Capital Cities	15 8 0	11 11 0
Yallourn(b) ..	15 13 6	11 15 0	Northern Territory—(d)		
Five Towns ..	15 7 0	11 10 0	Darwin ..	16 7 0	12 5 0
Queensland—			South of 20th Parallel ..	15 14 0	11 15 6
Brisbane ..	14 10 0	10 17 6	Australian Capital Territory—		
Five Towns ..	14 11 0	10 18 0	Canberra ..	15 10 0	11 12 6
South Australia—					
Adelaide ..	15 3 0	11 7 0			
Whyalla and Iron Knob(c) ..	15 8 0	11 11 0			
Five Towns ..	15 2 0	11 6 6			

(a) Operative from the beginning of the first pay-period commencing on or after 19th June, 1964; female rates are 75 per cent. of male rates. (b) Melbourne rate plus 6s. 6d. loading for males; 75 per cent. of male rate for females. (c) Adelaide rate plus 5s. for males; 75 per cent. of male rate for females. (d) Excludes special loadings—see p. 482.



The following table shows the movements of this wage in all State capital cities and the six capital cities during the period 1939 to 1964.

COMMONWEALTH BASIC WAGE: WEEKLY RATES, ADULT MALES(a)

Date operative(b)	Sydney	Mel-bourne	Brisbane	Adelaide	Perth	Hobart	Six capitals
	<i>s. d.</i>	<i>s. d.</i>	<i>s. d.</i>	<i>s. d.</i>	<i>s. d.</i>	<i>s. d.</i>	<i>s. d.</i>
September, 1939 ..	81 0	81 0	76 0	78 0	77 0	77 0	79 0
November, 1942 ..	97 0	97 0	91 0	93 0	91 0	92 0	95 0
„ 1943 ..	99 0	98 0	93 0	94 0	94 0	95 0	97 0
„ 1944 ..	99 0	98 0	93 0	93 0	94 0	94 0	96 0
„ 1945 ..	99 0	98 0	93 0	93 0	94 0	94 0	96 0
„ 1946 ..	101 0	99 0	94 0	95 0	95 0	97 0	98 0
December, 1946 ..	108 0	106 0	101 0	102 0	102 0	103 0	105 0
November, 1947 ..	112 0	109 0	105 0	106 0	106 0	107 0	109 0
„ 1948 ..	122 0	120 0	115 0	116 0	116 0	118 0	119 0
„ 1949 ..	132 0	130 0	125 0	126 0	129 0	128 0	129 0
„ 1950 ..	146 0	143 0	135 0	137 0	139 0	139 0	142 0
December, 1950(c) ..	165 0	162 0	154 0	158 0	160 0	160 0	162 0
November, 1951 ..	207 0	199 0	185 0	195 0	197 0	199 0	200 0
„ 1952 ..	237 0	228 0	216 0	229 0	228 0	230 0	231 0
August, 1953(d) ..	243 0	235 0	218 0	231 0	236 0	242 0	236 0
June, 1956 ..	253 0	245 0	228 0	241 0	246 0	252 0	246 0
15th May, 1957 ..	263 0	255 0	238 0	251 0	256 0	262 0	256 0
21st May, 1958 ..	268 0	260 0	243 0	256 0	261 0	267 0	261 0
11th June, 1959 ..	283 0	275 0	258 0	271 0	276 0	282 0	276 0
7th July, 1961 ..	295 0	287 0	270 0	283 0	288 0	294 0	288 0
19th June, 1964 ..	315 0	307 0	290 0	303 0	308 0	314 0	308 0

(a) Rates prescribed by the Commonwealth Conciliation and Arbitration Commission (before 30th June, 1956, the Commonwealth Court of Conciliation and Arbitration). Rates include prosperity loadings, where applicable. (b) Rates operative from the beginning of the first pay-period commencing in the month shown or commencing on or after the date shown. (c) From December, 1950 the basic wage rates for adult females have been 75 per cent. of the rates for adult males. (d) Automatic adjustment discontinued (see p. 469).

A table showing Commonwealth basic wage rates from 1923 to 1961 was published in the Appendix to *Labour Report No. 49*.

3. **Australian Territories.**—In the Northern Territory, there are two basic wages operating, one in respect of areas north of the 20th parallel of South Latitude, generally referred to as the “Darwin” rate, and the other in respect of areas south of that parallel and extending down to the 26th parallel (the “Port Augusta” rate).

The basic wage rates payable as from the beginning of the first pay-period commencing on or after 19th June, 1964 were:—“Darwin” rate, adult males £16 7s., adult females £12 5s.; “Port Augusta” rate, adult males £15 14s., adult females £11 15s. 6d.

In addition to these rates, special loadings were prescribed in Northern Territory awards following the fixation of the basic wage rates operative from November, 1951.

In the Australian Capital Territory, the rates payable as from the beginning of the first pay-period commencing on or after 19th June, 1964 were £15 10s. for adult males and £11 12s. 6d. for adult females.

Further details of basic wage rates in the Northern Territory and the Australian Capital Territory may be found in *Labour Report No. 49*, pages 114–118.

4. **Basic Wage Rates for Females.**—Reference should be made to *Labour Report No. 49* (pp. 112–114) for an account of the fixation of minimum rates and basic wages for adult females by the Commonwealth Court of Conciliation and Arbitration. At the end of the 1949–50 Basic Wage Inquiry, the Commonwealth Court of Conciliation and Arbitration, by a majority decision, fixed the basic weekly wage for adult females at 75 per cent. of the corresponding male rate from the beginning of the first pay-period commencing in December, 1950. This percentage has continued to be prescribed in subsequent inquiries.

5. *State Basic Wages.*—(i) *New South Wales.* The first determination under the New South Wales Industrial Arbitration Act of a standard "living" wage for adult male employees was made on 16th February, 1914, when the Court of Industrial Arbitration fixed the living wage at £2 8s. a week for adult males in the metropolitan area. A Board of Trade, established in 1918, with power to determine the "living" wage for adult male and female employees in the State, made numerous declarations from 1918 to 1925, but ceased to function after the *Industrial Arbitration (Amendment) Act, 1926* transferred its powers, as from 15th April, 1926, to the Industrial Commission of New South Wales.

The adult male rate was determined on the family unit of a man, wife and two children from 1914 to 1925; a man and wife only in 1927, with family allowances for dependent children; and a man, wife and one child in 1929, with family allowances for other dependent children. However, with the adoption in 1937 of the Commonwealth basic wage, the identification of a specified family unit with the basic wage disappeared.

A State scheme of supplementing wages by child endowment became operative in New South Wales from July, 1927, and continued until superseded by the Commonwealth Government scheme in July, 1941. A brief account of the main features of the New South Wales system was given in *Official Year Book No. 37*, pages 485–6. For particulars of the Commonwealth scheme, see Chapter XVI. of this Year Book.

Shortly after the Commonwealth Court of Conciliation and Arbitration announced its decision in the 1937 Basic Wage Inquiry, the Government of New South Wales amended the *Industrial Arbitration Act* to make the State basic wage agree with the Commonwealth rate ruling in New South Wales, and to adopt, as far as practicable, the general principles of operation laid down by the Commonwealth Court. Further amendments to the *Industrial Arbitration Act* were made in 1950 to give effect to the new rates declared by the Commonwealth Court of Conciliation and Arbitration in the 1949–50 Basic Wage Inquiry (see page 469).

Differential basic wage rates for country areas (except Broken Hill) and for employees under Crown awards were eliminated by an amendment of the *Industrial Arbitration Act* in 1951. Separate rates for Broken Hill were discontinued in 1961 (see below).

Following the decision of the Commonwealth Court of Conciliation and Arbitration in September, 1953, to discontinue the system of automatic adjustment of the basic wage in accordance with changes in the "Court" Series retail price index numbers, the New South Wales Industrial Commission deleted the automatic adjustment clause from awards, etc., within its jurisdiction. As a result, the basic wages applicable for the State and operative from the beginning of the first pay-period commencing in August, 1953, remained unchanged until November, 1955.

In October, 1955, the *Industrial Arbitration Act, 1940–1955* was amended to provide for the automatic adjustment of the existing basic wage each quarter, in accordance with the movements in the Commonwealth Statistician's "C" Series retail price index numbers. The first adjustment, based on the index number for the September quarter, 1955, represented the amount which would have been added to the basic wage if quarterly adjustments had not been suspended, and was made payable from the beginning of the first pay-period in November, 1955. Automatic adjustments have continued to operate since that date.

Act No. 29, 1961 (assented to on 13th October, 1961) amended the *Industrial Arbitration Amendment Act, 1961*, by adopting the Consumer Price Index numbers in place of the "C" Series retail price index numbers for purposes of the automatic quarterly adjustment of the basic wage. The November, 1961, variation was the first based on the Consumer Price Index. Consumer Price Index numbers relate only to capital cities and the weighted average for the six capital cities, and as a result the Sydney basic wage rate became the rate for the whole of New South Wales, separate rates no longer being prescribed for Broken Hill and "5 Towns" after November, 1961.

From the beginning of the first pay-period in May, 1964, the basic wage for adult males was £15 5s. and for adult females £11 9s.

The *Industrial Arbitration (Female Rates) Amendment Act* (No. 42, 1958), which became operative on 1st January, 1959, defined the existing basic wage for adult females as being 75 per cent. of the adult male rate and made provision for equal pay for males and females in certain circumstances. Where the Industrial Commission or a Conciliation Committee is satisfied that male and female employees are performing work of the same or a like nature and of equal value, they shall prescribe the same marginal or secondary rates of wage. The basic wage for these adult females was prescribed as 80 per cent. of the appropriate basic wage for adult males as from 1st January, 1959. Thereafter, the basic wage was to be increased annually by 5 per cent., so that on 1st January, 1963, it became the same as that for adult males.

A table showing, for the period from 16th February, 1914, to November, 1962, the basic wage rates for adult males and females payable in Sydney was published in the Appendix to *Labour Report* No. 49, 1961.

(ii) *Victoria*. There is no provision in Victorian industrial legislation for the declaration of a State basic wage. Wages Boards constituted from representatives of employers and employees, with an independent chairman, for each industry group or calling, determine the minimum rate of wage to be paid in that industry or calling. In general, these Boards have adopted a basic wage in determining the rate of wage to be paid.

By an amendment to the *Factories and Shops Act* in 1934, Wages Boards were given discretionary power to include in their determinations appropriate provisions of relevant Commonwealth Awards. A further amendment to this Act in 1937 made it compulsory for Wages Boards to adopt such provisions of Commonwealth Awards. The 1937 Act, as amended, also gave Wages Boards power to adjust wage rates, "with the variation from time to time of the cost of living as indicated by such retail price index numbers published by the Commonwealth Statistician as the Wages Board considers appropriate". The Wages Boards thus adopted the basic wages declared by the Commonwealth Court of Conciliation and Arbitration and followed that Court's system of adjusting the basic wage in accordance with variations in retail price index numbers.

After the Commonwealth Court of Conciliation and Arbitration discontinued the system of automatic adjustment of the Commonwealth basic wage in September, 1953, a number of Wages Boards met in November, 1953, and deleted references to these adjustments. However, an amendment to the *Factories and Shops Act* in November, 1953, required Wages Boards to provide for the automatic adjustment of wage rates in accordance with variations in retail price index numbers.

In October, 1956, an amendment to the *Labour and Industry Act* (which had superseded the *Factories and Shops Acts* in 1954) deleted the automatic adjustment provision and directed Wages Boards in determining wage rates to take into consideration relevant awards of, or agreements certified by, the Commonwealth Conciliation and Arbitration Commission. As a result of this legislation, the last automatic quarterly adjustment of the basic wage made was based on the variation in retail price index numbers for the June quarter, 1956, and was payable as from the beginning of the first pay-period in August, 1956. Following the judgment of the Commonwealth Conciliation and Arbitration Commission in the 1961 Basic Wage Inquiry, Wages Boards met in July and August, 1961, and varied their determinations by incorporating the new Commonwealth rates. As the 1964 Basic Wage Inquiry resulted in an increase of 20s. being made to the Commonwealth basic wage for adult males, the rates for Melbourne are £15 7s. a week for adult males and £11 10s. for adult females.

A table showing, for the period November, 1953 to July, 1961, the basic wage rates for adult males and females adopted by most Wages Boards was published in the Appendix to *Labour Report* No. 49, 1961.

(iii) *Queensland*. The *Industrial Conciliation and Arbitration Act* of 1929 established an Industrial Court, and provided that the Court could make declarations as to the basic wage and standard hours. This Act, as subsequently amended, was repealed by the *Industrial Conciliation and Arbitration Act* of 1961, which established, in addition to the Industrial Court, an Industrial Conciliation and Arbitration Commission. The full bench of the Commission, consisting of not less than three Commissioners, may make declarations as to, *inter alia*, the basic wage for males and/or females and the standard hours of work. The first formal declaration of a basic wage (£4 5s. for adult males) by the Queensland Court of Industrial Arbitration operated from 1st March, 1921. Prior to this declaration, the rate of £3 17s. a week for adult males had been generally recognized by the Court in its awards as the "basic" or "living" wage. The Queensland Industrial Conciliation and Arbitration Act provides that any basic wage declared must at least maintain an employee, his wife and family of three children in a fair and average standard of comfort.

From 21st April, 1942, the Queensland Industrial Court adopted the practice of making quarterly declarations of the basic wage on the basis of variations in the "C" Series retail price index numbers for Brisbane.

The Court granted increases of 7s. and 5s. to the basic wages for adult males and adult females respectively, payable from 23rd December, 1946, following the "interim" basic wage judgment of the Commonwealth Court of Conciliation and Arbitration announced earlier in December, 1946.

Following the decision of the Commonwealth Court of Conciliation and Arbitration to increase the male and female basic wages from December, 1950, the Queensland Industrial Court, after an inquiry, granted an increase of 15s. a week to both adult males and adult females, operative from 7th December, 1950. The new male rate was identical with the Commonwealth basic wage for the Brisbane metropolitan area and the basic wage payable to adult females became approximately 66 per cent. of the male rate.

In January, 1953, because the Court was not satisfied that the fall in the "C" Series index for Brisbane for the December quarter, 1952, was a true representation of the economic position for Queensland as a whole, it declined to make any alteration to the existing basic wage. However, quarterly adjustments were made for the next four quarters.

Following a Basic Wage Inquiry, the Court announced, on 11th June, 1954, that there would be no change in the basic wage rates declared for February, 1954. For the following four quarters, the Court also decided not to vary the existing basic wage rates. However, after considering the "C" Series index number for the quarter ended 30th June, 1955, and its relation to the index number for the March quarter, 1955, the Court announced that, as these figures showed a continued upward trend, the basic wage for adult males should be increased from 1st August, 1955. In this judgment, the Court emphasized that it held itself free whether or not to adjust the basic wage upwards or downwards in accordance with movements in the "C" Series retail price index numbers. The Court examined the movement in these index numbers for each subsequent quarter and announced variations in the basic wage.

On 22nd and 23rd April, 1958, the Court heard an application by combined unions for an immediate increase of £1 in the basic wage, on the ground that a state of emergency existed with regard to the cost of living. On 30th May, 1958, the Court dismissed the application.

In December, 1960, the Court determined that as from 1st May, 1961, the basic wage for adult females should be 75 per cent. of that for adult males.

In its basic wage declaration of 25th January, 1961, the Court referred to the opinion given by the Commonwealth Statistician that the "C" Series Retail Price Index had become an unreliable measure of retail price changes in recent quarters and to the fact that, for current statistical purposes, variations in retail prices were measured by the Consumer Price Index. Taking into consideration all relevant factors, including the approximate increase in price levels as disclosed by the Consumer Price Index, the Court decided to increase the basic wage for adult males by 4s. per week.

The *Industrial Conciliation and Arbitration Act* of 1961, which came into operation as from 2nd May, 1961, provided that all persons interested must be given an opportunity to be heard before any general declaration as to the basic wage can be made.

Following an inquiry, the Commission, in a decision issued on 24th May, 1961, increased the adult male basic wage by 4s. a week, which was approximately the amount of the increase indicated by the Consumer Price Index for March quarter, 1961.

In September, 1961 the Commission heard an application by employer organizations for a declaration of a general ruling that "in future the basic wage for males and/or females shall not be reviewed merely by reason of any change in the Consumer Price Index at intervals of less than twelve months". The application was opposed by the trade unions generally. In a judgment delivered on 14th November, 1961, the Commission refused the employers' application.

An inquiry held in November and December, 1962, dealt with an application by unions for increases of £1 4s. in the adult male basic wage and 18s. in the adult female basic wage. The application was opposed by employer organizations generally, by the State of Queensland and by the Queensland Commissioner for Railways. Judgment was given on 20th December, 1962, the application being refused.

A further application was made by trade unions for a declaration of a basic wage, and an inquiry was held in April, 1963. Employers generally opposed the application, and the State of Queensland, while adopting a neutral attitude, submitted information for the assistance of the Commission. In a judgment delivered on 26th April, 1963, the Commission increased the basic wage by 2s. a week for adult males and by 1s. 6d. a week for adult females from 6th May, 1963.

The rates payable in the Southern Division (Eastern District) from 6th May, 1963, were £14 6s. for adult males and £10 14s. 6d. for adult females.

In addition to the basic wage for the Southern Division (Eastern District), which includes Brisbane, adult males in other areas receive district allowances. As from 2nd February, 1959, the allowances have been:—Southern Division (Western District) 10s. 6d., Mackay Division 9s., Northern Division (Eastern District) 10s. 6d., Northern Division (Western District) £1 12s. 6d. The allowances for adult females are not less than 75 per cent. of those for adult males.

In the Appendix to *Labour Report* No. 49, a table was published showing adult male and adult female basic wage rates payable in the Southern Division (Eastern District) from 1st March, 1921, to 29th May, 1961.

(iv) *South Australia.* The *Industrial Code, 1920–1963* provides that the Board of Industry shall after public inquiry declare the “living wages” to be paid to adult male and adult female employees. The Board has power also to fix different rates to be paid in defined areas.

The family unit was not specifically defined in the Code, but the South Australian Industrial Court in 1920 decided that the average employee in respect of whom the living wage was to be declared was a man with a wife and three children. However, the concept of a family unit disappeared with the adoption of basic wage rates declared by the Commonwealth Conciliation and Arbitration Commission (*see below*).

The first declaration by the Board of Industry became operative from 4th August, 1921, when the living wage for adult male employees in the metropolitan area was determined at £3 19s. 6d. a week.

Following the “interim” increase in the “needs” basic wage of the Commonwealth Court of Conciliation and Arbitration, announced on 13th December, 1946, the South Australian Government made a provision in the *Economic Stability Act 1946* for the declaration by the Governor of a living wage based on the Commonwealth basic wage for Adelaide. This action was taken because the Board of Industry had made a determination on 5th September, 1946, and under the Industrial Code was unable to make a further determination for six months.

The *Industrial Code Amendment Act 1949* made provision for the quarterly adjustment of the living wage in accordance with the variations in the Commonwealth basic wage for Adelaide. In effect, this made the State living wage and the Commonwealth basic wage equal from the beginning of the first pay-period commencing in February, 1950. The prescribed adjustment to the female living wage was seven-twelfths of that made to the Commonwealth male basic wage. The Board of Industry retained power to amend the living wage, but any new living wage was to be adjusted quarterly as above.

Following the decision of the Commonwealth Court of Conciliation and Arbitration in the 1949–50 Basic Wage Inquiry, the South Australian *Industrial Code* was amended to provide for declarations of the living wage by proclamation to prevent unjustifiable differences between the State and Commonwealth rates of wage. By proclamation dated 30th November, 1950, the South Australian living wage in the metropolitan area was made identical with the December, 1950, rates fixed by the Commonwealth Court of Conciliation and Arbitration for the metropolitan area of South Australia. The female basic wage, which had been approximately 54 per cent. of the male basic wage, was increased to 75 per cent. of the corresponding male rate.

When the Commonwealth Court of Conciliation and Arbitration discontinued quarterly adjustments to Commonwealth basic wages in September, 1953, the South Australian living wage also ceased to be varied quarterly, and since that time it has remained the same as the Commonwealth basic wage for Adelaide. Following the Commonwealth basic wage inquiries in 1956 and subsequent years, increases were made to the South Australian living wages by proclamation. The rates operative from 22nd June, 1964, were £15 3s. for adult males and £11 7s. for adult females.

A table showing adult male and adult female basic wage rates for the whole State (with the exception of Whyalla and nearby area) from 1921 to July, 1961, will be found in Section XI of the Appendix to *Labour Report* No. 49.

(v) *Western Australia.* The *Industrial Arbitration Act 1912–1961* provides that the Court of Arbitration may determine and declare a basic wage at any time on its own motion and must do so when requested by a majority of industrial unions or by the Western Australian Employers' Federation, with the limitation that no new determination shall be made within twelve months of the previous inquiry.

The term "basic wage" is defined in the Act as "a wage which the Court considers to be just and reasonable for the average worker to whom it applies". In determining what is just and reasonable, the Court must take into account not only the "needs of an average worker", but also the "economic capacity of industry" and any other matters it deems relevant.

The Act provides that the Court of Arbitration may make adjustments to the basic wage each quarter, if the statement supplied by the State Government Statistician showing retail price index numbers and monetary equivalents in terms of the State basic wages indicates that there has been a variation of 1s. or more a week compared with the previous quarter. These adjustments generally apply from the dates of declaration by the Court.

The first declaration of the basic wage by the Court of Arbitration, after the authority to fix one was vested in the Court in 1925, operated from 1st July, 1926. The family unit is not specifically defined in the Act, but it has been the practice of the Court to take as a basis for its calculations a man, his wife and two dependent children. Since that date, the principal inquiries have been those of 1938, 1947, 1950 and 1951.

Following the judgment of the Commonwealth Court of Conciliation and Arbitration in the 1949-50 Basic Wage Inquiry, the Western Australian Court of Arbitration decided that the basic wage should be increased by £1 a week for adult males and by 15s. a week for adult females. As the result of a subsequent inquiry, the basic wage for adult females was increased from 1st December, 1951, to 65 per cent. of the corresponding male rate. This was subject to the condition that the increase in the basic wage should be offset by the reduction in, or deletion of, existing margins as specified by the appropriate award or determination.

Following the decision of the Commonwealth Court of Conciliation and Arbitration, in September, 1953, to discontinue quarterly adjustments to Commonwealth basic wages, the Western Australian Court of Arbitration exercised its discretionary power and declined to make any adjustments to the basic wage from November, 1953, to the June quarter, 1955.

However, from 9th August, 1955, the Court decided to increase the adult male basic wage by 5s. 11d. a week for Perth and to make corresponding increases for other areas. No further change was announced in the basic wage until January, 1956, and for each subsequent quarter to September quarter, 1961, the Court varied the State basic wages after considering the official statement supplied by the State Government Statistician, except in February, 1959, and February, 1960, when no change was made. Basic wage rates remained unchanged from 30th October, 1961, to 22nd April, 1963.

In a decision issued on 30th January, 1960, the Court, acting in recognition of an agreement between representatives of unions and employers, increased the basic wage for adult females from 65 per cent. to 75 per cent. of the adult male rate. The increased rates were payable from the beginning of the first pay-period commencing on or after this date. As in December, 1951, female margins were to be reduced or deleted to offset the increase in the female basic wage.

The rates payable in the metropolitan area as from 27th April, 1964, were £15 4s. 2d. for adult males and £11 8s. 2d. for adult females.

A table showing the West Australian State basic wage for the Perth Metropolitan Area, from 1926 to October, 1962, will be found in Section XI of the Appendix to *Labour Report* No. 49.

(vi) *Tasmania*. A State basic wage is not declared in Tasmania. Under the *Wages Board Act* 1920-1961, Wages Boards are constituted for a number of industries, from representatives of employers and employees and an independent chairman (who is common to all Wages Boards), with power to determine the minimum rates of wage payable in each industry. Until February, 1956, these Boards generally adopted the basic wages of the Commonwealth Court of Conciliation and Arbitration in determining the rates of wage to be paid.

Wages Boards have power to adjust their wage rates in accordance with variations in the cost of living as indicated by retail price index numbers published by the Commonwealth Statistician. When the Commonwealth Court discontinued the system of automatic adjustments of the basic wage in September, 1953, the Chairman of the Wages Boards stated he was of the opinion that automatic adjustment clauses should be deleted from all Wages Boards determinations. Before Wages Boards met to consider this matter, the wage rates for all determinations were automatically adjusted upwards from the beginning of the first pay-period commencing in November. By early December, 1953, all Wages Boards had met and deleted the automatic adjustment clause from determinations and cancelled the adjustment increases payable from November.

Automatic quarterly adjustments in accordance with movements in retail price index numbers were re-introduced by Wages Boards in February, 1956, and restored the basic wage to the level it would have reached if quarterly adjustments had not been discontinued in 1953. A further basic wage increase was payable from the first pay-period in May, 1956.

Upon application by the Employers' Federation of Tasmania, a compulsory conference of employer and employee representatives was held on 22nd and 25th June, 1956, to consider the adoption of Commonwealth basic wages and the deletion of automatic quarterly adjustment provisions. At the conclusion of the conference, the Chairman of the Wages Boards stated he was of the opinion that the adjustments should be suspended for a period in an endeavour to achieve some measure of stability. However, he pointed out that any Wages Board was competent to adopt, by agreement between the representatives of employers and employees or majority decision, the Commonwealth Court's basic wage or any other method of fixing the basic wage.

The majority of Wages Boards suspended automatic quarterly adjustments after the August, 1956, adjustment, and wage rates remained unchanged until July, 1959, when the Commonwealth rates were adopted. Following the decision of the Commonwealth Conciliation and Arbitration Commission in July, 1961, to increase the basic wage, Wages Boards met during July, and incorporated the new rates in their determinations. The rates for Hobart then became £14 14s. for adult males and £11 0s. 6d. for adult females. These rates operated until June, 1964, when, following the increase of 20s. in the Commonwealth basic wage for adult males, the rates became £15 14s. and £11 15s. 6d., respectively. During January, 1961, Wages Boards adopted the basic wage for Hobart as the uniform rate applicable throughout the State.

A table was published in the Appendix to *Labour Report* No. 49, 1961, showing basic wage rates for adult males and females generally adopted in Hobart for the period February, 1956, to July, 1961.

During 1962, a number of Wages Boards met and varied determinations by making provision for the automatic adjustment of the basic wage to conform to any change in the basic wage determined from time to time in awards of the Commonwealth Conciliation and Arbitration Commission.

(vii) *State Basic Wage Rates.* The "basic" wage rates of State industrial tribunals, operative in June, 1963, and June, 1964, are summarized in the following table.

## STATE BASIC WAGES: WEEKLY RATES

State	June, 1963			June, 1964		
	Date of operation (a)	Adult males	Adult females	Date of operation (a)	Adult males	Adult females
		s. d.	s. d.		s. d.	s. d.
New South Wales .. ..	May, 1963	302 0	226 6	May, 1964	305 0	229 0
Victoria(b) .. ..	July, 1961(c)	287 0	215 0	June, 1964(c)	307 0	230 0
Queensland—						
Southern Division—						
Eastern District, including						
Brisbane .. ..	6. 5. 63	286 0	214 6	6. 5. 63	286 0	214 6
Western District .. ..	6. 5. 63	296 6	222 6	6. 5. 63	296 6	222 6
Mackay Division .. ..	6. 5. 63	295 0	221 3	6. 5. 63	295 0	221 3
Northern Division—						
Eastern District .. ..	6. 5. 63	296 6	222 6	6. 5. 63	296 6	222 6
Western District .. ..	6. 5. 63	318 6	239 0	6. 5. 63	318 6	239 0
South Australia(d) .. ..	10. 7. 61	283 0	212 0	22. 6. 64	303 0	227 0
Western Australia—						
Metropolitan Area .. ..	22. 4. 63	300 3	225 2	27. 4. 64	304 2	228 2
South-West Land Division .. ..	22. 4. 63	298 8	224 0	27. 4. 64	302 7	226 11
Goldfields and other areas .. ..	22. 4. 63	292 11	219 8	27. 4. 64	296 8	222 6
Tasmania(b) .. ..	July, 1961(c)	294 0	220 6	June, 1964(c)	314 0	235 6

(a) Where dates are not quoted, wage rates operate from the beginning of the first pay-period commencing in the month shown. (b) No basic wage declared. Rates shown are those adopted by most Wages Boards. (c) Wages Boards adopted the Commonwealth rate. (d) The "living wage" declared for the metropolitan area is also adopted for country areas, except at Whyalla and nearby areas, where a loading of 5s. a week for adult males is generally payable.

Tables showing State basic wage rates for a long period of years are contained in the Appendix to *Labour Report* No. 49, 1961.

## § 6. Wage Margins

1. **General.**—Wage margins have been defined as “ minimum amounts awarded above the basic wage to particular classifications of employees for the features attaching to their work which justify payments above the basic wage, whether those features are the skill or experience required for the performance of that work, its particularly laborious nature, or the disabilities attached to its performance ”.\*

Marginal rates of wage are determined by Commonwealth and State industrial tribunals. In the Commonwealth jurisdiction, prior to 1954, the Commonwealth Court of Conciliation and Arbitration had not made any general determination in respect of wage margins, but general principles of marginal rate fixation had been enunciated by the Court in the Engineers Case of 1924, the Merchant Service Guild Case of 1942 and the Printing Trades Case of 1947. Major determinations affecting margins were made in 1954, 1959 and 1963. The decisions of the Commonwealth Court and later the Commonwealth Conciliation and Arbitration Commission have generally been followed by State industrial tribunals in the determination of margins in State awards.

A summary of the 1954, 1959 and 1963 Margins Cases is given in the following paragraphs.

2. **Metal Trades Case, 1954.**—Employee organizations parties to the Metal Trades Award, 1952, filed applications during 1953 for increased margins for all workers covered by this award. The applications came on for hearing before J. M. Galvin C.C., who decided that they raised matters of such importance that, in the public interest, they should be dealt with by the Commonwealth Court of Conciliation and Arbitration. On 16th September and 6th October, 1953, the Conciliation Commissioner, pursuant to section 14A of the *Conciliation and Arbitration Act*, referred these applications to the Court.

The actual claims of the trade unions were that the marginal rate of 52s. a week payable to a fitter in the metal trades should be increased to 80s. a week (86s. for certain electrical trades), with proportionate increases for other award occupations. The margins then current, with a few exceptions, had been in existence since 1947. The employees' claims were in the nature of a test case to determine the attitude of the Court to other applications for increased margins.

Employer organizations respondent to the Metal Trades Award counter-claimed that existing margins for skilled tradesmen should remain unaltered, while those paid to partly skilled or unskilled workers should be reduced.

The Court decided to take the Commissioner's two references together, and the matter came on for hearing before the Full Arbitration Court (Kelly C.J., Kirby, Dunphy and Morgan J.J.) in Melbourne on 13th October, 1953.

In a judgment delivered on 25th February, 1954, the Court held that a *prima facie* case had been made for a re-assessment of margins but that the economic situation at that time, particularly in regard to the level of costs, did not permit of such a comprehensive review. The Court decided that, to avoid the creation of new disputes, to save expense and to obviate procedural difficulties, it would not reject the claims but adjourn them until 9th November, 1954.

On 25th and 26th August, 1954, summonses were filed by the employees' organizations for orders that proceedings in this case be brought forward, and the hearing was resumed on 5th October, 1954.

In a judgment delivered on 5th November, 1954†, the Court made an order re-assessing the marginal structure in the Metal Trades Award by, in general, raising the current amount of the margin to two and a half times the amount of the margin that had been current in 1937. However, in cases in which the result of that calculation produced an amount less than the existing margin, the existing margin was to remain unaltered. In effect, this decision increased the margins of a fitter from 52s. a week to 75s. a week, increased similarly margins of other skilled occupations, and made no increase in margins of what may generally be described as the unskilled or only slightly skilled occupations under the Metal Trades Award.

At the end of its judgment, the Court stated that, while its decision in this case related immediately to one particular industry, it was expected to afford general guidance to all authorities operating under the *Conciliation and Arbitration Act*, or under other legislation

\* *Commonwealth Arbitration Reports*, Vol. 80, p. 24.

† *Ibid.*, p. 3.



which provided for tribunals having power to make references, or being subject to appeal, to the Court, where the wage or salary may properly be regarded as containing a margin. The Court added observations for the guidance of these and of other tribunals " which may regard decisions of this Court as of persuasive authority ". Further details were published in *Labour Report* No. 46, 1958, pages 101-8.

3. *Margins Cases, 1959.*—On 25th August, 1959, the Commonwealth Conciliation and Arbitration Commission began considering a number of applications for changes in margins referred to it from the appropriate Commissioner. Applications had been made by various employee organizations for increased margins in Parts I. and II. of the Metal Trades Award, Part II. of the Aircraft Industry Award, the Bank Officials' Award and the Gold and Metalliferous Mining Award. An application by employers sought to reduce marginal rates in the Metal Trades Award. The Commission decided to hear all these matters together, permitting the applicant unions in respect of Part II. of the Metal Trades and Aircraft Industry Awards and the Bank Officials' Award to ask first for an interim increase. A summary of the principal decisions and reasons for judgment of the Commission is given in the following paragraphs. Further details, including extracts from the judgment, were published in *Official Year Book* No. 47, pages 455-9.

*Metal Trades Award, Part I.* The employee organizations claimed an increase in the margin for the fitter, as set out in the Metal Trades Award, 1952 (i.e. the award as it existed prior to the Metal Trades Case, 1954—see para. 2, page 489), from 52s. to 134s. a week and an increase of 157 per cent. in the margins for other classifications. The employers counter-claimed for a reduction in margins of 15s. a week.

The Attorney-General of the Commonwealth intervened, and not only submitted statistical material and an analysis of the economic situation, but also assisted the Commission with an exposition of various factors proper to be taken into account in the fixation of margins. In particular, the Commonwealth emphasized the desirability of flexibility in the workings of the arbitration system.

Counsel for the unions put broadly a case that in the proper fixation of margins the basic criteria were the market value at the time of the fixation of the wage and the economic capacity of the economy to pay the wages claimed, and he alleged that the 1954 Metal Trades decision had departed from these principles. He produced to the Commission material to demonstrate that the economic situation would justify the increases asked for. He also submitted that the true relativities in the Metal Trades Award should be those created by a combination of the 1947 Full Court decision and the second variation order made in 1947 by G. A. Mooney, C.C.\*

The employers adopted the view that no case had been made out for any increase and that there should be wage reductions. They also supplied the Commission with economic material in support of their case that there was no capacity in the community to sustain increased margins, and alternatively that any increased economic capacity which may have occurred since 1954 had been exhausted by basic wage fixations. As to relativities, the employers submitted that the 1954 decision should be adhered to and should be carried to its logical conclusion in so far as the lower paid classifications were concerned.

In its judgment, delivered on 27th November, 1959, the Commission rejected the employers' application to reduce margins, and made an order re-assessing the marginal structure in the Metal Trades Award by increasing the existing margins by 28 per cent., the amount of the increase being taken to the nearest 6d. The new margins applied from the beginning of the first full pay-period commencing in December, 1959. The effect of this decision was to increase the margin of the fitter from 75s. to 96s. a week and that for the process worker from 22s. to 28s.

The Commission stated that, not having before it the question of work values, and having decided not to alter the 1954 relativities, the increases had been expressed as a percentage of current margins, but this was not to be taken as an endorsement of that method of fixing margins.

In discussing the principles of marginal fixation, the Commission stated that there was no real reason why a margin should be expressed as a percentage of the basic wage, and that it would be unwise to express any margin in that way. On the related question of whether margins should be increased merely because of the decreasing power of money since last fixed, the Commission's view was that, although the automatic or mathematical approach

\* *Commonwealth Arbitration Reports*, Vol. 59, p. 1272.

† 92 C.A.R., p. 800.

should be rejected, some account must be taken, whenever a margin is under review, of the amount at which the margin was originally fixed and of any decrease in the purchasing power of money since the time of fixation.

On the question of economic capacity the Commission said that, prior to 1947, it had been the practice, in the metal trades industry at least, to consider the economic situation of the industry itself, but in 1954 the Court considered only the capacity of industry generally. However, the Commission pointed out that in many cases in the past, margins had been fixed without consideration of capacity, and it could see no reason why in appropriate circumstances that practice should not continue.

The submission by the employers that, even if there had been capacity to pay increased wages, that capacity had been exhausted by basic wage decisions in recent years, was rejected by the Commission.

The unions sought to have restored the relativities within the marginal structure of the Metal Trades Award which existed prior to the 1954 decision. The employers not only relied on the relativities created in 1937 and confirmed in 1954, except as to the lower paid classifications, but also asked the Commission to take the 1954 relativities to their logical conclusion in its decision in this matter as far as those classifications were concerned.

The Commission said that, in origin at least, relativities in margins were merely an expression of relative work values and there was no evidence of such values before the Commission. In the circumstances, the Commission was not prepared to accede either to the unions' submissions or to the employers' submission in this regard, and it accepted the relativities established by the 1954 decision except to the extent necessary to round some of the figures off. The question of relativities in margins in the Metal Trades Award, based on work value, thus remained open.

During the proceedings, the unions presented some evidence as to over-award payments in the industry. The Commission referred to the question whether it should pay regard to payments obtained by duress, and decided that the means by which over-award payments of sufficient duration were obtained was irrelevant when considering economic capacity. The mere fact that such amounts were being paid and had been paid over a considerable period was sufficient to demonstrate capacity.

The Commission could not arrive at any figure which could be said to be a reliable average over-award payment for any classification. The most it could say was that in the Metal Trades industry there were over-award payments of varying amounts in quite a number of establishments, and it had taken this factor, indefinite though it was, into account in arriving at its decision.

In reviewing the economic situation, the Commission considered the current position in the light of information which had become available since the 1959 Basic Wage Judgment. After considering various indicators of the state of the economy, the Commission discussed the problems of inflation and the maintenance of economic stability. The Commission said that it had looked at the increases which it proposed to grant in the light of the submissions about economic stability and it did not consider that such increases were so likely to affect that stability that the economy would be adversely affected. If marginal increases could not be granted in times of economic prosperity, it was difficult to imagine when they could be granted.

Summing up, the Commission stated:—" We have considered, with the qualifications already mentioned in this Judgment, the decrease in the purchasing power of money which has occurred since the 1954 marginal fixation, we have assessed as well as we are able to the increased capacity which has occurred in the Australian economy since that time and the fact that productivity has played its part in that increase of strength, and we have considered the Basic Wage decisions and appraisals of the economy by the Court and the Commission since 1954. In the result, we have thought it proper to increase margins in the Metal Trades industry in the particular circumstances which confront us by an amount which exceeds the loss in purchasing power of the 1954 margins, which excess we consider has been earned by the contribution of the employees to productivity increases and made possible by the additional strength of the national economy."\*

The Commission went on to say:—" This decision is based on the material placed before us and our general industrial knowledge which, in view of our functions under the Act, we think it proper to use. Both that material and that knowledge relate to the Metal

\* *Commonwealth Arbitration Reports*, Vol. 92, p. 793.

Trades industry and to the economy generally. Our decision, however, relates only to the Metal Trades Award. We realize that on occasions in the past, margins fixed in the Metal Trades Award, and in particular the margin of the fitter, have been used as standards for other awards. The use of the increases which we have granted as a guide in other disputes will be a matter for the parties as far as conciliation is concerned and, if arbitration is necessary, for this Commission however constituted."

*Gold and Metalliferous Mining Award.* Judgment was also delivered on 27th November, 1959, in connexion with the application for variation of margins in this award.\* The margin for the miner was increased from 30s. to 42s. 6d. a week from the beginning of the first full pay-period commencing in December, 1959. Marginal claims for other classifications were referred back to the appropriate Commissioner for consideration. Subsequently, the parties to the award agreed that margins for all other classifications should be increased in the same proportion as the margin for the miner (i.e. 41.7 per cent.). The Commissioner varied the award accordingly.

*Metal Trades Award, Part II., and Aircraft Industry Award, Part II.* On 11th December, 1959, the Commission delivered a judgment granting a 20 per cent. interim increase in margins to graduate and diplomate engineers and scientists, payable as from the beginning of the first full pay-period commencing in December, 1959.

*Bank Officials' Award.* On 11th December, 1959, a 20 per cent. interim increase in margins was granted to officers in the 10th to 18th year of service inclusive and to accountants and managers, payable retrospectively as from 11th June, 1959. Interim increases were not awarded to more junior officers, nor to females. Subsequently the parties to the Bank Officials' Award met before a single Commissioner, and a consent award was made giving final marginal increases to adult males and adult females and making adjustments to junior rates of pay.

4. *Margins Case, 1963.*—Following the conclusion of the 1963 Basic Wage Case, two benches of the Commonwealth Conciliation and Arbitration Commission commenced, on 5th February, 1963, to hear applications by metal trades unions for increased margins and for three weeks annual leave (see pp. 496–7). The two benches sat jointly for the convenience of the parties involved and were constituted as follows:—margins case—Kirby C.J. (President), Moore and Ashburner J.J. and Commissioner Apsey; three weeks' annual leave case—Kirby C.J. (President), Moore J. (Deputy President) and Commissioner Apsey. In their application, the claimant unions were supported by the Australian Workers Union, the High Council of Commonwealth Public Service Organizations, the Australian Council of Salaried and Professional Associations and certain affiliated organizations. The claim was opposed by the respondent employers, who were supported in their opposition by the banks, respondents to the Bank Officials Award, and by members of the Australian Wool Growers and Graziers Council.

The Unions' claim on margins was that the Commission restore, on an assessed basic wage, the relativities within the Metal Trades Award established in 1947 by what is known as the second Mooney formula. Taking £15 7s. as the assessed basic wage (calculated as the 1947 basic wage adjusted to price changes since 1947) and applying the percentage 48.6, which the fitter's margin was of the 1947 basic wage, the union arrived at a new marginal rate of £7 9s. for a fitter, an increase of £2 13s. on the current margin. This claim of £7 9s. was 2.86 times the 1947 fitter's margin, and hence the unions sought to have all 1947 margins multiplied by 2.86. This claim was opposed by the employers who asked that any consideration of marginal increases be deferred for an unspecified time.

The Commonwealth Government intervened in the public interest and made submissions as to the approach to be adopted to marginal fixation generally, and to marginal fixation in the metal trades industry, as well as supplying information to the Commission about the economic situation and the Government's assessment of it. The Commonwealth Government neither opposed nor supported the claim. The State of South Australia neither opposed nor supported the claim for marginal increases, but did oppose any change in present relativities. The State of Queensland neither opposed nor supported the application for increases in margins, but submitted certain information regarding possible effects in Queensland. The Commission declined to allow submissions aimed at showing what might happen in State awards if State industrial tribunals followed their past practices with respect to the Commission's decisions.

The unions' case in outline comprised—firstly, a critical analysis of major decisions of the Court and of the Commission extending back to the Harvester decision of 1907; secondly, a demonstration from those decisions of the basic criteria used in the fixation of margins, in

\* *Commonwealth Arbitration Reports*, Vol. 92, p. 796.

particular the market value of the work of the various classifications at the time of fixation and the inter-related consideration of economic capacity; thirdly, evidence to demonstrate what is the current market value; and, finally, material concerning economic capacity to pay the rates being claimed.

Referring to past decisions and the problem of marginal fixation, the Commission stated that "the assessment of particular margins at particular times must be an act of judgment by the person or persons making the assessment in the light of current knowledge and practice both of which are themselves susceptible of change . . . . We hold the view that whatever may have been the practice in the past there is no reason why any margin should, after a period of time, necessarily be restored to any earlier relativity which it may have had with any earlier basic wage . . . . Margins are awarded for skill and other factors which are not included in the assessment of the basic wage. The value from time to time of skill and other factors relevant only to margins may change independently of changes in the basic wage. We are not prepared to assume that because in 1947 the fitter's margin represented 48.6 per cent. of the basic wage that it should now represent the same percentage of the current basic wage." The Commission emphasised the need to have before it all information essential for a complete assessment of margins, some of which must relate to the work actually being done, and pointed out that margins in the Metal Trades Award cannot be properly assessed either absolutely or relatively until the Commission in one form or another has before it an application which will enable it to deal with all aspects of marginal fixation.

In absence of any evidence or material on work value, the Commission said they accepted the margins then current in the metal trades award as a starting point. Since last fixing margins in 1959, the Consumer Price Index had risen 6.05 per cent. and the Commission stated that they were prepared to assume that this showed a movement in purchasing power of money with sufficient accuracy to enable this to be taken into account in fixing margins, and believing that a compensating increase is within capacity they considered it would be inequitable not to award it. But as this would only restore margins to the real value of the 1959 margins, it was necessary to consider whether there was any ground for an increase in real margins. To do this, and in the absence of any material related to the work itself, the Commission said it could only consider the question of economic capacity in the metal trades and in industry generally.

The Commission repeated what had been said in the 1961 Basic Wage Case, namely, that productivity figures could be used only to demonstrate a trend and that productivity can only be approximately measured. The unions put forward the view that both past and future increases in productivity should be noted, whilst the employers said that the proper approach was to ignore the past except to the extent to which it indicated the future, and to adjust wages in a ratio slightly less than any expected future increase in productivity. The employers argued that if overall the level of wages increases at a faster rate than the increase in national productivity then there will be an increase in prices or a shift in income to the wages sector. The Commission made the following observations on this proposition—firstly, that productivity can only be imperfectly calculated and that such productivity figures as are now available can only be properly used to demonstrate a trend; secondly, that the case for marginal increase relates to the metal trades industry only; thirdly, that, if current margins are inadequate, it should be a matter of equity to award margins which are adequate even if such increase raises wages by a percentage greater than the estimated immediate future increase in national productivity; and, finally, that it was an oversimplification to relate the movement in prices to general economic considerations only. The Commission then considered figures from 1949–50 of the movement in national productivity based on gross national product per person employed at 1952–53 prices, and pointed out that, since the 1959 assessment of margins to 1961–62, national productivity measured in this way had increased by 5.1 per cent.

On economic capacity the Commission came to the conclusion that after a period of slowing down, the economy had recovered some of its impetus and that this recovery was likely to continue in the immediate future at a somewhat higher rate than that of the past year. After considering material related to the metal trades industry, namely, over-award payments, average hours of overtime and average weekly hours for adult males, and keeping in mind that employers did not suggest that the economic capacity of the metal trades industry was less than industry generally or that increases in productivity in that industry had been or would be less than increases in national productivity, the Commission was prepared to assume in the unions' favour that by and large the economic capacity of the metal trades industry was certainly not less than, and probably more than, that of industry generally.

Summing up, the Commission said: "In our judgment of national economic capacity, including productivity, the likely future trends in that capacity and the relationship between the capacity of the Metal Trades industry and national capacity we consider that we should as a matter of equity increase the real value of margins under this award. Having regard to this decision and the decreased purchasing power of money since the last assessment we consider that it would be fair to increase margins under this award by ten per cent. We have reached this conclusion in the knowledge that today employees under this award have been awarded an extra week's annual leave. We emphasise again that no information about work values has been placed before us which would enable us to make a more accurate and from our point of view a more satisfactory assessment."

The Commission then considered in detail the capacity of the economy as shown by the following economic indicators:—rural industry, balance of payments, competitive position of secondary industries, investment, employment, company income, money and banking and retail trade, and general. Under company income, the Commission dealt with a submission of the employers that because wages had gone up as a result of the 1961 Basic Wage decision in a period of comparatively low activity in the economy and because the price level had not risen as a result of that decision, there had been a movement in income from the company sector to the wage sector. Any further increase in wages, the employers submitted, would be likely to cause a further drift in company income, followed by a further dampening down of investment and a consequent deleterious effect on activity in the economy and a worsening of the economic position of wage earners. The Commission referred to figures of gross national product, company income and wages and salaries which indicated that movements in company income were not directly related to movements in wages and salaries, but stated that the fact that company incomes had been lower in the past two years indicated the necessity for caution in awarding marginal increases.

The Commission concluded its consideration of the indicators with these words " . . . our own investigation of the economy (is) that both from a long term point of view and also from a short term point of view the prospects for the economy may be reasonably regarded with optimism. On a consideration of the whole of the indicators, we conclude that national capacity has increased and that it is likely to continue to increase in the foreseeable future. In these circumstances we are confident that the economy is able to sustain the increase of ten per cent. in margins in this award which we consider is otherwise justified."

At the request of the parties the Commission took the unusual course of making a pronouncement early in the proceedings as to the extent to which the decision in the metal trades case should be used in other industries. The Commission re-affirmed what was said in the 1959 metal trades judgment that the decision would relate to the Metal Trades Award only, although they realized that the margin of the fitter had been used as a standard for other awards. In the present case the Commission stated it was not intended that the decision should be applied automatically outside the metal trades.

The order of the Commission was that the margins for adult males in the Metal Trades Award be increased by ten per cent., the increase to be calculated to the nearest shilling and to operate from the beginning of the first pay period to commence on and after 22nd April, 1963.

## § 7. Leave

1. **Annual Leave.**—In the judgment given by the Commonwealth Court of Conciliation and Arbitration in the Commercial Printing Case of 1936, *Dethridge C.J.*, in granting one week's annual leave with full pay to employees in the industry, said:—"This Court has frequently been asked to award annual leave on full pay but has hitherto not done so except in cases where employees have to work on Sunday, or suffer some other deprivation by reason of isolation or other cause, or in cases where such leave has become the custom generally by the practice of most of the parties concerned."\* This judgment has usually been regarded as the first statement of the principles involved in deciding whether or not annual leave should be awarded.

In 1940, *Beeby C.J.*, awarded annual leave of one week to the manufacturing section of the metal trades industry, and in the same year *O'Mara J.* extended leave throughout the industry, with the exception of that section engaged in the servicing of motor vehicles.

\* *Commonwealth Arbitration Reports*, Vol. 36, p. 738.

Annual leave in the Commonwealth jurisdiction was introduced over a period of time, industry by industry, if the Judge responsible for the industry considered it proper.

The question of annual leave was again before the Court in 1945.\* In that case applications had been made seeking variations of awards to prescribe an extension of annual leave from a period of seven days to fourteen days. The Court in its judgment set out what it considered to be the principles to be applied in all applications for an extension of the annual leave period to fourteen days. The question of altering any particular award to prescribe for two weeks' annual leave was left to the discretion of the single Judge who heard the application.

Further inquiries into annual leave were conducted by the Commonwealth Conciliation and Arbitration Commission in 1960, 1962 and 1963. A summary of the 1960, 1962 and 1963 inquiries is given in paras. 2, 3 and 4 following.

Employees in New South Wales in private industry, other than those covered by Federal awards, were granted three weeks' annual leave by an amendment to the Annual Holidays Act, passed in 1958. Generally, employees of government authorities (Commonwealth, State, local and semi-governmental), with the exception of State and local government employees in Western Australia, are entitled to three weeks' annual leave, as are also many salaried employees and wage earners in certain industries. In February, 1964, the New South Wales Government indicated that it would grant four weeks' annual leave to its employees.

**2. Three Weeks' Annual Leave Inquiry, 1960.**—Unions respondent to the Metal Trades Award applied to the Commonwealth Conciliation and Arbitration Commission on 18th July, 1960, to vary the Award to provide three weeks' paid annual leave instead of two weeks.

The application was opposed by employers, the State of Victoria and the Electricity Trust of South Australia. The State of Tasmania supported the application. The Commonwealth Government and the State of Queensland neither supported nor opposed the application, although the Commonwealth tendered statistical and economic information for the benefit of the Commission and the parties.

In its judgment of the 14th December, 1960, the Commission summarized the submissions made by the unions and the employers, and stated that the two economic factors considered most important were the export-import position and the state of employment. The Commission stated that it had decided to reject the application, but emphasized that its decision was not intended to apply to a situation where, for special reasons related to a particular industry, it may consider an amount of annual leave greater than two weeks to be justified.

At the conclusion of its judgment the Commission made the following statement. "We accordingly dismiss this application because of the present economic situation. In doing so we would again repeat what we have said earlier in this judgment that we do not consider that employees under Federal awards have yet achieved all the leisure which they should achieve. We have done no more than decide that the present is not an appropriate time in which to award an extra week's paid leave."†

For further particulars *see* Official Year Book No. 49, pp. 511-513.

**3. Three Weeks' Annual Leave Inquiry, 1962.**—On 10th April, 1962, the Commonwealth Conciliation and Arbitration Commission, constituted by Kirby C.J. (President), Moore J. (Deputy President) and D. G. Apsey (Commissioner) commenced hearing an application by unions respondent to the Metal Trades Award for variation of the award to provide three weeks' paid annual leave instead of two weeks.

Although the application was made in respect of the Metal Trades Award only, counsel for the unions made it clear that they wished the claim to be regarded as a test case which, if granted, would involve the inclusion in federal awards generally of the basic standard of three weeks' annual leave. The application was opposed by employers, the State of Victoria and the Electricity Trust of South Australia. New South Wales and Tasmania supported the application. The Commonwealth Government and the State of Queensland neither supported nor opposed the application, although the Commonwealth intervened in the public interest and made submissions on the state of the economy, as well as providing economic and statistical information for the benefit of the Commission and the parties.

\* 55 C.A.R., p. 595.

† *Commonwealth Arbitration Reports*, Vol. 96, p. 217.

The hearing was concluded on 2nd May, 1962, and on 30th May the Commission made the following announcement.

" We have given careful consideration to the submissions which have been made to us in this case. The applicant unions have asked that we consider the claim a general one, the result to be applied to Federal awards generally. This must result in greater caution on our part in deciding whether or not the application should succeed. Our present intention is that an increase to three weeks' annual leave generally in secondary industry, subject to special cases, should be granted as soon as we are satisfied that the economy is in a position to cope with the effects of such an increase. However, there are two aspects of the economic arguments about which we are troubled and about which we consider it too early to make any firm decision. These are, firstly, whether our internal economy has sufficiently recovered from the recession of late 1961 and, if so, what is the likely rate of its recovery in the future and, secondly, the effect on Australia of success or failure of the application of the United Kingdom to enter the European Common Market. There have been developments in relation to the latter question since the hearing which both emphasise its importance and the lack of accurate information as to what is going to happen and the short and long term effect on Australia's economy.

So that we may be able better to assess these matters we have decided to adjourn these proceedings until a date in February or March next which will be announced later when the parties and interveners will be able to make such further submissions on these two matters as they may desire."

A brief summary of the case is given in the following paragraphs.

Counsel for the unions submitted that about half of the Australian work force was already entitled to three weeks' leave or more, and that the Commission was being asked to settle a genuine industrial dispute arising from the disparity between the leave granted to different sections of the work force. He referred to the judgment in the 1960 Annual Leave Inquiry, in which the Commission had stated that its decision to refuse the application had been influenced by the export-import position and the state of employment, and submitted that there had been sufficient improvement in these two factors to justify the granting of the application, particularly as the Commission had in the 1960 case conceded that two weeks should not be regarded as the ultimate in paid annual leave.

Counsel then submitted evidence to show that three weeks' annual leave, which had been granted by legislation in New South Wales in 1958, had not had any adverse effects on the economy of that State. Also, in the 17 years since 1945, when annual leave was extended to two weeks, the national economy had developed in a way which would permit the granting of an extra week's leave with much more safety than had been possible in 1945, at the end of the war.

Counsel for the employers, in opposing the application, said that since the previous rejection of the unions' claim in 1960, Australia had undergone a major recession. No new arguments had been advanced by the unions in support of their claim and it should therefore again be rejected. Counsel submitted that even on the grounds of social justice the claim should be rejected because Australian workers enjoyed shorter annual hours of work than those of any other country in the world. In addition, an examination of the relation of average weekly earnings to productivity showed that they had already received the fruits of all productivity increases.

The balance of payments situation, though improved, had been achieved only through drastic government action and in fact looked satisfactory only in comparison with that of the previous year. As to employment, there was still a shortage of skilled labour, which would be aggravated by the granting of increased leave.

He submitted that the claim should not be treated as a test case, because it was being argued not only on general economic issues but also in relation to specific problems in the metal trades. No party to any other award should be inhibited in any way from arguing the particular circumstances of other industries.

**4. Three Weeks Annual Leave Inquiry, 1963.**—On 5th February, 1963, the Commonwealth Conciliation and Arbitration Commission, constituted by Kirby C.J. (President), Moore J. (Deputy President) and Commissioner Apsey, commenced hearing an application, which had been adjourned from May, 1962, to vary the Metal Trades Award, to provide three weeks' paid annual leave, instead of two (*see* paragraph 3 above).

The hearing was continued during March and April, 1963, jointly with the Metal Trades Margins case hearing (see pp. 492-4), and in its judgment on 18th April, 1963, the Commission referred to the announcement it had made on 30th May, 1962, as to the Commission's intention to grant a period of three weeks' annual leave, when it was satisfied that the economy was in a position to cope with the effects of such an increase. "In our view the Australian economy has recovered sufficiently from the recession of 1961 and its likely rate of recovery in the future is such as to enable us to grant three weeks' annual leave. The second aspect of the economic arguments about which we were troubled has for the purposes of this decision been changed in a manner in which the problem has become no longer relevant. Therefore we see no reason why we should not implement our express intention of May last year to increase annual leave to three weeks generally in secondary industry, subject to special cases."

The Commission then announced that the Metal Trades Award would be varied to produce the following result. "A period of 21 consecutive days' leave shall be allowed to employees who have completed twelve months continuous service by or after 30th November, 1963."

Provision for proportionate leave for periods of employment of one month and over was made in respect of employment after 1st June, 1963.

It was stated that the application of the new standard of annual leave for secondary industry in other Federal awards would be a matter for individual Commissioners upon proper application being made for variation.

In a decision given on 22nd October, 1963, the Commission, comprising Wright J. (Acting President), Moore J. (Deputy President) and Commissioner Winter, unanimously rejected an application by the Metal Trades Employers Association and other employers' organizations firstly for permission, at the employers' discretion, to require employees to take their annual leave in two periods of seven and fourteen days respectively, and secondly that the time after accrual, within which leave must be taken, should be extended to nine months when leave is taken in one period and twelve months when leave is taken in more than one period. The Commission considered that there might be individual cases where some relief would be desirable in the first Christmas period after the increase became effective and accordingly they favoured the insertion of a provision in the Metal Trades Award which would enable an employer "in order to maintain the efficient working of his undertaking or his service to the public, to seek from the union or unions concerned, an agreement to split annual leave of the employees in his establishment or part of it either by two close-downs or by rostering or by a combination of one close-down and rostering". In instances where agreement could not be reached, an employer would have the right to seek permission to split the leave from a Board of Reference.

This order was to operate for a period of six months and no longer, as it might be desirable to reconsider the matter after the ensuing Christmas-New Year period when it would be possible to see how the new standard of annual leave had affected industry.

On the material before it, the Commission was not prepared to alter the period in which leave must be taken, but this might be re-considered when the case was resumed on a date to be fixed in May, 1964.

5. *Long Service Leave.*—(i) *General.* Paid long service leave, i.e. leave granted to workers who remain with the one employer over an extended period of time, has been included in the provisions of industrial legislation in the several States. A brief summary is given in the following paragraphs. In all cases the transfer of ownership of a business does not constitute a break in continuity of service with the same employer.

(ii) *New South Wales.* Long service leave was first introduced for the majority of workers by the *Industrial Arbitration Act, 1951*, which provided such leave for workers under State awards. This Act was replaced by the *Long Service Leave Act, 1955*, which extended the benefits to any worker within the State. An amendment to the Act in 1963 provided for three months' long service leave for fifteen years' continuous service with the same employer and proportionate amounts on this basis after a minimum of five years' service.

(iii) *Victoria.* The *Factories and Shops (Long Service Leave) Act 1953* first provided for long service leave for workers in Victoria, the provisions of this Act being subsequently incorporated in the *Labour and Industry Act*. Leave provided for is thirteen weeks for twenty years' continuous service with the same employer. Contributions by employers to retirement schemes can be taken into consideration in dealing with exemptions from the Act.



(iv) *Queensland.* In 1952, the *Industrial Conciliation and Arbitration Act* was amended to include long service leave provisions for employees within the jurisdiction of the Industrial Court, and the Act was amended again in 1955 to extend these provisions to any employee in respect of whose employment there was not in force an award or industrial agreement under the Act and to seasonal workers in sugar mills and meat works. Leave provided for is thirteen weeks for twenty years' continuous service with the same employer.

(v) *South Australia.* The *Long Service Leave Act*, passed in 1957, exempts a large number of industrial agreements, with wide industrial coverage, from specifying long service leave for employees. For those covered by the Act, leave provided for is seven days in the eighth and in each subsequent year of continuous service. Contributions by employers to retirement schemes can be taken into consideration in dealing with exemptions under the Act.

(vi) *Western Australia.* The *Long Service Leave Act* was passed in 1958, but it does not apply to employees whose conditions of work are regulated under the *Western Australian Industrial Arbitration Act*. The Court of Arbitration of Western Australia, in an order dated 1st April, 1958, incorporated, in most of the awards and agreements within its jurisdiction, provisions similar to those in the *Long Service Leave Act*. Leave provided for is thirteen weeks for twenty years' continuous service with the same employer. Contributions by employers to retirement schemes can be taken into consideration in dealing with exemptions from the Act.

A general inquiry into long service leave, public holidays, annual leave and hours was held by the Court in 1961. In its judgment, delivered on 5th May, 1961,\* the Court rejected the major claims by the parties relating to long service leave. However, it deleted a sub-clause of the 1958 Order which entitled an employer to offset any payment in respect of long service leave under the Order against any payment by him to any long service leave scheme, superannuation scheme, pension scheme, retiring allowance scheme, provident fund or the like or under any combination thereof.

(vii) *Tasmania.* The *Long Service Leave Act*, which was passed in 1956, provides for thirteen weeks leave for twenty years' continuous service with the same employer. Contributions by employers to retirement schemes can be taken into consideration in dealing with exemptions from the Act.

(viii) *Commonwealth.* Until May, 1964, the Commonwealth Conciliation and Arbitration Commission had not included provision for long service leave in its awards, and had refrained from determining disputes relating to this subject except in the case of the Northern Territory and the Australian Capital Territory (see p. 499). Consequently, till then, the provisions of the various State Acts relating to long service leave applied to workers covered by awards of the Commonwealth. The applicability of long service leave provisions under State law to workers under Commonwealth awards had been tested before the High Court and the Privy Council, and such provisions had been held to be valid.

The Commission's position was set out in its decision, issued on 16th September, 1959, regarding disputes on the inclusion, in the Graphic Arts (Interim) Award, 1957, of provisions for long service leave. It stated that it should refrain, until further order, from determining the disputes so far as they concerned long service leave and that if, in future, the Commission decided that long service leave on a national basis was desirable, it was open to proceed to the making of an award on the matter.

Following the hearing of claims for long service leave provisions by employers in the graphic arts and metal trades industries in August, 1963, the Full Bench of the Commonwealth Conciliation and Arbitration Commission, on 11th May, 1964, announced its decision that long service leave entitlement would be calculated on the basis of thirteen weeks for 20 years of unbroken employment, in respect of employment before 11th May, 1964 (or, in New South Wales, 1st April, 1963), and at the rate of thirteen weeks for 15 years in respect of service after 11th May, 1964 (or, in New South Wales, 1st April, 1963). After further periods of 10 years, employees would be entitled to an additional pro-rata period of leave calculated on the same basis. Those employees who completed an unbroken contract of employment of 10 years but less than 15 years, and whose employment was terminated by death or by the employer for any cause other than serious and wilful misconduct, or by the employee on account of illness, incapacity or domestic or other pressing necessity, would be entitled to pro-rata payment.

\* *Western Australia Industrial Gazette*, Vol. 41, p. 355.

Long service leave codes for employees in the Northern Territory and the Australian Capital Territory were prescribed on 4th December, 1961, by the Commonwealth Conciliation and Arbitration Commission in Presidential Session. The unions submitted that the Commission should refrain from exercising its jurisdiction and emphasized that it was the considered policy of the trade union movement "that long service leave should come from legislative action and not from prescription by industrial authorities." However, the Commission rejected the submission and awarded leave in each case in terms of the employers' applications, which were, in general, that employees should be granted three months' long service leave after 20 years service with one employer, even if part of this service was outside the Territory. In addition, the Australian Capital Territory code prescribed that employees presently employed might "go back for a period of 25 years in regard to the calculation of their present or future entitlement of long service leave."

The *Stevedoring Industry Act* 1961, which came into operation on 6th June, 1961, included provisions granting long service leave to persons who had been continuously registered as waterside workers under Commonwealth stevedoring legislation. Leave provided for is thirteen weeks after the completion of twenty years' qualifying service, and six and a half weeks for each subsequent ten years' qualifying service. An amendment to the Act in November, 1962, extended the eligibility and qualifying periods of the long service leave provisions of the Act.

## INDUSTRIAL DISPUTES

1. **General.**—Detailed information regarding industrial disputes involving stoppage of work is given in the *Labour Report*. A table showing statistics of industrial disputes for each year from 1913 is contained in the Appendix to *Labour Report* No. 49, 1961.

Particulars of all disputes in progress during the year are included in the annual figures, whether the dispute commenced in that year or was in progress at the beginning of the year. Consequently, details of "the number of disputes" and "workers involved" in disputes which commenced in any year, and were still in progress during the following year, are included in the figures for both years.

2. **Industry Groups.**—The following table gives, for Australia as a whole, particulars of industrial disputes which were in progress during 1963, classified according to industry groups.

## INDUSTRIAL DISPUTES(a): INDUSTRY GROUPS, AUSTRALIA, 1963

Industry group	Number	Workers involved			Working days lost	Estimated loss in wages (£'000)
		Directly	In-directly (b)	Total		
Agriculture, grazing, etc. .. ..	1	33	76	109	400	1.7
Coal mining .. .. .	222	28,855	204	29,059	45,914	209.4
Other mining and quarrying .. ..	9	4,227	286	4,513	4,807	21.2
Engineering, metals, vehicles, etc. ..	290	94,221	3,142	97,363	153,072	643.0
Textiles, clothing and footwear .. ..	4	989	..	989	5,119	12.7
Food, drink and tobacco .. .. .	108	38,786	7,834	46,120	78,155	321.4
Sawmilling, furniture, etc. .. .. .	..	2,494	..	2,494	1,513	5.3
Paper, printing, etc. .. .. .	8	3,454	..	3,454	3,949	16.2
Other manufacturing .. .. .	79	34,237	1,984	36,221	101,697	454.8
Building and construction .. .. .	146	23,297	512	23,809	52,915	248.6
Railway and tramway services .. ..	22	22,013	76	22,089	12,666	50.4
Road and air transport .. .. .	25	15,342	..	15,342	12,621	50.1
Shipping .. .. .	2	497	..	497	336	1.3
Stevedoring .. .. .	312	118,438	..	118,438	95,050	415.2
Amusement, hotels, personal service, etc. ..	5	631	..	631	695	2.9
Other industries(c) .. .. .	17	11,553	27	11,580	12,659	41.5
<b>Total .. .. .</b>	<b>1,250</b>	<b>398,567</b>	<b>14,141</b>	<b>412,708</b>	<b>581,568</b>	<b>2,495.7</b>

(a) Refers only to disputes involving a stoppage of work of 10 man-days or more. (b) Persons thrown out of work at the establishments where the stoppages occurred but not themselves parties to the dispute. (c) Includes Communication; Finance and Property; Wholesale and Retail Trade; Public Authority (n.e.i.); and Community and Business Services.

A graph showing, for the years 1951 to 1963, the working days lost as a result of industrial disputes in the main industry groups is shown on page 453.

3. States and Territories.—The following table gives particulars of the number of industrial disputes in each State and Territory, together with the number of workers involved and the losses in working days and wages caused by disputes which were current during each of the years 1959 to 1963.

#### INDUSTRIAL DISPUTES(a): STATES AND TERRITORIES

State or Territory	Year	Number	Workers involved			Working days lost	Estimated loss in wages (£'000)
			Directly	Indirectly (b)	Total		
New South Wales ..	1959	547	123,558	2,493	126,051	211,352	819.6
	1960	736	289,266	7,646	296,912	416,762	1,731.9
	1961	529	131,661	5,295	136,956	318,629	1,316.0
	1962	752	195,344	13,623	208,967	303,400	1,285.9
	1963	817	214,643	4,333	218,976	307,440	1,314.7
Victoria ..	1959	60	31,134	1,107	32,241	35,890	131.4
	1960	98	86,002	2	86,004	102,805	397.1
	1961	91	51,447	1,300	52,747	72,471	304.8
	1962	166	72,525	720	73,245	100,606	418.6
	1963	180	85,757	2,221	87,978	172,963	755.0
Queensland ..	1959	175	50,883	3,996	54,879	90,777	330.7
	1960	173	155,073	3,566	158,639	153,061	594.7
	1961	123	73,442	4,798	78,240	168,958	914.6
	1962	175	33,445	8,321	41,766	75,951	299.4
	1963	160	37,047	7,266	44,313	54,861	234.0
South Australia ..	1959	21	5,437	..	5,437	7,487	24.9
	1960	42	25,735	12	25,747	16,568	61.8
	1961	26	17,012	321	17,333	17,256	66.8
	1962	31	11,748	100	11,848	14,599	59.4
	1963	35	11,938	107	12,045	8,957	41.0
Western Australia ..	1959	20	10,864	383	11,247	11,243	39.6
	1960	43	25,684	..	25,684	27,342	106.6
	1961	22	9,588	99	9,687	23,233	94.5
	1962	28	8,280	83	8,363	6,300	25.0
	1963	28	42,390	194	42,584	31,969	126.2
Tasmania ..	1959	34	6,348	..	6,348	6,593	24.4
	1960	40	9,142	..	9,142	6,991	27.6
	1961	14	4,645	16	4,661	4,622	19.1
	1962	18	5,048	78	5,126	3,993	17.5
	1963	11	5,019	..	5,019	2,933	13.5
Northern Territory ..	1959	9	1,007	11	1,018	966	3.5
	1960	9	942	..	942	1,226	5.3
	1961	4	456	..	456	709	4.0
	1962	6	428	..	428	298	1.3
	1963	8	915	..	915	968	4.7
Australian Capital Territory	1959	3	238	12	250	731	3.1
	1960	4	209	..	209	352	1.8
	1961	6	275	2	277	933	4.0
	1962	7	4,005	105	4,110	3,608	15.0
	1963	11	858	20	878	1,477	6.6
Australia ..	1959	869	229,469	8,002	237,471	365,039	1,377.2
	1960	1,145	592,053	11,226	603,279	725,107	2,926.8
	1961	815	288,526	11,831	300,357	606,811	2,723.8
	1962	1,183	330,823	23,030	353,853	508,755	2,122.1
	1963	1,250	398,567	14,141	412,708	581,568	2,495.7

(a) Refers only to disputes involving a stoppage of work of 10 man-days or more. (b) Persons thrown out of work at the establishments where the stoppages occurred but not themselves parties to the dispute.

4. Duration.—(i) *General*. The duration of each industrial dispute involving a loss of work, i.e. the time between the cessation and resumption of work, has been calculated in working days, exclusive of Saturdays, Sundays and holidays, except where the establishment involved carries on a continuous process (e.g. metal smelting and cement manufacture).

(ii) *Industry Groups, 1963*. The following table shows, for the year 1963, industrial disputes in coal mining, stevedoring and other industries classified according to duration.

## DURATION OF INDUSTRIAL DISPUTES(a): AUSTRALIA, 1963

Duration (working days)	Number	Workers involved(b)		Working days lost		Estimated loss in wages (£'000)
		Number	Proportion of total (per cent.)	Number	Proportion of total (per cent.)	
<b>COAL MINING</b>						
1 day and less .. .. .	151	19,485	67.1	9,926	21.6	43.9
2 days and more than 1 day ..	33	3,086	10.6	5,288	11.5	22.8
3 days and more than 2 days ..	11	3,856	13.3	9,173	20.0	39.8
Over 3 days and less than 5 days	10	995	3.4	3,897	8.5	18.1
5 days and less than 10 days ..	11	1,100	3.8	8,179	17.8	36.9
10 days and less than 20 days ..	3	385	1.3	4,911	10.7	21.9
20 days and less than 40 days ..	2	148	0.5	4,340	9.5	25.3
40 days and over .. .. .	1	4	..	200	0.4	0.7
<b>Total</b> .. .. .	<b>222</b>	<b>29,059</b>	<b>100.0</b>	<b>45,914</b>	<b>100.0</b>	<b>209.4</b>
<b>STEVEDORING</b>						
1 day and less .. .. .	205	105,538	89.1	59,667	62.8	262.0
2 days and more than 1 day ..	81	8,849	7.5	13,231	13.9	57.7
3 days and more than 2 days ..	23	1,313	1.1	3,211	3.4	15.0
Over 3 days and less than 5 days	2	38	..	153	0.2	0.7
5 days and less than 10 days ..	1	2,700	2.3	18,788	19.7	79.8
10 days and less than 20 days ..	..	..	..	..	..	..
20 days and less than 40 days ..	..	..	..	..	..	..
40 days and over .. .. .	..	..	..	..	..	..
<b>Total</b> .. .. .	<b>312</b>	<b>118,438</b>	<b>100.0</b>	<b>95,050</b>	<b>100.0</b>	<b>415.2</b>
<b>OTHER INDUSTRIES</b>						
1 day and less .. .. .	333	169,410	63.9	103,209	23.4	405.9
2 days and more than 1 day ..	150	44,358	16.7	69,243	15.7	295.6
3 days and more than 2 days ..	84	22,661	8.5	58,707	13.3	249.8
Over 3 days and less than 5 days	53	9,780	3.7	38,793	8.8	170.5
5 days and less than 10 days ..	64	12,865	4.9	90,004	20.5	383.5
10 days and less than 20 days ..	29	5,778	2.2	70,004	15.9	317.9
20 days and less than 40 days ..	3	359	0.1	10,644	2.4	47.9
40 days and over .. .. .	..	..	..	..	..	..
<b>Total</b> .. .. .	<b>716</b>	<b>265,211</b>	<b>100.0</b>	<b>440,604</b>	<b>100.0</b>	<b>1,871.1</b>
<b>ALL INDUSTRIES</b>						
1 day and less .. .. .	689	294,433	71.4	172,802	29.7	711.8
2 days and more than 1 day ..	264	56,293	13.6	87,762	15.1	376.1
3 days and more than 2 days ..	118	27,830	6.8	71,091	12.2	304.6
Over 3 days and less than 5 days	65	10,813	2.6	42,843	7.4	189.3
5 days and less than 10 days ..	76	16,665	4.0	116,971	20.1	500.2
10 days and less than 20 days ..	32	6,163	1.5	74,915	12.9	339.8
20 days and less than 40 days ..	5	507	0.1	14,984	2.6	73.2
40 days and over .. .. .	1	4	..	200	..	0.7
<b>Grand Total</b> .. .. .	<b>1,250</b>	<b>412,708</b>	<b>100.0</b>	<b>581,568</b>	<b>100.0</b>	<b>2,495.7</b>

(a) Refers only to disputes involving a stoppage of work of 10 man-days or more. (b) includes workers indirectly involved. See footnote (b) to table on page 500.

5. Causes.—(i) *General*. In issues of the Year Book prior to No. 40, the causes of industrial disputes were classified in some detail for all industries combined. As from 1950, however, stoppages have been analysed in three separate groups, "Coal Mining", "Stevedoring" and "Other Industries".

Causes have been grouped under four main headings:—(1) Wages, Hours and Leave; (2) Physical Working Conditions and Managerial Policy; (3) Trade Unionism; (4) Other Causes. The first group is restricted to disputes involving general principles relating to wages, hours and leave; minor questions regarding the claims to pay or leave by individual employees are included under managerial policy. The second group comprises disputes regarding physical working conditions and general questions of managerial policy, which term covers disciplinary action, the promotion of employees, the employment of particular individuals, personal disagreements between employees and supervisory staff and disputes arising from the computation of wages, leave, etc., in individual cases. The third group includes stoppages over employment of non-unionists, inter-union and intra-union disputes, disputes over recognition of union activities, and sympathy stoppages in support of employees

in another industry. The last group comprises disputes by way of protest against situations not arising from the usual relationship of employer and employee, e.g. political matters, and cases (occurring mainly in the coal mining industry) where the cause of the stoppage is not officially made known to the management.

(ii) *Industry Groups.* The following table shows particulars of industrial disputes for 1963 classified according to cause in three industry groups.

**CAUSES OF INDUSTRIAL DISPUTES(a): AUSTRALIA, 1963**

Cause of dispute	Coal mining	Stevedoring	Other industries	All industries
<b>NUMBER OF DISPUTES</b>				
Wages, hours and leave .. .. .	9	37	233	279
Physical working conditions and managerial policy ..	116	246	386	748
Trade unionism .. .. .	31	12	72	115
Other .. .. .	66	17	25	108
<i>Total</i> .. .. .	<i>222</i>	<i>312</i>	<i>716</i>	<i>1,250</i>
<b>WORKERS INVOLVED(b)</b>				
Wages, hours and leave .. .. .	774	48,111	122,666	171,551
Physical working conditions and managerial policy ..	15,551	40,311	87,536	143,998
Trade unionism .. .. .	4,966	4,950	12,335	22,251
Other .. .. .	8,168	25,066	42,674	75,908
<i>Total</i> .. .. .	<i>29,059</i>	<i>118,438</i>	<i>265,211</i>	<i>412,708</i>
<b>WORKING DAYS LOST</b>				
Wages, hours and leave .. .. .	3,198	36,084	235,519	274,901
Physical working conditions and managerial policy ..	32,366	42,729	158,407	233,502
Trade unionism .. .. .	5,118	2,659	15,491	23,268
Other .. .. .	5,232	13,578	31,087	49,897
<i>Total</i> .. .. .	<i>45,914</i>	<i>95,050</i>	<i>440,604</i>	<i>581,568</i>

(a) Refers only to disputes involving a stoppage of work of 10 man-days or more. (b) Includes workers indirectly involved. See note (b) to table on p. 500.

(iii) *Summary, 1959 to 1963.* The following table gives particulars of industrial disputes according to cause for the years 1959 to 1963.

**CAUSES OF INDUSTRIAL DISPUTES(a): AUSTRALIA**

Cause of dispute	1959	1960	1961	1962	1963
<b>NUMBER OF DISPUTES</b>					
Wages, hours and leave .. .. .	105	213	123	290	279
Physical working conditions and managerial policy ..	556	648	525	707	748
Trade unionism .. .. .	86	127	66	92	115
Other .. .. .	122	157	101	94	108
<i>Total</i> .. .. .	<i>869</i>	<i>1,145</i>	<i>815</i>	<i>1,183</i>	<i>1,250</i>
<b>WORKERS INVOLVED(b)</b>					
Wages, hours and leave .. .. .	74,327	228,695	114,125	133,312	171,551
Physical working conditions and managerial policy ..	108,839	154,401	102,125	179,321	142,998
Trade unionism .. .. .	21,564	43,321	13,797	15,243	22,251
Other .. .. .	32,741	176,862	70,310	25,977	75,908
<i>Total</i> .. .. .	<i>237,471</i>	<i>603,279</i>	<i>300,357</i>	<i>353,853</i>	<i>412,708</i>
<b>WORKING DAYS LOST</b>					
Wages, hours and leave .. .. .	118,010	254,926	248,864	194,427	274,901
Physical working conditions and managerial policy ..	185,282	277,755	261,454	274,091	233,502
Trade unionism .. .. .	28,826	64,617	34,021	22,418	23,268
Other .. .. .	32,921	127,809	62,472	17,819	49,897
<i>Total</i> .. .. .	<i>365,039</i>	<i>725,107</i>	<i>606,811</i>	<i>508,755</i>	<i>581,568</i>

(a) Refers only to disputes involving a stoppage of work of 10 man-days or more. (b) Includes workers indirectly involved. See note (b) to table on p. 500.

6. Methods of Settlement.—The following table shows particulars of industrial disputes for 1963, classified according to method of settlement, in three industry groups.

## INDUSTRIAL DISPUTES(a): METHODS OF SETTLEMENT, AUSTRALIA, 1963

Method of settlement	Coal mining	Stevedoring	Other industries	All industries
NUMBER OF DISPUTES				
By private negotiation .. .. .	44	1	195	240
By mediation not based on legislation .. .. .	..	..	..	..
State legislation—				
Under State Conciliation, etc., legislation .. .. .	3	..	122	125
By reference to State Government officials .. .. .	..	..	..	..
Commonwealth and Commonwealth-State legislation—				
Industrial Tribunals under—				
Conciliation and Arbitration Act .. .. .	1	1	81	83
Coal Industry Acts .. .. .	22	..	..	22
Stevedoring Industry Act .. .. .	..	5	..	5
Other Acts .. .. .	..	..	..	..
By reference to Commonwealth Government officials .. .. .	..	227	..	227
By filling places of workers on strike or locked out .. .. .	..	..	..	..
By closing down establishment permanently .. .. .	..	..	..	..
By resumption without negotiation .. .. .	152	78	318	548
By other methods .. .. .	..	..	..	..
<i>Total</i> .. .. .	222	312	716	1,250

## WORKERS INVOLVED(b)

By private negotiation .. .. .	3,957	244	37,452	41,653
By mediation not based on legislation .. .. .	..	..	..	..
State legislation—				
Under State Conciliation, etc., legislation .. .. .	151	..	40,827	40,978
By reference to State Government officials .. .. .	..	..	..	..
Commonwealth and Commonwealth-State legislation—				
Industrial Tribunals under—				
Conciliation and Arbitration Act .. .. .	72	228	13,333	13,633
Coal Industry Acts .. .. .	4,367	..	..	4,367
Stevedoring Industry Act .. .. .	..	369	..	369
Other Acts .. .. .	..	..	..	..
By reference to Commonwealth Government officials .. .. .	..	46,618	..	46,618
By filling places of workers on strike or locked out .. .. .	..	..	..	..
By closing down establishment permanently .. .. .	..	..	..	..
By resumption without negotiation .. .. .	20,512	70,979	173,599	265,090
By other methods .. .. .	..	..	..	..
<i>Total</i> .. .. .	29,059	118,438	265,211	412,708

## WORKING DAYS LOST

By private negotiation .. .. .	9,398	123	100,073	109,594
By mediation not based on legislation .. .. .	..	..	..	..
State legislation—				
Under State Conciliation, etc., legislation .. .. .	569	..	103,337	103,906
By reference to State Government officials .. .. .	..	..	..	..
Commonwealth and Commonwealth-State legislation—				
Industrial Tribunals under—				
Conciliation and Arbitration Act .. .. .	2,592	456	47,003	50,051
Coal Industry Acts .. .. .	16,914	..	..	16,914
Stevedoring Industry Act .. .. .	..	89	..	89
Other Acts .. .. .	..	..	..	..
By reference to Commonwealth Government officials .. .. .	..	31,472	..	31,472
By filling places of workers on strike or locked out .. .. .	..	..	..	..
By closing down establishment permanently .. .. .	..	..	..	..
By resumption without negotiation .. .. .	16,441	62,910	190,191	269,542
By other methods .. .. .	..	..	..	..
<i>Total</i> .. .. .	45,914	95,050	440,604	581,568

(a) Refers only to disputes involving a stoppage of work of 10 man-days or more. (b) Includes workers indirectly involved. See note (b) to table on p. 500.

## WORKERS' COMPENSATION LEGISLATION

A conspectus of the principal provisions of Workers' Compensation Acts in force in Australia at 31st December, 1961, will be found in *Labour Report* No. 49, pages 167-175.

## LABOUR ORGANIZATIONS

## § 1. Labour Organizations in Australia

1. **General.**—The figures shown in this section are prepared from a special collection of membership of labour organizations at 31st December each year. The affairs of single unions are not disclosed in the published results and this has assisted in securing complete information. The Bureau is indebted to the secretaries of trade unions for their co-operation in supplying information.

2. **Organizations Registered under the (Commonwealth) Conciliation and Arbitration Act.**—Under Part VIII. of the *Conciliation and Arbitration Act* 1904–1961, any association of employers in any industry which has, or any employer who has, employed, on an average taken per month, not less than 100 employees during the six months preceding application for registration, or any association of not less than 100 employees in any industry, may be registered. However, under the Public Service Arbitration Act, an association of less than 100 employees may be registered as an organization, provided that its members comprise at least three-fifths of all persons engaged in that industry in the Service. Such organizations are included in the figures shown below. Registered unions include both interstate associations and associations operating within one State only. Registration under Commonwealth legislation began in 1906. At the end of 1963, the number of employers' organizations registered under the provision of the Conciliation and Arbitration Act was 66. The number of unions of employees registered at the end of 1963 was 154, with a membership of 1,663,822 representing 83 per cent. of the total membership of all trade unions in Australia.

3. **Particulars regarding Trade Unions.**—(i) *Types.* The trade unions in Australia are very diverse in character, and range from the small independent association to the large interstate organization, which, in its turn, may be a branch of an international body. Broadly speaking, there are four distinct classes of labour organizations:—(a) the local independent; (b) the State; (c) the interstate; and (d) the Australasian or international; but a number of variations occur from each of these classes. The schemes of organization of interstate or federated unions vary greatly in character. In some unions, the State organizations are bound together under a system of unification with centralized control, while in others the State units are practically independent and self-governing, the federal bond being loose and existing only for one or two specified purposes.

(ii) *Number and Membership.* Returns showing membership by States and Territories at 31st December each year are obtained for all trade unions and employee organizations. The following table shows the position at the end of each of the years 1961 to 1963.

TRADE UNIONS: NUMBER AND MEMBERSHIP

State or Territory	Number of separate unions			Number of members			Percentage increase in membership(b)		
	1961	1962	1963	1961	1962	1963	1961	1962	1963
New South Wales ..	226	222	227	743,581	765,479	782,665	-3.2	2.9	2.2
Victoria ..	156	155	154	486,760	498,018	514,919	1.6	2.3	3.4
Queensland ..	133	135	137	329,746	333,999	339,351	0.7	1.3	1.6
South Australia ..	134	133	134	151,488	160,390	161,095	-1.3	5.9	0.4
Western Australia ..	152	152	154	115,000	121,067	128,996	-0.8	5.3	6.5
Tasmania	103	103	103	56,873	57,255	57,482	1.5	0.7	0.4
Northern Territory(c)	24	23	30	2,904	3,336	3,338	(c)	(c)	(c)
Australian Capital Territory(c)	34	38	54	8,251	10,940	15,604	(c)	(c)	(c)
Australia ..	(a)355	(a)347	(a)347	1,894,603	1,950,484	2,003,450	-0.9	2.9	2.7

(a) Without interstate duplication. See below. (b) On preceding year. (c) In some cases, union members in the Territories associated with State organizations are reported under the heading of that State. The annual figures reflect, in part, progressive improvements to more accurate reporting, and the comparability of totals for the Territories is affected by this aspect.

NOTE.—Minus sign (—) denotes decrease.

In the preceding table, under the heading "Number of Separate Unions", a union reporting members in a State or Territory is counted as one union within that State or Territory. The figures do not add to the Australian total (shown in the last line) because a union represented in more than one State or Territory is included in the figure for each State or Territory in which it is represented, but is counted only once in the Australian total.

A table showing the number and membership of trade unions in Australia for the years 1912 to 1961 will be found in the Appendix to *Labour Report* No. 49.

(iii) *Classification in Industry Groups.* The following table shows the number of unions and members thereof in Australia at the end of each of the years 1961 to 1963.

#### TRADE UNIONS: INDUSTRY GROUPS, AUSTRALIA

Industry Group	1961		1962		1963	
	No. of unions (a)	No. of members	No. of unions (a)	No. of members	No. of unions (a)	No. of members
Agriculture, grazing, etc. .. ..	3	61,420	3	60,720	3	60,829
Mining and quarrying .. ..	12	35,288	12	35,331	12	34,901
Manufacturing—						
Engineering, metals, vehicles, etc. ..	13	291,541	12	294,646	12	301,534
Textiles, clothing and footwear .. ..	7	95,273	7	105,407	7	107,733
Food, drink and tobacco .. ..	34	128,016	34	130,312	34	136,769
Sawmilling, furniture, etc. .. ..	7	41,954	6	39,104	6	39,677
Paper, printing, etc. .. ..	6	51,810	6	52,104	6	53,418
Other manufacturing .. ..	32	82,584	31	87,082	31	90,865
<i>Total Manufacturing</i> .. ..	99	691,178	96	708,655	96	729,966
Building and construction .. ..	28	143,923	28	145,549	25	144,969
Railway and tramway services .. ..	25	133,823	25	134,672	25	133,755
Road and air transport .. ..	10	58,363	11	63,688	10	66,227
Shipping and stevedoring .. ..	14	35,016	14	34,033	14	33,174
Banking, insurance and clerical .. ..	19	118,850	19	121,236	19	126,348
Wholesale and retail trade .. ..	11	75,748	11	79,709	12	84,184
Public administration(b) .. ..	73	341,000	70	353,965	70	373,986
Amusement, hotels, personal service, etc.	23	51,393	22	54,506	23	54,068
Other industries(c) .. ..	38	148,601	36	158,420	38	161,013
<b>Total</b> .. ..	<b>355</b>	<b>1,894,603</b>	<b>347</b>	<b>1,950,484</b>	<b>347</b>	<b>2,003,450</b>

(a) Without interstate duplication. See para. (ii) p. 504.

(b) Includes communication,

municipal, etc. (c) Includes Community and business services.

(iv) *Number of Members and Proportion of Wage and Salary Earners.* The following table shows the estimated percentages of wage and salary earners in employment who are members of trade unions. As current estimates of wage and salary earners in employment do not include employees engaged in rural industry or in private domestic service, the percentages have been calculated on figures obtained by adding to the end of year estimates an estimate of the number of employees in rural industry and in private domestic service based on the results of the censuses of June, 1954, and June, 1961. For this reason, and also because the membership of trade unions includes some persons not in employment, the percentages shown in the table must be regarded as approximations.

#### TRADE UNIONS: NUMBER OF MEMBERS AND PROPORTION OF TOTAL WAGE AND SALARY EARNERS, AUSTRALIA

Year	Number of members			Proportion of total wage and salary earners (Per cent.)		
	Males	Females	Persons	Males	Females	Persons
1959 .. ..	1,494,669	356,058	1,850,727	64	41	57
1960 .. ..	1,534,423	377,969	1,912,392	63	41	57
1961 .. ..	1,521,900	372,703	1,894,603	63	41	57
1962 .. ..	1,561,854	388,630	1,950,484	64	41	57
1963 .. ..	1,588,454	414,996	2,003,450	62	42	57



(v) *Interstate or Federated Trade Unions.* The following table gives particulars of the number and membership of interstate or federated trade unions in 1963.

**INTERSTATE OR FEDERATED TRADE UNIONS(a): AUSTRALIA, 1963**

Particulars	Unions operating in—					Total
	2 States	3 States	4 States	5 States	6 States	
Number of unions ..	10	7	23	33	68	141
„ „ members ..	27,684	30,174	189,221	370,156	1,179,640	1,796,875

(a) Certain unions in this group have, in addition to branches in the States, branches in the Northern Territory and/or in the Australian Capital Territory.

4. *Central Labour Organizations.*—*Delegate organizations, consisting of representatives from a group of trade unions, have been established in each of the capital cities and in a number of industrial centres elsewhere. Their revenue is raised by means of a per capita tax on the members of each affiliated union. In most of the towns where such central organizations exist, the majority of the local unions are affiliated with the central organization, which is usually known as the Labour Council or the Trades Hall Council. In Western Australia, until 1962, a unified system of organization extended over the industrial centres throughout the State. In this State, there was a provincial branch of the Australian Labor Party, having a central council and executive, and metropolitan and branch district councils, with which the local bodies were affiliated. The central council, on which all district councils were represented, met periodically. In 1962, this organization was abolished, and a separate Trades and Labour Council with provincial councils was to be established outside the political organization. By the end of 1963 only the central council (the Trades and Labour Council of Western Australia) had been established. A number of provincial councils were established during 1964. In the other five States, while provision usually exists in the rules of the central council at each capital city for the organization of district councils or for the representation of the central council on the local councils, these councils are generally independent bodies.*

The table below shows the number of metropolitan and district or local labour councils, together with the number of unions and branches of unions affiliated therewith in each State and Territory at the end of 1963.

**CENTRAL LABOUR ORGANIZATIONS: NUMBER, AND UNIONS AND BRANCH UNIONS AFFILIATED, 1963**

Particulars	N.S.W.	Vic.	Q'land	S.A.	W.A. (a)	Tas.	N.T.	A.C.T.	Total
Number of councils ..	12	9	12	5	1	5	..	1	45
Number of unions and branch unions affiliated	335	295	170	154	83	121	..	27	1,185

(a) See explanation in text above.

The figures given in the preceding table concerning the number of unions do not necessarily represent separate unions, since the branches of a large union may be affiliated with the local trades councils in the several towns in which they are represented.

A Central Labour Organization, now called the Australian Council of Trade Unions, came into being during 1927. The Council was created to function on behalf of the trade unions of Australia, and was founded at an All-Australian Trade Union Congress held in

Melbourne in May, 1927. The A.C.T.U. consists of affiliated unions and affiliated Metropolitan and/or State Labour Councils and Provincial Councils. The Metropolitan or State Labour Council in each State is the State Branch of the A.C.T.U. and has the right to appoint one representative to act on the executive of the Council. In addition to the representatives of the State Branches of the A.C.T.U., six delegates are elected by and from Congress, one from each of the following industry groups of unions:—Building, Food and Distributive Services, Manufacturing, Metal, Services, Transport. To this executive are added the four officers, namely, President, two Vice-Presidents and Secretary, who are elected by and from the Australian Congress of Trade Unions.

The ordinary meetings of Congress are held in each alternate year. Special meetings of Congress shall be held whenever deemed advisable by decisions of the executive, as approved by the majority of its branches, or by resolution of unions representing one-third of the total membership of the A.C.T.U.

The objectives of the A.C.T.U. are the socialization of industry, i.e. production, distribution and exchange, and the utilization of the resources of Australia for the benefit of the people—ensuring full employment, with rising standards of living, real security and full cultural opportunities for all. The methods to be adopted are:—the closer organization of the workers by the transformation of the Australian trade union movement from the craft to an industrial basis, by grouping of unions in their respective industries and by the amalgamation of unions with a view to the establishment of one union in each industry; the consolidation of the Australian Labour Movement, with the object of unified control, administration and action; the centralized control of industrial disputes; educational propaganda among unions; and political action to secure satisfactory working-class legislation.

The A.C.T.U. was the first interstate body in Australia with authority to deal with industrial matters of an interstate character affecting the trade union movement generally. It is also the body responsible for submitting to the Commonwealth Government the names of persons suitable for selection as the Australian workers' delegate to the annual International Labour Conference.

All the major unions are affiliated with the A.C.T.U., with the exception of the largest, the Australian Workers' Union, which is itself virtually a central organization of branches catering in the main for employees in rural and constructional pursuits.

Between the trade union and the central organization of unions may be classed certain State or district councils organized on trade lines, and composed of delegates from separate unions whose members' interests are closely connected because of their occupations. Delegate councils of bakers, bread carters and mill employees, or of unions connected directly or indirectly with the iron, steel, or brass trades, or with the building trades, may be so classed.

## § 2. International Labour Organisation

The International Labour Organisation (I.L.O.) was established on 11th April, 1919, as an autonomous institution associated with the League of Nations. Its original constitution was adopted as Part XIII. of the Treaty of Versailles and formed part of other treaties of peace. During the years between its establishment and the outbreak of the 1939-45 War, the I.L.O., with headquarters at Geneva, played a leading role in promoting the improvement of labour conditions throughout the world.

In 1940, in order to ensure that the I.L.O. should be able to continue to function freely, a working centre was established at Montreal, Canada. In 1946, the Organisation became the first of the specialized agencies of the United Nations. Under the terms of agreement, the United Nations recognizes the I.L.O. as a specialized agency having responsibility in the field defined by its constitution, which embraces labour conditions, industrial relations, employment organization, social security and other aspects of social policy. The Organisation has three basic parts. These are the International Labour Conference, its highest authority, which as a rule meets annually; the Governing Body, its executive council, which usually meets three times each year; and the International Labour Office, which provides the secretariat of the Organisation. The Conference is composed of delegations

from the Member States of the Organisation. At the end of 1963, there were 109 Member States, each of which is entitled to be represented by four delegates—two government, one representing employers and one representing workers, together with their advisers. Each delegate speaks and votes independently, so that all points of view in each country are fully expressed. The Governing Body consists of the representatives of twenty-four governments and twelve employers' and twelve workers' representatives. Of the twenty-four government representatives, ten are from the ten countries of major industrial importance and fourteen are elected by the remaining governments. These latter fourteen government representatives and the twelve employers' and twelve workers' titular delegates and the deputy members of the three groups are elected by their groups at the Conference every three years. Particulars are given in *Labour Report* No. 49 of the proceedings of International Labour Conferences up to the 45th Session, held in Geneva in June, 1961. For details of I.L.O. conventions ratified by Australia, see *Labour Report* Nos. 47 to 49.

## CHAPTER XIV

### OVERSEA TRADE

NOTE.—Because of the limitations of space, the statistics in this chapter are in the main restricted to summarized form. For details of imports and exports, reference should be made to the annual bulletins on *Oversea Trade* (preliminary and final), *Australian Exports*, and *Imports Cleared for Home Consumption*. Current information on oversea trade is contained in the *Quarterly Summary of Australian Statistics*, the *Monthly Review of Business Statistics*, the *Digest of Current Economic Statistics*, the *Monthly Bulletin of Oversea Trade Statistics*, and a preliminary monthly statement on *Australian Oversea Trade—Merchandise*. The *Australian Balance of Payments* (mimeographed statement) contains detailed information on this subject, and there are also the following additional mimeographed statements:—*Exports of Wool* (monthly), *Oversea Trade with Major Groups of Countries* (quarterly), *Trade of Australia with the United Kingdom* (half-yearly) and *Trade of Australia with Eastern Countries* (annually).

#### § 1. Legislation affecting Oversea Trade

1. **Constitutional Powers.**—By the *Commonwealth of Australia Constitution Act*, section 51 (i), the power to make laws with respect to trade and commerce with other countries is conferred on the Commonwealth Parliament. Under section 86 of the Constitution, the collection and control of duties of customs and excise passed to the Executive Government of the Commonwealth on 1st January, 1901. Other references to trade and commerce are contained in sections 87 to 95 of the Constitution (*see pp. 18–19*).

2. **Commonwealth Legislation.**—The principal Commonwealth Acts affecting oversea trade at present in force are: the *Customs Act 1901–1963*; *Customs Tariff 1933–1963*; *Customs Tariff (Canada Preference) 1960–1963*; *Customs Tariff (New Zealand Preference) 1933–1963*; *Customs Tariff (Papua and New Guinea Preference) 1936–1959*; *Customs Tariff (Federation of Rhodesia and Nyasaland Preference) 1960–1963*; *Customs Tariff (Primage Duties) 1934–1958*; *Customs Tariff (Dumping and Subsidies) Act 1961*; *Trading with the Enemy Act 1939–1957*.

The Customs Act is the administrative Act under which the Department of Customs and Excise operates, while the Customs Tariffs provide the statutory authority for imposing the actual rates of duty operative from time to time.

3. **The Customs Tariff.**—(i) *General.* The first Commonwealth Customs Tariff was introduced by Resolution on 8th October, 1901, from which date uniform duties came into effect throughout Australia. The tariff has since been extensively amended. The Act at present in operation is the *Customs Tariff 1933–1963*.

The Australian Customs Tariff has been developed in conformity with the policy of protecting economic and efficient Australian industries and of granting preferential treatment to certain imports from certain countries of the Commonwealth of Nations. Duties are also imposed on some goods, generally of a luxury nature, for revenue purposes. Customs collections are a major source of revenue, but in its protective character the tariff has an important influence on the Australian economy.

Australia has three classes of tariff—the British Preferential Tariff, the Intermediate Tariff and the General Tariff.

(ii) *British Preference.* British Preferential Tariff rates of duty apply to goods the produce or manufacture of the United Kingdom, provided that such goods comply with the laws and statutory regulations in force at the time affecting the grant of preference,

and that the goods have been shipped in the United Kingdom to Australia and have not been transhipped, or, if transhipped, it is proved to the satisfaction of the Collector of Customs that the intended destination of the goods, when originally shipped from the United Kingdom, was Australia. For the purpose of the preferential tariff, the following goods are deemed by section 151A of the *Customs Act* 1901–1963 to be the produce or manufacture of the United Kingdom, provided the final process of their production or manufacture was performed in that country.

- (a) Goods which are wholly produced or wholly manufactured in the United Kingdom from materials in one or more of the following classes:—
- (i) materials wholly produced or wholly manufactured in the United Kingdom or in Australia;
  - (ii) imported unmanufactured raw materials;
  - (iii) imported manufactured raw materials as determined by the Minister.
- (b) Goods of the factory or works cost of which not less than 75 per cent. is represented—
- (i) by labour or material of the United Kingdom; or
  - (ii) by labour or material of the United Kingdom and labour or material of Australia.
- (c) Goods of a class or kind not commercially produced or manufactured in Australia and of the factory or works cost of which not less than 25 per cent. (or 50 per cent. if the Minister so determines) is represented—
- (i) by labour or material of the United Kingdom; or
  - (ii) by labour or material of the United Kingdom and labour or material of Australia.

The British Preferential Tariff also applies to the Republic of Ireland and, with the exception of a relatively small number of commodities which carry special rates of duty, to Canada, New Zealand (except Cook Islands) and the Territory of Papua and New Guinea, and the abovementioned preference conditions apply *mutatis mutandis* to each of those countries, except that in respect of New Zealand the percentage content of goods under clause (b) of the said conditions is 50 per cent. of New Zealand and Australian labour and materials or 75 per cent. of New Zealand and United Kingdom or of New Zealand, Australian and United Kingdom labour and materials. In relation to certain goods, the British Preferential Tariff also applies to specified countries of the Commonwealth of Nations and most of the British non-self-governing colonies, protectorates and trust territories.

(iii) *Intermediate Tariff.* The Intermediate Tariff has been a feature of the Australian Tariff for a considerable number of years, although its effective application dates only from 1st January, 1937, consequent upon the conclusion of trade agreements with Belgium, Czechoslovakia and France in 1936. The countries to which the Intermediate Tariff applies include those countries with which Australia has concluded trade agreements (including tariff negotiations pursuant to the General Agreement on Tariffs and Trade) and countries which accord Australia reciprocal most-favoured-nation tariff treatment by reason of agreements between those countries and the United Kingdom. The Intermediate Tariff has also been extended to some countries to which Australia has no formal obligation to accord most-favoured-nation treatment. The countries and the particular tariff items to which the Intermediate Tariff applies are specified by order made in pursuance of section 9A of the *Customs Tariff* 1933–1963.

(iv) *General Tariff.* The General Tariff applies to goods other than those to which the British Preferential Tariff or Intermediate Tariff or special rates under trade agreements apply.

4. *Primage Duties.*—In addition to the duties imposed by the Customs Tariff, *ad valorem* primage duties at rates of 4 per cent., 5 per cent. or 10 per cent. are charged on some goods according to the type of goods and origin thereof under the *Customs Tariff (Primage Duties)* 1934–1958. Other goods are exempt from primage duty. Goods the produce or manufacture of New Zealand, Norfolk Island, Fiji, Cocos Islands, Christmas Island and the Territory of Papua and New Guinea are exempt from primage duty.

5. **Tariff Board.**—The *Tariff Board Act 1921–1962* provides for the appointment of a Tariff Board consisting of eight members. Of these, two must, and three may, be members of the Commonwealth Public Service at the time of their appointment (or first appointments in the case of re-appointments). Members of the Board are appointed for terms of not less than one year and not more than five years. The purpose of the Tariff Board is to advise the Government on matters relating to the protection and encouragement of Australian industry.

The Minister of State for Trade and Industry is required to refer to the Board for inquiry and report the following matters:—the necessity for new, increased, or reduced duties; the necessity for granting bounties and the effect of existing bounties; and any complaint that a manufacturer is taking undue advantage of the protection afforded him by the Tariff or by the restriction of the importation of any goods by charging unnecessarily high prices for his goods or acting in restraint of trade. In addition, the Minister may refer the following matters to the Tariff Board for inquiry and report:—the general effect of the working of the Customs Tariff and the Excise Tariff; the fiscal and industrial effects of the Customs laws on the Commonwealth; the incidence between the rates of duty on raw materials and on finished or partly finished products; and other matters affecting the encouragement of primary and secondary industries in relation to the Tariff. The Minister of State for Customs and Excise may refer to the Tariff Board for inquiry and report the following matters:—the classification of goods in the Customs Tariff or Excise Tariff and matters in connexion with the interpretation of these Tariffs; the question of the value for duty of goods; whether goods not prescribed in departmental by-laws should be so prescribed; and any matters in respect of which action may be taken under the *Customs Tariff (Dumping and Subsidies) Act 1961*.

Where a matter of the necessity for new or increased duties on any goods has been referred to the Board for inquiry and report, the Board may, in its report, recommend the restriction of the importation of those goods for such period as is specified in the report.

Inquiries conducted by the Board relating to a revision of the Tariff, a proposal for a bounty, a question under the *Customs Tariff (Dumping and Subsidies) Act*, or any complaint that a manufacturer is taking undue advantage of the protection afforded him by the Tariff or by the restriction of the importation of any goods, are held in public, and evidence in such inquiries is taken in public on oath, unless the Board accepts evidence as confidential or in the form of a written statement by a witness on oath. The Board is required to make available to the public the contents of any such written statement except any matter which it accepts as confidential.

6. **Special Advisory Authority.**—The Minister for Trade and Industry may also request a Special Advisory Authority to inquire into cases where urgent action appears necessary to protect an Australian industry against import competition pending receipt and consideration of a full report by the Tariff Board. The Special Advisory Authority's report must be submitted to the Minister within thirty days of the making of the request. Temporary protection recommended by a Special Advisory Authority may be imposed, but may only operate for a period of up to three months after the date of receipt of the final report by the Tariff Board on the goods concerned.

7. **Anti-dumping Legislation.**—The *Customs Tariff (Dumping and Subsidies) Act 1961* provides protection for Australian industry against various forms of unfair trading. Under this Act, dumping duty may be imposed on goods that are sold to Australia at an export price which is less than the normal value of the goods, where this causes or threatens material injury to an Australian industry.

“ Normal value ” under the Act means:—

- (a) fair market value in the country of export;
- (b) price in the country of export to a third country;
- (c) fair market value in a third country; or
- (d) cost of production, plus f.o.b. charges, plus selling costs and profit.

Countervailing duty may be levied on goods in respect of which any subsidy, bounty, reduction, or remission of freight or other financial assistance has been, or is being, paid or granted directly or indirectly upon the production, manufacture, carriage or export of those goods. The amount of the countervailing duty in respect of any goods is a sum equal to the amount of the subsidy, bounty, reduction or remission of freight or other financial assistance

Special duties may be collected also if dumped or subsidized goods are imported to the detriment of the trade of a third country in the Australian market.

Dumping and countervailing duties may be imposed to protect an Australian industry only after inquiry and report by the Tariff Board.

For information concerning the *Customs Tariff (Industries Preservation) Act 1921-1957* reference should be made to Official Year Book No. 47, page 483.

**8. Trade Descriptions.**—The *Commerce (Trade Descriptions) Act 1905-1950* gives power to require the application of a proper trade description on certain prescribed goods imported into or exported from Australia. Goods which must bear a prescribed trade description upon importation into Australia are specified in the Commerce (Imports) Regulations. As regards exports from Australia, marking requirements are prescribed in regulations issued under the Act and relating to specified export commodities.

**9. Import Controls.**—*Customs (Import Licensing) Regulations.* A comprehensive system of import licensing was introduced in Australia at the beginning of the second World War under the authority of the Customs (Import Licensing) Regulations.

With the end of the War, it was possible to relax the restrictions progressively. However, because of a serious deterioration in Australia's external financial position, import licensing controls were reimposed on 8th March, 1952, on imports from all sources except for goods originating in Papua, New Guinea and Norfolk Island.

The object of import licensing was to limit the value of imports to an annual rate determined by the government in order that payments for imports would not involve an excessive drawing on Australia's oversea exchange reserves. Imports were divided into a number of categories to which different licensing treatment was accorded (largely by the establishment of quotas for individual importers within each category). In general, the nature of goods and their relative importance to the Australian economy were taken into account in determining the licensing rate for particular goods.

Between March, 1952, and February, 1960, import restrictions were relaxed and intensified broadly in line with changes in Australia's balance of payments position.

The import controls were administered without discrimination as to country of origin, with the exception of those relating to imports from Japan and the dollar area. The special restrictions against Japanese imports were removed in July, 1957, and from October, 1955, Australia progressively removed discrimination against imports from the dollar area.

In accordance with the principle of relaxing and removing controls in the light of developments in Australia's balance of payments position, large-scale licensing changes involving the almost complete abolition of controls were made as from 23rd February, 1960. As a result of these changes, some 90 per cent. of total imports were exempted from control. The remaining import licensing controls were removed on 18th October, 1962, with the exception of some goods retained under control for reasons associated with the protection of the Australian industries concerned. The goods falling within this latter category at 31st December, 1963, are broadly described as:—aluminium and aluminium alloy, ingot and preliminary shapes, and waste and scrap; ball bearings; timber; and used, secondhand or disposal earthmoving and construction equipment.

The administration of the import controls is the responsibility of the Department of Trade and Industry, although the issue of import licences is a function of the Department of Customs and Excise at the various ports of the Commonwealth.

**10. Export Controls.**—(i) *Commodity Control.* Section 112 of the *Customs Act* provides that the Governor-General may, by regulation, prohibit the exportation of goods from Australia, and that this power may be exercised by—(a) prohibiting the exportation of goods absolutely; (b) prohibiting the exportation of goods to a specified place; and (c) prohibiting the exportation of goods unless prescribed conditions or restrictions are complied with. Goods subject to this export control are listed in the Customs (Prohibited Exports) Regulations.

(ii) *Exchange Control—Banking Act 1959.* As an integral part of the framework of exchange control, a control over goods exported from Australia is maintained under the provisions of Part III. of the Banking (Foreign Exchange) Regulations, to ensure that the full proceeds of such goods are received into the Australian banking system and that these proceeds are received in the currency and in the manner prescribed by the Reserve Bank of

Australia. This action is complementary to that taken under other parts of the Banking (Foreign Exchange) Regulations and under Part IV. of the *Banking Act 1959* to control the movement out of Australia of capital in the form of securities, currency and gold.

Export licences are issued subject to terms and conditions specified in the Banking (Foreign Exchange) Regulations, and may be subject to such further terms and conditions as are determined, or may be free from terms and conditions. On the receipt in Australia by the Reserve Bank, or by a bank acting as agent for that Bank, of advice that the foreign currency has been paid to the Reserve Bank or to an agent of the Bank in payment for goods exported in accordance with a licence granted under the regulations, the Bank, or an agent of the Bank, pays the licensee, or such other person as is entitled to receive it, an amount in Australian currency equivalent to the foreign currency received. In addition to commercial transactions involving exports, movements of personal effects are also controlled. Persons leaving Australia for overseas are required to obtain licences to cover their bona fide baggage, personal effects and household effects in any individual case where the gold content thereof exceeds £A.125, or where jewellery and other articles of high intrinsic worth either exceed £A.1,000 in value or have not been the personal property of the passenger for at least twelve months.

11. Trade Agreements.—(i) *The United Kingdom.* The original United Kingdom and Australia Trade Agreement (Ottawa Agreement) was signed on 20th August, 1932. Under this agreement, Australia secured preferences in the United Kingdom market for a wide range of Australian export commodities, and in return assumed obligations in respect of tariff levels and the grant of preference to United Kingdom goods.

A new Trade Agreement, designed to replace the original agreement and correct the unbalance in benefits which had emerged in the 25 years of its operation, came into effect on 9th November, 1956. Briefly, this agreement preserves security for Australian exports in the United Kingdom market, but lowers the obligatory margins of preference which Australia extends to the United Kingdom (*see also* pp. 515–6).

(ii) *Canada.* The existing agreement between Australia and Canada came into force on 30th June, 1960, replacing an agreement signed on 3rd August, 1931. The agreement provides for Australian goods to receive British Preferential Tariff rates, or better, upon entry into Canada, and for Canada to maintain margins of preference in favour of Australia on a range of commodities. The agreement specifies that Canadian goods, with some exceptions, shall receive the benefit of the British Preferential Tariff upon importation into Australia and that Australia shall maintain margins of preference in favour of Canada on a range of commodities. The agreement continues subject to six months notice.

(iii) *New Zealand.* The existing trade agreement between Australia and New Zealand came into force on 1st December, 1933. The basis of the agreement is, generally, the mutual accord of British Preferential Tariff treatment. The exceptions to this general rule are listed in the schedules to the agreement.

(iv) *Federation of Rhodesia and Nyasaland.* A trade agreement was negotiated with the Federation in June, 1955. Australia's principal undertaking was to grant an exclusive tariff preference to the Federation on unmanufactured tobacco—a concession formerly accorded Southern Rhodesia only, under a previous agreement. The Federation accorded preferential tariff treatment on a wide range of Australian export products. Following the dissolution of the Federation in December, 1963, the agreement has been applied on a provisional basis to each of the three constituent territories—Southern Rhodesia, Northern Rhodesia and Nyasaland.

(v) *Malaysia.* A trade agreement was signed with the former Federation of Malaya on 26th August, 1958. By common consent, the agreement continues in force, applying only to that part of Malaysia which formerly comprised the Federation of Malaya. (For administrative purposes this area is now known as the States of Malaya.) The trade agreement provides for concessional rates of duty on a limited number of items on both sides, and includes anti-dumping clauses to protect Malayan rubber and tin and Australian wheat and flour. The Agreement continues in force indefinitely, subject to six months notice of termination by either party. A review of the operation of the agreement is due every two years.

(vi) *Japan.* An Agreement on Commerce between the Commonwealth of Australia and Japan was signed on 6th July, 1957, and formally ratified on 4th December, 1957. It was provided that the Agreement would remain in force until 5th July, 1960, and thereafter



unless prior notice of termination should be given by either government. The agreement provides that each country shall extend most-favoured-nation treatment to the other in respect of customs duties and similar charges and import and export licensing. Japan is not entitled to claim the benefit of preferences accorded by Australia to Commonwealth countries and dependent territories. Japan also gave certain specific commitments on some important Australian export commodities.

Following a review of the agreement, a Protocol of Amendment was signed on 5th August, 1963. Under the Protocol, Australia agreed to withdraw action against Japan under Article XXXV of the General Agreement on Tariffs and Trade, and thus a full G.A.T.T. relationship is to be established between the two countries. This arrangement will take effect when the Protocol has been ratified by both Governments. Pending this action, both countries agreed to apply the new agreement provisionally.

The specific undertakings agreed in 1957, have now lapsed and the following commitments entered into.

Japan has—

- (a) undertaken not to accord less favourable import treatment (apart from tariff) for raw wool than for raw cotton,
- (b) stated that it has no present intention of imposing a duty on wool,
- (c) undertaken to continue imports of Australian soft wheat at a stabilized level, and to purchase Australian hard wheat when requirements are met,
- (d) stated that it will endeavour to expand opportunities for imports into Japan of Australian sugar, canned meat, leather, motor vehicles, butter and cheese.

Australia has—

- (a) undertaken to consult Japan on temporary protection cases affecting Japanese products (in such consultations Japan will consider whether the need for temporary protection can be obviated by measures taken in Japan),
- (b) stated that equal opportunities of fair and equal competition are accorded to Japanese products in Australian Government purchases overseas.

The new agreement will be effective for three years from the date of ratification and thereafter subject to three months' notice of termination by either Government. There is provision for consultations to take place at least annually.

(vii) *Federal Republic of Germany.* An agreement signed in October, 1959, provided for annual import quotas for Australian wheat, coarse grains, frozen mutton and lamb, canned meat, fruits preserved in sugar, canned tropical fruit and wine. The agreement also provided for Australia to be included in all global tenders for whole and skim milk powder, butter, cheese, frozen beef, apples, pears, canned fruits, jam and casein.

The Agreed Minute on the export of flour from the Federal Republic of Germany to certain traditional Australian flour markets was also signed in October, 1959.

(viii) *Indonesia.* This agreement came into operation on 1st July, 1959. It records the desirability of expanding trade between Australia and Indonesia. It also gives special recognition to the importance of the flour trade from Australia to Indonesia. Australia recognizes the importance to Indonesia of its traditional export items to Australia. The agreement is subject to review and renewal annually.

(ix) *Other Countries.* Australia has entered into bilateral agreements with South Africa, Brazil, Czechoslovakia, France, Greece and Switzerland. Summaries of the texts of these agreements were given in earlier issues of the Official Year Book. In 1951, Australia entered into a trade agreement with Israel under which each country undertook to accord most-favoured-nation treatment to imports from the other. A similar agreement with Iceland was concluded in 1952.

(x) *The General Agreement on Tariffs and Trade (G.A.T.T.).* The General Agreement on Tariffs and Trade, of which Australia is an original member, is an international trade agreement which has been in operation since 1st January, 1948. Some of the provisions of the Agreement were revised in 1954 and 1955.

The objectives of the G.A.T.T. include the expansion of world trade and the raising of living standards throughout the world. Its members work towards these objectives by the reduction of tariffs and other barriers to trade, and by reduction of discrimination between countries through negotiations on a reciprocal and mutually advantageous basis. The essential features of the G.A.T.T. are the schedules of tariff concessions which its members have agreed to apply consequent to tariff negotiations with each other, the application of most-favoured-nation treatment among its members, the avoidance of trade discrimination, and a code of agreed commercial policy rules for fair international trading.

Five series of tariff negotiations have been completed under the provisions of the General Agreement. As a result of these negotiations, Australia has obtained tariff concessions on a number of products of which it is an actual or potential exporter to the individual countries concerned. These concessions were a result both of direct negotiation by Australia and of negotiations by other countries—in the latter case, benefits occur through the operation under the Agreement of the most-favoured-nation principle.

In 1958, a Committee was set up to examine problems of expansion of trade in agricultural products and obstacles to the expansion of trade of under-developed countries, and in 1962, groups were set up to study the problems of trade in cereals and meat. Little progress has been made, however, in resolving the problems of expanding trade in agricultural products.

In May, 1963, a Ministerial meeting of Contracting Parties was convened principally to make arrangements for a new round of trade negotiations commencing in 1964—the “Kennedy Round”. The chief characteristics of the present proposals for Kennedy Round negotiations is that they contemplate a linear or “across the board” cut in tariffs of a suggested depth of 50 per cent. (whereas previous rounds were confined to negotiation of tariff cuts on an item-by-item basis) and are expected to embrace non-tariff barriers on agricultural and other products.

There are at present (January, 1964) 60 Contracting Parties to the Agreement, comprising most of the world's larger trading nations, and further countries are seeking accession or have some provisional association with the G.A.T.T. The Contracting Parties periodically hold plenary sessions to deal with the questions arising out of the administration of the Agreement. The 20th Session was held in October/November, 1962, and the 21st Session was scheduled to be held in February/March, 1964. A permanent Council has been set up to deal with urgent business arising between sessions and gives preliminary consideration to work arising at the sessions.

## § 2. Imperial Preference in the United Kingdom

1. **Preferential Tariff of the United Kingdom.**—A brief summary of the preferential tariff of the United Kingdom in the years prior to 1931 was published in Official Year Book No. 43, page 328. Further details were published in Official Year Book No. 48, page 474.

Since 30th October, 1947, Canada and the United Kingdom have, by an exchange of letters, recognized the rights of their respective Governments to reduce or eliminate the preferences they accord one another without prior consultation or consent.

In 1947, the United Kingdom and Australia adhered to the General Agreement on Tariffs and Trade, which prohibits increases in tariff preferences by either country. This rule, as is the case with the other provisions of the General Agreement, may be waived by a two-thirds majority of the signatories to the agreement.

2. **The Australia-United Kingdom Trade Agreement.**—The provisions and history of the original Australia-United Kingdom Agreement (Ottawa Agreement) were published in Official Year Book No. 43, page 329.

The major provisions of the current agreement (operative since 9th November, 1956) which affect Australia's position in the United Kingdom market are as follows.

- (a) Continued free entry for those Australian goods in which Australia has an active trade interest, and which were accorded free entry immediately prior to the new agreement.

- (b) A guaranteed minimum margin of preference in the United Kingdom Tariff on all items so treated in the previous agreement plus an extension of this guarantee to several items on which the margin of preference, although in force, was not bound to Australia. This latter group comprised currants, egg powder and egg pulp, jam, rice, tomato juice, pineapple juice and coconut oil. A selection of the items on which Australia receives a bound margin of preference and the extent of that preference is as follows (all values in sterling):—cheese (15 per cent. *ad val.*); canned peaches, pears and apricots (12 per cent. *ad val.*); raisins (8s. 6d. a cwt.); eggs in shells (1s. to 1s. 9d. a great hundred (10 dozen)); milk powder 6s. a cwt.; sweetened condensed milk (5s. a cwt.); apples (4s. 6d. a cwt. in season); honey (5s. a cwt.); flour (10 per cent. *ad val.*); light wine (2s. a gallon); heavy wine (10s. a gallon at present duty rate).
- (c) All rights under the Ottawa Agreement in respect of meat are maintained.
- (d) Australia receives an assured wheat market of at least 750,000 tons f.a.q. wheat or flour equivalent annually. Any Australian high-protein wheat sold to the United Kingdom is not counted against this obligation.
- (e) There is provision for full consultation between the two Governments on such matters as agricultural production and marketing, transport and communication, the disposal of surpluses and restrictive business practices.
- (f) The agreement shall be the subject of re-negotiation between the two Governments during the fifth year of its operation. (By agreement between the two governments this re-negotiation has been postponed.)

### § 3. Trade Commissioner Service

The stimulation of interest abroad in Australia's exports is an important government activity in which the Australian Trade Commissioner Service plays a prominent part. The origin of official Australian trade representation abroad dates back to 1921, when the first Trade Commissioner was appointed to Shanghai. In the following year, a second Commissioner was appointed to Singapore. These appointments, however, were terminated shortly afterwards.

In 1929, a Trade Commissioner post was opened at Toronto. Wellington was opened five years later. The *Trade Commissioners Act 1933* provided for the establishment of an Australian Government Trade Commissioner Service. In 1935, official trade representation was established at Batavia (now Djakarta), Shanghai and Tokyo. Cairo, New York and Calcutta posts were opened between 1937 and 1939 and the Singapore post was established in 1941.

After the War, the service increased steadily to take care of Australia's expanding export interests and the growing diversity of our export commodities. By December, 1963, there were 38 Trade Commissioner posts in 29 countries, new posts having been opened in Beirut, Lebanon, August, 1961; Lima, Peru, October, 1961; Caracas, Venezuela, March, 1962; Athens, Greece, July, 1962; and Bahrein, November, 1963.

In 1957, Australia's official commercial representation overseas was extended by the introduction of a system of government Trade Correspondents. These men, who as a rule already reside in particular centres overseas, are engaged on a part-time basis to carry out market research, arrange introductions between buyer and seller, and generally promote Australia's trade interests in the same way as Trade Commissioners. Each Trade Correspondent operates under the general direction of the nearest Trade Commissioner.

The first two Australian Trade Correspondents were appointed in 1957 at Montevideo, Uruguay and Nairobi, Kenya (since replaced by a Trade Commissioner). In 1958, four more were appointed at Suva, Honolulu (discontinued in 1963), Mauritius and Mexico City. Appointments have since been made at Taiwan, Malta, Istanbul and Madrid. In addition, Marketing Officers have been appointed at Los Angeles and Rangoon.

Trade Commissioners and, to a lesser extent, Trade Correspondents, are responsible for commercial intelligence in their territories. Particular facilities provided for Australian exporters and export organizations include—

- (a) surveys of market prospects;
- (b) advice on selling and advertising methods;
- (c) arranging introductions with buyers and agents;
- (d) providing reports on the standing of oversea firms;
- (e) advice and assistance to business visitors;
- (f) helping to organize and carry through trade missions, trade displays, newspaper supplements and other promotion and publicity media;
- (g) providing information on import duties, import licensing, economic conditions, quarantine and sanitary requirements, and other factors affecting the entry and sale of goods;
- (h) helping to attract desirable investment.

In some countries, Trade Commissioners also participate in inter-governmental negotiations in the economic and commercial fields. In certain countries where there is no diplomatic or consular mission he is called upon to act as the Australian representative.

Trade Commissioners usually enter the Service from either private enterprise or the public service, and applications for entry into the Service are called for periodically by public advertisement. In the more important posts, the Trade Commissioner is supported by an Assistant Trade Commissioner, who normally qualifies at a later stage for appointment as a Trade Commissioner.

The Trade Commissioner Service is administered by the Commonwealth Department of Trade and Industry (as distinct from the diplomatic and consular services administered by the Department of External Affairs), but in countries where there is an Australian diplomatic or consular mission it is the practice for Trade Commissioners to be attached to the mission and to hold an appropriate diplomatic or consular rank (Commercial Counsellor, Commercial Secretary or Commercial Attaché).

The oversea trade representation is shown in Chapter XXIX. International Relations.

#### § 4. Australian Trade Missions

Over the last decade, Trade Missions have become an integral part of the Commonwealth Government's campaign to develop and expand Australia's export trade.

They have proved successful in creating an awareness, especially in new markets, of Australia as a producer of quality primary and secondary products, in establishing Australia as a source of supply, and in establishing a basis for long-term business, as well as producing valuable export business from "on the spot" trading.

Trade Missions are of three different types: (i) the Trade Survey Mission, designed to investigate a particular area, assess its potentialities for Australian exports, and recommend a programme of trade publicity and promotion; (ii) the major Trade Mission, comprising representatives of private enterprise and of the Department of Trade and Industry, its function being firstly to sell, and secondly to publicize and promote Australia as an exporting nation; and (iii) the specialized trade mission, which is smaller than (ii) and confined to one industry at a time.

Since 1954, Australia has sent overseas fourteen major Trade Missions, three Trade Ships, five Trade Survey Missions and two Specialized Selling Missions. Africa, Asia, the Pacific, America and the Mediterranean and Arabian Gulf littorals are represented in the countries visited. Some of the countries have been visited more than once.

Further details on Trade Missions are included in Official Year Book No. 49, page 544.

### § 5. Export Payments Insurance Corporation

The *Export Payments Insurance Corporation Act* No. 32 of 1956 established the Corporation with the objective of protecting Australian exporters against risks of loss arising from non-payment of their overseas accounts.

The Corporation is charged to be self-supporting and operates on principles similar to those of any other form of insurance. There is no overlap with normal insurance facilities, since the Corporation does not cover risks which can normally be insured with commercial insurers.

The main risks of loss against which the Corporation insures are the "commercial" risks of the insolvency or protracted default of the buyer, and "political" risks. The cover for "commercial" risks is a maximum of 85 per cent., and the cover on "political" risks a maximum of 90 per cent. for the amount of loss in the pre-shipment period and a maximum of 95 per cent. in the post-shipment period.

The initial capital of the Corporation was £500,000 and the maximum liability limit of the Corporation was £25,000,000. In April, 1959, these limits were doubled to enable the Corporation to meet fully demands of the Australian exporters for this facility.

Further information on the Corporation is contained in Official Year Book No. 49, page 544.

### § 6. European Economic Integration

Official Year Book No. 49, pages 545-6, contained a short description of the following European economic organizations: the European Economic Community (E.E.C.), the European Coal and Steel Community (E.C.S.C.), the European Atomic Energy Community (Euratom), and the European Free Trade Association (E.F.T.A.), but information has not been repeated in this issue because of consideration of space. Details of Australia's trade and balance of payments with E.E.C. and E.F.T.A. countries are shown on pages 530-1 and 551-2 of this issue.

### § 7. Method of Recording Imports and Exports

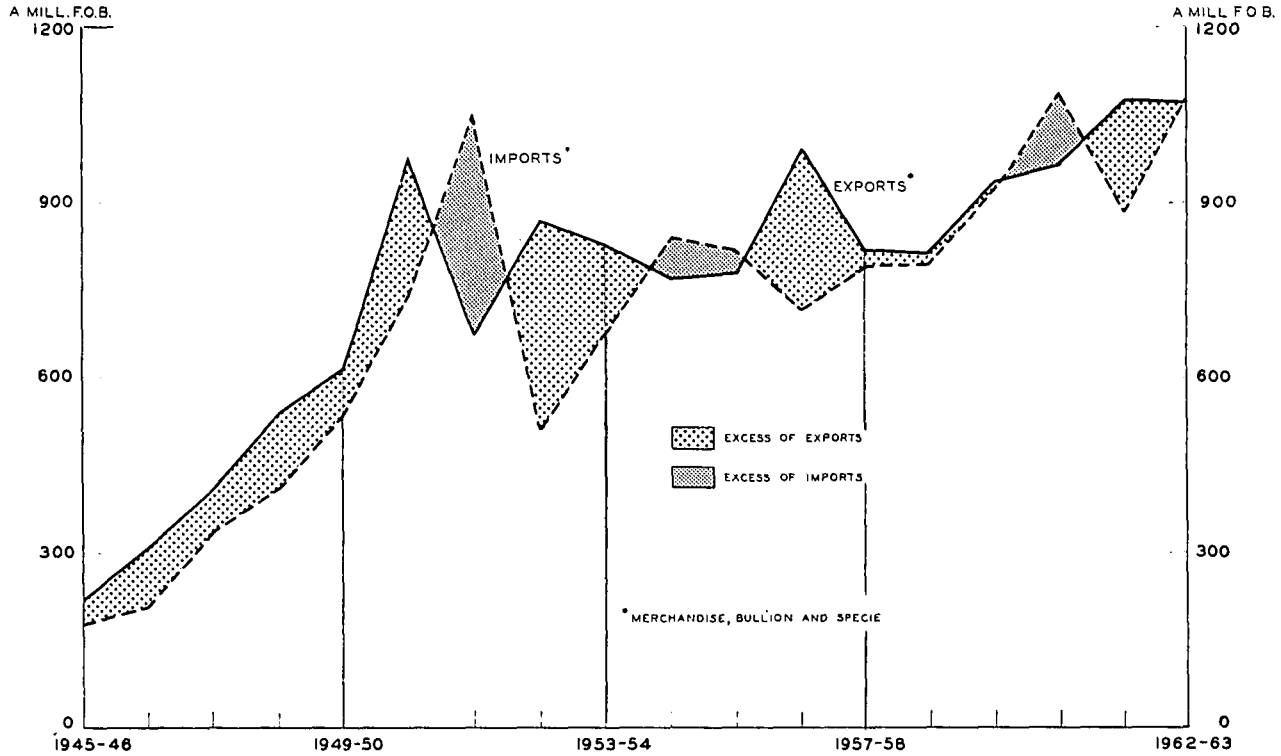
1. **Source of Statistics.**—Overseas trade statistics are compiled from documents obtained under the *Customs Act* 1901-1963 and supplied to the Commonwealth Bureau of Census and Statistics by the Department of Customs and Excise. Certain items are excluded for which customs entries are not required. See sub-para. (viii) Balance of Payments, page 526.

2. **Customs Area.**—The area to which all overseas trade statistics issued by this Bureau apply is the whole area of the Commonwealth of Australia. Non-contiguous territories are treated as outside countries, and trade transactions between Australia and these non-contiguous territories are part of the overseas trade of Australia. Such transactions are shown separately, i.e. the trade of Australia with each particular country is separately recorded and tabulated.

3. **The Trade System.**—There are two generally accepted systems of recording overseas trade statistics, namely (a) special trade and (b) general trade. Statistics of both are published by the Bureau, although greater emphasis is placed on general trade. The Statistical Office of the United Nations defines the two systems as follows.

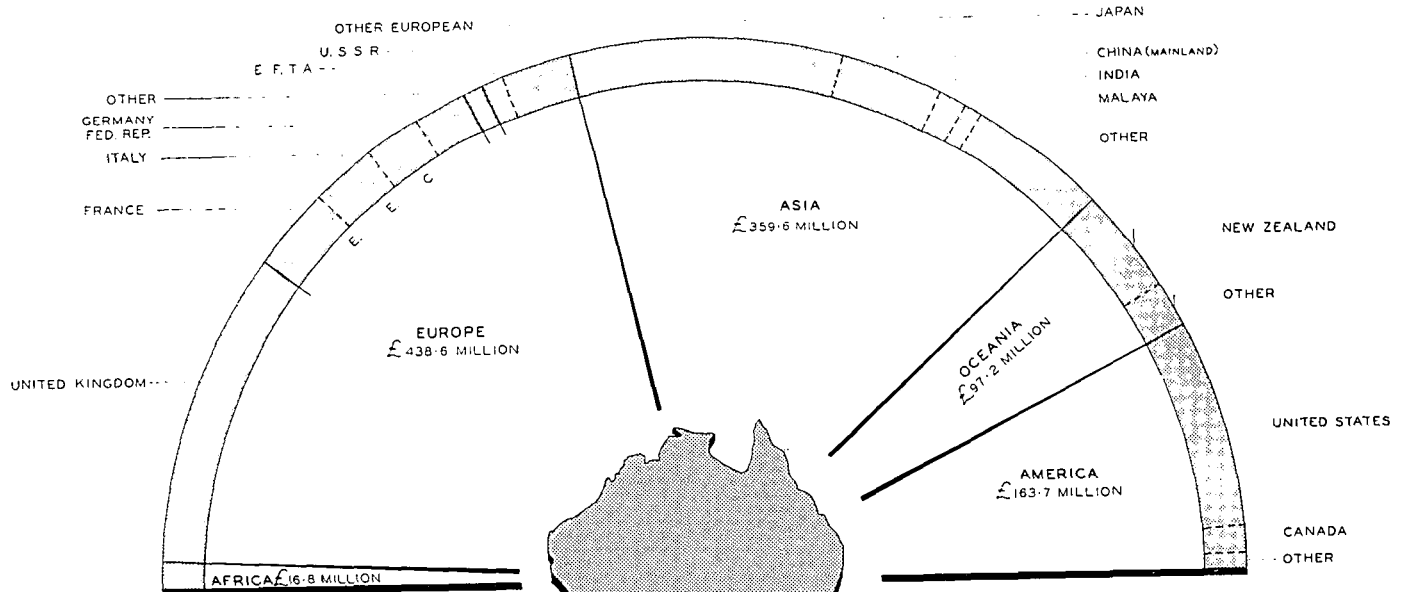
"*System of Trade.* Two systems of recording trade are in common use, differing mainly in the way warehoused and re-exported goods are recorded.

# OVERSEA TRADE: AUSTRALIA, 1945-46 TO 1962-63



# EXPORTS FROM AUSTRALIA, 1962-63

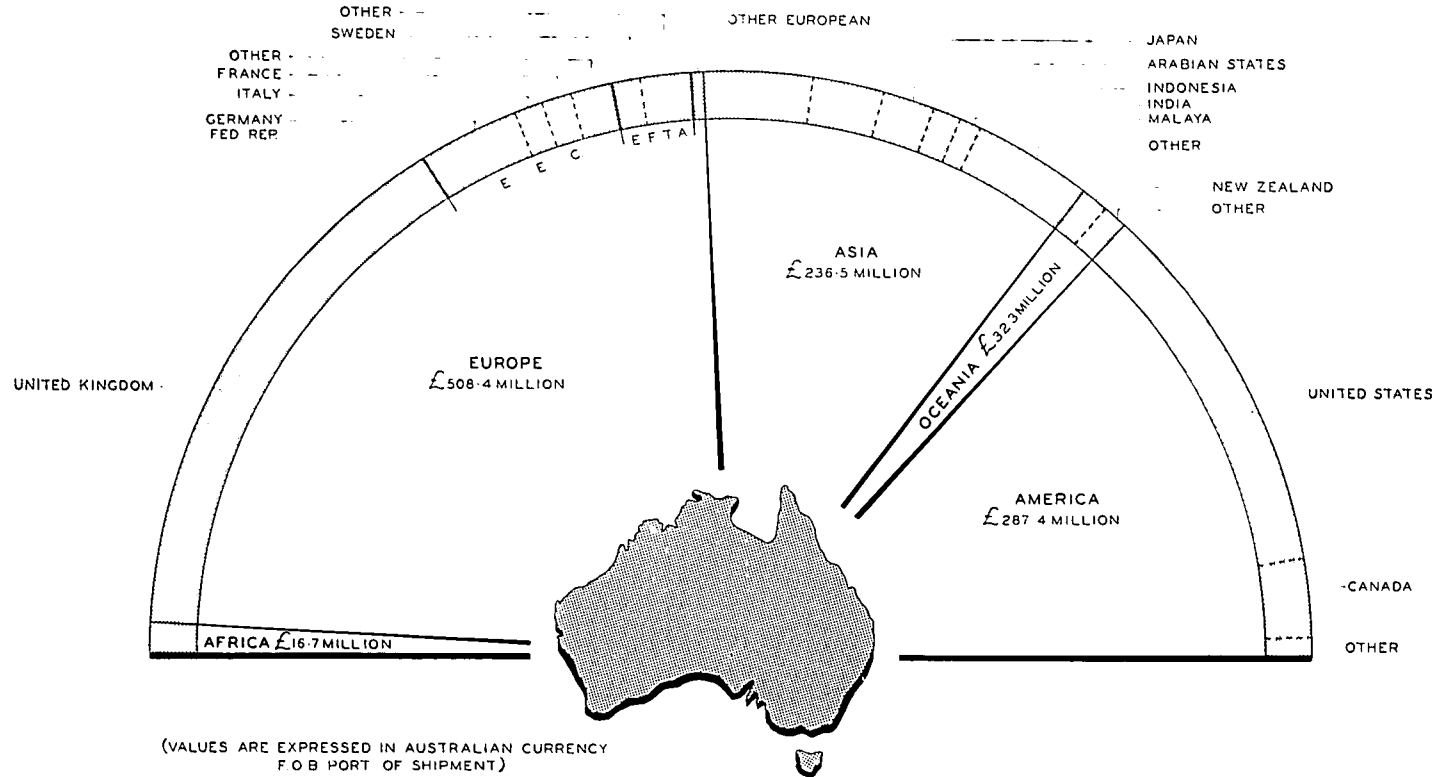
TOTAL EXPORTS - £1,075.9 MILLION



(VALUES ARE EXPRESSED IN AUSTRALIAN CURRENCY F.O.B. PORT OF SHIPMENT)

# IMPORTS INTO AUSTRALIA, 1962-63

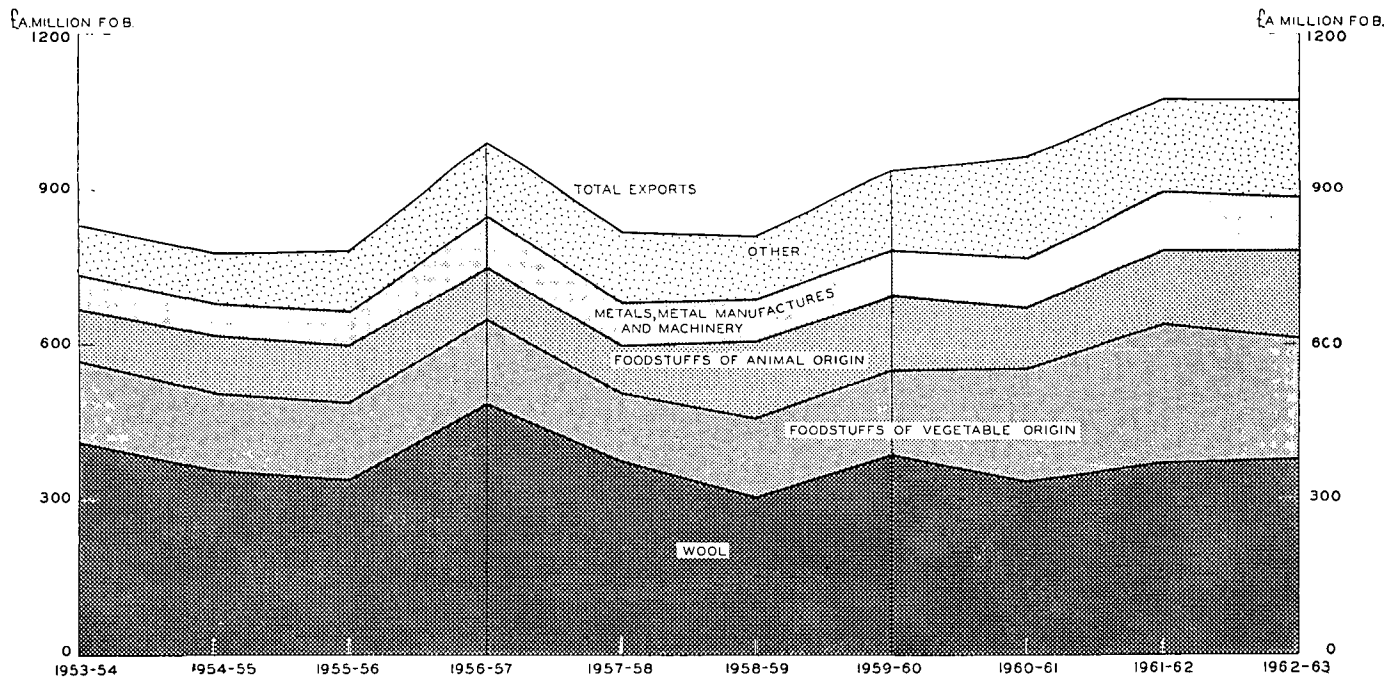
TOTAL IMPORTS - £1,081.3 MILLION





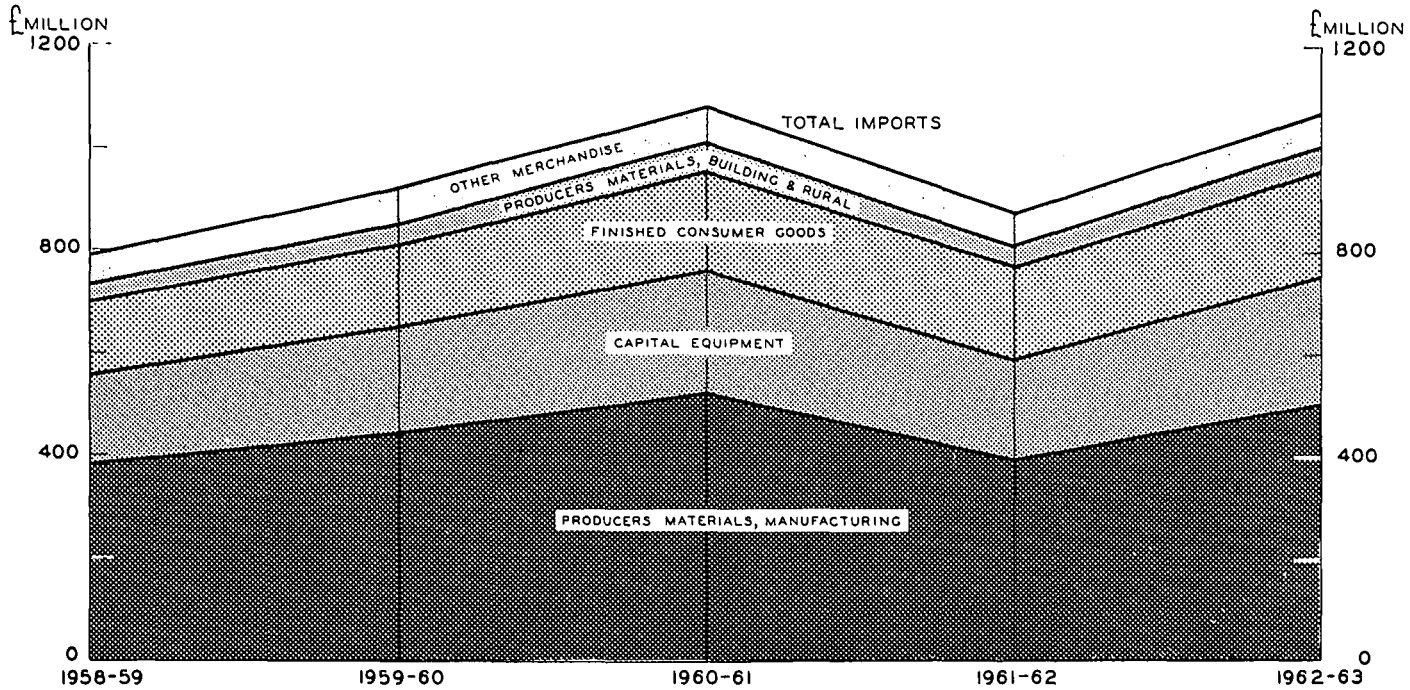
# EXPORTS OF PRINCIPAL COMMODITIES

AUSTRALIA, 1953-54 TO 1962-63

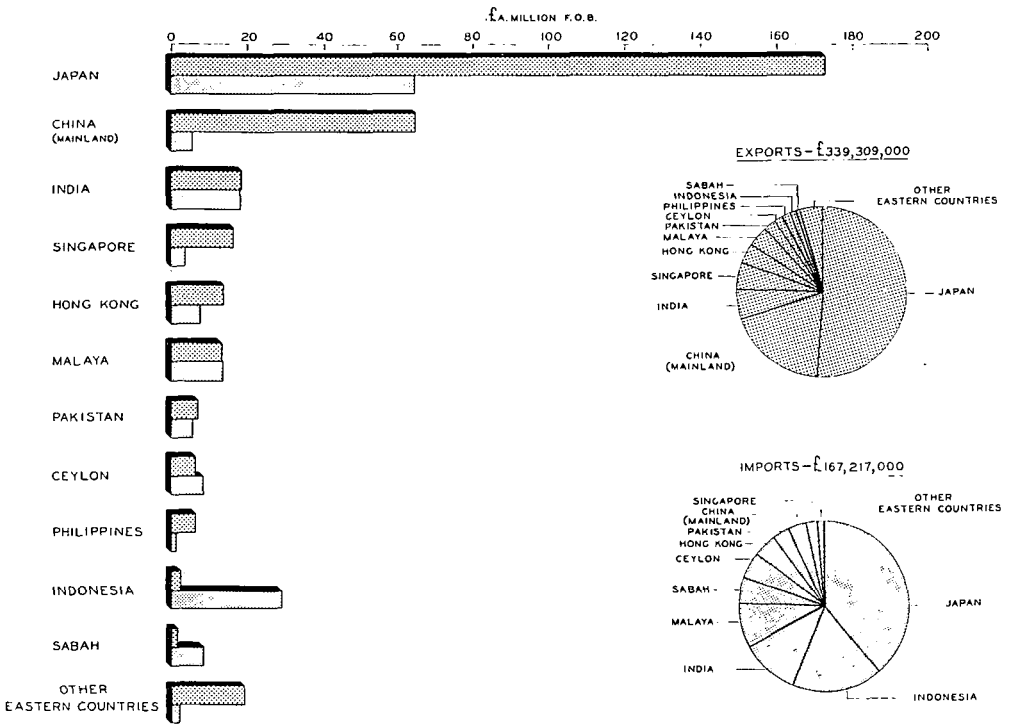


# IMPORTS BY ECONOMIC CLASS: AUSTRALIA

## 1958-59 TO 1962-63



## AUSTRALIA TRADE WITH EASTERN COUNTRIES, 1962-63



- (a) *Special Trade.* Special imports are the combined total of imports directly for domestic consumption (including transformation and repair) and withdrawals from bonded warehouses or free zones for domestic consumption. Special exports comprise exports of national merchandise, namely, goods wholly or partly produced or manufactured in the country, together with exports of nationalized goods. (Nationalized goods are goods which, having been included in special imports, are then exported without transformation.)
- (b) *General Trade.* General imports are the combined total of imports directly for domestic consumption and imports into bonded warehouse or free zone. General exports are the combined total of national exports and re-exports. Re-exports, in the general trade system, consist of the outward movement of nationalized goods plus goods which, after importation, move outward from bonded warehouse or free zone without having been transformed.

*Direct transit trade, i.e., goods merely being transhipped or moving through the country for purposes of transport only, is excluded from the statistics of both special and general trade.*"

The tables which follow refer to general trade, except for those appearing in § 17, para. 2, which refer to imports cleared for home consumption.

4. **Statistical Classification of Imports and Exports.**—Statistics of oversea imports and exports from which the summary tables in this issue of the Official Year Book have been extracted were compiled according to the revised classification which came into operation on 1st July, 1945. This classification is designed to allow for the inclusion of items which become significant with varying trade conditions, and in 1962–63 provided for over 3,700 import items and over 1,300 export items.

5. **The Trade Year.**—From 1st July, 1914, the statistics relating to oversea trade have been shown according to the financial year (July to June). Prior to that date, the figures related to the calendar year. A table is included in § 18 showing the total value of imports and exports in the calendar years 1958 to 1963 inclusive.

6. **Valuation.**—(i) *Imports.* The recorded value of goods imported from countries beyond Australia as shown in the following tables represents the amount on which duty is payable or would be payable if the duty were charged *ad valorem*.

Section 154 (1) of the *Customs Act* 1901–1963 provides that "when any duty is imposed according to value, the value for duty shall be the sum of the following:—

- (a) (i) the actual money price paid or to be paid for the goods by the Australian importer plus any special deduction, or
- (ii) the current domestic value of the goods, whichever is the higher; and
- (b) all charges payable or ordinarily payable for placing the goods free on board at the port of export."

"Current domestic value" is defined as "the amount for which the seller of the goods to the purchaser in Australia is selling or would be prepared to sell for cash, at the date of exportation of those goods, the same quantity of identically similar goods to any and every purchaser in the country of export for consumption in that country". *The recorded values of Australia's imports, as shown throughout this and other chapters of this issue of the Official Year Book, are therefore "transaction value (f.o.b.)" or "domestic value (f.o.b.)", whichever is the higher. These values are f.o.b. port of shipment Australian currency.*

(ii) *Exports.* Since 1st July, 1937, the following revised definitions of f.o.b. values have been adopted for exports generally.

- (a) Goods sold to oversea buyers before export—the Australian f.o.b. port of shipment equivalent of the price at which the goods were sold (e.g. as regards wool, the actual price paid by the oversea buyer plus the cost of all services incurred by him in placing the wool on board ship).

- (b) Goods shipped on consignment—the Australian f.o.b. port of shipment equivalent of the current price offering for similar goods of Australian origin in the principal markets of the country to which the goods were dispatched for sale (as regards wool, the f.o.b. port of shipment equivalent of the current price ruling in Australia will normally provide a sufficient approximation to the f.o.b. port of shipment equivalent of the price ultimately received).

Exporters are required to show all values in terms of Australian currency and to include the cost of containers.

An account of the bases of valuation in operation prior to 1st July, 1937, was given on page 469 of Official Year Book No. 39.

7. **Inclusions and Exclusions.**—(i) *Stores.* Prior to 1906, goods shipped in Australian ports on oversea vessels as ships' stores were included as exports. From 1906, ships' and subsequently aircraft stores have been specially recorded as such, and omitted from the tabulation of exports. A table showing the value of these stores shipped each year since 1958–59 is shown on page 542.

(ii) *Outside Packages.* Outside packages (containers, crates, etc.) have always been included as a separate item in the tabulation of imports, but, except for those received from the United Kingdom, a classification according to country of origin has been available only since 1950–51. For exports, however, the value recorded for each item includes the value of the outside package.

(iii) *Trade on Government Account.* Imports and exports on Government account are treated as normal transactions and are an integral part of oversea trade transactions.

(iv) *Currency.* Notes and coins are included in the oversea trade statistics at their commodity value only.

(v) *Gold Content of Ores and Concentrates.* The value of ores and concentrates imported and exported includes the value of the gold content. The latter is not recorded separately for purposes of inclusion in imports and exports of gold.

(vi) *Migrants' Effects.* Migrants' effects are included in imports and exports.

(vii) *Direct Transit Trade.* Particulars of direct transit trade through Australia are not recorded.

(viii) *Balance of Payments.* Statistics relating to oversea trade do not measure Australia's total balance of payments during the period shown. Particulars of other transactions entering into the balance of payments, for example, freight charges and oversea travel, payment of dividends, profits and interest and government expenditure overseas are provided in the statistical bulletin *Balance of Payments: Quarterly Summary* issued by the Commonwealth Statistician (see also § 20, p. 547). For items such as naval ships, merchant vessels trading overseas, aircraft for use on oversea routes, uranium and certain materials for inter-governmental defence projects, no customs entries are recorded, but these items are taken into account in estimates of the balance of payments.

8. **Countries.**—(i) *Imports.* From 1st January, 1905, in addition to the record of the countries whence goods arrived directly in Australia, a record of the countries of their origin was kept, as it was considered that classification of imports according to country of origin was of greater interest and value than classification according to country of shipment. Up to and including the year 1920–21, imports continued to be classified both according to country of shipment and according to country of origin, but the former tabulation was discontinued as from the year 1921–22. "Country of origin" referred to in import tables should be taken to mean the country of production.

(ii) *Exports.* In the export sections of tables in this chapter, "country" refers to the country to which the goods were consigned so far as this can be determined at the time of export.

9. Quantities.—Where quantities are shown, they are generally, but not invariably, expressed in terms of the normal trade unit. Where "cental" is used, the unit is equivalent to 100 lb. avoirdupois. Quantities are not tabulated in respect of items for which there is no appropriate unit of quantity (e.g. an item which covers a number of commodities and cannot be recorded under a uniform unit of quantity).

10. Pre-federation Records.—In the years preceding Federation each State recorded its trade independently, and in so doing did not distinguish other Australian States from foreign countries. The aggregation of the records of the several States is necessarily the only available means of ascertaining the trade of Australia for comparison with later years, but the results obtained may be subject to error, since past records of values and the direction of imports and exports were not on uniform lines. Imports and exports for years prior to Federation may be found in issues of the Official Year Book prior to No. 41. On the introduction of the *Customs Act 1901*, the methods of recording values were made uniform throughout the States.

### § 8. Total Oversea Trade

1. Including Gold.—The following table shows the total trade (including gold) of Australia with oversea countries from 1901 to 1962-63. The period 1901 to 1955-56 has been divided into five-year periods, and the figures shown represent the annual averages for the periods specified. Figures for the individual years were published in earlier issues, but figures for imports in issues prior to No. 37 were expressed in British currency.

VALUE OF OVERSEA TRADE: AUSTRALIA  
(INCLUDING GOLD)  
(£A. f.o.b.)

Period	Imports	Exports	Total	Excess of exports(+) or imports(-)	Value per head of population		
					Imports	Exports	Total
	£'000	£'000	£'000	£'000	£	£	£
Annual Average—							
1901 to 1905 ..	35,689	51,237	86,926	+ 15,548	9.1	13.1	22.2
1906 to 1910 ..	46,825	a 69,336	116,161	+ 22,511	11.0	16.3	27.3
1911 to 1915-16 ..	66,737	74,504	141,241	+ 7,767	13.8	15.4	29.2
1916-17 to 1920-21	91,577	115,066	206,643	+ 23,489	17.4	21.9	39.3
1921-22 to 1925-26	124,404	134,545	258,949	+ 10,141	21.1	22.9	44.0
1926-27 to 1930-31	119,337	131,382	250,719	+ 12,045	18.6	20.5	39.1
1931-32 to 1935-36	73,798	120,958	194,756	+ 47,160	11.1	18.1	29.2
1936-37 to 1940-41	123,553	157,610	281,163	+ 34,057	17.8	22.7	40.5
1941-42 to 1945-46	211,514	163,955	375,469	- 47,559	29.1	22.4	51.5
1946-47 to 1950-51	449,273	571,430	1,020,703	+ 122,157	57.2	72.7	129.9
1951-52 to 1955-56	782,794	786,128	1,568,922	+ 3,334	87.8	88.2	176.0
Year—							
1953-54.. ..	681,609	828,332	1,509,941	+ 146,723	76.6	93.0	169.6
1954-55.. ..	843,742	774,164	1,617,906	- 69,578	92.8	85.2	178.0
1955-56.. ..	821,088	781,864	1,602,952	- 39,224	88.1	83.9	172.0
1956-57.. ..	718,991	992,906	1,711,897	+ 273,915	75.4	104.2	179.6
1957-58.. ..	791,940	817,946	1,609,886	+ 26,006	81.3	83.9	165.2
1958-59.. ..	796,599	811,463	1,608,062	+ 14,864	80.0	81.5	161.5
1959-60.. ..	927,091	937,682	1,864,773	+ 10,591	91.1	92.2	183.3
1960-61.. ..	1,087,577	968,843	2,056,420	- 118,734	104.6	93.2	197.8
1961-62.. ..	884,746	1,077,284	1,962,030	+ 192,538	83.4	101.6	185.0
1962-63.. ..	1,081,335	1,075,906	2,157,241	- 5,429	100.0	99.5	199.5

(a) Prior to 1906, ship's stores were included in exports. For the value of such goods shipped on oversea vessels and aircraft during each of the years 1958-59 to 1962-63, see table in § 14 on p. 542.

A graph showing the oversea trade of Australia from 1945-46 to 1962-63 appears on page 519.

2. **Excluding Gold.**—The fluctuations in recent years in merchandise trade (including silver and bronze as merchandise) are shown more clearly in the following table, from which all gold movements have been excluded.

**VALUE OF OVERSEA TRADE: AUSTRALIA**  
(EXCLUDING GOLD)  
(£A. f.o.b.)

Year	Imports	Exports	Total	Value per head of population		
				Imports	Exports	Total
				£	£	£
1958-59 ..	£'000 794,422	£'000 808,184	£'000 1,602,606	79.9	81.2	161.1
1959-60 ..	924,568	927,471	1,852,039	91.0	91.2	182.2
1960-61 ..	1,085,374	928,884	2,014,258	104.5	89.4	193.9
1961-62 ..	882,598	1,068,307	1,950,905	83.2	100.7	183.9
1962-63 ..	1,078,860	1,069,436	2,148,296	99.8	98.9	198.7

**§ 9. Direction of Oversea Trade**

1. **According to Countries.**—(i) *Values.* The following table shows the value of Australian imports and exports during each of the years 1960-61 to 1962-63 according to country of origin and consignment respectively.

**VALUES OF AUSTRALIAN IMPORTS AND EXPORTS: COUNTRIES OF ORIGIN OR CONSIGNMENT**  
(EXCLUDING GOLD)  
(£A. '000 f.o.b.)

Country	Imports			Exports		
	1960-61	1961-62	1962-63	1960-61	1961-62	1962-63
<b>Commonwealth countries—</b>						
United Kingdom ..	340,531	265,917	329,192	200,063	205,876	200,777
Australian Territories ..	11,217	10,912	10,988	19,848	19,487	22,065
Canada ..	45,664	34,158	45,911	17,027	17,524	19,051
Ceylon ..	10,166	9,821	8,534	7,180	8,947	6,455
India ..	22,707	16,070	18,073	13,884	25,222	18,610
Malaya ..	15,195	11,098	13,638	11,993	11,560	13,262
New Zealand ..	16,965	13,237	17,474	61,890	58,648	65,566
Singapore ..	1,856	2,489	3,418	12,185	15,987	16,847
Other Commonwealth countries	40,348	38,441	38,018	42,481	43,924	49,477
<i>Total, Commonwealth Countries</i>	<i>504,649</i>	<i>402,143</i>	<i>485,246</i>	<i>386,551</i>	<i>407,175</i>	<i>412,110</i>
<b>Foreign countries—</b>						
Arabian States ..	35,517	29,272	43,806	3,762	3,527	5,709
Belgium-Luxembourg ..	11,176	6,810	6,998	22,761	22,981	23,186
China (Mainland) ..	3,974	3,811	5,628	39,857	65,956	64,644
France ..	16,722	11,085	17,778	51,072	50,485	52,985
Germany, Federal Republic of	66,176	51,832	58,660	26,755	40,834	34,184
Indonesia ..	28,105	26,510	29,013	5,133	3,548	2,616
Italy ..	15,779	14,028	19,532	47,725	52,180	44,028
Japan ..	65,445	49,495	64,689	161,488	186,905	173,083
Netherlands ..	17,010	13,142	13,736	6,258	9,652	7,170
Sweden ..	17,930	16,655	17,912	2,255	2,124	3,267
United States of America	217,041	174,080	230,046	72,471	108,991	132,898
Other foreign countries ..	84,976	82,830	84,753	94,215	107,207	105,860
<i>Total, Foreign Countries</i>	<i>579,851</i>	<i>479,550</i>	<i>592,551</i>	<i>533,752</i>	<i>654,390</i>	<i>649,630</i>
Country unknown ..	874	905	1,063	8,581	6,742	7,696
<b>Total ..</b>	<b>1,085,374</b>	<b>882,598</b>	<b>1,078,860</b>	<b>928,884</b>	<b>1,068,307</b>	<b>1,069,436</b>

(ii) *Proportions.* The following table expresses the values shown in the preceding tables as percentages of total imports or exports.

**VALUES OF AUSTRALIAN IMPORTS AND EXPORTS: PROPORTIONS BY COUNTRIES OF ORIGIN OR CONSIGNMENT**

(EXCLUDING GOLD)

(Per Cent. of Total)

Country	Imports			Exports		
	1960-61	1961-62	1962-63	1960-61	1961-62	1962-63
<b>Commonwealth countries—</b>						
United Kingdom .. .. .	31.38	30.13	30.51	21.54	19.27	18.77
Australian Territories ..	1.03	1.24	1.02	2.14	1.82	2.06
Canada .. .. .	4.21	3.87	4.26	1.83	1.64	1.78
Ceylon .. .. .	0.94	1.11	0.79	0.77	0.84	0.60
India .. .. .	2.09	1.82	1.68	1.50	2.36	1.74
Malaya .. .. .	1.40	1.36	1.26	1.29	1.08	1.24
New Zealand .. .. .	1.56	1.49	1.62	6.66	5.49	6.13
Singapore .. .. .	0.17	0.28	0.32	1.31	1.50	1.58
Other Commonwealth countries	3.72	4.26	3.52	4.57	4.12	4.63
<i>Total, Commonwealth Countries</i>	<i>46.50</i>	<i>45.56</i>	<i>44.98</i>	<i>41.61</i>	<i>38.12</i>	<i>38.53</i>
<b>Foreign countries—</b>						
Arabian States .. .. .	3.27	3.32	4.06	0.41	0.33	0.53
Belgium-Luxembourg ..	1.03	0.77	0.65	2.45	2.15	2.17
China (Mainland) .. ..	0.36	0.43	0.52	4.29	6.17	6.04
France .. .. .	1.54	1.26	1.65	5.50	4.73	4.95
Germany, Federal Republic of	6.10	5.87	5.44	2.88	3.82	3.20
Indonesia .. .. .	2.59	3.00	2.69	0.55	0.33	0.24
Italy .. .. .	1.45	1.59	1.81	5.14	4.88	4.12
Japan .. .. .	6.03	5.61	6.00	17.39	17.50	16.18
Netherlands .. .. .	1.57	1.49	1.27	0.67	0.90	0.67
Sweden .. .. .	1.65	1.89	1.66	0.24	0.20	0.31
United States of America ..	20.00	19.72	21.32	7.80	10.20	12.43
Other foreign countries ..	7.83	9.39	7.85	10.15	10.04	9.91
<i>Total, Foreign Countries</i>	<i>53.42</i>	<i>54.34</i>	<i>54.92</i>	<i>57.47</i>	<i>61.25</i>	<i>60.75</i>
Country unknown .. .. .	0.08	0.10	0.10	0.92	0.63	0.72
<b>Total .. .. .</b>	<b>100.00</b>	<b>100.00</b>	<b>100.00</b>	<b>100.00</b>	<b>100.00</b>	<b>100.00</b>

2. According to Major Groups of Countries.—(i) *Countries included in Major Groups.* The following table shows the major groups of countries referred to in the tables on pages 530-1 and 551-2.



## COUNTRIES INCLUDED IN MAJOR GROUPS

Sterling area	Non-sterling countries	
United Kingdom	North America—	Soviet Area— <i>continued.</i>
British East Africa, British Pacific Islands, British West Africa, West Indies Federation, Hong Kong and other British colonies and dependencies (excluding New Hebrides)	Canada	Romania
Australia and Territories (including Papua and New Guinea)	United States of America and dependencies	Union of Soviet Socialist Republics
Ceylon	European Economic Community <sup>(a)</sup> —	China (Mainland)
Ghana	Belgium-Luxembourg	Korea (North)
India	France	Vietnam (North)
Malaysia, Federation of (Malaya, Sabah, Sarawak and Singapore)	Germany, Federal Republic of	Principal other countries—
New Zealand and dependencies	Greece	Argentina
Pakistan	Italy	Brazil
Rhodesia and Nyasaland	Netherlands (excluding dependencies)	China, Republic of
Other Commonwealth countries	European Free Trade Association (other than the United Kingdom) <sup>(a)</sup> —	Indonesia
Arabian States of Bahrain, Kuwait, Qatar, Muscat, Oman and Trucial States	Austria	Iran
Burma	Denmark	Iraq
Iceland	Finland	Japan
Ireland, Republic of	Norway	Korea, Republic of
Jordan	Portugal	Mexico
Libya	Sweden	Netherlands dependencies
South Africa	Switzerland	Peru
	Soviet Area—	Philippines
	Albania	Spain
	Bulgaria	Saudi Arabia
	Czechoslovakia	Thailand
	Germany, Eastern	Turkey
	Hungary	United Arab Republic
	Poland	Venezuela
		Yugoslavia

(a) Includes dependent territories, associated communities, etc., unless otherwise stated.

(ii) *Trade with Major Groups.* The following table shows the trade of Australia with the major groups of countries shown above during the years 1961-62 and 1962-63. Particulars of Australia's balance of payments with countries in these groups are shown on pages 551-2.

**VALUE OF TRADE OF AUSTRALIA: MAJOR GROUPS OF COUNTRIES**  
(INCLUDING GOLD)  
(£A.'000 f.o.b.)

Major groups of countries	1961-62	1962-63
<b>STERLING AREA</b>		
<b>Imports—</b>		
From—United Kingdom .. .. .	265,917	329,231
Other countries .. .. .	129,283	144,517
Total .. .. .	395,200	473,748
<b>Exports—</b>		
To—United Kingdom .. .. .	206,374	200,814
Other countries .. .. .	204,108	214,080
Total .. .. .	410,482	414,894
<b>Excess of Exports (+) or Imports (-)</b> .. .. .	+15,282	-58,854

VALUE OF TRADE OF AUSTRALIA: MAJOR GROUPS OF COUNTRIES—*continued*

(INCLUDING GOLD)

(£A.'000 f.o.b.)

Major groups of countries	1961-62	1962-63
<b>NON-STERLING COUNTRIES—NORTH AMERICA</b>		
<b>Imports—</b>		
From—United States of America(a) .. .. .	174,090	230,086
Canada .. .. .	34,158	45,916
Total .. .. .	208,248	276,002
<b>Exports—</b>		
To—United States of America(a) .. .. .	109,940	134,391
Canada .. .. .	17,524	19,051
Total .. .. .	127,464	153,442
Excess of Exports (+) or Imports (—)	—80,784	—122,560
<b>OTHER NON-STERLING COUNTRIES</b>		
<b>Imports—</b>		
From—European Economic Community .. .. .	98,288	118,643
European Free Trade Association(b) .. .. .	46,252	49,663
Other countries .. .. .	136,758	163,279
Total .. .. .	281,298	331,585
<b>Exports—</b>		
To—European Economic Community .. .. .	183,621	166,879
European Free Trade Association(b) .. .. .	10,918	11,638
Other countries .. .. .	344,799	329,053
Total .. .. .	539,338	507,570
Excess of Exports (+) or Imports (—)	+258,040	+175,985
<b>ALL GROUPS</b>		
Total Imports .. .. .	884,746	1,081,335
Total Exports .. .. .	1,077,284	1,075,906
Excess of Exports (+) or Imports (—)	+192,538	—5,429

(a) Includes Alaska and Hawaiian Islands.

(b) Other than United Kingdom.

## § 10. Trade with the United Kingdom

1. *Statistical Classes.*—The following table shows, according to statistical classes, the value of imports into Australia of United Kingdom origin and of exports from Australia to the United Kingdom during each of the years 1960-61 to 1962-63.

**VALUE OF TRADE OF AUSTRALIA WITH UNITED KINGDOM: CLASSES**  
(£A.'000 f.o.b.)

Class	Imports			Exports		
	1960-61	1961-62	1962-63	1960-61	1961-62	1962-63
I. Foodstuffs of animal origin, etc.	1,989	1,932	2,188	48,304	50,413	44,443
II. Foodstuffs of vegetable origin; non-alcoholic beverages, etc.	1,226	1,164	859	62,504	68,100	60,618
III. Alcoholic liquors, etc.	3,334	4,017	3,222	764	850	811
IV. Tobacco, etc.	405	395	490	1	..	..
V. Live animals and birds	176	110	174	..	..	..
VI. Animal substances, etc.	1,258	755	1,107	58,302	55,628	59,381
VII. Vegetable substances, etc.	1,463	2,510	2,470	81	441	508
VIII. Apparel, textiles, etc.	39,483	28,043	28,944	187	247	257
IX. Oils, fats and waxes	2,187	2,388	2,484	1,504	1,610	1,980
X. Pigments, paints and varnishes	3,617	2,903	3,713	13	..	..
XI. Rocks, minerals, etc.	758	759	800	4,843	5,298	5,739
XII. Metals, metal manufactures and machinery	194,719	139,822	190,286	15,857	13,227	17,828
XIII. Rubber and leather, etc.	4,616	4,368	5,341	2,269	2,709	2,486
XIV. Wood and wicker, etc.	489	305	372	949	1,081	896
XV. Earthenware, etc.	9,397	7,708	8,938	11	..	..
XVI. Paper and stationery	20,574	17,832	20,137	305	410	317
XVII. Jewellery, etc.	3,321	3,135	3,405	450	..	..
XVIII. Optical, surgical and scientific instruments	5,741	5,731	6,094	820	782	890
XIX. Chemicals, medicinal products, essential oils, fertilizers	21,867	21,003	21,599	624	589	688
XX. Miscellaneous	(a)23,910	(a)21,036	(a)26,568	2,188	4,324	3,800
XXI. Gold and silver; bronze specie	1	1	40	31,598	665	172
<b>Total</b>	<b>340,531</b>	<b>265,917</b>	<b>329,231</b>	<b>231,591</b>	<b>206,374</b>	<b>200,814</b>

(a) Includes outside packages.

2. Imports of Principal Articles.—The following table shows the value of the principal articles imported into Australia from the United Kingdom during each of the years 1960-61 to 1962-63.

**VALUE OF IMPORTS OF PRINCIPAL ARTICLES OF UNITED KINGDOM ORIGIN: AUSTRALIA**  
(£A.'000 f.o.b.)

Article	1960-61	1961-62	1962-63	Article	1960-61	1961-62	1962-63
Aircraft and parts	2,807	3,199	3,224	Optical, surgical and scientific instruments	4,203	4,177	4,444
Arms and ammunition, military, naval and air force stores	3,702	3,621	2,410	Paper, printing	3,466	2,120	2,491
Aluminium—				Paper, wrapping	2,534	2,118	1,997
Plates, sheets, strips	1,490	559	922	Piece-goods—			
Leaf and foil	1,480	649	1,000	Cotton and linen	6,338	3,907	4,328
Apparel	4,933	2,684	2,852	Silk and rayon(a)	1,577	824	814
Books, magazines, etc.	8,234	8,250	9,333	All other piece-goods	5,450	3,845	3,527
Carpets	6,026	3,367	3,615	Plastics materials	3,556	3,210	7,152
Chemicals, medicinal products, essential oils and fertilizers	21,867	21,003	21,599	Rubber and rubber manufactures	3,542	3,417	4,466
Crockery	2,168	1,850	1,906	Sewing and other cottons, threads, etc.	2,939	1,968	2,053
Dyes	1,777	1,353	1,871	Stationery and paper manufactures	10,810	10,931	12,186
Electrical machinery and appliances	24,450	23,861	27,936	Tools of trade	2,481	1,869	2,043
Glass and glassware	4,255	2,952	3,975	Vehicles, parts and accessories	49,997	29,851	56,738
Iron and steel—				Vessels (ships) including parts	467	215	854
Plate and sheet	7,066	3,093	3,491	Whisky	3,086	3,761	2,992
Other	11,739	5,691	5,858	Yarns—			
Linoleums	2,320	2,274	1,894	Cotton	2,919	1,568	1,491
Machines and machinery (except dynamo, electrical)—				Rayon	4,015	3,743	4,243
Agricultural	1,527	1,081	928	Other	828	651	748
Metal-working	7,793	4,586	6,190	All other articles(b)	53,531	47,530	51,971
Motive-power	22,001	16,690	25,202				
Other	43,157	33,449	40,487	<b>Total Imports</b>	<b>340,531</b>	<b>265,917</b>	<b>329,231</b>

(a) Includes tyre cord fabric.

(b) Includes outside packages.

3. Exports of Principal Articles of Australian Produce.—The following table shows the quantities and values of the principal articles of Australian produce exported to the United Kingdom during each of the years 1960-61 to 1962-63.

PRINCIPAL ARTICLES EXPORTED TO THE UNITED KINGDOM: AUSTRALIA  
(Australian Produce)

Article	Quantity			Value (£A.'000 f.o.b.)		
	1960-61	1961-62	1962-63	1960-61	1961-62	1962-63
Butter .. .. . tons	50,795	68,031	65,094	15,611	19,950	19,326
Cheese .. .. . "	13,073	17,427	13,632	2,580	3,427	2,683
Eggs .. .. . "	..	..	..	3,048	3,253	1,536
Fruit, dried .. .. . tons	28,964	34,542	29,943	4,685	5,251	4,398
" fresh .. .. . '000 bus.	4,303	5,411	4,407	5,820	7,517	7,048
" preserved in airtight containers tons	60,991	77,384	65,834	8,748	10,723	9,043
Gold .. .. . "	..	..	..	31,528	498	37
Grains and cereals—						
Barley .. .. . tons	194,425	213,685	66,232	3,438	4,636	1,463
Flour (wheaten), plain white .. .. . tons(a)	56,135	66,560	66,641	1,459	1,943	1,470
Wheat .. .. . tons	734,205	623,622	437,073	18,472	16,438	11,803
Other .. .. . "	..	..	..	1,451	1,986	2,212
Hides and skins .. .. . "	..	..	..	2,349	2,009	2,031
Lead bullion .. .. . tons	53,741	37,861	59,645	5,330	3,527	4,979
" pig .. .. . "	66,790	65,897	80,228	5,271	4,615	5,092
Leather .. .. . "	..	..	..	2,240	2,643	2,328
Meats preserved by cold process—						
Beef and veal .. .. . tons	40,631	35,528	27,813	9,622	7,765	6,142
Lamb .. .. . "	19,894	11,414	16,655	3,637	1,614	2,965
Mutton .. .. . "	7,947	7,074	6,852	1,509	920	1,238
Rabbit and hare .. .. . "	..	..	..	2,339	1,985	1,558
Meats, tinned .. .. . tons	19,883	22,753	10,461	5,981	6,859	3,069
Milk and cream .. .. . '000 lb.	2,927	5,583	6,640	103	305	422
Silver bullion .. .. . '000 fine oz.	168	375	231	68	161	128
Sugar (cane) .. .. . tons	329,251	375,538	437,769	17,676	18,599	22,103
Tallow, inedible .. .. . "	2,289	19,409	10,006	132	597	512
Timber, undressed(b) .. .. . '000 super. ft.	6,351	2,910	1,912	445	217	137
Wine, fermented .. .. . '000 gals.	1,362	1,161	1,104	736	823	781
Wool .. .. . '000 lb.	237,851	223,577	222,585	55,559	53,291	57,002
Zinc bars, etc. .. .. . tons	3,243	15,574	22,269	339	1,424	1,736
All other articles .. .. . "	..	..	..	17,255	18,568	24,156
<b>Total Exports (Australian Produce)</b>	..	..	..	<b>227,431</b>	<b>201,544</b>	<b>197,398</b>

(a) 2,000 lb.

(b) Excludes railway sleepers.

4. Imports from the United Kingdom and Competing Countries.—Since 1908, permanent resident Commissioners appointed by the British Board of Trade have been located in Australia for the purpose of advising manufacturers and merchants in the United Kingdom with regard to Australian trade affairs. From 8th August, 1907, the Commonwealth Customs Tariffs have provided preferential rates of customs duties on certain goods the produce or manufacture of the United Kingdom, with the object of assisting the British manufacturer to retain or improve his position in this market in relation to other countries. The main provisions in these Acts relating to preference are dealt with on previous pages in this chapter.

In an investigation into the relative position occupied by the United Kingdom in the import trade of Australia, the comparison must, of course, be restricted to those classes of goods which are produced or manufactured in the United Kingdom. Imports into Australia include many commodities, such as tea, rice, raw coffee, unmanufactured tobacco, petroleum products, copra, timber, etc., which the United Kingdom cannot supply. These items, in addition to others not available from that country, have therefore been omitted from the following table.

The imports into Australia have been classified under nine headings, and the trade of the United Kingdom therein is compared with that of France, the Federal Republic of Germany, Japan, and the United States of America. These countries have been selected as the principal competitors in normal times with the United Kingdom for the trade of Australia under the specified headings. Totals for each of the years 1960-61 to 1962-63 are shown in the following table.

**VALUE OF IMPORTS FROM THE UNITED KINGDOM AND ITS MAIN  
COMPETITORS: AUSTRALIA**

(£A.'000 f.o.b.)

Nature of imports	Year	United Kingdom	France	Federal Republic of Germany	Japan	United States of America	All countries
Foodstuffs of animal origin	1960-61	1,989	10	285	2,320	1,514	13,116
	1961-62	1,932	11	315	2,504	1,037	11,271
	1962-63	2,188	12	294	2,187	908	12,341
Yarns and manufactured fibres, textiles and apparel	1960-61	39,483	2,992	4,836	25,933	12,205	132,476
	1961-62	28,043	2,192	2,927	24,322	9,417	104,204
	1962-63	28,944	2,239	2,973	28,119	12,347	116,650
Metals, metal manufactures and machinery	1960-61	194,719	8,830	38,164	21,983	113,282	435,908
	1961-62	139,822	4,071	29,631	7,599	84,612	315,338
	1962-63	190,286	9,458	33,494	14,929	119,636	425,203
Rubber and leather and manufactures thereof, and substitutes therefor	1960-61	4,616	493	518	255	6,895	25,541
	1961-62	4,368	394	378	502	4,520	19,450
	1962-63	5,341	552	525	931	4,960	23,335
Earthenware, cement, china, glass and stoneware	1960-61	9,397	690	1,034	2,861	2,432	20,798
	1961-62	7,708	684	1,078	2,372	1,596	17,957
	1962-63	8,938	789	933	3,247	2,498	20,219
Pulp, paper and board; paper manufactures and stationery	1960-61	20,574	309	1,838	1,560	10,323	70,132
	1961-62	17,832	333	1,123	1,506	10,039	57,850
	1962-63	20,137	461	1,313	1,757	13,356	69,810
Sporting material, toys, fancy goods, jewellery and time-pieces	1960-61	3,321	169	1,647	2,460	961	13,019
	1961-62	3,135	191	1,351	2,122	978	12,515
	1962-63	3,405	240	1,394	2,301	948	14,154
Optical, surgical and scientific instruments, etc.; photographic goods, n.e.i.	1960-61	5,741	104	3,067	1,729	5,011	17,499
	1961-62	5,731	139	2,415	1,749	4,885	16,860
	1962-63	6,094	188	2,801	2,049	5,377	18,713
Chemical, medicinal and pharmaceutical products, essential oils and fertilizers	1960-61	21,867	1,341	7,122	1,433	11,496	56,817
	1961-62	21,003	1,467	6,455	1,547	13,474	58,156
	1962-63	21,599	1,816	7,292	242	20,617	69,519
Total, competitive imports	1960-61	301,707	14,938	58,511	60,534	164,119	785,306
	1961-62	229,574	9,482	45,673	44,223	130,558	613,601
	1962-63	286,932	15,755	51,019	55,762	180,647	769,944
Total imports (less bullion and specie) (a)	1960-61	340,530	16,722	66,176	65,445	217,041	1,085,331
	1961-62	265,917	11,085	51,832	49,495	174,080	882,546
	1962-63	329,192	17,778	58,660	64,689	230,046	1,078,778

(a) Includes outside packages.

VALUE OF IMPORTS FROM THE UNITED KINGDOM AND ITS MAIN  
COMPETITORS: AUSTRALIA—*continued*.  
(£A.'000 f.o.b.)

Nature of imports	Year	United Kingdom	France	Federal Republic of Germany	Japan	United States of America	All countries
PERCENTAGE DISTRIBUTION							
Total, competitive imports	1960-61	38.4	1.9	7.4	7.7	20.9	100.0
	1961-62	37.4	1.5	7.4	7.2	21.3	100.0
	1962-63	37.3	2.0	6.6	7.2	23.5	100.0
Total imports (less bullion and specie) (a)	1960-61	31.3	1.5	6.1	6.0	20.0	100.0
	1961-62	30.1	1.3	5.9	5.6	19.7	100.0
	1962-63	30.5	1.6	5.4	6.0	21.3	100.0

(a) Includes outside packages.

### § 11. Trade with Eastern Countries

1. Merchandise Trade According to Countries.—The values of imports from, and exports to, eastern countries during the years 1960-61 to 1962-63 are shown in the following table.

VALUE OF MERCHANDISE TRADE OF AUSTRALIA WITH EASTERN COUNTRIES:  
COUNTRIES OF ORIGIN OR CONSIGNMENT  
(£A.'000 f.o.b.)

Country	Imports(a)			Exports		
	1960-61	1961-62	1962-63	1960-61	1961-62	1962-63
<b>Commonwealth countries—</b>						
Ceylon .. .. .	10,166	9,821	8,534	7,180	8,947	6,455
Hong Kong .. .. .	6,243	6,418	7,627	10,511	14,015	13,957
India .. .. .	22,707	16,083	18,073	13,884	25,296	18,610
Malaya .. .. .	15,195	11,098	13,638	11,993	11,560	13,262
Pakistan .. .. .	5,501	5,663	5,714	4,921	3,329	7,058
Sabah .. .. .	12,329	12,883	8,766	1,359	1,463	1,688
Singapore .. .. .	1,856	2,489	3,418	12,185	15,987	16,847
<b>Foreign countries—</b>						
Burma .. .. .	17	11	64	1,701	2,782	3,235
Cambodia .. .. .	4	4	3	93	108	57
China, Republic of (Mainland) .. .. .	224	388	574	2,008	1,976	2,028
Indonesia .. .. .	3,974	3,811	5,628	39,857	65,956	64,644
Japan .. .. .	28,105	26,510	29,013	5,133	3,548	2,616
Korea, Republic of	65,445	49,495	64,689	161,488	186,905	173,083
Korea (North) .. .. .	75	115	206	1,721	1,684	3,182
Laos .. .. .	1	1	7	1,909	854	1,190
Nepal .. .. .	..	..	..	46	28	17
Philippines .. .. .	..	..	..	2	..	..
Portuguese Dependencies—						
Macao .. .. .	406	510	759	3,696	4,669	6,243
Timor .. .. .	3	20	16	4	2	8
Other .. .. .	..	1	20	90	98	56
Thailand (North) .. .. .	..	13	..	158	74	(b)
Vietnam, Republic of	443	334	434	1,887	3,311	3,704
Vietnam (North) .. .. .	16	7	17	216	522	1,205
	1	..	..	6	22	164
<b>Total .. .. .</b>	<b>172,711</b>	<b>145,675</b>	<b>167,217</b>	<b>282,048</b>	<b>353,136</b>	<b>339,309</b>

(a) Includes outside packages.

(b) Not recorded separately.

Graphs showing trade between Australia and eastern countries during 1961-62 are shown on page 524.

2. Merchandise Trade—Principal Articles.—(i) *Totals*, 1960-61 to 1962-63. The following table shows the value of merchandise trade between Australia and eastern countries for each of the years 1960-61 to 1962-63. The countries concerned in this trade are listed in the previous table.

**VALUE OF MERCHANDISE TRADE OF AUSTRALIA WITH EASTERN COUNTRIES:  
PRINCIPAL ARTICLES**

(£A.'000 f.o.b.)

Article	Imports			Article	Exports		
	1960-61	1961-62	1962-63		1960-61	1961-62	1962-63
Apparel and attire ..	3,526	2,777	3,070	Animal (except marine) oils and fats ..	2,389	2,925	3,155
Bags and sacks ..	13,319	10,330	8,493	Army stores ..	599	1,267	1,563
Crude and crepe rubber and latex ..	9,227	6,223	8,068	Butter ..	2,570	1,782	2,022
Fibres, vegetable origin ..	2,886	1,597	2,549	Cheese ..	899	766	1,065
Hair and bristles ..	1,156	642	965	Fodders ..	1,231	1,380	1,294
Nuts, edible ..	1,145	1,026	1,457	Fruit, fresh or preserved ..	1,303	1,706	1,828
Outside packages ..	2,025	1,865	2,119	Grains and cereals—			
Petroleum oils—				Wheat ..	44,782	78,616	75,514
Kerosene ..	2,594	2,377	2,806	Flour (wheaten), plain white ..	13,137	11,312	9,402
Petroleum, crude ..	25,662	29,846	28,886	Other ..	8,787	7,906	5,126
Petroleum, spirit ..	5,222	3,665	3,035	Infants' and invalids' foods ..	2,478	2,638	2,703
Other ..	609	866	855	Leather ..	782	750	653
Piece-goods—				Machines and machinery ..	3,650	4,213	6,433
Cotton and linen ..	24,257	20,857	24,125	Meats, all kinds ..	4,431	4,017	4,470
Hessian and other jute ..	3,280	3,210	3,765	Metals and metal manufactures except zinc bars, etc.	19,758	31,141	16,664
Pulp, paper and board ..	1,130	994	1,359	Milk and cream ..	6,294	5,661	7,186
Tea ..	12,740	12,718	12,178	Petroleum oils ..	4,206	6,733	7,647
Timber ..	6,602	3,870	4,530	Sugar—from cane (raw) ..	5,472	4,076	9,255
Vegetable oils and fats, n.e.i.	993	878	1,993	Wool ..	120,385	137,139	134,383
All other articles ..	56,338	41,934	56,964	Zinc bars, blocks, etc. ..	3,092	3,428	3,708
				All other articles ..	35,803	45,680	45,238
<b>Total ..</b>	<b>172,711</b>	<b>145,675</b>	<b>167,217</b>	<b>Total ..</b>	<b>282,048</b>	<b>353,136</b>	<b>339,309</b>

(ii) *Individual Countries, 1961-63.* The following tables show the imports and exports of principal articles from and to individual countries in this trade.

**VALUE OF IMPORTS OF PRINCIPAL ARTICLES OF MERCHANDISE FROM  
INDIVIDUAL EASTERN COUNTRIES, 1962-63**

(£A.'000 f.o.b.)

Article	Ceylon	Hong Kong	India	Malaya	Pakistan	Sabah	China (Mainland)	Indonesia	Japan
Apparel and attire ..	..	1,413	9	3	1	..	223	17	1,348
Bags and sacks ..	..	25	4,416	..	3,804	57	175	..	16
Crude and crepe rubber and latex ..	38	..	..	8,013	..	..	..	3	..
Fibres, vegetable origin ..	201	5	300	1	961	34	48	149	666
Nuts, edible ..	298	1	764	3	..	..	70	..	..
Outside packages ..	202	137	264	44	38	9	112	132	1,139
Petroleum oils—									
Kerosene ..	..	..	..	..	..	..	..	1,031	1
Petroleum, crude ..	..	..	..	..	..	6,543	..	22,192	..
Petroleum spirit ..	..	..	163	..	..	..	..	1,877	161
Other ..	..	..	..	..	..	5	..	642	99
Piece-goods—									
Cotton and linen ..	..	2,227	3,161	..	15	..	1,350	..	17,032
Hessian and other jute ..	..	..	3,627	..	134	1	..	..	3
Pulp, paper and board ..	..	2	72	..	4	..	108	..	1,165
Tea ..	7,614	3	2,130	..	23	..	159	2,225	15
Timber ..	..	45	..	2,285	1	1,838	..	5	43
Vegetable oils and fats, n.e.i.	7	5	1,120	240	..	1	20	297	303
All other articles ..	174	3,764	2,047	3,026	755	278	3,363	443	42,698
<b>Total ..</b>	<b>8,534</b>	<b>7,627</b>	<b>18,073</b>	<b>13,638</b>	<b>5,714</b>	<b>8,766</b>	<b>5,628</b>	<b>29,013</b>	<b>64,689</b>

(a) Includes metals, metal manufactures and machinery, £14,928,000; textiles other than piece goods shown above, £3,600,000; tinned fish, £1,913,000; earthenware, chinaware, etc., £3,247,000; sporting material, toys, jewellery, etc., £2,301,000; chemical and medical supplies, etc., £2,171,000; optical, surgical, etc., supplies, £2,049,000.

VALUE OF EXPORTS OF PRINCIPAL ARTICLES OF MERCHANDISE TO  
INDIVIDUAL EASTERN COUNTRIES, 1962-63  
(£A'000 f.o.b.)

Article	Ceylon	Hong Kong	India	Malaya	Paki- stan	Singa- pore	China (Main- land)	Indo- nesia	Japan
Animal (except marine)									
oils and fats ..	122	55	128	319	309	260	371	10	1,052
Army stores ..		5	448	548	110	436		5	
Butter ..	397	420	4	341		452	1	10	19
Cheese ..		32	48	29	1	87		30	555
Fodders ..	24	574		117		340	2		176
Fruit, fresh or preserved	2	485	2	214		951		1	1
Grains and cereals—									
Wheat ..	9	1,817	5,285	455	4,107	26	52,340		9,131
Flour (wheaten), plain									
white ..	3,064	185		2,709	1	1,625		184	
Other ..	34	286	18	825		478	620	19	1,574
Infants' and invalids'									
foods ..	139	331	31	411	131	398		2	2
Leather ..	29	440	19	51		86	2		10
Machines and machinery	110	250	1,008	1,165	427	696	3	130	417
Meats, all kinds ..	128	522	10	366	1	1,313	5	1	1,441
Metals and metal manu- factures except zinc									
bars, etc. ..	138	1,232	1,210	1,285	201	1,234	144	737	8,004
Milk and cream ..	1,479	168	730	2,268	36	518	39	46	21
Petroleum oils ..	333		359			3,869		1	3,084
Sugar—from cane (raw)		229							8,416
Wool ..	14	3,925	5,411	13	670		10,378		111,137
Zinc bars, blocks, etc. ..	3	266	1,377	71	113	105	133	6	246
All other articles ..	398	2,719	2,541	2,066	951	3,969	606	1,434	27,797
<b>Total ..</b>	<b>6,455</b>	<b>13,957</b>	<b>18,610</b>	<b>13,262</b>	<b>7,058</b>	<b>16,847</b>	<b>64,644</b>	<b>2,616</b>	<b>173,083</b>

(a) Includes coal, £9,928,000; copper ores and concentrates, £2,708,000; other ores and concentrates, £4,203,000.

### § 12. Oversea Trade at Principal Ports

The following table shows the value of oversea imports and exports at the principal ports of Australia during the year 1962-63, and the totals for each State and Territory.

VALUE OF OVERSEA TRADE: PRINCIPAL PORTS, 1962-63  
(£A.'000 f.o.b.)

Port	Imports	Exports	Port	Imports	Exports
<b>NEW SOUTH WALES</b>			<b>SOUTH AUSTRALIA</b>		
Sydney, including Botany			Port Adelaide, including		
Bay ..	458,609	247,549	Adelaide and Port Stan-		
Newcastle, including Port			vac ..	67,577	68,691
Stephens ..	9,939	45,862	Port Pirie ..	237	20,576
Port Kembla ..	8,395	17,201	Port Lincoln ..	342	4,470
Other ..		216	Wallaroo ..	296	4,932
<b>Total ..</b>	<b>476,943</b>	<b>310,828</b>	Other ..	1,461	7,803
			<b>Total ..</b>	<b>69,913</b>	<b>106,472</b>
<b>VICTORIA</b>			<b>WESTERN AUSTRALIA</b>		
Melbourne ..	359,944	254,512	Fremantle, including Perth	54,446	95,534
Geelong ..	29,097	35,464	and Kwinana ..	343	8,205
Portland ..	989	8,464	Geraldton ..	928	7,390
<b>Total ..</b>	<b>390,030</b>	<b>298,440</b>	Bunbury ..	493	9,153
			Albany ..	110	3,437
			Other ..		
			<b>Total ..</b>	<b>56,320</b>	<b>123,719</b>
<b>QUEENSLAND</b>			<b>TASMANIA</b>		
Brisbane ..	61,902	123,831	Hobart ..	7,606	18,833
Townsville ..	1,298	23,815	Launceston ..	6,375	8,272
Mackay ..	380	20,870	Burnie ..	2,969	4,677
Cairns ..	1,870	9,547	Devonport ..	1,232	1,614
Bowen ..	1	1,646	<b>Total ..</b>	<b>18,182</b>	<b>33,396</b>
Rockhampton ..	188	4,458			
Gladstone ..	1,312	6,011	<b>NORTHERN TERRITORY</b>		
Maryborough ..	69	6	Darwin ..	1,192	545
Other ..	96	12,316			
<b>Total ..</b>	<b>67,116</b>	<b>202,500</b>	<b>AUSTRALIAN CAPITAL TERRITORY</b>		
			Canberra ..	1,639	6
			<b>Grand Total ..</b>	<b>1,081,335</b>	<b>1,075,906</b>



### § 13. Classified Summary of Australian Oversea Trade

1. *Statistical Classes.—(i) Imports and Exports.* The following table shows, according to statistical classes, the value of Australian imports and exports during each of the years 1960–61 to 1962–63.

VALUE OF OVERSEA TRADE OF AUSTRALIA: CLASSES  
(£A.'000 f.o.b.)

Class	Imports			Exports		
	1960–61	1961–62	1962–63	1960–61	1961–62	1962–63
I. Foodstuffs of animal origin, etc.	13,116	11,271	12,341	117,620	142,488	168,262
II. Foodstuffs of vegetable origin; non-alcoholic beverages, etc.	30,233	28,111	27,752	219,889	266,977	234,429
III. Alcoholic liquors, etc.	3,878	4,528	3,799	2,247	2,369	2,540
IV. Tobacco, etc.	13,362	9,743	12,136	415	564	802
V. Live animals and birds	715	576	667	1,453	1,470	1,653
VI. Animal substances, etc.	6,725	4,349	6,227	362,963	405,886	417,548
VII. Vegetable substances, etc.	21,316	19,718	24,490	922	1,761	1,958
VIII. Apparel, textiles, etc.	132,476	104,204	116,650	3,650	3,763	4,590
IX. Oils, fats and waxes	111,638	109,913	123,141	26,832	29,552	31,720
X. Pigments, paints and varnishes	6,803	5,456	7,241	1,233	1,232	1,419
XI. Rocks, minerals, etc.	8,680	7,539	9,601	37,641	40,350	35,253
XII. Metals, metal manufactures and machinery	435,908	315,338	425,203	94,489	110,961	103,943
XIII. Rubber and leather, etc.	25,541	19,450	23,335	4,500	4,855	4,709
XIV. Wood and wicker, etc.	22,718	15,260	17,262	3,533	3,621	3,067
XV. Earthenware, etc.	20,798	17,957	20,219	1,268	984	1,128
XVI. Paper and stationery	70,132	57,850	69,810	3,930	3,869	4,482
XVII. Jewellery, etc.	13,019	12,515	14,154	2,143	2,839	4,184
XVIII. Optical, surgical and scientific instruments	17,499	16,860	18,713	3,159	3,031	3,136
XIX. Chemicals, medicinal products, essential oils, fertilizers	56,817	58,156	69,519	9,000	8,931	10,592
XX. Miscellaneous	(a)73,957	(a)63,752	(a)76,518	31,153	32,382	33,611
XXI. Gold and silver; bronze specie	2,246	2,200	2,557	40,803	9,399	6,880
<b>Total</b>	<b>1,087,577</b>	<b>884,746</b>	<b>1,081,335</b>	<b>968,843</b>	<b>1,077,284</b>	<b>1,075,906</b>

(a) Includes outside packages.

(ii) *Exports—Australian Produce and Re-exports.* In the following table, the exports from Australia of (a) Australian produce and (b) re-exports are shown according to statistical classes for each of the years 1960–61 to 1962–63.

VALUE OF EXPORTS FROM AUSTRALIA: AUSTRALIAN PRODUCE AND RE-EXPORTS  
(£A.'000 f.o.b.)

Class	Australian produce			Re-exports		
	1960–61	1961–62	1962–63	1960–61	1961–62	1962–63
I. Foodstuffs of animal origin, etc.	117,582	142,322	168,211	38	166	51
II. Foodstuffs of vegetable origin; non-alcoholic beverages, etc.	219,450	266,470	233,967	439	507	462
III. Alcoholic liquors, etc.	2,234	2,350	2,523	13	19	17
IV. Tobacco, etc.	351	520	609	64	44	193
V. Live animals and birds	1,295	1,377	1,552	158	93	101
VI. Animal substances, etc.	362,819	405,750	417,401	144	136	147
VII. Vegetable substances, etc.	869	1,684	1,894	53	77	64
VIII. Apparel, textiles, etc.	3,158	3,239	4,111	492	524	479
IX. Oils, fats and waxes	24,932	28,712	30,785	1,900	840	935
X. Pigments, paints and varnishes	1,172	1,151	1,340	61	81	79
XI. Rocks, minerals, etc.	37,526	40,145	35,112	115	205	141
XII. Metals, metal manufactures and machinery	89,040	104,264	98,277	5,449	6,697	5,666
XIII. Rubber and leather, etc.	4,443	4,787	4,601	57	68	108
XIV. Wood and wicker, etc.	3,394	3,525	2,948	139	96	119
XV. Earthenware, etc.	1,222	917	1,040	46	67	88
XVI. Paper and stationery	3,663	3,619	4,127	267	250	355
XVII. Jewellery, etc.	1,842	2,482	3,823	301	357	361
XVIII. Optical, surgical and scientific instruments	2,438	2,424	2,523	721	607	613
XIX. Chemicals, medicinal products, essential oils, fertilizers	8,457	8,501	9,801	543	430	791
XX. Miscellaneous	15,921	17,099	21,409	15,232	15,283	12,202
XXI. Gold and silver; bronze specie	40,798	9,386	6,855	5	13	25
<b>Total</b>	<b>942,606</b>	<b>1,050,724</b>	<b>1,052,909</b>	<b>26,237</b>	<b>26,560</b>	<b>22,997</b>

2. Imports of Principal Articles.—The next table shows the quantity, where available, and the value of the principal articles imported into Australia during each of the years 1960-61 to 1962-63.

## IMPORTS OF PRINCIPAL ARTICLES: AUSTRALIA

Article	Quantity			Value (£A.'000 f.o.b.)		
	1960-61	1961-62	1962-63	1960-61	1961-62	1962-63
Aircraft and parts .. .. .				13,806	12,174	13,488
Aluminium manufacture .. .. cwt.	635,091	408,335	683,765	8,224	5,348	8,627
Leaf and foil .. .. . '000 lb.	8,021	5,960	6,299	2,415	1,730	1,929
Apparel—						
Blouses, skirts, costumes, etc. .. .. .				1,690	1,204	1,463
Gloves .. .. . doz. prs.	554,373	390,282	456,462	1,509	1,098	1,222
Headwear .. .. .				1,278	1,237	1,108
Men's and boys' outer clothing .. .. .				805	480	460
Socks and stockings .. .. .				767	523	551
Trimmings and ornaments .. .. .				6,300	1,337	1,271
Other apparel and attire .. .. .				2,902	2,908	3,539
Arms, explosives, military stores, etc. .. .. .				6,916	6,140	6,846
Bags and sacks .. .. .				13,383	10,380	8,691
Carpets and carpeting .. .. .				7,640	4,532	5,301
Chemicals, drugs, fertilizers .. .. .				56,817	58,156	69,519
Cocoa and chocolate .. .. . '000 lb.	37,432	32,465	31,488	4,916	3,758	3,491
Cotton, raw .. .. . "	41,842	37,735	42,543	5,477	5,272	5,786
Crockery, etc. .. .. .				4,007	3,295	3,704
Electrical machinery and appliances .. .. .				47,534	47,862	59,270
Fibres (excl. Cotton, raw) .. .. .				7,995	7,106	10,281
Fish—						
Fresh or preserved by cold process '000 lb.	34,594	32,290	33,630	3,424	3,561	3,822
Preserved in airtight containers .. .. . "	27,493	22,021	21,529	5,308	4,086	4,039
Glass and glassware .. .. .				9,832	7,928	9,543
Iron and steel—						
Pipes, tubes and fittings .. .. cwt.	698,028	428,223	659,296	3,814	3,527	4,066
Plate and sheet .. .. . "	7,770,918	1,179,620	1,585,840	28,063	6,710	7,746
Other .. .. .				26,558	10,166	11,348
Machines and machinery (except dynamo, electrical)—						
Agricultural .. .. .				3,522	2,463	3,757
Metal-working .. .. .				17,146	11,678	18,676
Mining and metallurgical .. .. .				4,469	7,685	7,669
Motive power—						
Diesel engines .. .. .				3,323	3,011	4,382
Steam engines, turbines and parts .. .. .				3,004	2,389	3,200
Tractors and parts .. .. .				24,072	15,494	22,430
Other .. .. .				17,156	16,684	17,120
Office and accounting .. .. .				13,445	11,712	14,817
Textile working .. .. .				6,873	7,015	7,888
Other .. .. .				74,040	59,707	69,436
Motor vehicles, chassis, bodies and parts .. .. .				74,238	47,202	98,106
Musical instruments .. .. .				1,277	996	1,247
Oils—						
Linseed .. .. . '000 gals.	789	1,903	872	433	1,108	431
Olive .. .. . "	1,147	1,466	1,206	1,099	1,461	1,573
Petroleum and shale—						
Crude(a) .. .. . mill. gals.	3,108	2,871	3,237	76,354	65,302	71,861
Kerosene .. .. . '000 gals.	117,531	97,413	97,974	6,022	5,020	5,242
Lubricating (mineral) .. .. .	52,159	46,179	59,104	7,438	6,453	8,113
Petroleum and shale spirit .. .. .	222,215	182,389	246,626	11,848	9,941	14,901
Residual and solar .. .. . "	22,703	67,828	88,694	979	2,757	2,918
Paper, printing .. .. .				23,666	16,818	19,874
wrapping .. .. . '000 cwt.	606	592	365	6,213	5,937	5,519
Piece-goods—						
Canvas and duck .. .. . '000 sq. yds.	6,795	(b)	(b)	902	(b)	(b)
Cotton and linen .. .. .				45,209	35,518	37,923
Silk and man-made fibre-yarn .. .. .				8,623	7,239	9,468
Woolen and containing wool .. .. .				2,133	1,455	1,926
All other piece-goods .. .. .				12,699	10,304	11,979
Plastics materials .. .. .				14,974	13,451	18,610
Rubber and rubber manufactures .. .. .				23,645	17,772	21,330
Stationery and paper manufactures .. .. .				17,515	19,382	22,785
Tea .. .. . '000 lb.	61,701	63,866	64,369	12,824	12,914	12,529
Timber, undressed, including logs(c) '000 sup. ft.	397,293	264,171	320,148	19,348	12,238	14,059
Tobacco .. .. . '000 lb.	36,322	24,510	28,513	12,059	8,483	10,346
Yarns—						
Cotton .. .. .	9,067	5,410	4,771	3,901	2,198	1,906
Man-made fibres .. .. .	21,352	13,817	21,322	9,553	7,290	11,605
Woolen .. .. .	841	982	1,094	640	600	734
Other .. .. .	2,356	2,036	3,046	604	327	547
All other articles .. .. .				254,951	222,224	259,317
<b>Total Imports</b> .. .. .				<b>1,087,577</b>	<b>884,746</b>	<b>1,081,335</b>

(a) Includes once-run distillate. (b) Not recorded separately. (c) Excludes dunnage and undressed timber not measured in super. feet.

3. Exports of Principal Articles of Australian Produce.—The following table shows the quantities and values of the principal articles of Australian produce exported during each of the years 1960-61 to 1962-63.

EXPORTS OF PRINCIPAL ARTICLES OF AUSTRALIAN PRODUCE

Article	Quantity			Value (£A.'000. f.o.b.)		
	1960-61	1961-62	1962-63	1960-61	1961-62	1962-63
Butter .. .. . tons	61,137	78,005	77,413	19,651	23,537	23,594
Cheese .. .. . "	18,037	22,378	25,939	4,608	5,203	6,095
Chemicals, drugs, fertilizers .. .. . "	..	..	..	9,000	8,931	10,592
Coal .. .. . tons	1,888,415	3,469,552	2,676,522	7,692	13,611	11,171
Copper .. .. . "	35,909	31,075	38,843	10,003	8,254	10,423
Fruit—						
Dried .. .. . "	60,320	67,394	63,856	9,097	10,357	9,552
Fresh, including frozen .. .. . '000 bus.	7,354	9,515	9,224	10,369	13,363	14,985
Preserved in airtight containers .. .. . tons	67,850	84,261	76,848	9,773	11,919	10,636
Gold .. .. . "	..	..	..	39,959	8,977	6,470
Grains and cereals—						
Barley .. .. . tons	756,704	701,681	230,411	14,329	14,954	5,229
Flour (wheaten), plain white .. .. . tons(a)	658,029	579,274	523,862	18,979	17,397	15,695
Wheat .. .. . tons	4,098,081	5,441,667	4,070,653	102,426	142,446	108,452
Other .. .. . "	..	..	..	14,423	16,777	17,622
Hides and skins .. .. . "	..	..	..	27,194	32,147	36,851
Iron and steel .. .. . "	..	..	..	27,511	43,152	25,849
Lead, bullion .. .. . tons	53,741	46,461	78,076	5,330	4,183	6,197
Lead, pig .. .. . "	128,106	195,430	169,264	10,541	14,253	11,097
Machines and machinery (except dynamo, electrical) .. .. . "	..	..	..	12,968	13,140	15,955
Meats preserved by cold process—						
Beef and veal .. .. . tons	134,014	201,173	260,771	40,110	58,843	79,265
Lamb .. .. . "	28,778	16,696	25,274	5,793	2,624	5,181
Mutton .. .. . "	37,087	48,711	61,045	7,437	8,156	11,652
Other .. .. . "	..	..	..	7,074	6,760	6,954
Meats, tinned .. .. . tons	30,357	33,394	22,221	9,374	10,519	6,518
Milk and cream .. .. . '000 lb.	108,554	103,337	142,288	9,152	8,307	10,237
Ores and concentrates .. .. . tons	1,051,181	1,114,875	1,088,039	27,943	24,665	22,476
Petroleum and shale oils .. .. . '000 gals.	463,073	(b)	612,431	21,693	22,363	24,344
Sugar (cane) .. .. . tons	796,531	843,539	1,145,967	35,074	33,895	45,521
Wool .. .. . '000 lb.	1,382,979	1,459,589	1,413,619	334,442	372,531	379,356
All other articles .. .. . "	..	..	..	90,671	99,460	114,940
<b>Total Exports (Australian Produce) ..</b>	<b>..</b>	<b>..</b>	<b>..</b>	<b>942,606</b>	<b>1,050,724</b>	<b>1,052,909</b>

(a) 2,000 lb.

(b) Not available.

A graph showing exports in principal commodity groups in each of the years 1953-54 to 1962-63 will be found on page 522.

4. Imports of Merchandise and Bullion and Specie.—The table hereunder shows the value of imports into Australia during each of the years 1958-59 to 1962-63, grouped under the headings—Merchandise, and Bullion and specie. The imports of merchandise are shown under the sub-headings of "free" and "dutiable" goods.

**VALUE OF IMPORTS OF MERCHANDISE, AND BULLION AND SPECIE:  
AUSTRALIA  
(£A.'000 f.o.b.)**

Year	Merchandise			Bullion and specie	Total imports
	Free goods	Dutiable goods	Total		
1958-59.. ..	464,274	330,114	794,388	2,211	796,599
1959-60.. ..	509,824	414,704	924,528	2,563	927,091
1960-61.. ..	576,277	509,054	1,085,331	2,246	1,087,577
1961-62.. ..	496,798	385,748	882,546	2,200	884,746
1962-63.. ..	583,424	495,353	1,078,777	2,558	1,081,335

5. Exports of Merchandise and Bullion and Specie.—The next table shows the value of exports from Australia during each of the years 1958-59 to 1962-63, grouped under the headings—Merchandise, and Bullion and specie. The exports of Australian produce and re-exports are shown separately.

**VALUE OF EXPORTS OF MERCHANDISE, AND BULLION AND SPECIE:  
AUSTRALIA  
(£A.'000 f.o.b.)**

Year	Merchandise			Bullion and specie			Total exports
	Australian produce	Re-exports	Total	Australian produce	Re-exports	Total	
1958-59 ..	790,165	16,540	806,705	4,744	14	4,758	811,463
1959-60 ..	907,971	17,988	925,959	11,716	7	11,723	937,682
1960-61 ..	901,809	26,232	928,041	40,797	5	40,802	968,843
1961-62 ..	1,041,339	26,546	1,067,885	9,385	14	9,399	1,077,284
1962-63 ..	1,046,054	22,972	1,069,026	6,855	25	6,880	1,075,906

6. Ratios of Net Customs Revenue to Values of Merchandise Imported.—The following table shows the ratios of net customs revenue collected, including and excluding net primage, to values of merchandise imported during the years 1958-59 to 1962-63. The calculations are based on Australian currency values and on the assumption that the value of clearances approximated to the value of imports during the same period. For particulars of customs revenue collections see Chapter XXII, Public Finance.

**RATIOS OF NET CUSTOMS REVENUE COLLECTED TO VALUES OF  
MERCHANDISE IMPORTED: AUSTRALIA**

(Per cent.)

Ratio of—	1958-59	1959-60	1960-61	1961-62	1962-63
Net customs revenue collected (excluding net primage) to value of all merchandise imported .. .. .	8.8	8.9	9.2	9.4	9.5
Net customs revenue collected plus net primage to value of all merchandise imported .. .. .	9.0	9.1	9.4	9.6	9.7
Net customs revenue collected (excluding net primage) to value of dutiable goods only .. .. .	21.0	19.9	19.5	21.5	20.8

### § 14. Ships' and Aircraft Stores

The value of ships' and aircraft stores, which are excluded from the export figures, is shown in the following table for each of the years 1958-59 to 1962-63, with separate figures for oils.

VALUE OF STORES LOADED ON OVERSEA SHIPS AND AIRCRAFT:  
AUSTRALIA  
(£A.'000 f.o.b.)

Item	1958-59	1959-60	1960-61	1961-62	1962-63
Oils .. .. .	6,704	7,817	8,937	7,819	6,869
All stores (including oils) ..	10,876	12,413	14,205	13,324	12,937

In addition to oils, the principal items supplied to overseas ships and aircraft in 1962-63 were:—meats, £1,578,334; fruit and vegetables, £377,023; eggs, £164,356; butter, £99,873; sea food, £167,177; flour, £53,642; rice, £31,387; milk and cream, £28,946; ale, beer, wine, spirits, etc., £545,411; tobacco and cigarettes, £224,104.

### § 15. Movement of Bullion and Specie

1. Imports and Exports.—The following table shows the values of gold and silver bullion and specie, and of bronze specie, imported into, and exported from, Australia during each of the years 1960-61 to 1962-63.

VALUE OF OVERSEA TRADE OF AUSTRALIA IN BULLION AND SPECIE.  
(£A. f.o.b.)

Item	Imports			Exports		
	1960-61	1961-62	1962-63	1960-61	1961-62	1962-63
Gold—Bullion ..	2,201,903	2,148,395	2,430,793	39,959,140	8,976,094	6,432,988
Specie ..	1,182	..	43,771	280	732	37,125
<i>Total</i> ..	<i>2,203,085</i>	<i>2,148,395</i>	<i>2,474,564</i>	<i>39,959,420</i>	<i>8,976,826</i>	<i>6,470,113</i>
Silver—Bullion ..	31,101	41,663	60,057	748,156	313,159	134,742
Specie ..	11,303	9,518	22,456	94,028	108,150	253,687
<i>Total</i> ..	<i>42,404</i>	<i>51,181</i>	<i>82,513</i>	<i>842,184</i>	<i>421,309</i>	<i>388,429</i>
Bronze—Specie ..	518	6	272	859	854	21,853
Total— Australian pro- duce ..	..	..	..	40,797,511	9,385,581	6,855,460
Re-exports ..	..	..	..	4,952	13,408	24,935
<b>Grand Total ..</b>	<b>2,246,007</b>	<b>2,199,582</b>	<b>2,557,349</b>	<b>40,802,463</b>	<b>9,398,989</b>	<b>6,880,395</b>

2. Imports and Exports, by Country.—The next table shows the imports and exports of bullion and specie from and to various countries during the year 1962-63.

VALUES OF AUSTRALIAN IMPORTS AND EXPORTS OF BULLION AND SPECIE: COUNTRIES OF ORIGIN OR CONSIGNMENT, 1962-63  
(£A. f.o.b.)

Country	Imports			Exports		
	Bullion	Specie	Total	Bullion	Specie	Total
<b>Commonwealth countries—</b>						
Australia (re-imported)	..	14,172	14,172	..	..	..
United Kingdom ..	608	39,251	39,859	127,979	43,806	171,785
<b>Australian Territories—</b>						
Nauru .. ..	..	..	..	..	21,800	21,800
New Guinea ..	661,779	..	661,779	..	201,830	201,830
Norfolk Is. ..	..	..	..	..	600	600
Papua .. ..	..	..	..	..	24,140	24,140
Canada .. ..	5,831	1	5,832	..	10	10
Hong Kong ..	..	..	..	6,277,403	..	6,277,403
New Zealand ..	279,537	4,357	283,894	151,053	1,443	152,496
<b>Pacific Islands (British)—</b>						
Fiji .. ..	1,513,360	1	1,513,361	3,370	331	3,701
Gilbert and Ellice Is. ..	..	..	..	..	1,270	1,270
New Hebrides ..	..	..	..	..	1,500	1,500
Tonga .. ..	..	109	109	..	..	..
Solomon Is. ..	7,965	..	7,965	..	15,925	15,925
<b>Total, Commonwealth Countries ..</b>	<b>2,469,080</b>	<b>57,891</b>	<b>2,526,971</b>	<b>6,559,805</b>	<b>312,655</b>	<b>6,872,460</b>
<b>Foreign countries—</b>						
Austria .. ..	..	1,382	1,382	..	..	..
Czechoslovakia ..	..	52	52	..	..	..
France .. ..	25	437	462	..	..	..
Germany, Federal Republic of ..	2,364	1,197	3,561	..	..	..
Poland .. ..	..	18	18	..	..	..
Switzerland ..	..	5,465	5,465	..	..	..
United States of America	19,381	57	19,438	7,925	10	7,935
<b>Total, Foreign Countries</b>	<b>21,770</b>	<b>8,608</b>	<b>30,378</b>	<b>7,925</b>	<b>10</b>	<b>7,935</b>
<b>Grand Total ..</b>	<b>2,490,850</b>	<b>66,499</b>	<b>2,557,349</b>	<b>6,567,730</b>	<b>312,665</b>	<b>6,880,395</b>

## § 16. Exports According to Industries

1. Classification.—The following table provides an analysis of the total recorded value of Australian exports for the years 1960-61 to 1962-63. This analysis is designed to show fluctuations in the value of exports of Australian produce dissected according to the main industry of their origin, although any such classification is necessarily arbitrary in some respects.

## VALUES OF EXPORTS OF AUSTRALIAN PRODUCE: INDUSTRIAL GROUPS

Industrial group	Value (£A.'000 f.o.b.)			Proportion of value of exports of Australian produce (excluding gold) (Per cent.)		
	1960-61	1961-62	1962-63	1960-61	1961-62	1962-63
<b>Agriculture, horticulture and viticulture—</b>						
Unprocessed .. ..	139,227	184,576	143,780	15.4	17.8	13.7
Processed .. ..	81,258	83,579	91,879	9.0	8.0	8.8
<b>Total .. ..</b>	<b>220,485</b>	<b>268,155</b>	<b>235,659</b>	<b>24.4</b>	<b>25.8</b>	<b>22.5</b>
<b>Pastoral—</b>						
Unprocessed .. ..	384,686	439,971	476,853	42.6	42.2	45.6
Processed .. ..	57,170	65,520	64,926	6.4	6.3	6.2
<b>Total .. ..</b>	<b>441,856</b>	<b>505,491</b>	<b>541,779</b>	<b>49.0</b>	<b>48.5</b>	<b>51.8</b>
<b>Dairy and farmyard—</b>						
Unprocessed .. ..	2,083	2,605	2,471	0.2	0.2	0.2
Processed .. ..	38,055	41,688	43,535	4.2	4.0	4.2
<b>Total .. ..</b>	<b>40,138</b>	<b>44,293</b>	<b>46,006</b>	<b>4.4</b>	<b>4.2</b>	<b>4.4</b>
<b>Mines and quarries (other than gold)—</b>						
Unprocessed .. ..	34,327	36,882	31,935	3.8	3.6	3.1
Processed .. ..	35,546	39,460	41,039	3.9	3.8	3.9
<b>Total (a) .. ..</b>	<b>69,873</b>	<b>76,342</b>	<b>72,974</b>	<b>7.7</b>	<b>7.4</b>	<b>7.0</b>
<b>Fisheries—</b>						
Unprocessed .. ..	5,026	6,858	6,629	0.6	0.6	0.6
Processed .. ..	946	761	359	0.1	0.1	0.1
<b>Total .. ..</b>	<b>5,972</b>	<b>7,619</b>	<b>6,988</b>	<b>0.7</b>	<b>0.7</b>	<b>0.7</b>
<b>Forestry—</b>						
Unprocessed .. ..	586	607	427	0.1	0.1	0.1
Processed .. ..	3,925	3,296	2,863	0.4	0.3	0.2
<b>Total .. ..</b>	<b>4,511</b>	<b>3,903</b>	<b>3,290</b>	<b>0.5</b>	<b>0.4</b>	<b>0.3</b>
<b>Total, Primary Produce—</b>						
Unprocessed .. ..	565,935	671,499	662,095	62.7	64.5	63.3
Processed .. ..	216,900	234,304	244,601	24.0	22.5	23.4
<b>Total .. ..</b>	<b>782,835</b>	<b>905,803</b>	<b>906,696</b>	<b>86.7</b>	<b>87.0</b>	<b>86.7</b>
<b>Manufactures .. ..</b>	<b>88,237</b>	<b>102,052</b>	<b>102,088</b>	<b>9.8</b>	<b>9.8</b>	<b>9.8</b>
Refined petroleum oils .. ..	19,811	21,537	23,391	2.2	2.0	2.2
Unclassified .. ..	11,764	12,356	14,282	1.3	1.2	1.3
<b>Total, Australian Produce (excluding Gold) .. ..</b>	<b>902,647</b>	<b>1,041,748</b>	<b>1,046,457</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>
<b>Re-exports (excluding Gold) .. ..</b>	<b>26,236</b>	<b>26,559</b>	<b>22,979</b>	<b>..</b>	<b>..</b>	<b>..</b>
<b>Gold exports (a) .. ..</b>	<b>39,960</b>	<b>8,977</b>	<b>6,470</b>	<b>..</b>	<b>..</b>	<b>..</b>
<b>Total Recorded Value of Exports .. ..</b>	<b>968,843</b>	<b>1,077,284</b>	<b>1,075,906</b>	<b>..</b>	<b>..</b>	<b>..</b>

(a) The value of refined newly-won gold was £16,203,000 in 1960-61, £16,205,000 in 1961-62, and £15,735,000 in 1962-63.

2. **Relative Importance of Industrial Groups.**—In the year 1962–63, Australian produce (other than gold) exported amounted to approximately £1,046 million. Of this, £907 million or 87 per cent. was mainly produce of primary industries, comprising £662 million of unprocessed produce and £245 million of goods which had been processed in some degree before export. The values of the principal individual items of processed Australian primary produce exported were:—raw sugar, £45,521,000; flour, etc., £15,695,000; canned fruit, £10,636,000; dried fruit, £9,552,000; wool (scoured, tops, etc.), £43,703,000; canned meats, £6,518,000; butter, £23,594,000; milk (condensed, dried, etc.), £10,237,000; pig lead, £11,097,000; lead bullion, £6,197,000; zinc bars, blocks, etc., £8,073,000; copper ingots, £6,802,000; and undressed timber, £2,305,000.

The value of manufactures exported as classified on page 544 was £102 million, approximately 10 per cent. of Australian produce (other than gold) exported in 1962–63. The values of principal individual items here included were:—manufactures of metal, £45,301,000; implements and machinery, £13,560,000; drugs and chemicals, £8,029,000; and paper and stationery, £4,127,000.

The items enumerated indicate the arbitrariness of the line necessarily drawn between primary produce and manufactures in any classification of this kind. The value of processed primary products exported includes some element of value added by the simpler processes of manufacture, while the value shown for manufactures exported necessarily includes the value of raw materials (primary produce) used in those manufactures.

Refined petroleum oils exported are shown separately, as they consist of imported crude oils refined in Australia and re-exported in the refined form. The values of principal individual items shown as “unclassified” in 1962–63 were:—individual consignments of less than £50 in value, £5,196,000; and military equipment and stores and supplies for Australian projects overseas, £2,547,000.

## § 17. External Trade of Australia and other Countries

1. **Essentials of Comparison.**—Direct comparison of the external trade of any two countries is possible only when the general conditions prevailing therein, and the system of record, are more or less identical. For example, in regard to the mere matter of record, it may be observed that in one country the value of imports may be the value at the port of shipment, while in another the cost of freight, insurance and charges may be added thereto. Again, the values of imports and exports in one may be declared by merchants, whereas in another they may be the official prices fixed from time to time by a commission constituted for the purpose. In later years, moreover, a very substantial difference in the value of imports would result from the different methods of converting the moneys of foreign countries, i.e. from the application of current rates of exchange or of the mint par. Lastly, the figures relating to the external trade of any country are also affected in varying degree by the extent to which they include transit or re-export trade. This class of trade represents a much greater proportion of the trade of Switzerland and Belgium-Luxembourg than that of other countries. France and the United Kingdom also re-export largely, whereas in Canada, Australia and New Zealand the same class of trade represents a comparatively small proportion of the total.

2. **“Special Trade” of Various Countries.**—In the following table, the figures, which are expressed in Australian currency, relate as nearly as possible to imports cleared for home consumption in the various countries specified and to exports of their domestic products. It is to be noted, however, that these figures do not invariably denote the same thing throughout, since, in the United Kingdom and other manufacturing countries, raw or partly manufactured materials are imported as for home consumption and, after undergoing some process of manufacture or further modification, are re-exported as domestic production. Nevertheless, a comparison of this character reveals approximately the extent of the external trade which otherwise would not be manifest. The countries listed below are not necessarily all the important trading countries of the world, but those important countries for which comparable statistics are available. Information for countries other than Australia has been extracted from publications of the United Nations.



VALUES OF IMPORTS CLEARED FOR HOME CONSUMPTION, AND EXPORTS OF DOMESTIC PRODUCTS (MERCHANDISE ONLY (a)): VARIOUS COUNTRIES, 1962

Country	Imports cleared c.i.f.	Exports f.o.b.	Total	Trade per head of population		
				Imports cleared	Exports	Total
				£A. m.	£A. m.	£A. m.
United States of America	(b)7,290.0	9,542.0	16,832.0	39.1	51.1	90.2
Germany, Federal Republic of ..	5,481.7	5,921.4	11,403.1	100.1	108.1	208.2
United Kingdom ..	(c)5,417.9	4,739.7	10,157.6	101.4	88.7	190.1
France ..	3,533.5	3,285.7	6,819.2	75.2	69.9	145.1
Canada ..	(b)2,609.8	2,645.5	5,255.3	140.3	142.2	282.5
Italy ..	2,703.6	2,083.0	4,786.6	53.9	41.5	95.4
Japan ..	(d)2,516.5	2,194.6	4,711.1	26.5	23.1	49.6
Netherlands ..	2,387.5	2,046.9	4,434.4	202.4	173.5	375.9
Belgium-Luxembourg ..	2,033.5	1,930.4	3,963.9	213.1	202.3	415.4
Sweden ..	(d)1,390.2	1,304.5	2,694.7	183.8	172.5	356.3
Switzerland ..	1,348.2	989.3	2,337.5	238.2	174.8	413.0
Australia (e) ..	(b)1,058.4	1,046.4	2,104.8	97.9	96.8	194.7
Denmark ..	(d)950.9	740.6	1,691.5	204.3	159.1	363.4
Austria ..	692.9	563.8	1,256.7	97.2	79.1	176.3
Norway ..	738.4	434.4	1,172.8	202.9	119.4	322.3
Spain ..	700.0	322.3	1,022.3	22.7	10.5	33.2
Indonesia ..	288.8	300.9	589.7	3.0	3.1	6.1
Chile ..	231.2	237.5	468.7	28.9	29.7	58.6
Turkey ..	277.7	170.1	447.8	9.6	5.9	15.5
Portugal ..	261.2	165.2	426.4	29.3	18.5	47.8
Greece ..	312.9	111.2	424.1	37.0	13.2	50.2

(a) Includes silver. (b) f.o.b. (c) Covers goods imported less goods re-exported. (d) Covers goods imported as distinct from goods cleared for home consumption. (e) Year ended June, 1962.

### § 18. Oversea Trade in Calendar Years

For the purpose of comparison with countries which record oversea trade in calendar years, the following table has been compiled to show Australian imports and exports for each of the calendar years 1959 to 1963.

#### VALUE OF OVERSEA TRADE IN CALENDAR YEARS: AUSTRALIA (£A.'000 f.o.b.)

Year	Merchandise		Bullion and specie		Total	
	Imports	Exports	Imports	Exports	Imports	Exports
1959 ..	826,131	892,571	2,075	3,338	828,206	895,909
1960 ..	1,056,842	874,585	2,389	40,577	1,059,231	915,162
1961 ..	934,333	1,036,950	2,331	17,753	936,664	1,054,703
1962 ..	1,009,594	1,046,550	2,224	5,367	1,011,818	1,051,917
1963 p ..	1,106,308	1,243,828	3,328	8,673	1,109,636	1,252,501

### § 19. Excise

Although excise goods have no immediate bearing on oversea trade, the rate of excise duty is in some cases related to the import duty on similar goods. Moreover, as the Excise Acts are administered by the Department of Customs and Excise, it is convenient to publish here the quantities of Australian produce on which excise duty has been paid. Particulars of customs and excise revenue are shown in Chapter XXII. Public Finance. The following table shows the quantities of spirits, beer, tobacco, etc., on which excise duty was paid in Australia during the years 1961-62 and 1962-63.

QUANTITY OF SPIRITS, BEER, TOBACCO, ETC., ON WHICH EXCISE DUTY WAS PAID: AUSTRALIA

Article	1961-62	1962-63	Article	1961-62	1962-63
	'000 gallons	'000 gallons	Cigarettes—machine-made	'000 lb. 42,322	'000 lb. 44,007
Beer .. .. .	231,323	238,918		'000 gallons	'000 gallons
	'000 proof gallons	'000 proof gallons	Petrol—		
Spirits—			Aviation petrol (by-law)	6,886	6,311
Brandy .. .. .	791	883	Aviation petrol (non by-law)	282	578
Gin .. .. .	348	359	Petrol, n.e.i. .. .. .	1,162,890	1,224,793
Whisky .. .. .	399	324	Total Petrol .. .. .	1,170,058	1,231,682
Rum .. .. .	515	529	Aviation turbine fuel .. .. .	34,354	30,963
Liqueurs .. .. .	62	62	Diesel fuel .. .. .	45,204	51,682
Other .. .. .	44	65			
Total, Spirits (Potable) .. .. .	2,159	2,222	Playing cards .. .. .	doz. packs 105,344	doz. packs 98,094
Spirits for—				60 papers or tubes	60 papers or tubes
Fortifying wine .. .. .	2,147	2,218	Cigarette papers and tubes	'000 87,820	'000 78,320
Industrial or scientific purposes .. .. .	278	296		8,640 matches	8,640 matches
Manufacture of—			Matches .. .. .	'000 3,370	'000 3,468
Essences .. .. .	105	109		'000 tons 17,255	'000 tons 16,807
Scents and toilet preparations .. .. .	83	95	Coal .. .. .		
Vinegar .. .. .	197	215	Cathode ray tubes .. .. .	'000 343	'000 351
Tobacco .. .. .	'000 lb. 12,981	'000 lb. 11,493			
Cigars .. .. .	157	149			

## § 20. Balance of Payments

1. **Introduction.**—Estimates of a country's balance of payments are prepared for the purpose of providing a systematic record in money terms of the economic transactions which take place over a period between that country and all other countries. Such records are essential to the examination of influences which external factors have on the domestic economy. The Australian economy is subject to fairly large fluctuations in export income, and it is also affected in important respects by variations in the level of foreign investment and the demand for imports. Consequently, these estimates have always assumed particular importance in this country.

Official estimates of Australia's balance of payments covering the period 1928-29 to 1930-31 were included in the Appendix to Official Year Book No. 24, 1931. Except for the war years (1939 to 1945), estimates have since been published annually. Detailed estimates are currently provided twice yearly in the form of a mimeographed publication *Balance of Payments*. This publication brings the estimates forward to the end of the most recent financial year or half-year and, together with a printed volume *The Australian Balance of Payments, 1928-29 to 1950-51*, provides also a description of the various items included and the sources from which the information is obtained. A summarized statement of the principal current account items and some identified capital movements is prepared and issued on a quarterly basis in the *Balance of Payments—Quarterly Summary*.

The form in which the Australian estimates are presented follows the pattern originally adopted by the International Monetary Fund. In this presentation, a basic distinction is drawn between "current account" transactions and "capital account" transactions. Current account transactions are defined as those which involve changes in the ownership of goods or the rendering of services between residents of Australia and the rest of the world. They include such important items as exports, imports, shipping freights, dividends, profits and interest, travel and government expenditure. The current account also includes transfers in the form of personal gifts and government gifts of technical assistance, for which there is no consideration. Capital account transactions are defined

as those which involve claims to money and titles to investments between residents of one country and those of another country. Details are shown according to whether the items with which transactions are concerned are classified as assets or liabilities. For practical purposes, items are also broadly divisible into investment items (including overseas investment in companies in Australia and government loans), certain financing transactions, and monetary movements (including transactions with the International Monetary Fund and changes in the level of international reserves).

By definition, the balance of payments on current account is always equivalent to the balance on capital account. The net monetary movement is used as a control figure to which the net sum of all other figures must reconcile. However, errors and omissions occur in the estimation of the amounts involved in various items included in both current and capital accounts, and in addition there are timing differences between the statistical recording of trade transactions and certain invisible items, and the relevant foreign exchange transactions. Therefore, in order to preserve the identity between the total shown in the current account and the total shown in the capital account, it is necessary to introduce a "balancing item". The "balancing item" is included in the capital account, but, as mentioned above, it may include discrepancies in the current account, and it does not, as is frequently supposed, include only errors and timing differences related to investment and financing transactions.

Recent changes in the estimates include an adjustment for the estimated excess of the value of imports, as recorded in overseas trade statistics, over the actual selling price to the importer (see Appendix IV. *The Australian Balance of Payments 1957-58 to 1961-62*). Significant amendments to figures previously published for transportation items and changes in concept and presentation were made in the *Balance of Payments 1960-61, 1961-62 and First Half 1962-63*. Information on these changes is provided in "Notes to Tables" and Appendix II. of that publication.

Details of the estimates are assembled from a variety of sources of which the following are the more important:—(i) statistics of exports and imports obtained from Australian trade statistics; (ii) details of the import valuation adjustment obtained from a sample of the invoices submitted to the Department of Customs and Excise in respect of imports into Australia; (iii) information on particular invisible current account items and capital movements obtained by regular inquiry from private organizations and government departments; (iv) details of receipts and payments of foreign exchange provided by the banking system; (v) information on dividends remitted, undistributed income and private investment in companies provided by statistics of overseas investment collected by this Bureau; (vi) information on freight on imports and other items concerned with overseas shipping obtained from a sample of the invoices submitted to the Department of Customs and Excise in respect of imports into Australia and a survey of shipping operations conducted by this Bureau; and (vii) information on international reserves supplied by the Reserve Bank of Australia.

**2. Current Account.**—The balance of payments on current account is arranged to show a series of credit items and a corresponding series of debit items. In general, entries on the credit side include all current transactions which result in receipts of foreign exchange (for goods and services, investment income or donations), and on the debit side the similar transactions which result in payments of foreign exchange. The principal exceptions to this rule are the amounts shown for undistributed income. In respect of these amounts no movement of foreign exchange takes place, the amounts concerned being treated as credits or debits in the relevant sections of the current account, and as corresponding outflows or inflows in the relevant sections of the capital account. Exceptions also occur where debts incurred for current account items, principally goods, are subsequently capitalized.

The largest items shown in the current account are exports and imports, and the difference between them represents the balance of visible trade. This is the most important, and usually the most variable, relationship in the balance of payments. A full evaluation of the overall position on current account, however, occurs only after the invisible items have been taken into account. The most important of these are the transportation items. Entries appear on both the debit and credit sides, the principal component on the debit side being freight payable overseas on imports into Australia. The principal component on the credit side is expenditure by overseas carriers, which represents mainly overseas ships' expenditure for stevedoring, port charges, etc., incurred in loading and discharging goods at Australian ports, and stores purchased in Australia. The items next in importance are those concerning income from property. Debit entries under this heading include dividends, profits, interest and royalties, payable overseas, while the credit entries include similar details of amounts receivable by Australian residents. These items include undistributed income for which, as mentioned above, no monetary payments occur. The remaining items are smaller than those mentioned above, and include travel, government transactions, donations (including foreign aid made available by the Australian Government), and on the credit side the net value of Australian gold production.

## BALANCE OF PAYMENTS ON CURRENT ACCOUNT

(£ million)

Particulars	1961-62	1962-63
1. Exports f.o.b.(a) .. .. .	1,066.8	1,065.1
2. Imports f.o.b.(a) .. .. .	856.7	1,031.8
<i>Balance of Trade</i> .. .. .	<u>210.1</u>	<u>33.3</u>
<b>Invisible Credits—</b>		
3. Gold production .. .. .	16.1	15.9
4. Transportation—		
Expenditure of oversea carriers .. .. .	70.6	77.2
Australian carriers .. .. .	10.5	11.9
	81.1	89.1
5. Travel .. .. .	15.6	14.5
6. Property income—		
Undistributed income .. .. .	4.4	4.6
Royalties and copyrights .. .. .	0.9	1.0
Other .. .. .	34.4	30.7
	39.7	36.3
7. Government—		
Australian Government receipts .. .. .	11.8	11.9
Foreign government expenditure .. .. .	10.5	11.7
	22.3	23.6
8. Miscellaneous .. .. .	14.0	17.9
9. Donations, etc.—		
Immigrants' funds .. .. .	25.1	27.8
Other .. .. .	10.7	11.2
	35.8	39.0
<i>Total Invisible Credits</i> .. .. .	<u>224.6</u>	<u>236.3</u>
<b>Invisible Debits—</b>		
10. Transportation(b)—		
Freight .. .. .	102.0	117.0
Other .. .. .	37.1	40.3
	139.1	157.3
11. Travel .. .. .	40.8	45.0
12. Property income—		
Public authority interest .. .. .	32.0	32.5
Direct investment .. .. .	58.6	58.9
Undistributed income .. .. .	29.8	51.7
Royalties and copyrights .. .. .	15.2	16.2
Other .. .. .	11.7	14.7
	147.3	174.0
13. Government—		
Defence .. .. .	9.7	9.7
Other .. .. .	17.5	18.0
	27.2	27.7
14. Miscellaneous .. .. .	25.7	26.9
15. Donations, etc.—		
Government—		
Papua and New Guinea .. .. .	22.0	25.3
Other foreign aid .. .. .	4.2	6.8
Private .. .. .	26.5	29.1
	52.7	61.2
<i>Total Invisible Debits</i> .. .. .	<u>432.8</u>	<u>492.1</u>
<b>Balance on Current Account</b> .. .. .	<b>1.9</b>	<b>-222.5</b>

(a) The amounts shown represent the recorded trade figures adjusted for balance of payments purposes. Adjustments affect both coverage and valuation. (b) Total freight and insurance on imports, whether payable overseas or in Australia, is estimated at £113 million in 1961-62 and £129 million in 1962-63.

NOTE.—Minus sign (–) denotes deficit.

3. Capital Account.—The capital account shows net movements in assets and liabilities.

**BALANCE OF PAYMENTS ON CAPITAL ACCOUNT**  
(£ million)

Particulars	1961-62	1962-63
<b>CHANGES IN ASSETS</b>		
1. International reserves .. .. .	10.4	64.9
2. I.M.F. .. .. .	..	..
3. Other international financial agencies .. .. .	1.7	1.7
4. Other government .. .. .	-2.8	6.5
5. Marketing authorities .. .. .	32.9	-4.8
6. Portfolio investment .. .. .	-2.2	-2.6
7. Direct investment—		
Branches—		
Unremitted profits .. .. .	0.5	0.4
Other .. .. .	4.1	-2.6
Subsidiaries—		
Undistributed profits .. .. .	3.9	4.2
Other .. .. .	1.2	3.8
	9.7	5.8
8. Life insurance .. .. .	-0.4	0.1
<i>Total</i> .. .. .	49.3	71.6
<b>CHANGES IN LIABILITIES</b>		
9. Government loans—		
I.B.R.D. .. .. .	-7.9	5.9
Other central government .. .. .	14.9	43.4
Local and semi-governmental .. .. .	-0.2	-1.2
Discounts, etc. .. .. .	-0.4	-1.4
	6.4	46.7
10. I.M.F. .. .. .	-78.8	-11.5
11. Other international financial agencies .. .. .	-1.2	-2.3
12. Foreign banks .. .. .	0.3	2.7
13. Portfolio investment—		
Government securities .. .. .	-1.5	-4.8
Companies, etc. .. .. .	37.1	42.3
	35.6	37.5
14. Direct investment—		
Branches—		
Unremitted profits .. .. .	2.2	3.4
Other .. .. .	25.5	8.7
Subsidiaries—		
Undistributed profits .. .. .	27.6	48.3
Other .. .. .	48.0	121.6
	103.3	182.0
15. Balancing item .. .. .	-18.2	39.0
<i>Total</i> .. .. .	47.4	294.1
<b>Balance on Capital Account</b> .. .. .	<b>-1.9</b>	<b>222.5</b>

On the assets side, the most important item is Australia's holdings of monetary gold and foreign exchange, usually referred to as international reserves. On the liabilities side, the most important items are government loans, I.M.F. transactions and private investment in Australian companies.

Transactions with international monetary and finance agencies appear on both sides of the capital account. On the assets side, items 2 and 3 show increases in subscriptions to these institutions, and on the liabilities side, items 10 and 11 show corresponding increases in liabilities or changes in liabilities previously incurred. Liabilities comprise, on the one hand, bank balances and special non-negotiable, non-interest bearing securities (payable in Australian currency but convertible by arrangement into foreign currency or gold) related to capital subscriptions to the various agencies and, on the other hand, drawings from the International Monetary Fund.

Changes in overseas investment in companies by Australian residents are shown on the assets side of the capital account (items 6 and 7), and changes in investment in Australian companies by overseas residents are shown on the liabilities side (items 13 (part) and 14). Figures shown for marketing authorities (item 5) represent changes in the estimated value of commodity stocks held overseas or in amounts owed by overseas debtors to the principal Australian marketing authorities.

The balancing item includes errors and omissions and timing differences, referred to on page 548.

4. Balance of Payments on Current Account, by Major Groups of Countries.—Estimates are also made of Australia's current account transactions with the following groups of countries (*see p. 530* for countries included in the several groups).

**BALANCE OF PAYMENTS ON CURRENT ACCOUNT, BY MAJOR GROUPS OF COUNTRIES**  
(£ million)

Particulars	1961-62	1962-63
<b>EXPORTS f.o.b.(a)—</b>		
Sterling—		
United Kingdom .. .. .	216.3	209.5
Other .. .. .	191.5	199.5
Non-sterling—		
North America .. .. .	124.2	151.4
European Economic Community .. .. .	181.0	166.5
European Free Trade Association(b) .. .. .	10.9	11.5
Soviet Area .. .. .	93.9	93.1
Other .. .. .	249.0	233.6
Total .. .. .	1,066.8	1,065.1
<b>IMPORTS f.o.b.(a)—</b>		
Sterling—		
United Kingdom .. .. .	-249.1	-317.3
Other .. .. .	-122.7	-136.5
Non-sterling—		
North America .. .. .	-210.9	-257.1
European Economic Community .. .. .	-93.2	-111.5
European Free Trade Association(b) .. .. .	-45.0	-47.8
Soviet Area .. .. .	-8.7	-10.8
Other .. .. .	-127.1	-150.8
Total .. .. .	-856.7	-1,031.8
<b>INVISIBLES (NET)—</b>		
Sterling—		
United Kingdom .. .. .	-59.4	-80.8
Other .. .. .	-39.9	-47.1
Non-sterling—		
North America .. .. .	-81.7	-95.5
European Economic Community .. .. .	-14.0	-16.7
European Free Trade Association(b) .. .. .	2.7	3.3
Soviet Area .. .. .	-1.1	-1.2
Other .. .. .	-22.4	-26.7
International agencies .. .. .	-8.5	-7.0
Gold production .. .. .	16.1	15.9
Total .. .. .	-208.2	-255.8

For footnotes, *see* next page.

BALANCE OF PAYMENTS ON CURRENT ACCOUNT, BY MAJOR GROUPS OF COUNTRIES—*continued*

(£ million)

Particulars	1961-62	1962-63
<b>BALANCE ON CURRENT ACCOUNT—</b>		
Sterling—		
United Kingdom .. .. .	-92.2	-188.6
Other .. .. .	28.9	15.9
Non-sterling—		
North America .. .. .	-168.4	-201.2
European Economic Community .. .. .	73.8	38.3
European Free Trade Association(b) .. .. .	-31.4	-33.0
Soviet Area .. .. .	84.1	81.1
Other .. .. .	99.5	56.1
International agencies .. .. .	-8.5	-7.0
Gold production .. .. .	16.1	15.9
<b>Total .. .. .</b>	<b>1.9</b>	<b>-222.5</b>

(a) The amounts shown represent the recorded trade figures as shown on page 530-1 adjusted for balance of payments purposes. Adjustments affect both coverage and valuation. (b) Other than the United Kingdom.

NOTE.—Minus sign (—) denotes deficit.

5. **International Reserves.**—The following table shows the net gold and foreign exchange holdings of official and banking institutions for the years 1961-62 and 1962-63.

## INTERNATIONAL RESERVES

(Source: Reserve Bank of Australia)

(£ million)

Particulars	1961-62	1962-63
Gold .. .. .	79.2	89.3
Foreign exchange .. .. .	482.0	536.8
<b>Total at end of period .. .. .</b>	<b>561.2</b>	<b>626.1</b>
Change during period .. .. .	+10.4	+64.9

## CHAPTER XV

## TRANSPORT AND COMMUNICATION

NOTE.—The statistics in this chapter relate in the main to the year 1962–63, with comparisons restricted to a few recent years. More detailed figures and particulars for earlier years are included in the annual bulletins, *Transport and Communication*, *Commonwealth Finance*, and *State, Territories and Local Government Authorities' Finance and Government Securities* published by this Bureau.

Current information on subjects dealt with in this chapter appears in the *Quarterly Summary of Australian Statistics*, the *Monthly Review of Business Statistics*, the *Digest of Current Economic Statistics*, the *Monthly Bulletin of Registrations of New Motor Vehicles* and two preliminary monthly statements on *Registrations of New Motor Vehicles*.

The detailed results of the Census of Motor Vehicles, 31st December, 1962 (see summary tables later in this chapter) are being published in mimeographed and printed bulletins for each State and Territory and for Australia (see Chapter XXX. Miscellaneous).

## SHIPPING

## § 1. Control of Shipping

1. **Commonwealth Navigation and Shipping Legislation.**—By section 51 (i) of the Commonwealth Constitution, the Parliament of the Commonwealth is empowered to make laws in respect of "Trade and commerce with other countries, and among the States". By section 98, this power is further defined as extending to navigation and shipping. Section 51 (vii) empowers the Commonwealth Parliament to legislate in respect of "Lighthouses, lightships, beacons and buoys" and section 51 (ix) in respect of "Quarantine".

A review of the introduction and development of the *Navigation Act 1912–1950* was given in Year Book No. 40, pages 110–2. Amendments to the principal Act were made by the *Navigation Acts of 1952, 1953, 1956, 1958 and 1961*.

Other shipping Acts under the powers of the Commonwealth are the *Sea-Carriage of Goods Act 1924–1961*, the *Seamen's Compensation Act 1911–1960*, the *Seamen's War Pensions and Allowances Act 1940–1961*, *Pollution of the Sea by Oil Act 1960*, the *Australian Coastal Shipping Commission Act 1956*, the *Australian Coastal Shipping Agreement Act 1956* and the *Stevedoring Industry Act 1956–1962*.

The control of shipping during, and immediately after, the 1939–45 War and the establishment of the Maritime Industry Commission (abolished in 1952), the Australian Stevedoring Industry Board (replaced in 1956 by the Australian Stevedoring Industry Authority), and the Australian Shipping Board (replaced in 1956 by the Australian Coastal Shipping Commission) are described in Year Books No. 36, pages 121–30, and No. 39, pages 147–8.

2. **Australian Coastal Shipping Commission.**—This Commission was established in 1956 for the purpose of maintaining and operating interstate, oversea and territorial shipping services, and replaced the Australian Shipping Board. It operates the Australian National Line, a Commonwealth-owned merchant shipping service which, at 30th June, 1963, comprised 40 vessels totalling 172,261 gross tons. These included 15 vessels with a gross tonnage of 500 to 3,000, 12 vessels with a gross tonnage of 3,000 to 5,000, 11 vessels with a gross tonnage of 5,000 to 8,000, and the bulk ore carriers *Mount Keira* 10,229 gross tons and *Mount Kembla* 10,112 gross tons.

The Commission has currently on order a 7,500 ton deadweight bulk carrier, *Jeparit*, and a passenger vehicular vessel, *Empress of Australia*, of approximately 9,850 gross tons for operation between Sydney and Tasmania. The latter vessel will augment the service



already being provided between the mainland and Tasmania by the *Princess of Tasmania*, the vehicular container ship *Bass Trader* and the container vessel *South Esk*. The 21,400 ton deadweight bulk carrier *Musgrave Range*, now on the stocks, is expected to be in service during 1964.

In the year ended 30th June, 1963, the *Princess of Tasmania* carried 89,649 passengers, 19,760 accompanied vehicles, 7,410 commercial vehicles, 3,552 trade cars and 321 mail vans.

3. **Australian Shipbuilding Board.**—(i) *Constitution and Functions.* Originally established in 1941 under National Security Regulations, the Board has been reconstituted a number of times since its inception, and in 1948 was constituted on a permanent basis under the control of the Minister for Shipping and Transport. The membership of the Board consists of a Chairman, who is the General Manager, a Deputy Chairman, a Finance Member and two other members one of whom represents the Naval Board. The staff of the Board are employed under the *Public Service Act 1922–1960* as officers of the Department of Shipping and Transport.

The existing functions of the Board, which have been summarized in earlier issues of the Year Book, are set out in detail in regulation 22 (4) of the Supply and Development Regulations.

(ii) *Construction Programme.* From its inception to 30th June, 1963, the Board had arranged for the construction of 75 merchant vessels totalling 513,142 deadweight tons. During the 1939–45 War, the Board was also responsible for the construction of numerous small craft and a 1,000-ton floating dock.

At 30th June, 1963, current orders for trading vessels placed by the Board were for the construction of seven vessels totalling 64,375 deadweight tons. The vessels consisted of one passenger vehicular vessel of 2,175 dw.t., two 21,400 dw.t. bulk carriers, one 7,500 dw.t. general purpose bulk carrier, two roll-on roll-off vehicular traffic vessels, each of 3,250 dw.t., and one "seatainer" vessel of 5,400 dw.t. A further order has since been placed for a 3,650 dw.t. motor cargo vessel.

Other types of ships under construction at 30th June, 1963, included a Naval Survey vessel of 2,300 tons displacement, two lighthouse supply vessels and a survey vessel for use in the Philippines. Two further lighthouse supply vessels have been ordered since.

It is expected that orders will be placed this year for the construction in Australian shipyards of oil tankers for use on the Australian coast.

4. **Australian Stevedoring Industry Authority.**—In March, 1947, legislation established a permanent Stevedoring Industry Commission to continue in peace-time the functions performed during the war by the Commission established under National Security legislation. In June, 1949, legislation was enacted to abolish the Stevedoring Industry Commission, on which employers and employees were represented, and established in its place a Stevedoring Industry Board of three members, which attended to administrative matters formerly under the control of the Commission, such as the operation of labour bureaux at ports, payment of attendance money and provision of amenities. The industrial functions which previously came within the province of the Commission were assigned to a single Judge of the Commonwealth Court of Conciliation and Arbitration. In August, 1956, following a Committee of Inquiry into the stevedoring industry, the Stevedoring Industry Board was replaced by the Australian Stevedoring Industry Authority of three members, including a representative of the management side of industry and a representative of the trade union movement. At the same time, the judicial and non-judicial functions formerly exercised by the Commonwealth Court of Conciliation and Arbitration were divided between the Commonwealth Industrial Court and the Commonwealth Conciliation and Arbitration Commission respectively. Awards of the Conciliation and Arbitration Commission subsequently placed payment of sick pay, public holiday pay and annual leave under the administration of the Authority. Under amending legislation which operated from 6th June, 1961, the Authority became responsible for payment of long service leave to registered waterside workers, and its disciplinary powers were strengthened to reduce the time lost through unauthorized stoppages. The statutory provisions regulating the industry are now contained in the *Stevedoring Industry Act 1956–1962* and in Division 4 of Part III of the *Conciliation and Arbitration Act 1904–1961*.

## § 2. System of Record

In the system of recording statistics of oversea shipping, Australia is considered as a unit, and therefore only one entry and one clearance are counted for each voyage, without regard to the number of States visited (*see* also § 4, p. 559). For the purpose of these statistics, the Australian mainland and Tasmania are treated as Australia and all external territories as oversea countries.

On arrival at, or departure from, a port in Australia, whether from or for an oversea country or from or for another port in Australia, the master or agent must "enter" the vessel with the Customs authorities at the port, and supply certain prescribed information in regard to the ship, passengers and cargo. At the end of each month, the information so obtained is forwarded to the Bureau of Census and Statistics. This information relates, in the main, only to vessels engaged in the carriage of passengers and/or cargo between Australian States or between Australia and oversea countries.

The size of a vessel may be expressed in a number of ways. A vessel's gross tonnage, expressed in tons of 100 cubic feet, represents the total volume of the enclosed space, i.e. a ship of 25,000 tons has a total enclosed capacity of 2,500,000 cubic feet. Its net tonnage, expressed in tons of 100 cubic feet, represents the volume of enclosed space that can be used for cargo or passengers. Its displacement is its total weight and is expressed in tons of 2,240 lb. Its deadweight tonnage is the difference between the displacement of the vessel loaded to its summer deadline and the displacement light, i.e. it is the weight the vessel can carry, including the weight of bunkers and stores. Net tonnage is the concept generally used in the tables in this chapter, but since it can give a misleading impression of the size of ships which have a function other than carrying passengers and cargo (e.g. a tug has no net tonnage), some figures are given for deadweight tons and tons gross also.

Most of the cargo is recorded in terms of the ton weight of 2,240 lb. However, some additional cargo, mainly bulky commodities, is shipped and recorded on the basis of 40 cubic feet of space used representing one ton measurement.

Except in § 5. Shipping at Principal Ports (p. 562), intra-State (coastal) movements of vessels, including those of vessels engaged solely in trade within State limits, are excluded from the statistics in the following pages.

## § 3. Oversea Shipping

1. **Total Movement.**—The following table shows the number of entrances and clearances combined of oversea vessels at Australian ports, and the aggregate net tonnage, during each of the years 1958–59 to 1962–63.

**OVERSEA SHIPPING: ENTRANCES AND CLEARANCES (COMBINED) OF VESSELS DIRECT, AUSTRALIA**

Particulars	1958–59	1959–60	1960–61	1961–62	1962–63
Number of vessels .. ..	5,463	5,945	6,778	7,210	6,762
Net tonnage .. .. '000 tons	26,019	28,874	34,317	37,662	37,584

Particulars of the total oversea movement of shipping for each year from 1822 to 1920–21 were published in Year Book No. 15, page 507, and those for each year from 1921–22 to 1950–51 in Year Book No. 40, page 97.

2. **Total Oversea Shipping, States.**—The following table shows, for each State and the Northern Territory, the number of entrances and clearances of vessels direct from and to oversea countries, and the aggregate net tonnage, during the year 1962–63.

**OVERSEA SHIPPING: ENTRANCES AND CLEARANCES OF VESSELS DIRECT,  
1962-63**

Particulars		N.S.W.	Vic.	Qld	S.A.	W.A.	Tas.	N.T.	Aust.
Entrances	No.	1,098	548	626	200	822	83	34	3,411
	'000 net tons	6,219	4,018	2,360	975	4,999	288	99	18,958
Clearances	No.	942	503	775	228	825	49	29	3,351
	'000 net tons	5,841	3,730	2,999	1,082	4,695	199	80	18,626

3. **Shipping Communication with Various Countries.**—A vessel arriving in Australia from overseas is recorded as coming from the country where the voyage commenced, irrespective of the number of intermediate ports of call. Similarly, a vessel leaving Australia is recorded as going to the country where the voyage is scheduled to terminate.

The following table shows statistics of the net tonnage entered and cleared, with cargo and in ballast, according to the principal countries where vessels commenced or terminated their voyages to or from Australia.

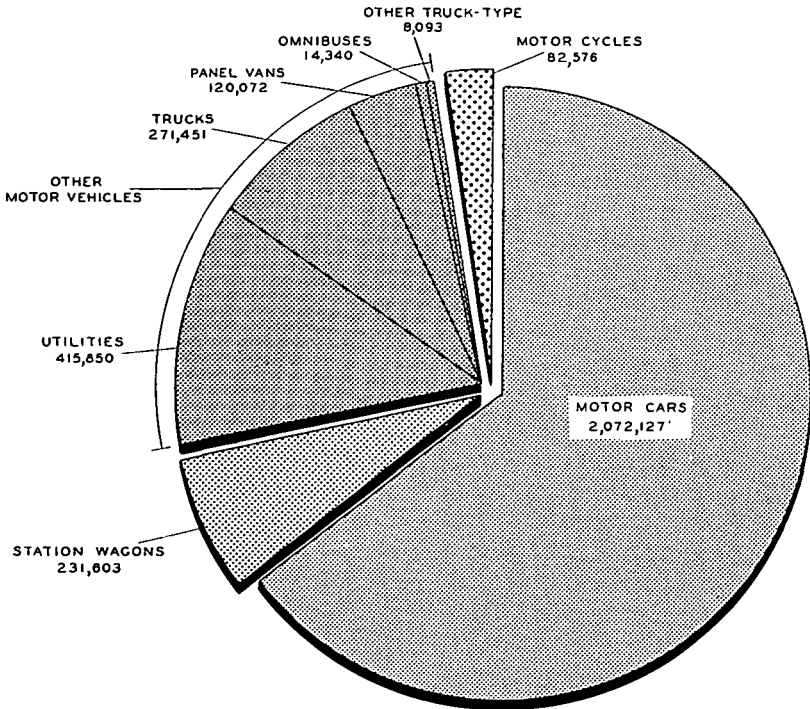
**OVERSEA SHIPPING: COUNTRIES FROM WHICH ENTERED OR FOR WHICH  
CLEARED, AUSTRALIA**

('000 net tons)

Country from which entered or for which cleared	With cargo or in ballast	Entered			Cleared		
		1960-61	1961-62	1962-63	1960-61	1961-62	1962-63
United Kingdom	Cargo	1,714	1,607	1,627	2,137	2,197	2,014
	Ballast	54	60	18	64	10	25
Canada	Cargo	423	493	502	264	277	345
	Ballast	8		5			
Nauru	Cargo	423	550	532	237	265	280
	Ballast		6		45	62	62
New Zealand	Cargo	760	752	772	1,261	1,240	1,185
	Ballast	615	891	790	82	119	92
Singapore	Cargo	372	336	411	396	398	487
	Ballast	87	107	133	356	482	623
Other Commonwealth countries	Cargo	1,644	1,798	1,631	1,339	1,638	1,370
	Ballast	328	357	297	226	310	333
Arabian States	Cargo	2,180	2,012	3,158	140	118	139
	Ballast	6	3	43	2,723	2,838	2,961
France	Cargo	82	104	84	105	138	141
	Ballast	3			6		
Germany, Federal Republic of	Cargo	386	347	357	336	407	368
	Ballast		4			6	13
Indonesia	Cargo	1,391	1,733	1,684	175	122	86
	Ballast	186	354	193	858	1,010	964
Iran	Cargo	1,111	1,006	1,020	99	64	107
	Ballast	21		10	521	498	753
Italy	Cargo	248	231	277	526	349	317
	Ballast		1		11		11
Japan	Cargo	1,065	811	921	2,013	2,661	2,402
	Ballast	1,405	2,522	1,968	26	13	41
Netherlands	Cargo	186	227	141	258	386	218
	Ballast	9		5			
New Caledonia	Cargo	217	191	192	205	155	171
	Ballast	44	32	31	20	6	71
United States of America	Cargo	982	812	890	720	795	857
	Ballast	8	11	13	45	24	18
Other foreign countries	Cargo	1,105	1,061	920	1,693	1,989	1,925
	Ballast	206	439	333	161	227	247
Total	Cargo	14,289	14,071	15,119	11,904	13,199	12,412
	Ballast	2,980	4,787	3,839	5,144	5,605	6,214
Total with Cargo and in Ballast		17,269	18,858	18,958	17,048	18,804	18,626

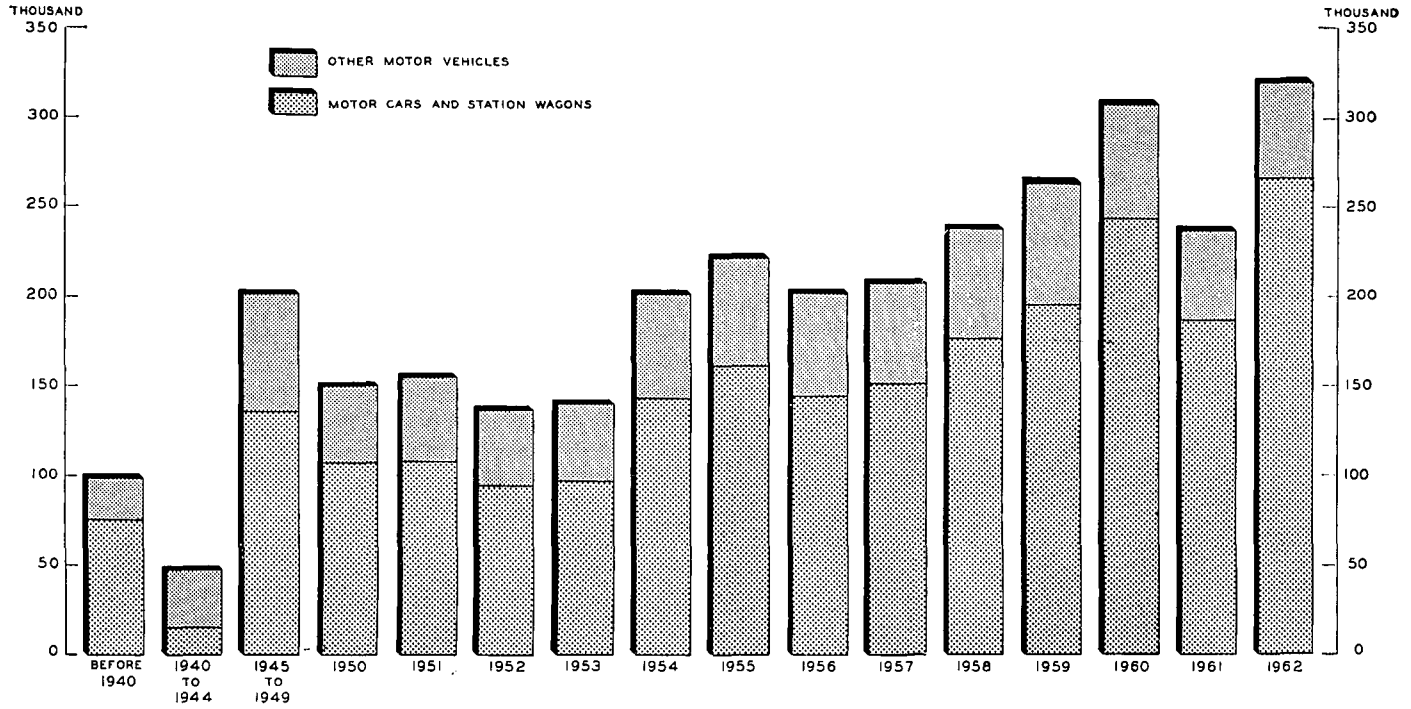
4. **Country of Registration of Oversea Shipping.**—Particulars of overseas shipping which entered Australian ports during each of the years 1960-61 to 1962-63 are given in the following table according to country of registration of vessels.

AUSTRALIA  
 CENSUS OF MOTOR VEHICLES, 31<sup>ST</sup> DECEMBER, 1962  
 TYPES OF VEHICLE



TOTAL MOTOR VEHICLES-3,216,112

AUSTRALIA  
 CENSUS OF MOTOR VEHICLES, 31<sup>ST</sup> DECEMBER, 1962  
 BY YEAR OF MODEL



EXCLUDES MOTOR CYCLES

OVERSEA SHIPPING: COUNTRY OF REGISTRATION OF VESSELS ENTERED, AUSTRALIA

('000 net tons)

Vessels registered at ports in—	1960-61	1961-62	1962-63	Vessels registered at ports in—	1960-61	1961-62	1962-63
<b>Commonwealth countries—</b>				<b>Foreign countries—</b>			
Australia .. .. .	269	347	130	<i>continued—</i>			
Hong Kong .. .. .	327	585	466	Norway .. .. .	2,045	2,158	2,355
New Zealand .. .. .	343	343	341	Panama .. .. .	462	439	524
Singapore .. .. .	63	95	49	Sweden .. .. .	624	839	745
United Kingdom .. .	7,390	7,497	7,413	United States of America .. .. .	307	278	335
Other .. .. .	243	179	129	Other .. .. .	237	244	212
In cargo .. .. .	7,375	7,133	7,244	In cargo .. .. .	6,914	6,938	7,875
In ballast .. .. .	1,260	1,913	1,284	In ballast .. .. .	1,720	2,874	2,555
<b>Total, Commonwealth Countries</b>	<b>8,635</b>	<b>9,046</b>	<b>8,528</b>	<b>Total, Foreign Countries</b>	<b>8,634</b>	<b>9,812</b>	<b>10,430</b>
<i>Proportion of total %</i>	<i>50.0</i>	<i>47.9</i>	<i>42.9</i>	<i>Proportion of total %</i>	<i>50.0</i>	<i>52.1</i>	<i>57.1</i>
<b>Foreign countries—</b>				<b>All countries—</b>			
Denmark .. .. .	493	561	566	In cargo .. .. .	14,289	14,071	15,119
France(a) .. .. .	324	456	276	Proportion of total %	82.7	74.6	79.7
Germany, Federal Republic .. .. .	245	307	312	In ballast .. .. .	2,980	4,787	3,839
Greece .. .. .	725	1,212	933	Proportion of total %	17.3	25.4	20.3
Italy .. .. .	532	656	898				
Japan .. .. .	907	859	1,293	<b>Grand Total .. .. .</b>	<b>17,269</b>	<b>18,858</b>	<b>18,958</b>
Liberia .. .. .	736	886	1,150				
Netherlands .. .. .	997	917	831				

(a) Includes New Caledonia (29 during 1962-63).

The Australian tonnage which entered Australian ports from overseas during the year 1962-63 represented 0.7 per cent. of the total tonnage entered and was confined mainly to the New Zealand and Pacific Islands trade.

§ 4. Interstate Shipping

1. System of Record.—*Interstate Shipping* comprises two elements: (a) vessels engaged solely in interstate trade; and (b) vessels trading between Australia and overseas countries and in the course of their voyages proceeding from one State to another. (However, these vessels, except under special circumstances, do not engage in interstate carrying. Numerous overseas vessels obtain single voyage permits or exemptions under the *Navigation Act 1912-1950*. Such vessels include overseas tankers carrying petroleum products interstate, and, since the withdrawal of interstate passenger liners, other overseas vessels, under permit, carrying passengers and frozen cargo on the interstate run.) No complexity enters into the record of those in category (a), but with regard to the method of recording the movements of the overseas vessels (b), some explanation is necessary. Each State desires that its shipping statistics should show in full its shipping communication with overseas countries, but at the same time it is necessary to avoid any duplication in the statistics of Australia as a whole. In order to meet these dual requirements, a vessel arriving in any State from an overseas country—say the United Kingdom—via another State, is recorded in the second State as from the United Kingdom "Overseas via States", thus distinguishing the movement from a direct overseas entry. Continuing the voyage, the vessel is again recorded for the statistics of the third State as from the United Kingdom "Overseas via States". On an inward voyage, the clearance from the first State to the second State is a clearance interstate, and is included with interstate tonnage in conformity with the prefederation practice of the States, and to preserve the continuity of State statistics. Thus, movements of ships which are, from the standpoint of Australia as a whole, purely coastal movements, must for the individual States be recorded as "Overseas via States" or "Interstate" according to the direction of the movement. The significance of the record of these movements will be seen more clearly

from the following tabular presentation of the inward and outward voyages to and from Australia of an oversea vessel which, it is presumed, reaches Fremantle (Western Australia) and then proceeds to the terminal port of the voyage—Sydney (New South Wales)—via South Australia and Victoria. From the terminal port, the vessel will commence the outward voyage and retrace its inward track.

#### ITINERARY OF AN OVERSEA VESSEL ON THE AUSTRALIAN COAST

Particulars	Recorded as—		
	For the State and for Australia	For the States	
		1.	2.
<b>Inward Voyage—</b>			
Enters Fremantle from United Kingdom	Oversea direct	Interstate direct	
Clears Fremantle for Adelaide .. ..			
Enters Adelaide from United Kingdom via Fremantle .. ..		Interstate direct	Oversea via States
Clears Adelaide for Melbourne .. ..			
Enters Melbourne from United Kingdom via Adelaide .. ..		Interstate direct	Oversea via States
Clears Melbourne for Sydney .. ..			
Enters Sydney from United Kingdom via Melbourne .. ..		Interstate direct	Oversea via States
<b>Outward Voyage—</b>			
Clears Sydney for United Kingdom via Melbourne .. ..			Oversea via States
Enters Melbourne from Sydney .. ..		Interstate direct	
Clears Melbourne for United Kingdom via Adelaide .. ..			Oversea via States
Enters Adelaide from Melbourne .. ..		Interstate direct	
Clears Adelaide for United Kingdom via Fremantle .. ..			Oversea via States
Enters Fremantle from Adelaide .. ..		Interstate direct	
Clears Fremantle for United Kingdom ..	Oversea direct		

From the method outlined above, the requirements for Australia and for the individual States are ascertained as follows. (a) The aggregate of all ships recorded for each State as "Oversea direct" gives the oversea shipping for Australia as a whole; (b) the aggregate for all ships recorded in any State as "Oversea direct" plus those recorded as "Oversea via States" gives the total *oversea shipping* for that State; and (c) the aggregate for all ships recorded as "Oversea via States" may also be used, together with those recorded as "Interstate direct" (including those engaged solely in interstate movement) to furnish figures showing the total *interstate movement* of shipping.

2. **Interstate Movement.**—(i) *Interstate Direct.* The following table shows the number of entrances and the net tonnage of vessels recorded into each State and the Northern Territory from any other State (including oversea vessels on interstate direct voyages as in column 2 above) during each of the years 1960–61 to 1962–63.

#### INTERSTATE MOVEMENT OF SHIPPING: ENTRANCES OF VESSELS INTERSTATE DIRECT

State or Territory	Number			Net tons ('000)		
	1960–61	1961–62	1962–63	1960–61	1961–62	1962–63
New South Wales .. ..	1,883	1,933	1,844	5,780	6,149	5,946
Victoria .. ..	1,637	1,749	1,711	4,809	5,147	4,915
Queensland .. ..	799	748	772	2,030	1,930	2,195
South Australia .. ..	1,103	1,147	1,132	3,726	3,969	4,010
Western Australia .. ..	671	685	649	3,303	3,206	2,950
Tasmania .. ..	1,100	1,223	1,200	1,472	1,675	1,739
Northern Territory .. ..	66	69	71	107	139	144
<b>Australia .. ..</b>	<b>7,259</b>	<b>7,554</b>	<b>7,379</b>	<b>21,227</b>	<b>22,215</b>	<b>21,899</b>

(ii) *Oversea via States.* The figures in the following table show the number of entrances and clearances of vessels to and from oversea countries via other Australian States as in column 3 in the table in para. 1, p. 560, and their aggregate net tonnage.

**INTERSTATE MOVEMENT OF SHIPPING: ENTRANCES AND CLEARANCES OF VESSELS OVERSEAS VIA OTHER AUSTRALIAN STATES, 1962-63**

Particulars		N.S.W.	Vic.	Qld	S.A.	W.A.	Tas.	N.T.	Aust.
Entrances ..	No.	827	918	431	613	49	331	4	3,173
	'000 net tons	4,237	4,655	1,987	2,901	290	1,447	12	15,529
Clearances ..	No.	840	884	249	533	31	314	1	2,852
	'000 net tons	3,716	4,429	1,063	2,483	153	1,341	6	13,191

(iii) *Total Interstate Movement.* In order to ascertain the aggregate movement of interstate shipping, including the total interstate movement of oversea vessels, the figures in the two preceding tables must be combined. The following table shows, for each State and the Northern Territory, the number of entrances and clearances of vessels from and for other States (including the interstate movement of oversea vessels) during the year 1962-63, together with the aggregate net tonnage.

**INTERSTATE MOVEMENT OF SHIPPING: TOTAL, 1962-63**

Particulars		N.S.W.	Vic.	Qld	S.A.	W.A.	Tas.	N.T.	Aust.
Entrances ..	No.	2,671	2,629	1,203	1,745	698	1,531	75	10,552
	'000 net tons	10,183	9,570	4,182	6,911	3,240	3,186	156	37,428
Clearances ..	No.	2,814	2,686	1,054	1,838	703	1,574	77	10,746
	'000 net tons	10,352	9,856	3,459	7,217	3,557	3,247	174	37,862

The following table shows the total interstate movement of shipping, including oversea vessels travelling overseas via States and interstate direct, for Australia for each of the years 1958-59 to 1962-63.

**INTERSTATE MOVEMENT OF SHIPPING: TOTAL, AUSTRALIA**

Particulars		1958-59	1959-60	1960-61	1961-62	1962-63
Entrances ..	No.	9,446	9,866	10,225	10,551	10,552
	'000 net tons	30,932	32,857	35,791	36,974	37,428
Clearances ..	No.	9,425	9,819	10,276	10,608	10,746
	'000 net tons	30,842	32,622	36,006	36,923	37,862

3. *Shipping Engaged Solely in Interstate Trade.*—The following table shows, for each State and the Northern Territory, the number of entrances direct from other States of vessels engaged solely in interstate trade (i.e., excluding oversea vessels in continuation of their oversea voyages) during the year 1962-63, together with the net tonnage.

**SHIPPING ENGAGED SOLELY IN INTERSTATE TRADE(a): ENTRANCES, 1962-63**

Particulars		N.S.W.	Vic.	Qld	S.A.	W.A.	Tas.	N.T.	Aust.
Ships entered	..	1,170	1,071	372	812	258	1,097	65	4,845
Net tons	.. '000	2,929	1,718	550	2,321	833	1,232	112	9,695

(a) Excludes vessels travelling interstate via ports in the same State.



4. Australian Trading Vessels.—The following table shows particulars of all Australian trading vessels of 200 gross tons or more engaged in the regular overseas, interstate or coastal (intrastate) services at 30th June, 1963.

**AUSTRALIAN TRADING VESSELS<sup>(a)</sup> OF 200 GROSS TONS OR MORE,  
30th JUNE, 1963**

Vessels	No.	Deadweight tons	Gross tons
<b>Interstate vessels—</b>			
Australian-owned, Australian-registered vessels ..	95	547,502	409,888
New Zealand-owned, Australian-registered engaged in Australian coastal trade .. .. .	9	24,835	21,047
Total Interstate Vessels .. .. .	104	572,337	430,935
Intrastate vessels .. .. .	21	29,525	25,141
<i>Total Coastal Trading Vessels</i> .. .. .	<i>125</i>	<i>601,862</i>	<i>456,076</i>
<b>Overseas trading vessels—</b>			
Australian-owned, Australian-registered operated mainly on overseas services .. .. .	7	25,982	23,811
Australian-owned, overseas-registered operated wholly on overseas services .. .. .	14	150,116	109,896
<i>Total Overseas Trading Vessels</i> .. .. .	<i>21</i>	<i>176,098</i>	<i>133,707</i>
<b>Total Australian Trading Vessels</b> .. .. .	<b>146</b>	<b>777,960</b>	<b>589,783</b>

(a) Includes 14 vessels of 109,896 gross tons not registered in Australia.

### § 5. Shipping at Principal Ports

NOTE.—For details of Harbour Boards and Trusts in each State see Chapter XX.

1. Total Shipping, Australia.—The following table shows the total volume of shipping—overseas, interstate and coastal—which entered the principal ports of Australia during the years 1961–62 and 1962–63. The movements of warships and of other non-commercial vessels are excluded from the table.

**TOTAL SHIPPING: ENTRANCES AT PRINCIPAL PORTS, AUSTRALIA**

Port of entry	1961–62		1962–63		Port of entry	1961–62		1962–63	
	Num- ber	Net tons '000	Num- ber	Net tons '000		Num- ber	Net tons '000	Num- ber	Net tons '000
<b>New South Wales—</b>					<b>South Australia—</b>				
Sydney <sup>(a)</sup> ..	4,395	14,715	4,142	14,683	Adelaide <sup>(b)</sup> ..	2,496	5,871	2,348	6,159
Newcastle ..	2,119	5,417	1,902	4,811	Port Lincoln ..	312	477	316	434
Port Kembla ..	1,113	3,781	1,131	3,872	Port Pirie ..	423	1,071	448	1,062
					Rapid Bay ..	96	237	110	310
					Walleroo ..	83	265	36	162
					Whyalla ..	497	1,721	474	1,718
<b>Victoria—</b>					<b>Western Australia—</b>				
Melbourne ..	2,852	11,094	2,862	11,288	Fremantle <sup>(c)</sup> ..	1,491	8,017	1,425	7,696
Geelong ..	600	3,330	657	3,495	Albany ..	144	672	140	674
					Bunbury ..	126	499	114	472
					Carnarvon ..	71	110	77	134
					Geraldton ..	146	493	110	386
					Yampi ..	142	631	136	608
<b>Queensland—</b>					<b>Tasmania—</b>				
Brisbane ..	1,406	4,870	1,488	5,303	Hobart ..	577	1,520	591	1,382
Bowen ..	31	70	37	115	Burnie ..	365	686	393	980
Cairns ..	327	626	300	637	Devonport ..	428	668	403	707
Gladstone ..	96	450	93	450	Launceston ..	604	796	580	987
Mackay ..	107	294	127	486		o			
Rockhampton ..	104	279	112	309	<b>Northern Territory—</b>				
Townsville ..	377	1,034	349	991	Darwin ..	114	224	109	255

(a) Includes Botany Bay.

(b) Includes Port Stanvac.

(c) Includes Kwinana.

2. Total Shipping—Australia, New Zealand and the United Kingdom.—The following table shows the total shipping tonnage which entered the principal ports of Australia, New Zealand and the United Kingdom during 1962–63.

**TOTAL SHIPPING: ENTRANCES AT PORTS, AUSTRALIA, NEW ZEALAND AND THE UNITED KINGDOM**

('000 net tons)

Port	Net tonnage entered	Port	Net tonnage entered	Port	Net tonnage entered
<b>AUSTRALIA—</b>					
Sydney (N.S.W.)(a)	14,683	<b>NEW ZEALAND—</b>		<b>ENGLAND AND WALES—</b>	
Melbourne (Vic.) ..	11,288	Wellington ..	4,841	<i>continued</i>	
Fremantle (W.A.)(b)	7,696	Auckland ..	4,365	Manchester (including Runcorn) ..	6,862
Adelaide (S.A.)(c) ..	6,159	Lyttleton ..	3,449	Hull ..	6,302
Brisbane (Qld) ..	5,303	Otago ..	1,514	Bristol ..	6,004
Newcastle (N.S.W.) ..	4,811	Napier ..	1,239	Middlesbrough ..	4,534
Port Kembla (N.S.W.) ..	3,872	Bluff ..	1,034	Swansea ..	4,349
Geelong (Vic.) ..	3,495	Taranaki ..	985	Cardiff ..	3,592
Whyalla (S.A.) ..	1,718	<b>ENGLAND AND WALES—</b>		<b>SCOTLAND—</b>	
Hobart (Tas.) ..	1,382	London ..	47,978	Glasgow ..	8,067
Port Pirie (S.A.) ..	1,062	Southampton ..	25,791	<b>NORTHERN IRELAND—</b>	
Townsville (Qld) ..	991	Liverpool (including Birkenhead) ..	22,533	Belfast ..	8,266
Launceston (Tas.) ..	987	Tyne Ports ..	7,998		
Burnie (Tas.) ..	980	Dover ..	7,154		

(a) Includes Botany Bay.

(b) Includes Kwinana.

(c) Includes Port Stanvac.

**§ 6. Shipping Cargo**

1. Oversea and Interstate Cargo.—(i) *Australia*. The table hereunder shows the aggregate tonnage of oversea and interstate cargo discharged and shipped at Australian ports for the years 1958–59 to 1962–63. Most of the cargo is recorded in terms of the ton weight of 2,240 lb., the remainder, mainly bulky commodities, being shipped and recorded on the basis of 40 cubic feet of space occupied representing one ton measurement.

**SHIPPING CARGO MOVEMENT: AUSTRALIA**

('000 tons)

Year	Oversea cargo				Interstate cargo			
	Discharged		Shipped		Discharged		Shipped	
	Weight	Meas.	Weight	Meas.	Weight	Meas.	Weight	Meas.
1958–59 ..	14,232	2,666	8,646	1,469	12,236	1,288	12,345	1,047
1959–60 ..	15,458	3,263	10,108	1,479	12,535	1,562	12,923	1,360
1960–61 ..	17,265	3,801	13,748	1,551	13,130	1,622	13,713	1,473
1961–62 ..	17,508	2,763	17,178	1,547	13,318	1,427	13,658	1,186
1962–63 ..	19,497	3,397	15,405	1,545	13,882	1,306	14,340	1,100

(ii) *Principal Ports.* The following table shows the tonnage of overseas and interstate cargo discharged and shipped at the principal ports of Australia during 1962-63.

**CARGO DISCHARGED AND SHIPPED AT PRINCIPAL PORTS, 1962-63**  
(<sup>'000 tons</sup>)

Port	Discharged				Shipped			
	Overseas		Interstate		Overseas		Interstate	
	Wt	Meas.	Wt	Meas.	Wt	Meas.	Wt	Meas.
Sydney .. .. .	1,873	1,358	641	182	2,524	418	238	109
Botany Bay .. .. .	3,941	..	5	..	93	..	907	..
Newcastle .. .. .	311	..	1,958	..	1,318	..	1,768	..
Port Kembla .. .. .	410	..	4,033	..	1,038	..	738	..
Other .. .. .	4	..	24	..	8	5	2	..
<i>Total, New South Wales</i> .. .. .	<i>6,539</i>	<i>1,358</i>	<i>6,661</i>	<i>182</i>	<i>4,981</i>	<i>423</i>	<i>3,653</i>	<i>109</i>
Melbourne .. .. .	3,589	1,256	1,680	399	1,006	524	794	434
Geelong .. .. .	3,575	3	492	24	1,772	2	1,073	7
Portland .. .. .	33	..	73	..	139	..	2	..
<i>Total, Victoria</i> .. .. .	<i>7,197</i>	<i>1,259</i>	<i>2,254</i>	<i>423</i>	<i>2,917</i>	<i>526</i>	<i>1,869</i>	<i>441</i>
Brisbane .. .. .	421	249	799	83	624	98	49	24
Cairns .. .. .	51	1	98	11	160	2	29	4
Gladstone .. .. .	9	..	80	..	289	..	9	..
Mackay .. .. .	14	..	57	..	530	..	20	..
Townsville .. .. .	31	..	170	12	352	1	67	..
Other .. .. .	9	1	65	3	402	4	511	1
<i>Total, Queensland</i> .. .. .	<i>535</i>	<i>251</i>	<i>1,269</i>	<i>109</i>	<i>2,357</i>	<i>105</i>	<i>685</i>	<i>29</i>
Port Adelaide .. .. .	335	340	1,492	58	421	193	146	21
Ardrossan .. .. .	..	..	..	..	109	..	203	..
Port Lincoln .. .. .	51	..	41	..	168	..	29	..
Port Pirie .. .. .	14	..	180	..	539	..	180	..
Port Stanvac .. .. .	402	..	..	..	7	..	74	..
Rapid Bay .. .. .	..	..	..	..	..	..	629	..
Whyalla .. .. .	5	..	239	..	79	..	3,610	..
Other .. .. .	42	1	1	..	458	17	274	..
<i>Total, South Australia</i> .. .. .	<i>849</i>	<i>341</i>	<i>1,953</i>	<i>58</i>	<i>1,781</i>	<i>210</i>	<i>5,145</i>	<i>21</i>
Fremantle(a) .. .. .	3,726	140	599	93	2,255	70	1,052	26
Bunbury .. .. .	106	..	4	..	319	43	29	4
Geraldton .. .. .	56	..	..	..	284	8	16	..
Yampi .. .. .	..	..	4	..	..	..	1,271	..
Other .. .. .	139	2	34	2	300	19	31	2
<i>Total, Western Australia</i> .. .. .	<i>4,027</i>	<i>142</i>	<i>641</i>	<i>95</i>	<i>3,158</i>	<i>140</i>	<i>2,399</i>	<i>32</i>
Hobart .. .. .	113	14	421	103	134	109	193	99
Burnie .. .. .	58	2	152	20	44	14	64	85
Launceston .. .. .	123	29	259	83	25	15	74	51
Other .. .. .	7	1	183	232	1	3	252	233
<i>Total, Tasmania</i> .. .. .	<i>301</i>	<i>46</i>	<i>1,015</i>	<i>438</i>	<i>204</i>	<i>141</i>	<i>583</i>	<i>468</i>
Darwin, Northern Territory .. .. .	49	..	89	1	7	..	6	..
<i>Australia</i> .. .. .	<i>19,497</i>	<i>3,397</i>	<i>13,882</i>	<i>1,306</i>	<i>15,405</i>	<i>1,545</i>	<i>14,340</i>	<i>1,100</i>

(a) Includes Kwinana.

2. Oversea Cargo according to Country of Registration of Vessels.—The following table shows the total overseas cargo, discharged and shipped combined, according to the country in which the vessels were registered, during each of the years 1960–61 to 1962–63.

**OVERSEA CARGO DISCHARGED AND SHIPPED: COUNTRY OF REGISTRATION OF VESSELS, AUSTRALIA**

('000 tons)

Vessels registered at ports in—	1960–61		1961–62		1962–63	
	Weight	Meas.	Weight	Meas.	Weight	Meas.
<b>Commonwealth countries—</b>						
Australia .. .. .	273	106	297	116	169	108
Hong Kong .. .. .	606	68	1,092	27	695	71
New Zealand .. .. .	507	404	487	358	515	407
United Kingdom .. .. .	12,457	2,703	12,735	2,204	12,454	2,519
Other .. .. .	612	167	457	173	396	116
<i>Total, Commonwealth Countries</i> .. .. .	<i>14,455</i>	<i>3,448</i>	<i>15,068</i>	<i>2,878</i>	<i>14,229</i>	<i>3,221</i>
<i>Proportion of Total</i> %	<i>46.6</i>	<i>64.4</i>	<i>43.4</i>	<i>66.8</i>	<i>40.8</i>	<i>65.2</i>
<b>Foreign Countries—</b>						
Denmark .. .. .	1,042	33	1,283	36	1,333	50
France and New Caledonia .. .. .	465	82	730	83	374	106
Germany, Federal Republic of .. .. .	476	240	546	215	627	246
Greece .. .. .	1,468	30	2,422	47	1,800	18
Italy .. .. .	384	84	864	52	1,319	56
Japan .. .. .	1,879	210	1,697	216	2,622	205
Liberia .. .. .	1,641	80	1,988	16	2,696	12
Netherlands .. .. .	1,322	314	1,206	218	1,001	291
Norway .. .. .	4,628	354	5,205	165	5,638	249
Panama .. .. .	856	56	876	10	957	36
Sweden .. .. .	1,108	152	1,884	257	1,621	325
United States of America .. .. .	299	138	316	103	237	102
Other .. .. .	990	131	601	14	448	25
<i>Total, Foreign Countries</i> .. .. .	<i>16,558</i>	<i>1,904</i>	<i>19,618</i>	<i>1,432</i>	<i>20,673</i>	<i>1,721</i>
<i>Proportion of Total</i> %	<i>53.4</i>	<i>35.6</i>	<i>56.6</i>	<i>33.2</i>	<i>59.2</i>	<i>34.8</i>
<b>Grand Total</b> .. .. .	<b>31,013</b>	<b>5,352</b>	<b>34,686</b>	<b>4,310</b>	<b>34,902</b>	<b>4,942</b>

**§ 7. Vessels Registered in Australia**

1. Australian-registered Trading Vessels.—The following table shows the number and gross tonnage of trading vessels of 200 tons and over registered in Australia at 30th June, 1963, classified according to—(i) year of construction, 1959 to 1963, and 1958 and earlier years, (ii) type of trade in which the vessels were engaged, and (iii) vessels built in Australian or in overseas shipyards. The statistics in this table have been compiled by the Commonwealth Department of Shipping and Transport. The *Merchant Shipping Act 1894* (Imperial) under which vessels are registered in Australia, does not make it compulsory to register vessels under 15 tons burden if engaged in river or coastal trade. Larger vessels are also exempt from registration if not engaged in trade. Yachts and small trading vessels may be, and frequently are, registered at the request of the owners.

## AUSTRALIAN-REGISTERED TRADING VESSELS, 30TH JUNE, 1963 (a)

Year of construction	Oversea and interstate vessels		Intrastate vessels		Built in Australian yards		Built overseas		Total	
	No.	Gross tons	No.	Gross tons	No.	Gross tons	No.	Gross tons	No.	Gross tons
1958 and earlier .. ..	95	347,355	20	23,145	55	220,154	60	150,346	115	370,500
1959 .. .. .	6	33,146	..	..	4	26,936	2	6,210	6	33,146
1960 .. .. .	3	24,457	..	..	3	24,457	..	..	3	24,457
1961 .. .. .	3	20,141	1	1,996	4	22,137	..	..	4	22,137
1962 .. .. .	2	16,715	..	..	2	16,715	..	..	2	16,715
1963 .. .. .	2	12,932	..	..	2	12,932	..	..	2	12,932
<b>Total, Registered in Australia ..</b>	<b>111</b>	<b>454,746</b>	<b>21</b>	<b>25,141</b>	<b>70</b>	<b>323,331</b>	<b>62</b>	<b>156,556</b>	<b>132</b>	<b>479,887</b>

(a) 200 gross tons and over.

Figures in this table relate to gross tons, and are therefore not comparable with those in the table following, which relate to net tons and to *all* registered vessels irrespective of tonnage and type.

2. *Vessels Registered.*—The following table shows the number and net tonnage of steam, sailing and other vessels on the register of each State and the Northern Territory at 31st December, 1963.

## VESSELS REGISTERED, 31st DECEMBER, 1963

State or Territory	Steam and motor		Sailing				Barges, hulks, dredges, etc., not self-propelled		Total	
			Propelled by sail only		Fitted with auxiliary power					
	No.	Net tons	No.	Net tons	No.	Net tons	No.	Net tons	No.	Net tons
New South Wales ..	308	48,306	29	2,058	147	1,837	12	1,849	496	54,050
Victoria .. .. .	126	156,736	26	664	64	1,248	16	6,211	232	164,859
Queensland .. ..	86	35,121	33	594	56	658	5	1,321	180	37,694
South Australia ..	37	19,691	2	9	50	2,207	5	1,433	94	23,340
Western Australia ..	113	15,854	206	2,961	76	1,711	5	478	400	21,004
Tasmania .. .. .	52	13,732	42	693	114	2,719	3	690	211	17,834
Northern Territory ..	..	..	16	154	11	227	..	..	27	381
<b>Australia ..</b>	<b>722</b>	<b>289,440</b>	<b>354</b>	<b>7,133</b>	<b>518</b>	<b>10,607</b>	<b>46</b>	<b>11,982</b>	<b>1,640</b>	<b>319,162</b>

3. *World Shipping Tonnage.*—At 1st July, 1963, the total steamships, motorships and auxiliaries of 100 gross tons and upwards throughout the world amounted to 39,571, with a gross tonnage of 145,863,463. Of these totals, steamships numbered 12,118 for 74,584,310 gross tons, motorships 26,681 for 71,125,967 gross tons, and auxiliaries 772 for 153,186 gross tons. Included therein were 4,984 oil tankers of 100 gross tons and upwards, with a gross tonnage of 47,121,017. Australian steamships, motorships and auxiliaries, 293 for 557,052 gross tons, constituted 0.74 per cent. and 0.38 per cent. respectively of the total number and tonnage. This information has been derived from *Lloyd's Register of Shipping*.

§ 8. Miscellaneous

1. Lighthouses.—A list of the principal lighthouses on the coast of Australia, giving details of the location, number, colour, character, period, candle-power and visibility of each light so far as particulars are available, will be found in *Transport and Communication*, Bulletin No. 46.

2. Distances by Sea.—The distances by sea between principal ports of Australia and some important ports in other countries which trade with Australia were published in Year Book No. 48, page 525.

3. Shipping Freight Rates.—The *Quarterly Summary of Australian Statistics* shows a list of the current freight rates for general merchandise in respect of both oversea and interstate shipments.

The following table shows the freight rates from Australia to various countries for certain important commodities at 31st December, 1963.

OVERSEA SHIPPING FREIGHT RATES FROM AUSTRALIA TO VARIOUS COUNTRIES, 31st DECEMBER, 1963  
(1 Ton measurement = 40 cubic feet)

Article and country	Unit for which freight rate is quoted	Freight rate
		<i>Rates—Sterling</i>
		s. d.
UNITED KINGDOM AND CONTINENTAL EUROPE—		
Butter .. .. .	Box 56 lb.	11 6
Cheese .. .. .	lb.	0 2 17/32
Eggs, in shell .. .. .	Ton measurement	342 3
Meats, preserved by cold process—		
Beef, refrigerator, excluding carton .. .. .	lb.	0 3 51
Lamb, refrigerator, excluding carton .. .. .	lb.	0 4 33
Mutton, refrigerator, excluding carton .. .. .	lb.	0 3 51
Beef, refrigerator, carton .. .. .	lb.	0 2 53
Lamb, refrigerator, carton .. .. .	lb.	0 2 53
Mutton, refrigerator, carton .. .. .	lb.	0 2 53
Rabbits .. .. .	Ton measurement	267 9
Preserved in tins .. .. .	Ton measurement	224 6
Sausage casings, dried, in casks or cases .. .. .	Ton measurement	353 3
		Frozen
		Dry
Meats, not frozen—preserved in tins .. .. .	Ton measurement	224 6
Milk and cream, condensed .. .. .	Ton measurement	224 6
Fruit—		
Canned .. .. .	Ton measurement	178 0
Dried .. .. .	Ton measurement	178 0
Fresh—		
Apples .. .. .	Standard bushel case	12 9
Citrus .. .. .	Standard bushel case	13 11
Pears .. .. .	Standard bushel case	12 9
Pears .. .. .	Standard bushel case	11 8
Pears .. .. .	Standard bushel case	13 11
Grapes, grapefruit, oranges, lemons and plums .. .. .	¼ bushel case	12 7
	½ bushel case	9 0
	¾ bushel carton	8 5
Grain and pulse, unprepared—		
Barley, in bags .. .. .	Ton weight	130 0
Wheat, parcels—		
Bagged .. .. .	Ton weight	107 6
Bulk .. .. .	Ton weight	107 6
Maize .. .. .	Ton weight	152 6
Oats, in bags .. .. .	Ton weight	140 0
Rice, paddy, unhusked .. .. .	Ton weight	177 6
Grain and pulse, prepared—		
Bran .. .. .	Ton weight	167 6
Pollard .. .. .	Ton weight	160 0
Flour, wheaten .. .. .	Ton weight	147 6
Rice, clean, husked .. .. .	Ton weight	152 6
Jams .. .. .	Ton measurement	178 0
Wine .. .. .	Ton measurement	213 6
Hides and skins—		
Calf .. .. .	lb.	0 1 13/16
Cattle .. .. .	lb.	
Fox .. .. .	lb.	
Kangaroo .. .. .	lb.	0 5 15/32
Opossum .. .. .	lb.	
Rabbit and hare .. .. .	lb.	
Wallaby .. .. .	lb.	
Sheep—dumped .. .. .	lb.	0 2 11/16
Other .. .. .	lb.	0 5 15/32

**OVERSEA SHIPPING FREIGHT RATES FROM AUSTRALIA TO VARIOUS COUNTRIES, 31st DECEMBER, 1963—continued**

Article and country	Unit for which freight rate is quoted	Freight rate
		<i>Rates—Sterling</i>
		s. d.
Pearlshell .. .. .	Ton measurement	224 6
Trochus and green snail shell, bags or cases .. .. .	Ton weight	337 6
Wool—		
Greasy, dumped .. .. .	lb.	0 3 74
Scoured and washed, dumped .. .. .	lb.	0 4 69
Tops .. .. .	lb.	0 4 77 net
Bark, tanning .. .. .	Ton weight	234 6
Sandalwood, in bags .. .. .	Ton measurement	224 6
Apparel and attire, effects .. .. .	Ton weight or measurement	352 0
Oils—		
Eucalyptus .. .. .	Ton measurement	254 0
Coconut .. .. .	Ton weight	254 0
Whale .. .. .	Ton weight	254 0
Other .. .. .	Ton weight	254 0
Stearine .. .. .	Ton weight	254 0
Tallow, unrefined, in drums .. .. .	Ton weight	254 0
Ore in casks, bags or drums, n.e.i. .. .. .	Ton weight	139 0
Zinc—		
Ex Risdon .. .. .	Ton weight	85 6
Other than above .. .. .	Ton weight	102 6
Dust in tins, sealed cases or new lined drums .. .. .	Ton weight	319 0
Copper .. .. .	Ton weight	122 6
Lead .. .. .	Ton weight	106 6
Steel billets—		
Up to 20 feet .. .. .	Ton weight	90 0
Over 20 feet and up to 30 feet .. .. .	Ton weight	100 0
Tin clippings, hydraulically pressed .. .. .	Ton weight	113 0
Leather .. .. .	Ton weight	494 0
Timber—		
Logs up to 40 feet long .. .. .	100 super. ft.	78 2
Logs over 40 feet and up to 50 feet long .. .. .	100 super. ft.	83 11
Logs over 50 feet and up to 60 feet long .. .. .	100 super. ft.	90 0
Sawn undressed up to 30 feet—shipment of less than 50 tons .. .. .	100 super. ft.	41 5
Toilet paper .. .. .	Ton measurement	240 0
Stationery—		
Note paper and/or envelopes .. .. .	Ton measurement	370 0
Other than above .. .. .	Ton measurement	384 0
Casein .. .. .	Ton weight	294 0
Fertilizers .. .. .	Ton measurement	287 0
Soap .. .. .	Ton measurement	224 6
Gold and silver specie .. .. .	Ad valorem	15 0%
<b>CEYLON—</b>		
Flour, wheat .. .. .	Ton weight	144 0
Milk and cream—		
Condensed .. .. .	Ton measurement	244 6
Frozen .. .. .	Ton measurement	422 0
General cargo .. .. .	Ton weight or measurement	244 6
<b>INDIA—</b>		
Milk products in cases, cartons, etc. .. .. .	Ton measurement	186 0
Wheat in bags .. .. .	Ton weight	142 0
Wool—		
Greasy .. .. .	lb.	0 3 24
Scoured, etc. .. .. .	lb.	0 4 15
Zinc bars .. .. .	Ton weight	117 6
General cargo .. .. .	Ton weight or measurement	217 6
<b>SOUTH AFRICA—</b>		
Wool—		
Greasy .. .. .	lb.	0 3 25
Scoured, etc. .. .. .	lb.	0 4 00
General cargo .. .. .	Ton weight or measurement	209 0
<b>CHINA—</b>		
		<i>Rates—Australian</i>
Flour .. .. .	2,000 lb.	145 0
Wheat .. .. .	Ton	150 0
Wool—		
Greasy .. .. .	lb.	0 3
Scoured, etc. .. .. .	lb.	0 3 49
General cargo .. .. .	Ton weight or measurement	262 6

OVERSEA SHIPPING FREIGHT RATES FROM AUSTRALIA TO VARIOUS COUNTRIES, 31st DECEMBER, 1963—*continued*

Article and country	Unit for which freight rate is quoted	Freight rate
<b>HONG KONG—</b>		
Sugar .. .. .	Ton weight	<i>Rates— Australian s. d.</i> 147 0
Wheat .. .. .	Ton weight	150 0 net
Wool—		
Greasy .. .. .	lb.	0 3
Scoured, etc. .. .. .	lb.	0 3.49
General cargo .. .. .	Ton weight or measurement	262 6
<b>JAPAN—</b>		
Cattle hides, wet salted .. .. .	Ton weight	262 6
Coal .. .. .	Ton weight	214 0
Copper ores and concentrates—		
Parcels .. .. .	Ton weight	161 6
Bulk .. .. .	Ton weight	126 0
Iron and steel scrap—		
Loose .. .. .	Ton weight	240 0
4-cwt. drums .. .. .	Ton weight	190 0
Over 4-cwt. drums .. .. .	Ton weight	170 0
Iron, pig .. .. .	Ton weight	105 0
Lead ores and concentrates—		
Parcels .. .. .	Ton weight	161 6
Bulk .. .. .	Ton weight	126 0
Lead, pig .. .. .	Ton weight	160 0
Sugar .. .. .	Ton weight	147 0
Wheat .. .. .	Ton weight	150 0 net
Wool—		
Greasy .. .. .	lb.	0 3.32
Scoured, etc. .. .. .	lb.	0 3.86
Zinc ores and concentrates—		
Parcels .. .. .	Ton weight	161 6
Bulk .. .. .	Ton weight	126 0
General cargo .. .. .	Ton weight or measurement	262 6
<b>MALAYA—</b>		
Milk products—		
Condensed—		
From eastern Australian ports .. .. .	Ton measurement	230 0
From Western Australian ports .. .. .	Ton measurement	210 0
Powdered in bags—		
From eastern Australian ports .. .. .	Ton weight	312 6
From Western Australian ports .. .. .	Ton weight	287 6
Powdered in cases or cartons—		
From eastern Australian ports .. .. .	Ton weight or measurement	230 0
From Western Australian ports .. .. .	Ton weight or measurement	210 0
Flour—		
From eastern Australian ports .. .. .	2,000 lb.	137 6
From Western Australian ports .. .. .	2,000 lb.	127 6
General cargo—		
From eastern Australian ports .. .. .	Ton weight or measurement	249 0
From Western Australian ports .. .. .	Ton weight or measurement	229 0
<b>INDONESIA—</b>		
Flour—		
From eastern Australian ports .. .. .	2,000 lb.	137 6
From Western Australian ports .. .. .	2,000 lb.	127 6
General cargo—		
From eastern Australian ports .. .. .	Ton weight or measurement	249 0
From Western Australian ports .. .. .	Ton weight or measurement	229 0
<b>CANADA—EAST COAST AND ST. LAWRENCE PORTS TO MONTREAL—</b>		
<i>Rates— Canadian Dollars</i>		
Fruit—		
Canned .. .. .	Ton measurement	39.10
Dried .. .. .	Ton measurement	33.00
Preserved .. .. .	Ton measurement	42.20
Wine .. .. .	Ton measurement	47.50
Wool—greasy .. .. .	100 lb.	4.375
General cargo .. .. .	Ton measurement	47.60



**OVERSEA SHIPPING FREIGHT RATES FROM AUSTRALIA TO VARIOUS COUNTRIES, 31st DECEMBER, 1961—continued**

Article and country	Unit for which freight rate is quoted	Freight rate
<b>UNITED STATES OF AMERICA—ATLANTIC AND GULF PORTS—</b>		<i>Rates— U.S. Dollars</i>
Beef, preserved by cold process—		
Quarters, etc. . . . .	100 lb. gross weight	4.65
Cartons . . . . .	100 lb. net weight	4.15
Casein . . . . .	Ton weight	47.00
Fish, preserved by cold process—		
Loose . . . . .	Ton weight	70.80
Cartons . . . . .	100 lb. net weight	3.90
Lead—		
Ores and concentrates . . . . .	Ton weight	24.80
Unwrought . . . . .	Ton weight	19.00
Mutton preserved by cold process—		
Carcasses . . . . .	100 lb. gross weight	5.00
Cuts in cartons . . . . .	100 lb. net weight	4.15
Pipes and tubes of iron and steel . . . . .	Ton weight	33.00
Wool—		
Greasy . . . . .	100 lb.	4.375
Scoured, etc. . . . .	100 lb.	5.25
General cargo . . . . .	Ton weight or measurement	47.60

Interstate rates per ton weight or measurement for general cargo at 31st December, 1963, (expressed in Australian currency) were:—Sydney–Melbourne, 159s. 6d.; Sydney–Brisbane, 155s.; Sydney–Adelaide, 185s.; Sydney–Fremantle, 250s.; Sydney–Hobart, 147s.; Sydney–Darwin, 258s. 6d.

4. **Depth of Water at Main Ports.**—A table showing the depth of water available and tides at principal ports of Australia is published in the annual bulletin, *Transport and Communication*. For some major ports, information is given in Chapter XX. Local Government.

5. **Shipping Casualties.**—Courts of Marine Inquiry are constituted by a magistrate assisted by skilled assessors, and, when necessary, are held at the principal port in each State and at Launceston (Tasmania). Such courts have power to deal with the certificates of officers who are found at fault. Particulars of shipping losses and casualties reported on or near the coast during each of the years 1959 to 1963 are shown in the table below.

**SHIPPING CASUALTIES TO OVERSEA AND INTERSTATE STEAM AND MOTOR VESSELS(a): AUSTRALIA**

Year	Shipping losses			Other shipping casualties			Total shipping casualties		
	Vessels	Net tons	Lives lost	Vessels	Net tons	Lives lost	Vessels	Net tons	Lives lost
1958–59 ..	3	444	1	200	570,129	9	203	570,573	10
1959–60 ..	..	..	..	229	708,418	..	29	708,418	..
1960–61 ..	..	..	..	178	549,244	..	178	549,244	..
1961–62 ..	..	..	..	147	569,644	1	147	569,644	1
1962–63 ..	..	..	..	122	468,326	..	122	468,326	..

(a) Vessels over 50 net tons.

6. **Ferry (Passenger) Services.**—For particulars of ferry passenger services operating in several States see page 588.

## GOVERNMENT RAILWAYS

1. **General.**—The policy of government ownership and control of railways has been adopted generally throughout Australia, and, although a number of private railways exist, most of them are light railways intended primarily to transport goods involved in the commercial operations of their owners. There are three main gauges in use in the several States (5 ft. 3 in., 4 ft. 8½ in. and 3 ft. 6 in.), but in recent years considerable progress has been made towards the standardization of main trunk routes (*see para. 3 below*).

In the tables in this division, details of the four lines owned by the Commonwealth are grouped and shown with the totals for the various State-owned systems. Separate particulars for each Commonwealth line and more detailed statistics for all lines are shown in the annual bulletin, *Transport and Communication*.

2. **Railway Communication in Australia.**—An account of the progress of railway construction in Australia since the opening of the first line in 1854 was given in Year Book No. 6, page 681, and in No. 22, page 259. The main ports on the mainland are connected by lines running approximately parallel to the coast and are the focal points of lines which radiate inland to the agricultural, mining and pastoral areas of the continent to a distance of up to 750 miles. However, Darwin in the Northern Territory is not connected by rail to any other port. A 3 ft. 6 in. gauge railway extends southward from Darwin to Birdum, a distance of 317 miles, and from Port Augusta in South Australia a 4 ft. 8½ in. gauge railway of 217 miles extends northwards to Marree from where a 3 ft. 6 in. gauge of 540 miles continues to Alice Springs.

3. **Standardization of Railway Gauges.**—The first step towards uniform gauge railway communication between the capitals of the mainland States was effected in 1930 with the construction of the 4 ft. 8½ in. gauge line from Grafton to South Brisbane. The finance required for the construction was provided by the Commonwealth Government. For details of the agreement between the Commonwealth and New South Wales and Queensland, *see Official Year Book No. 31, page 122*. This line is operated by the New South Wales Railways, and details of operations in New South Wales are included with those of the New South Wales system. Details of operations on the Queensland portion are included with Queensland railway statistics unless otherwise specified.

In March, 1944, the late Sir Harold Clapp, Director-General of Land Transport, Commonwealth Department of Transport, and formerly Chairman of Commissioners, Victorian Railways, was requested by the Commonwealth Government to submit a report and recommendation regarding the standardization of Australia's railway gauges on the basis of a 4 ft. 8½ in. gauge. A summary of his report and recommendations, made in March, 1945, together with an outline of the agreement between the Commonwealth Government and the States of New South Wales, Victoria and South Australia regarding the standardization of railway gauges in their respective States, was published in Year Book No. 37, pages 146–9. The agreement, which was signed in 1946, was ratified by the Governments of the Commonwealth, of Victoria and of South Australia, but not by the New South Wales Government. After some time had elapsed and New South Wales had not ratified the agreement, the Commonwealth Government decided to enter into a separate agreement with South Australia, and the necessary legislation was enacted in 1949 by each Government concerned. The Commonwealth–South Australia Agreement provides for the same standardization work to be carried out in South Australia as would have been carried out had New South Wales ratified the original Commonwealth–Three States Agreement, and that the Commonwealth shall provide all funds required under the Agreement, with 30 per cent. of such moneys being repaid with interest by South Australia over 50 years, while the Commonwealth shall meet the full cost of works on Commonwealth railways in South Australia.

At the request of the South Australian Government, an amendment to the Agreement was approved to enable, as an interim measure, the narrow gauge (3 ft. 6 in.) lines in the South-Eastern Division of the State railways system to be converted to the broad gauge (5 ft. 3 in.). This work was completed in 1959 at a cost of £5 million. Construction and conversion work on the Central Australian Railway between Stirling North and Marree, 216 miles, has been completed by Commonwealth Railways at a cost of £12.2 million. In 1958, the Commonwealth Government made available £50,000 to South Australia for surveying the standard gauge line to be constructed between Broken Hill and Port Pirie, and in April, 1963, it announced its intention to provide funds for the standardization of the line. Preliminary work on this project has commenced.

In 1961, the Commonwealth undertook to provide £1.3 million, outside the Standardization Agreement, for the purchase of diesel-electric locomotives and ore wagons for use on the existing narrow gauge line on this route, the State to bear the cost of their subsequent conversion for operation on standard gauge track.

As a further step towards standardization, a committee consisting of members of the Federal Parliament was formed in March, 1956, to ascertain whether a scheme confined to the main trunk routes would be desirable. This committee recommended in October, 1956, that standard gauge (4 ft. 8½ in.) lines be provided from Wodonga to Melbourne, from Broken Hill to Adelaide via Port Pirie and from Kalgoorlie to Fremantle via Perth.

In 1962, the opening of a new uniform gauge line between Albury and Melbourne completed the standard gauge link between South Brisbane and Melbourne, and for the first time through services were operated between Sydney and Melbourne. There is an agreement on this project between the Commonwealth and the two States, New South Wales and Victoria, whereby the Commonwealth is to meet 70 per cent. of the cost of unification and the two States are to share equally the remaining 30 per cent., with the Commonwealth advancing the whole of the necessary funds initially, and the States' portion, plus interest, being repayable over 50 years. Legislation was enacted by the Commonwealth and the two State Governments in three separate Acts assented to towards the close of 1958. Estimated total cost for the project is £15.8 million. The cost of operations of, and the revenue derived from, the line are based proportionately on a Sydney-Melbourne mileage basis. Details of operations are included in the statistics of the respective States.

In 1961, the Commonwealth and Western Australian Governments enacted legislation to enter into an Agreement to undertake certain standard gauge railway works, including the provision of rolling stock, in that State, at an estimated cost of £41.2 million. The proposal is linked with the establishment of an integrated iron and steel industry at Kwinana in Western Australia, and the new railway facilities will be used to transport iron ore from the Koolyanobbing deposits some 33 miles beyond Southern Cross. These railway facilities will also link Kalgoorlie with East Perth and Fremantle by a standard gauge line. It has been agreed that the project has standardization and developmental components in approximately equal parts, and, initially, the Commonwealth will in effect provide finance for all of the standardization portion of the works and 70 per cent. of the developmental portion. The State will repay with interest 30 per cent. of the standardization costs over 50 years and all the advance for developmental works over 20 years. Work on the project commenced in 1962 and is planned to be completed by December, 1967.

4. Mileage Open for Traffic, all Lines.—The following table shows the route-mileage of Commonwealth and State lines open in each State and Territory at various periods since the inauguration of railways in Australia in 1854.

**GOVERNMENT RAILWAYS: ROUTE-MILEAGE OPEN**  
(Miles)

At 30th June—	N.S.W.	Vic.	Qld	S.A.	W.A.	Tas.	N.T.	A.C.T.	Aust.
1855(a) ..	14	2	..	7	..	..	..	..	23
1861(a) ..	73	114	..	56	..	..	..	..	243
1871(a) ..	358	276	218	133	..	45	..	..	1,030
1881(a) ..	996	1,247	800	832	92	45	..	..	4,012
1891 ..	2,182	2,763	2,195	1,666	198	351	145	..	9,500
1901 ..	2,846	3,237	2,801	1,736	1,355	457	145	..	12,577
1911 ..	3,762	3,523	3,868	1,935	2,376	470	145	..	16,079
1921 ..	5,043	4,267	5,752	3,408	3,992	630	199	5	23,296
1931 ..	6,247	4,514	6,529	3,898	4,634	665	317	5	26,809
1941 ..	6,368	4,518	6,567	3,809	4,835	642	490	5	27,234
1951 ..	6,354	4,445	6,560	3,805	4,682	613	490	5	26,954
1961 ..	6,303	4,050	6,324	3,836	4,577	517	490	5	26,102
1963 ..	6,296	4,024	6,077	3,838	4,251	516	490	5	25,497

(a) At 31st December.

At 30th June, 1963, 264 route-miles in Victoria and 234 route-miles in New South Wales were electrified.

5. Classification of Lines according to Gauge, at 30th June, 1963.—The next table shows the route-mileage of government railways open in each State and Territory classified according to gauge, and State totals in relation to population and area at 30th June, 1963.

## GOVERNMENT RAILWAYS: ROUTE-MILEAGE OPEN, AT 30th JUNE, 1963

(Miles)

Gauge	N.S.W.	Vic.	Qld	S.A.	W.A.	Tas.	N.T.	A.C.T.	Aust.
5 ft. 3 in. ..	(a) 241	(b) 3,814	..	1,676	..	..	..	..	5,731
4 ft. 8½ in. ..	6,055	202 (c)	69 (d)	871 (e)	454 (d)	..	..	5 (d)	7,656
3 ft. 6 in. ..	..	..	5,978	1,291 (e)	3,797	516	(d) 490	..	12,072
2 ft. 6 in. ..	..	8	..	..	..	..	..	..	8
2 ft. 0 in. ..	..	..	30	..	..	..	..	..	30
<b>Total ..</b>	<b>6,296</b>	<b>4,024</b>	<b>6,077</b>	<b>3,838</b>	<b>4,251</b>	<b>516</b>	<b>490</b>	<b>5</b>	<b>25,497</b>
<b>Per 1,000 of pop- ulation ..</b>	<b>1.56</b>	<b>1.32</b>	<b>3.88</b>	<b>3.80</b>	<b>5.50</b>	<b>1.43</b>	<b>16.65</b>	<b>0.07</b>	<b>2.34</b>
<b>Per 1,000 square miles ..</b>	<b>20.35</b>	<b>45.79</b>	<b>9.11</b>	<b>10.10</b>	<b>4.36</b>	<b>19.68</b>	<b>0.94</b>	<b>5.32</b>	<b>8.58</b>

(a) Portion of Victorian system. (b) Excludes 201 miles of 5 ft. 3 in. gauge line which roughly parallels the uniform gauge (4 ft. 8½ in.) line between Albury and Melbourne. (c) Queensland section of Grafton-South Brisbane Uniform Gauge Line. (d) Portion of Commonwealth system. (e) Includes 432 miles of Commonwealth system.

6. Summary of Operations.—In the following table, a summary is shown of the operations of government railways open in Australia during 1962–63. Figures for earnings exclude State government grants and certain other earnings payable to railways, while figures for working expenses exclude certain other expenses charged to railways (see para. 10, p. 577).

## GOVERNMENT RAILWAYS: SUMMARY OF OPERATIONS, 1962-63

Particulars	Commonwealth railways	State railways	Total
Route-mileage (30th June) .. .. miles	2,252	23,245	25,497
Track-mileage (30th June) .. .. miles	2,461	29,736	32,197
Gross earnings .. .. £'000	6,979	205,397	212,376
"  "  per revenue train-mile pence	657	545	548
Working expenses .. .. £'000	6,643	196,674	203,317
"  "  per revenue train-mile pence	625	522	525
Net earnings .. .. £'000	336	8,723	9,059
"  "  per revenue train-mile pence	32	23	23
Revenue train-miles .. .. '000	2,549	90,389	92,938
Passenger-journeys .. .. '000	334	441,994	442,328
Goods and livestock carried .. '000 tons	2,230	53,679	55,909
Average number of employees .. ..	2,801	128,478	131,279
"  wages and salaries paid per employee £	1,225	1,136	1,138

7. Gross Earnings.—(i) *General.* Gross earnings are composed of earnings from (a) coaching traffic, including the carriage of mails, horses, parcels, etc., by passenger trains; (b) carriage of goods and livestock; and (c) rents and miscellaneous items. State Government grants are excluded. Details of these grants made during 1962–63 are shown in para. 10, page 577.

(ii) *Coaching, Goods and Miscellaneous Earnings.* (a) *Summary.* In the following table, gross earnings are shown for the years 1958-59 to 1962-63, together with earnings per average route-mile worked and per revenue train-mile.

**GOVERNMENT RAILWAYS: GROSS EARNINGS(a)**

Year	N.S.W.	Vic.	Q'land	S. Aust.	W. Aust.	Tas.	C <sup>w</sup> wealth	Aust.
GROSS EARNINGS (£'000)								
1958-59 ..	75,930	38,150	36,169	12,856	13,516	2,707	4,817	184,145
1959-60 ..	83,563	39,190	35,671	12,758	14,846	2,808	5,327	194,163
1960-61 ..	89,751	42,987	36,530	13,870	16,317	2,732	6,036	208,223
1961-62 ..	88,351	42,557	36,159	13,924	17,549	2,703	6,241	207,484
1962-63 ..	91,241	43,439	37,622	13,836	16,460	2,799	6,979	212,376

**GROSS EARNINGS PER AVERAGE ROUTE-MILE WORKED  
(£)**

1958-59 ..	12,441	8,756	5,628	5,075	3,283	4,782	2,139	6,987
1959-60 ..	13,681	9,130	5,562	5,037	3,603	4,978	2,365	7,388
1960-61 ..	14,806	10,020	5,751	5,476	3,958	5,127	2,680	7,964
1961-62 ..	14,572	9,918	5,917	5,499	4,557	5,239	2,772	8,100
1962-63 ..	15,069	10,185	6,191	5,465	4,335	5,425	3,099	8,330

**GROSS EARNINGS PER REVENUE TRAIN-MILE  
(Pence)**

1958-59 ..	517.78	496.89	444.96	447.80	420.87	421.99	572.76	484.13
1959-60 ..	545.26	514.47	449.26	444.59	447.53	434.79	596.86	502.90
1960-61 ..	568.37	565.88	478.77	482.09	500.86	432.50	618.32	537.21
1961-62 ..	566.25	540.33	494.11	496.04	522.22	458.37	610.58	537.86
1962-63 ..	586.11	535.26	502.96	493.67	523.19	508.07	657.12	548.43

(a) Excludes government grants; see para. 10, p. 577.

(b) *Distribution.* The following table shows gross earnings for the year 1962-63 classified according to the three main sources of earnings together with the percentage of the total derived from each source.

**GOVERNMENT RAILWAYS: DISTRIBUTION OF GROSS EARNINGS(a), 1962-63**

Railway system	Gross earnings (£'000)			Proportion of total (per cent.)		
	Coaching	Goods and livestock	Miscellaneous	Coaching	Goods and livestock	Miscellaneous
New South Wales ..	23,792	63,323	4,126	26.08	69.40	4.52
Victoria ..	14,038	26,508	2,893	32.32	61.02	6.66
Queensland ..	4,812	31,731	1,079	12.79	84.34	2.87
South Australia ..	2,088	10,747	1,001	15.10	77.67	7.23
Western Australia ..	1,640	14,063	757	9.96	85.44	4.60
Tasmania ..	189	2,522	88	6.75	90.08	3.17
Commonwealth ..	1,182	5,331	466	16.93	76.39	6.68
<b>Australia ..</b>	<b>47,741</b>	<b>154,225</b>	<b>10,410</b>	<b>22.48</b>	<b>72.62</b>	<b>4.90</b>

(a) Excludes government grants; see para. 10 p. 577.

8. Working Expenses.—(i) *General.* In comparing the working expenses of the several States and Territories, allowance should be made for the variation of gauges and of physical and traffic conditions, not only on the different systems of the State and Commonwealth railways, but also on different portions of the same system.

Working expenses, wherever presented in the Railways section of this chapter, include reserves for depreciation in South Australia, Western Australia and Tasmania but exclude interest, sinking fund, exchange and certain other payments (*see* para. 10, p. 577).

(ii) *Working Expenses.* The following table shows the total working expenses, the ratio of working expenses to gross earnings, and working expenses per average route-mile worked, and per revenue train-mile for the years 1958–59 to 1962–63.

## GOVERNMENT RAILWAYS: WORKING EXPENSES(a)

Year	N.S.W.	Vic.	Q'land	S. Aust.	W. Aust.	Tas.	C'wealth	Aust.
TOTAL WORKING EXPENSES								
(£'000)								
1958–59 ..	71,102	38,119	37,461	15,102	16,307	3,215	3,647	184,953
1959–60 ..	76,492	39,542	38,309	15,325	16,907	3,363	4,154	194,092
1960–61 ..	79,556	41,627	38,529	15,310	17,147	3,545	4,629	200,343
1961–62 ..	79,595	42,906	38,085	15,603	17,454	3,439	5,165	202,247
1962–63 ..	79,326	43,500	37,718	15,492	17,303	3,335	(b)6,643	203,317

## RATIO OF WORKING EXPENSES TO GROSS EARNINGS

(Per cent.)

1958–59 ..	93.64	99.92	103.57	117.47	120.65	118.79	75.72	100.43
1959–60 ..	91.54	100.90	107.40	120.11	113.88	119.77	77.98	99.96
1960–61 ..	88.64	96.84	105.47	110.38	105.08	129.75	76.68	96.22
1961–62 ..	90.09	100.82	105.33	112.06	99.46	127.21	82.75	97.47
1962–63 ..	86.94	100.14	100.25	111.97	105.13	119.13	b 95.19	55.73

## WORKING EXPENSES PER AVERAGE ROUTE-MILE WORKED

(£)

1958–59 ..	11,650	8,749	5,829	5,962	3,961	5,680	1,620	7,018
1959–60 ..	12,523	9,213	5,974	6,050	4,103	5,963	1,845	7,385
1960–61 ..	13,124	9,703	6,066	6,044	4,159	6,652	2,055	7,663
1961–62 ..	13,128	9,999	6,232	6,162	4,532	6,665	2,294	7,895
1962–63 ..	13,101	10,199	6,207	6,119	4,557	6,463	(b)2,950	7,975

## WORKING EXPENSES PER REVENUE TRAIN-MILE

(Pence)

1958–59 ..	484.85	496.49	460.85	526.04	507.78	501.28	433.68	486.26
1959–60 ..	499.12	519.09	482.50	534.03	509.63	520.72	465.43	502.72
1960–61 ..	503.81	547.98	504.97	532.15	526.33	561.17	474.15	516.88
1961–62 ..	510.14	544.76	520.42	555.86	519.39	583.10	505.28	524.28
1962–63 ..	509.57	536.02	504.24	552.76	550.01	605.27	h625.52	525.04

(a) *See* para. 10, p. 577.  
expenses.

(b) Includes depreciation previously not charged to the Railway working

(iii) *Distribution.* The following table shows the total working expenses for the year 1962-63 classified according to the four main expenditure headings.

**GOVERNMENT RAILWAYS: DISTRIBUTION OF WORKING EXPENSES, 1962-63**

(£'000)

Railway system	Maintenance of way and works	Motive power <sup>(a)</sup>	Traffic	Other charges	Total working expenses <sup>(b)</sup>
New South Wales .. ..	14,043	28,989	19,567	16,727	79,326
Victoria .. ..	8,534	12,123	12,036	10,807	43,500
Queensland .. ..	9,800	16,805	8,943	2,170	37,718
South Australia .. ..	(c) 3,389	(c) 6,313	(c) 3,888	1,902	15,492
Western Australia .. ..	(c) 3,839	(c) 7,658	3,857	1,949	17,303
Tasmania(c) .. ..	848	1,264	823	400	3,335
Commonwealth .. ..	2,066	1,766	1,040	(c) 1,771	6,643
<b>Australia .. ..</b>	<b>42,519</b>	<b>74,918</b>	<b>50,154</b>	<b>35,726</b>	<b>203,317</b>

(a) Includes maintenance of rolling stock.  
of reserves for depreciation.

(b) See para. 10, p. 577.

(c) Includes provision

9. *Net Earnings.*—The following table shows, for the years 1958-59 to 1962-63, net earnings, i.e., the excess of gross earnings over working expenses and the amount of such net earnings per average route-mile worked and per revenue train-mile.

**GOVERNMENT RAILWAYS: NET EARNINGS<sup>(a)</sup>**

Year	N.S.W.	Vic.	Q'land	S. Aust.	W. Aust.	Tas.	C'wealth	Aust.
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**TOTAL NET EARNINGS**

(£'000)

1958-59 ..	4,828	31	-1,292	-2,246	-2,791	-508	1,170	-808
1959-60 ..	7,071	-352	-2,638	-2,567	-2,061	-555	1,173	71
1960-61 ..	10,195	1,360	-1,999	-1,440	-830	-813	1,407	7,880
1961-62 ..	8,756	-349	-1,926	-1,679	95	-736	1,077	5,238
1962-63 ..	11,915	-61	-96	-1,656	-843	-536	(b) 336	9,059

**NET EARNINGS PER AVERAGE ROUTE-MILE WORKED**

(£)

1958-59 ..	791	7	-201	-887	-678	-898	519	-31
1959-60 ..	1,158	-83	-412	-1,013	-500	-985	520	3
1960-61 ..	1,682	317	-315	-568	-201	-1,525	625	301
1961-62 ..	1,444	-81	-315	-663	25	-1,426	478	205
1962-63 ..	1,968	-14	-16	-654	-222	-1,038	(b) 149	355

**NET EARNINGS PER REVENUE TRAIN-MILE**

(Pence)

1958-59 ..	32.93	0.40	-15.89	-78.24	-86.91	-79.29	139.08	-2.13
1959-60 ..	46.14	-4.62	-33.24	-89.44	-62.10	-85.93	131.43	0.18
1960-61 ..	64.56	17.90	-26.20	-50.06	-25.47	-128.67	144.17	20.33
1961-62 ..	56.11	-4.43	-26.31	-59.82	2.83	-124.73	105.30	13.58
1962-63 ..	76.54	-0.76	-1.28	-59.09	-26.82	-97.20	631.60	23.39

(a) See para. 10, p. 577.

(b) See footnote (b) to table on p. 575.

NOTE.—Minus sign (-) denotes loss.

10. Net Earnings, Grants to Railways, Interest, Sinking Fund, Surplus or Deficit, 1962-63.—The following table shows, for each railway system for the year 1962-63, (i) net earnings as in para. 9 above, (ii) State grants and other items credited to railways accounts, (iii) loan interest, exchange, sinking fund, etc., payments charged against the accounts, and (iv) the net surplus or deficit after these items have been taken into account. Particulars of items (ii) to (iv) are not included in the preceding tables in this section.

The figures shown in this table accord with those published in the Annual Reports of the Railways Commissioners of the several systems. Because of the differences in governmental practice concerning costs other than operative charged against railways accounts, compensation for non-paying and developmental lines, etc., and the inclusion in some railways finances of the operations of ancillary transport services, direct comparison cannot be made between the results shown in the table.

GOVERNMENT RAILWAYS: SURPLUS OR DEFICIT AT 30th JUNE, 1963

(£)

System	Net earnings—excess of gross earnings over working expenses(a)	Plus grants and other income	Less other expenses charged to railways				Surplus (+) or deficit (-)	
			Loan interest and exchange	Sinking fund	Loan management expenses	Other		Total
State—								
N.S.W. ..	11,915,388	b 1,600,000	11,000,680	2,286,000	36,370	c 164,020	13,487,070	28,318
Victoria ..	— 61,027 (d)	14,243	..	..	..	(e) 27,308	27,308	(f) — 74,792
Queensland ..	— 95,876 (g)	87,068	4,568,502	..	..	h 683,547	5,252,049	(i) — 5,260,857
S. Australia ..	— 1,656,293	j 3,905,432	2,375,054	..	..	(k) 85,174	2,460,228	(l) — 211,089
W. Australia ..	— 843,734 (l)	15,547	2,605,991	..	..	..	2,605,991	(j) — 3,434,178
Tasmania ..	— 535,515	..	429,122	..	..	..	429,122	— 964,637
<b>Total, States ..</b>	<b>8,722,943</b>	<b>5,622,290</b>	<b>20,979,349</b>	<b>2,286,000</b>	<b>36,370</b>	<b>960,049</b>	<b>24,261,768</b>	<b>— 9,916,535</b>
Commonwealth	335,591 (m)	25,098	..	..	..	(n)	..	360,689
<b>Australia ..</b>	<b>9,058,534</b>	<b>5,647,388</b>	<b>20,979,349</b>	<b>2,286,000</b>	<b>36,370</b>	<b>960,049</b>	<b>24,261,768</b>	<b>— 9,555,846</b>

(a) See para. 9, p. 576. (b) Grants to meet losses on country development lines, £800,000, and to subsidize payments due from superannuation account, £800,000. (c) Loan flotation expenses. (d) Keirang-Koondrook Tramway recoup from Treasury. (e) Net loss on road motor services not included in previous pages. (f) Includes road motor services. (g) Adjustment for deficit on Queensland portion of Uniform Gauge Railway as included in foregoing tables. (h) Interest on unopened lines, £203,047; demolished assets written off, £334,667 and repayments to loan fund accounts for credit to closed lines account, £119,191; and net cost of closing branch lines, £26,642. (i) Excludes Queensland portion of Uniform Gauge Railway. (j) Grants towards working expenses £3,100,000, and debt charges, £800,000; and surplus from road motor services, £5,432. (k) Interest and repayment under Railways Standardization Agreement. (l) Net profit on road motor services. (m) Income from sale of assets. (n) Now charged to working expenses.

NOTE.—For further information on railways finance, in particular expenditure from loan and other funds, see Chapter XXII, Public Finance of this Year Book. See also the Reports of the several Railways Commissioners.

11. Traffic.—(i) General. The following table shows particulars of railway passenger and goods traffic for the years 1958-59 to 1962-63.



## GOVERNMENT RAILWAYS: TRAFFIC

Year	N.S.W.	Vic.	Q'land (a)	S. Aust.	W. Aust.	Tas.	C'wealth	Aust.
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## PASSENGER-JOURNEYS (SUBURBAN AND COUNTRY)(b)

('000)

						(c)			
1958-59	..	236,030	163,483	33,457	16,805	14,615	2,344	259	466,993
1959-60	..	236,573	158,294	32,347	17,038	13,879	2,292	275	460,698
1960-61	..	235,416	149,929	28,876	15,574	12,661	2,103	303	444,862
1961-62	..	234,638	152,768	26,700	15,176	11,906	1,816	315	443,319
1962-63	..	235,169	152,727	26,081	14,922	11,537	1,558	334	442,328

## PASSENGER-JOURNEYS (SUBURBAN AND COUNTRY) PER AVERAGE ROUTE-MILE WORKED

(Number)

						(c)			
1958-59	..	38,674	37,522	5,207	6,634	3,550	4,141	115	17,720
1959-60	..	38,732	36,881	5,044	6,726	3,369	4,065	122	17,529
19 0-61	..	38,835	34,948	4,546	6,147	3,071	3,946	134	17,015
1961-62	..	38,700	35,602	4,369	5,994	3,092	3,519	140	17,306
1962-63	..	38,839	35,809	4,292	5,893	3,038	3,018	148	17,350

## GOODS AND LIVESTOCK CARRIED

('000 tons)

1958-59	..	19,700	9,295	8,373	4,207	3,913	1,138	1,405	48,031
1959-60	..	22,127	9,687	8,116	4,036	4,533	1,191	1,482	51,172
1960-61	..	24,104	10,977	7,981	4,537	4,833	1,192	1,738	55,362
1961-62	..	24,050	10,350	8,153	4,616	5,342	1,096	1,958	55,565
1962-63	..	23,641	10,841	8,736	4,503	4,793	1,165	2,230	55,909

## GOODS AND LIVESTOCK CARRIED PER AVERAGE ROUTE-MILE WORKED

(Tons)

1958-59	..	3,228	2,133	1,303	1,661	950	2,010	624	1,823
1959-60	..	3,623	2,257	1,266	1,594	1,100	2,111	658	1,947
1960-61	..	3,976	2,559	1,256	1,791	1,172	2,236	772	2,118
1961-62	..	3,967	2,412	1,334	1,823	1,387	2,124	869	2,169
1962-63	..	3,904	2,542	1,438	1,778	1,262	2,257	990	2,193

(a) Traffic originating on the 3 ft. 6 in. gauge system and continuing on the Uniform Gauge Railway, or vice versa, has been counted once only. (b) Based on ticket sales, making allowances for periodical tickets. Except in Tasmania, tickets sold at concession rates are counted as full journeys. (c) Concession tickets are counted according to the proportion of the adult fare charged.

(ii) *Passenger Traffic.* With the exception of the Commonwealth railway systems, which operate only country services, all systems provide both suburban and country passenger services. Traffic classed as "suburban" moves between stations within a classified suburban area around each capital city, whilst traffic classified as "country" originates or terminates at stations outside this suburban area. Particulars of suburban and country passenger traffic are shown separately in the two tables following.

(a) *Suburban Passenger Traffic.* The following table shows a summary of suburban passenger operations for the years 1958-59 to 1962-63. Most of the suburban services in New South Wales and Victoria are operated within electrified areas.

## GOVERNMENT RAILWAYS: SUBURBAN PASSENGER SUMMARY

Year	Suburban passenger-journeys (a) ( <sup>'000</sup> )	Suburban revenue passenger-train-miles ( <sup>'000</sup> )	Suburban passenger-miles ( <sup>'000</sup> )	Average number of passengers per train-mile	Average mileage per passenger-journey (Miles)	Suburban passenger earnings			
						Gross (£'000)	Per passenger journey (Pence)	Per passenger-mile (Pence)	Per passenger train-mile (Pence)
NEW SOUTH WALES									
1958-59	221,713	11,175	(b)	(b)	(b)	12,027	13 02	(b)	258
1959-60	221,788	11,212				12,222	13 23	(b)	262
1960-61	222,333	11,176				12,755	13 77	(b)	274
1961-62	221,861	11,250				12,745	13 79	(b)	272
1962-63	221,960	10,915				12,836	13 88	(b)	282
VICTORIA									
1958-59	158,613	8,310	1,364,884	164	8 61	8,511	12 88	1 50	246
1959-60	153,660	7,999	1,349,319	169	8 79	8,826	13 78	1 57	265
1960-61	145,558	7,902	1,282,975	162	8 81	8,885	14 65	1 66	270
1961-62	147,977	8,296	1,299,379	157	8 78	9,006	14 61	1 66	261
1962-63	147,587	8,303	1,302,094	157	8 82	8,989	14 62	1 66	260
QUEENSLAND									
1958-59	28,398	2,127	(b)	(b)	(b)	889	7 52	(b)	100
1959-60	27,548	2,131				865	7 54	(b)	97
1960-61	24,582	2,009				962	9 39	(b)	115
1961-62	22,890	1,850				977	10 25	(b)	127
1962-63	22,413	1,706				966	10 35	(b)	136
SOUTH AUSTRALIA									
1958-59	15,704	2,087	125,391	60	7 98	706	10 79	1 35	81
1959-60	15,997	2,134	128,183	60	8 01	792	11 89	1 48	89
1960-61	14,584	2,082	117,423	56	8 05	795	13 08	1 62	92
1961-62	14,211	1,962	114,852	59	8 08	781	13 19	1 63	96
1962-63	13,978	1,941	115,215	59	8 24	789	13 55	1 64	98
WESTERN AUSTRALIA									
1958-59	13,880	1,320	93,958	71	6 77	434	7 50	1 11	79
1959-60	13,171	1,343	90,003	67	6 83	478	8 70	1 27	85
1960-61	12,026	1,357	82,612	61	6 87	484	9 65	1 41	86
1961-62	11,308	1,355	78,469	58	6 94	469	9 95	1 43	83
1962-63	10,937	1,334	76,312	57	6 98	462	10 13	1 45	83
TASMANIA									
1958-59	(c) 2,092	210	12,632	60	6 04	53	6 11	1 01	61
1959-60	2,031	206	12,438	60	6 12	51	5 98	0 98	59
1960-61	1,859	202	11,018	54	5 93	55	7 06	1 19	65
1961-62	1,585	188	9,778	52	6 17	56	8 41	1 36	71
1962-63	1,347	135	8,385	62	6 23	49	8 70	1 40	87

(a) Based on ticket sales, making allowances for periodical tickets. Except in Tasmania, tickets sold at concession rates are counted as full journeys. (b) Not available. (c) Concession tickets are counted according to the proportion of the adult fare charged.

(b) *Country Passenger Traffic.* The following table shows a summary of country passenger operations for the years 1958-59 to 1962-63.

GOVERNMENT RAILWAYS: COUNTRY PASSENGER SUMMARY

Year	Country passenger-journeys (a)	Country revenue passenger train-miles (b)	Country passenger-miles (c)	Average number of passengers per train-mile (c)	Average mileage per passenger-journey (Miles)	Country passenger earnings				
						Gross (£'000)	Per passenger-journey (Pence)	Per passenger-mile (Pence)	Per passenger-train-mile (d) (Pence)	
NEW SOUTH WALES										
1958-59	14,317	9,904	(e)	(e)	(e)	6,984	117.08	(e)	169	
1959-60	14,785	10,007				6,570	106.64	(e)	158	
1960-61	13,083	10,206				6,825	125.19	(e)	160	
1961-62	12,777	10,410				6,948	130.51	(e)	160	
1962-63	13,209	10,475				7,416	134.73	(e)	170	
VICTORIA										
1958-59	4,870	4,711	414,539	88	85.12	3,466	170.80	2.01	177	
1959-60	4,634	4,599	394,690	86	85.16	3,291	170.44	2.00	172	
1960-61	4,371	4,482	388,258	87	88.84	3,248	178.35	2.01	174	
1961-62	4,791	4,726	413,435	87	86.31	3,473	174.01	2.02	176	
1962-63	5,140	4,829	418,887	87	81.50	3,531	164.89	2.02	176	
QUEENSLAND										
1958-59	(f) 5,059	5,072	(e)	(e)	(e)	2,452	116.31	(e)	116	
1959-60	4,799	4,962				2,273	113.70	(e)	110	
1960-61	4,294	4,869				2,406	134.50	(e)	119	
1961-62	3,810	4,714				2,378	146.56	(e)	115	
1962-63	3,668	4,689				2,349	150.18	(e)	114	
SOUTH AUSTRALIA										
1958-59	1,101	2,101	106,506	51	96.70	778	169.55	1.75	89	
1959-60	1,041	2,089	105,386	50	101.31	806	185.89	1.83	93	
1960-61	990	2,039	100,683	49	101.69	822	199.31	1.96	98	
1961-62	965	2,043	100,591	49	104.24	838	208.50	2.00	99	
1962-63	944	2,014	99,761	50	105.69	846	215.18	2.04	101	
WESTERN AUSTRALIA										
1958-59	735	1,591	79,155	50	107.64	653	213.23	1.98	99	
1959-60	708	1,504	77,450	51	109.32	666	225.56	2.06	106	
1960-61	635	1,254	73,900	59	116.34	641	242.11	2.08	123	
1961-62	598	1,184	74,230	63	124.12	671	269.10	2.17	136	
1962-63	600	1,121	75,684	67	126.19	669	267.71	2.12	143	
TASMANIA										
1958-59	(g) 252	325	13,361	41	53.03	86	81.78	1.54	63	
1959-60	261	325	13,805	42	52.92	86	79.07	1.49	63	
1960-61	244	323	12,940	40	53.10	80	78.59	1.48	59	
1961-62	231	324	12,745	39	55.10	80	82.68	1.50	59	
1962-63	211	318	12,255	39	58.19	78	89.13	1.53	59	

NOTE.—For footnotes see next page.

GOVERNMENT RAILWAYS: COUNTRY PASSENGER SUMMARY—*continued*

Year	Country passenger-journeys (a)	Country revenue passenger train-miles (b)	Country passenger-miles	Average number of passengers per train-mile	Average mileage per passenger-journey	Country passenger earnings			
						Gross	Per passenger-journey	Per passenger-mile	Per passenger-train-mile (d)
	(‘000)	(‘000)	(‘000)	(c)	(Miles)	(£’000)	(Pence)	(Pence)	(Pence)
<b>COMMONWEALTH(h)</b>									
1958-59	259	750	80,910	108	312.92	739	685 90	2 19	236
1959-60	275	798	84,371	106	307.57	749	654 89	2 13	225
1960-61	303	825	93,540	113	309.07	838	664 51	2 15	244
1961-62	315	923	100,604	109	319.15	904	688 57	2 16	235
1962-63	334	939	107,991	115	322.99	957	686 59	2 13	244

(a) Based on ticket sales, making allowances for periodical tickets. Except in Tasmania, tickets sold at concession rates are counted as full journeys. (b) Includes a proportion of mixed train-miles. (c) Passenger-miles divided by passenger train-miles inclusive of a proportion of mixed train-miles. (d) Passenger earnings divided by passenger train-miles inclusive of a proportion of mixed train-miles. (e) Not available. (f) Traffic originating on the 3 ft. 6 in. gauge system and continuing on the Uniform Gauge Railway, or vice versa, has been counted once only. (g) Concession tickets are counted according to the proportion of the adult fare charged. (h) Railways controlled by Commonwealth Government.

NOTE.—Train-miles refer to revenue mileages only. Figures have been revised to include a proportion of mixed train-miles for all systems except Western Australia, where they do not apply. Mixed train-miles do not apply for Victoria also during 1962-63.

(iii) *Freight Traffic. (a) Commodities Carried and Earnings.* The following table shows the quantities of various commodities carried on the various systems and the earnings derived during 1962-63.

GOVERNMENT RAILWAYS: COMMODITIES CARRIED AND EARNINGS, 1962-63

Railway system	Coal, coke and briquettes	Other minerals (a)	Agricultural produce (b)	Wool	Livestock	All other commodities	Total
<b>QUANTITY CARRIED</b> (‘000 Tons)							
New South Wales ..	9,557	2,036	3,351	223	510	7,964	23,641
Victoria ..	2,120	111	3,075	115	293	5,127	10,841
Queensland(c) ..	1,804	1,204	3,080	46	681	1,921	8,736
South Australia ..	60	1,344	975	44	181	1,899	4,503
Western Australia ..	682	346	1,882	76	125	1,682	4,793
Tasmania ..	293	24	39	3	28	778	1,165
Commonwealth ..	1,486	58	33	4	72	577	2,230
<i>Australia</i> ..	<i>16,002</i>	<i>5,123</i>	<i>12,435</i>	<i>511</i>	<i>1,890</i>	<i>19,948</i>	<i>55,909</i>
<b>FREIGHT EARNINGS</b> (£’000)							
New South Wales ..	(d)	(d)	(d)	(d)	3,045	(d)	63,323
Victoria ..	3,208	162	7,402	554	990	14,192	26,508
Queensland(c) ..	3,601	3,021	6,819	813	4,129	13,348	31,731
South Australia ..	47	3,426	1,721	238	680	4,635	10,747
Western Australia ..	1,178	641	4,456	485	386	6,917	14,063
Tasmania ..	460	27	95	14	75	1,851	2,522
Commonwealth ..	851	204	175	23	206	3,872	5,331
<i>Australia</i> ..	<i>(d)</i>	<i>(d)</i>	<i>(d)</i>	<i>(d)</i>	<i>9,511</i>	<i>(d)</i>	<i>154,225</i>

(a) Includes sand and gravel. (b) Includes wheat and fruit. (c) Includes Queensland portion of Uniform Gauge Railway. Tonnages carried over both systems have been counted once only. (d) Not available.

(b) *Freight Summary.* A summary of freight traffic on each railway system for each of the years 1958-59 to 1962-63 is shown in the following table.

## GOVERNMENT RAILWAYS: FREIGHT SUMMARY

Year	Revenue goods train-miles (a)	Revenue net ton-miles	Average train load (paying traffic) (b)	Average haul per ton (c)	Goods and livestock earnings				Density of traffic (e)
					Gross	Per average route-mile worked	Per revenue net ton-mile	Per revenue goods train-mile (d)	
	('000)	(Million)	(Tons)	(Miles)	(£'000)	(£)	(Pence)	(Pence)	('000)
NEW SOUTH WALES									
1958-59	14,117	2,736	194	139	50,524	8,279	4 43	859	448
1959-60	15,563	3,216	202	146	57,598	9,430	4.30	925	526
1960-61	16,516	3,613	219	150	63,058	10,402	4.19	916	596
1961-62	15,786	3,576	227	149	61,424	10,131	4.12	934	590
1962-63	15,971	3,743	234	158	63,323	10,458	4 06	952	618
VICTORIA									
1958-59	5,406	1,353	250	146	22,126	5,078	3 93	982	310
1959-60	5,684	1,385	244	143	22,876	5,330	3.96	966	323
1960-61	5,847	1,612	276	147	26,582	6,196	3.96	1,091	376
1961-62	5,880	1,581	269	153	25,733	5,997	3.91	1,050	368
1962-63	6,345	1,693	267	156	26,508	6,215	3.76	1,003	397
QUEENSLAND(f)									
1958-59	12,167	1,463	120	181	29,493	4,639	4 84	582	230
1959-60	11,795	1,515	126	196	29,420	4,637	4.66	586	239
1960-61	11,267	1,472	131	195	29,803	4,743	4.86	635	234
1961-62	10,832	1,461	135	189	29,467	4,877	4 84	653	242
1962-63	11,375	1,559	137	190	31,004	5,160	4.77	654	260
SOUTH AUSTRALIA									
1958-59	2,701	605	224	144	10,054	3,969	3 99	893	239
1959-60	2,664	596	224	148	9,840	3,885	3.96	886	235
1960-61	2,784	645	232	142	10,906	4,305	4 06	940	255
1961-62	2,733	650	238	141	10,880	4,297	4 02	956	257
1962-63	2,771	679	245	151	10,747	4,244	3.80	931	268
WESTERN AUSTRALIA									
1958-59	4,797	632	132	162	11,243	2,731	4.27	563	154
1959-60	5,115	705	138	156	12,251	2,974	4.17	575	171
1960-61	5,208	748	144	155	13,940	3,381	4.48	642	181
1961-62	5,526	831	150	156	15,114	3,925	4.36	656	216
1962-63	5,095	762	150	159	14,063	3,704	4 43	662	201
TASMANIA									
1958-59	1,004	110	110	97	2,426	4,287	5.27	580	195
1959-60	1,019	119	116	100	2,537	4,498	5.13	597	210
1960-61	991	114	115	95	2,456	4,601	5.19	595	213
1961-62	903	107	119	98	2,411	4,673	5.41	641	207
1962-63	869	112	129	96	2,522	4,887	5.41	696	217
COMMONWEALTH(g)									
1958-59	1,268	394	311	281	3,476	1,543	2.12	658	175
1959-60	1,343	438	326	296	3,963	1,760	2.17	708	194
1960-61	1,519	549	362	316	4,537	2,015	1.98	717	244
1961-62	1,530	581	380	297	4,671	2,074	1.93	733	258
1962-63	1,610	664	412	298	5,331	2,367	1.93	795	295

(a) Includes a proportion of mixed train-miles. (b) Net ton-miles per goods (including a portion of mixed) train-mile. (c) Net ton-miles per ton carried. (d) Goods and livestock earnings divided by goods train-miles, inclusive of a proportion of mixed train-miles. (e) Total ton-miles per average route-mile worked. (f) Excludes Queensland portion of Grafton-South Brisbane (Uniform Gauge) Line. (g) Railways controlled by the Commonwealth Government.

NOTE.—Revenue goods train-miles figures have been revised to include a proportion of mixed train-miles for all systems except Western Australia, where they do not apply. Mixed train-miles do not apply for Victoria also during 1962-63.

12. Rolling Stock.—(i) *Each System, 1963.* The following table shows the number of rolling stock on capital account of government railways at 30th June, 1963.

GOVERNMENT RAILWAYS: ROLLING STOCK(a) AT 30th JUNE, 1963

Railway system	Locomotives					Coaching stock(c)	Goods stock	Service stock
	Steam	Diesel-electric	Electric	Other (b)	Total			
New South Wales ..	763	187	41	16	1,007	(d) 3,491	e 21,293	(f) 2,059
Victoria ..	258	105	35	64	462	dg 2,422	e 21,033	(h) 1,667
Queensland ..	667	86	..	11	764	1,476	e 24,160	2,071
South Australia ..	188	75	..	..	263	(g) 615	7,797	(h) 480
Western Australia ..	270	75	..	15	360	556	11,458	937
Tasmania ..	46	35	..	19	100	148	2,488	165
Commonwealth ..	23	45	..	7	75	152	1,781	580
<b>Australia ..</b>	<b>2,215</b>	<b>608</b>	<b>76</b>	<b>132</b>	<b>3,031</b>	<b>(f) 8,969</b>	<b>1 90,020</b>	<b>(i) 7,960</b>

(a) Included in capital account. (b) Includes non-passenger carrying diesel power vans. (c) Includes all brake vans. (d) Excludes 41 interstate coaching stock owned jointly by New South Wales and Victoria. (e) Excludes 10 interstate goods stock owned jointly by New South Wales and Victoria. (f) Includes all vehicles. Figures before 1961-62 have included only vehicles having a capital value. (g) Excludes 68 interstate coaching stock owned jointly by Victoria and South Australia. (h) Excludes one dynamometer car owned jointly by Victoria and South Australia. (i) Includes jointly owned stock.

(ii) *Australia, 1953 to 1963.* The following table shows the numbers of rolling stock on capital account for all railway systems at 30th June of each of the years 1953 to 1963.

GOVERNMENT RAILWAYS: ROLLING STOCK(a), AUSTRALIA

30th June—	Locomotives					Coaching stock(c)	Goods stock	Service stock
	Steam	Diesel-electric	Electric	Other(b)	Total			
1953 ..	3,674	116	19	18	3,827	9,553	95,700	5,231
1954 ..	3,598	161	36	22	3,817	9,545	100,569	5,253
1955 ..	3,511	204	38	26	3,779	9,522	99,968	5,468
1956 ..	3,366	257	37	26	3,686	9,399	99,137	5,418
1957 ..	3,249	315	65	28	3,657	9,387	99,064	5,474
1958 ..	3,077	367	76	37	3,557	9,358	97,361	5,783
1959 ..	2,905	402	76	48	3,431	9,282	95,312	6,613
1960 ..	2,775	451	76	71	3,373	9,287	94,443	6,602
1961 ..	2,651	491	76	109	3,327	9,172	92,455	6,896
1962 ..	2,456	541	76	123	3,196	9,177	91,094	7,976
1963 ..	2,215	608	76	132	3,031	8,969	90,020	7,960

For footnotes see previous table.

13. Accidents.—The following table shows particulars of the number of persons killed or injured through train accidents and the movement of rolling stock on the government railways of Australia during 1962-63.

GOVERNMENT RAILWAYS: ACCIDENTS(a), 1962-63

Particulars	N.S.W.	Vic.	Qld	S.A.	W.A.	Tas.	Cwth	Aust.
Persons killed ..	49	54	23	10	9	5	1	151
Persons injured ..	1,087	670	140	30	106	5	31	2,069

(a) Excludes accidents to railway employees.

14. Consumption of Coal, Oil and Petrol.—The following table shows the value of coal, oil and petrol consumed by the various government railways during 1962-63.

**GOVERNMENT RAILWAYS: VALUE OF COAL, OIL AND PETROL  
CONSUMED, 1962-63**  
(£'000)

Railway system	Coal		Oil				Petrol for rail cars
	Locomotives	Other purposes	Diesel(a)	Fuel(b)	Lubrication	Other purposes	
New South Wales ..	(c) 548	(c) 17	1,359	146	221	154	..
Victoria ..	1,209	28	739	324	115	137	..
Queensland ..	224	20	618	..	61	105	(d)
South Australia ..	583	10	398	180	(e)	(e)	(d)
Western Australia ..	7	1	303	(d)	115	99	7
Tasmania ..	(d)	3	98	..	13	14	..
Commonwealth ..			318	..	31	28	(d)
<b>Australia ..</b>	<b>(c)</b>	<b>(c)</b>	<b>3,833</b>	<b>650</b>	<b>(e)</b>	<b>(e)</b>	<b>7</b>

(a) Used in internal combustion engines of locomotives and rail cars. (b) Used in oil-fired furnaces of steam locomotives. (c) Not available. The quantity of coal used in New South Wales was 705,000 tons for locomotives and 15,000 tons for other purposes. (d) Less than £500. (e) Not available.

15. Staff Employed and Salaries and Wages Paid.—The following table shows details of the average staff employed and the salaries and wages paid by the government railways of Australia during 1962-63.

**GOVERNMENT RAILWAYS: AVERAGE NUMBER OF EMPLOYEES AND  
SALARIES AND WAGES PAID, 1962-63**

Railway system	Operating staff			Construction staff			Total salaries and wages paid (£'000)	Average earnings per employee (£)
	Salaried	Wages	Total	Salaried	Wages	Total		
New South Wales ..	9,111	39,543	48,654	..	..	..	56,833	1,169
Victoria ..	(a) 5,390	a 21,478	a 28,868	(b)	(b)	(b)	33,035	1,144
Queensland(e) ..	4,324	22,257	26,581	22	448	470	30,178	1,116
South Australia ..	1,805	6,964	8,769	..	752	752	10,738	1,128
Western Australia ..	1,997	9,975	11,972	(d)	(d)	(d)	12,690	1,060
Tasmania ..	357	1,891	2,248	29	135	164	2,434	1,009
Commonwealth ..	447	2,354	2,801	..	..	..	3,433	1,225
<b>Australia ..</b>	<b>e 23,431</b>	<b>e106,462</b>	<b>e129,893</b>	<b>51</b>	<b>1,335</b>	<b>1,386</b>	<b>149,341</b>	<b>1,138</b>

(a) Includes construction staff. (b) Included with operating staff. (c) Excludes Queensland portion of Uniform Gauge Railway. (d) Construction work is carried out by private contractors and the staff engaged is therefore not under the control of the Railway Commissioner. (e) Includes construction staff, Victoria.

**TRAMWAY, TROLLEY-BUS AND OMNIBUS SERVICES**

1. Systems in Operation.—(i) *Tramway and Trolley-bus.* Since 1st April, 1947, all systems have been operated by government or municipal authorities. During the year 1962-63, tramway systems were in operation in the following cities—Melbourne, Bendigo, and Ballarat, Victoria; Brisbane, Queensland; and Adelaide, South Australia. Trolley-bus services operated in Brisbane, Queensland; Adelaide, South Australia; Perth, Western Australia; and Hobart and Launceston, Tasmania. All systems were electric.

In many parts of Australia, private lines used for special purposes in connexion with the timber, mining, sugar, or other industries are often called tramways, but they are more properly railways, and the traffic on them has nothing in common with that of the street tramways for the conveyance of passengers, which are dealt with in the present section.

(ii) *Motor Omnibus.* Services are operated by government or municipal authorities and private operators. Statistics are collected for government and municipal omnibus services located in all State capital cities; Canberra, Australian Capital Territory; Newcastle, New South Wales; Maryborough and Rockhampton, Queensland; Fremantle and the Eastern Goldfields area, Western Australia; Launceston and Burnie, Tasmania; Darwin, Northern

Territory; and for country road services operated by the Western Australian Government Railways. In Sydney, the government tramway system has been replaced by omnibus services, and in Perth, the Metropolitan (Perth) Passenger Transport Trust has acquired all but one of the formerly privately owned metropolitan services. In Hobart, the government trolley-bus and omnibus services have replaced the government tramway service.

Particulars of motor omnibus services under the control of private operators are recorded for the States of New South Wales, Victoria, Queensland, South Australia and Western Australia. In New South Wales, particulars of private services are compiled for the Sydney metropolitan and Newcastle transport districts and the city of Greater Wollongong. In Victoria, particulars relate to the Melbourne metropolitan area only, and in South Australia to services licensed by the Municipal Tramways Trust and the Transport Control Board. In Queensland, they relate to all cities with a population of 10,000 or more persons. In Western Australia, particulars of all private services throughout the State are included.

2. Government and Municipal Services.—(i) *Summary of Operations, States.* Because of the development in recent years of the various forms of public road transport under the control of single authorities, and the gradual replacement of tramway services by motor omnibus services, it is no longer possible to obtain separate statistics for all phases of the activities of each form of transport, particularly financial operations. In this section, therefore, statistics of public tramway, trolley-bus and motor omnibus services are combined in single tables with separate details shown for each form of transport where possible.

Since October, 1960, the tramway gauge has been 4 feet 8½ inches throughout.

The following table gives a summary of the operations of tramway, trolley-bus and omnibus systems controlled by government and municipal authorities, for 1962-63.

TRAMWAY, TROLLEY-BUS AND OMNIBUS SERVICES: GOVERNMENT AND MUNICIPAL, 1962-63

Particulars	N.S.W.	Vic.	Qld	S.A.	W.A.	Tas.	N.T.	A.C.T.	Aust.
Route-miles at 30th June—									
Tram .. .. . miles	..	156	60	7	..	..	..	..	223
Trolley-bus .. ..	..	..	20	23	17	28	..	..	5,829
Omnibus .. .. .	556	123 (a)	280	115	3,765	808	35	59	
Vehicle miles—									
Tram .. .. . '000	..	18,547	7,319	497	..	..	..	..	26,363
Trolley-bus .. ..	..	..	1,143	704	(b)	1,353	..	..	94,883
Omnibus .. .. .	44,034	7,341	5,796	10,234	17,564	4,863	409	1,442	
Rolling Stock at 30th June—									
Tram .. .. . No.	..	758	301	28	..	..	..	..	1,087
Trolley-bus .. ..	..	..	36	39	63	70	..	..	208
Omnibus .. .. .	1,745	238	300	329	561	227	11	63	3,474
Passenger-journeys—									
Tram .. .. . '000	..	168,275	67,133	2,521	..	..	..	..	237,929
Trolley-bus .. ..	..	..	8,582	3,574	(b)	(b)	..	..	474,194
Omnibus .. .. .	265,569	32,634	29,372	51,944	52,146	25,145	781	4,447	
Gross revenue(c)—									
Tram, trolley-bus and omnibus .. .. . £'000	12,385	8,553	3,964	2,718	2,680	1,151	47	199	31,697
Working expenses(d)—									
Tram, trolley-bus and omnibus .. .. . £'000	13,951	8,457	3,994	2,583	2,979	1,380	71	257	33,672
Net revenue—									
Tram, trolley-bus and omnibus .. .. . £'000	-1,566	96	-30	135	-299	-229	-24	-58	-1,975
Ratio of working expenses to gross revenue—									
Tram, trolley-bus and omnibus .. .. . per cent.	112.65	98.88	100.75	95.03	111.16	119.88	152.44	129.12	106.23
Employees at 30th June—									
Tram, trolley-bus and omnibus .. .. . No.	7,862	5,305	2,731	1,555	1,723	683	18	109	19,986
Accidents—									
Tram, trolley-bus and omnibus(e)—									
Persons killed .. . No.	11	11	4	2	3	1	..	..	32
Persons injured ..	1,524	686	96	230	292	73	..	14	2,915

(a) Decrease due to revision in method of calculating mileage. (b) Included with omnibus services.  
(c) Excludes government grants. (d) Includes provision of reserves for depreciation, etc., where possible.  
(e) Excludes accidents to employees.

NOTE.—Minus sign (-) denotes deficit.



(ii) *Summary of Operations, Australia.* The following table gives a summary of the operations of tramway, trolley-bus and omnibus systems controlled by government and municipal authorities, for the years 1958-59 to 1962-63.

**TRAMWAY, TROLLEY-BUS AND OMNIBUS SERVICES: GOVERNMENT AND MUNICIPAL, AUSTRALIA**

Particulars	1958-59	1959-60	1960-61	1961-62	1962-63
<b>Route-miles at 30th June—</b>					
Tram .. .. miles	286	275	238	229	223
Trolley-bus .. .. "	105	92	92	} 6,000	5,829
Omnibus .. .. "	5,664	5,773	5,551		
<b>Vehicle miles—</b>					
Tram(a) .. .. '000	37,659	34,379	30,010	28,034	26,363
Trolley-bus .. .. "	5,277	5,444	4,558	} 93,647	94,883
Omnibus .. .. "	78,881	81,755	85,924		
<b>Rolling stock at 30th June—</b>					
Tram .. .. No.	1,584	1,514	1,227	1,158	1,087
Trolley-bus .. .. "	279	246	246	240	208
Omnibus .. .. "	3,016	3,154	3,366	3,450	3,474
<b>Passenger-journeys—</b>					
Tram(a) .. .. '000	346,957	312,913	265,473	248,396	237,929
Trolley-bus .. .. "	25,720	25,403	19,461	} 469,549	474,194
Omnibus(c) .. .. "	404,676	420,360	440,822		
<b>Gross revenue(d)—</b>					
Tram, trolley-bus and omnibus £'000	31,132	31,817	31,800	31,757	31,697
<b>Working expenses(e)—</b>					
Tram, trolley-bus and omnibus £'000	32,338	33,629	34,382	34,206	33,672
<b>Net revenue—</b>					
Tram, trolley-bus and omnibus £'000	-1,206	-1,812	-2,582	-2,449	-1,975
<b>Ratio of working expenses to gross revenue—</b>					
Tram, trolley-bus and omnibus per cent.	103.87	105.70	108.12	107.71	106.23
<b>Employees at 30th June—</b>					
Tram, trolley-bus and omnibus No.	22,569	21,555	21,455	20,607	19,986
<b>Accidents—</b>					
Tram, trolley-bus and omnibus(f)—					
Persons killed .. No.	38	40	25	42	32
Persons injured .. "	3,092	3,147	2,756	3,076	2,915

(a) Includes particulars of New South Wales trolley-buses up to cessation of operation in August, 1959, and tramway services up to February, 1961. (b) Includes a small number of passenger-ferry miles for Western Australia. (c) Includes particulars for Tasmanian trams (to October, 1960) and trolley-buses. (d) Excludes government grants. (e) Includes provision of reserves for depreciation, etc., where possible. (f) Excludes accidents to employees.

NOTE.—Minus sign (—) denotes deficit.

3. Private Services.—*Summary of Operations.* The following table shows the operations of motor omnibus services under the control of private operators in New South Wales, Victoria, South Australia and Western Australia during each of the years 1958–59 to 1962–63, and in Queensland during the years 1959–60 to 1962–63. Particulars are not available for Tasmania.

## MOTOR OMNIBUS SERVICES: PRIVATE

Year	Number of omnibuses	Omnibus-miles ( <sup>'000</sup> )	Passenger-journeys ( <sup>'000</sup> )	Value of plant and equipment (£ <sup>'000</sup> )	Gross revenue (£ <sup>'000</sup> )	Persons employed
NEW SOUTH WALES(a)						
1958–59..	916	25,496	95,457	1,586	3,721	1,545
1959–60..	930	26,676	98,303	1,661	4,025	1,679
1960–61(b)	1,011	20,611	76,157	1,847	3,288	1,662
1961–62..	1,171	26,336	83,523	1,963	4,194	1,593
1962–63..	1,083	25,141	72,082	1,994	3,888	1,452
VICTORIA(c)(d)						
1958–59..	469	15,592	72,005	(e) 670	2,206	(f) 750
1959–60..	477	15,448	70,719	759	2,319	705
1960–61..	495	15,702	70,273	755	2,467	732
1961–62..	486	15,805	69,150	694	2,613	721
1962–63..	492	16,405	70,197	700	2,684	709
QUEENSLAND(g)						
1959–60..	362	7,605	25,344	713	1,165	539
1960–61..	378	8,298	25,806	741	1,238	578
1961–62..	394	8,714	26,301	806	1,281	582
1962–63..	402	8,562	25,563	867	1,254	574
SOUTH AUSTRALIA(h)						
1958–59..	(i) 116	6,042	12,107	(j) {	{	732
1959–60..	(i) 117	6,208	11,457			833
1960–61..	281	5,963	11,171			849
1961–62..	258	6,030	11,153			869
1962–63..	244	6,045	11,583			903
WESTERN AUSTRALIA(k)						
1958–59..	146	6,028	15,846	260	804	287
1959–60..	137	4,142	11,183	243	585	272
1960–61..	142	4,049	10,394	353	586	273
1961–62(l)	53	3,698	7,268	142	383	82
1962–63..	54	1,088	1,696	120	135	74

(a) Metropolitan, Newcastle and Wollongong transport districts only. (b) Nine months ended March, 1961; subsequent figures relate to the years ended 31st March. (c) Metropolitan area only. (d) Partly estimated. (e) Vehicles only. (f) Drivers only. (g) All cities with a population of 10,000 persons or more. (h) Services licensed by the Municipal Tramways Trust and the Transport Control Board. (i) Excludes Transport Control Board licensed omnibuses. (j) Not available. (k) Includes services operated in metropolitan and rural areas. (l) Decrease due to Metropolitan Perth Passenger Transport Trusts acquisition of services previously privately owned.

## FERRY (PASSENGER) SERVICES

1. **General.**—Ferry passenger services are operated in the following States—New South Wales, at Sydney and Newcastle; Western Australia, on the Swan River at Perth; Tasmania, on the Derwent River at Hobart and on the Mersey River at Devonport. Control is exercised by both governmental authorities and private operators. In Victoria and Queensland the services operated are not extensive. There are no ferry passenger services in South Australia.

2. **Summary of Operations.**—The operations of ferry passenger services in New South Wales, Western Australia and Tasmania during the years 1958–59 to 1962–63 are summarized in the following table. Particulars of vehicular ferries are not included.

## FERRY (PASSENGER) SERVICES

Year	Number of vessels	Passenger accommodation	Passenger-journeys ('000)	Gross revenue (£)	Persons employed
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## NEW SOUTH WALES—SYDNEY AND NEWCASTLE

1958–59	.. .. .	37	19,300	15,906	800,196	308
1959–60	.. .. .	37	19,191	15,365	835,700	298
1960–61	.. .. .	40	19,211	15,093	872,000	316
1961–62	.. .. .	39	17,641	14,452	830,000	295
1962–63	.. .. .	38	17,653	14,456	836,000	300

## WESTERN AUSTRALIA—PERTH

1958–59	.. .. .	4	785	407	13,504	11
1959–60	.. .. .	4	785	362	12,219	7
1960–61	.. .. .	4	785	180	9,211	7
1961–62	.. .. .	4	800	168	9,889	8
1962–63	.. .. .	4	800	192	11,221	8

## TASMANIA—HOBART AND DEVONPORT

1958–59	.. .. .	4	1,482	416	12,701	15
1959–60	.. .. .	4	1,452	431	12,061	13
1960–61	.. .. .	4	1,482	436	10,434	12
1961–62	.. .. .	4	1,482	406	9,419	12
1962–63	.. .. .	4	1,482	380	10,376	12

## MOTOR VEHICLES

1. **General.**—The arrangements for the registration of motor vehicles and the licensing of drivers and riders are not uniform throughout Australia, since they are the function of a separate authority, or authorities, in each State and Territory. Particulars of registration, licences, fees payable, etc., in each State and Territory at 30th June, 1960, were given in Year Book, No. 47, pp. 553–6.

In all the capital cities and in most of the provincial centres, taxi-cabs and other vehicles ply for hire under licence granted by either the Commissioner of Police or the local government authority concerned, but particulars of their operations are not available.

In both urban and provincial centres, motor omnibus traffic has assumed considerable proportions during recent years, and there has been a considerable replacement of existing tramway and trolley-bus services by motor omnibus services. Tramway services by 30th June, 1963, had ceased to operate in New South Wales, Western Australia and Tasmania whilst in South Australia only 7 miles of route remained in operation (*see p. 585*).

2. Motor Vehicles on the Registers, etc.—The following table shows particulars of motor vehicles on the registers, licences issued and revenue received for 1962–63 and a summary for Australia for each of the years 1958–59 to 1962–63.

Figures for numbers of motor vehicles at 31st December, 1962, shown in the tables in this paragraph are as obtained from the census of motor vehicles and relate to motor vehicles as defined for the purposes of the census; figures for other dates are estimates on a basis comparable with the figures from the censuses of 1955 and 1962 (see p. 590).

MOTOR VEHICLES: REGISTRATIONS AND REVENUE

State or Territory, and year	Numbers of motor vehicles on the registers					Number of drivers' and riders' licences in force at 30th June	Gross revenue derived from—			
	Motor cars and station wagons	Utilities, panel vans, trucks and omnibuses	Motor cycles	Total	Per 1,000 of population		Vehicle registrations and motor tax	Drivers' and riders' etc. licences	Other sources	Total
							(£'000)	(£'000)	(£'000)	(£'000)
<b>STATES AND TERRITORIES, 1962–63</b>										
N.S.W. ..	(a) 828,693	(a) 279,113	(a) 20,398	(a) 1,128,204	(a) 281	1,450,842	14,252	2,270	5,891	22,413
Victoria ..	681,025	208,688	15,802	905,515	300	1,112,750	11,215	1,432	3,948	16,595
Queensland	290,195	148,275	14,680	453,150	292	(d) 6,247	6,247	336	2,891	9,474
S. Aust. ...	238,905	82,463	16,717	338,085	338	396,678	4,911	(e) 99	99	5,010
W. Aust. ...	165,637	75,531	12,257	253,425	331	292,000	3,164	326	245	3,735
Tasmania	75,697	27,275	2,101	105,073	284	124,667	1,457	125	157	1,739
Nor. Terr.	5,579	4,767	325	10,671	406	13,834	71	10	1	82
A.C.T. ...	17,999	3,694	296	21,989	319	35,728	(d)	(d)	(d)	204
<b>Australia ..</b>	<b>2,303,730</b>	<b>829,806</b>	<b>82,576</b>	<b>3,216,112</b>	<b>298</b>	<b>3,426,499</b>	<b>(g) 41,317</b>	<b>(h) 4,499</b>	<b>13,232</b>	<b>59,252</b>

SUMMARY, AUSTRALIA

	(a)	(a)	(a)	(a)	(f)	(f)	(f)	(f)	(f)	
1958–59(b)	1,770,595	750,994	109,754	2,631,343	262	2,833,040	31,642	2,721	8,373	42,736
1959–60(b)	1,921,637	778,074	102,208	2,801,919	273	2,984,852	34,044	3,275	10,203	47,522
1960–61(b)	2,071,515	802,848	94,130	2,968,493	282	3,197,510	(f) 35,227	(f) 3,799	10,871	50,061
1961–62(b)	2,203,311	817,143	86,430	3,106,884	290	3,325,774	(g) 37,324	(h) 3,504	11,767	52,778
1962–63(c)	2,303,730	829,806	82,576	3,216,112	298	3,426,499	(g) 41,317	(h) 4,499	13,232	59,252

(a) Census of 31st December, 1962. (b) Numbers of motor vehicles are estimates as at 30th June on a basis comparable with the figures from the censuses of 1955 and 1962. (c) Numbers of motor vehicles at census of 31st December, 1962. (d) Not available. (e) Included in registration fees. (f) Excludes Queensland. (g) Excludes Australian Capital Territory but includes drivers, etc., licence fees for South Australia. (h) Excludes South Australia and Australian Capital Territory. (i) Excludes Australian Capital Territory.

NOTE.—All Commonwealth-owned vehicles are included except those belonging to the Defence Services.

The table following shows the number of vehicles (excluding motor cycles) registered per 1,000 of population in each State and Territory at 30th June for each of the years 1959 to 1962 and at 31st December, 1962.

MOTOR VEHICLES (EXCLUDING MOTOR CYCLES) REGISTERED PER 1,000 OF POPULATION

Date	N.S.W.	Vic.	Q'land	S.A.	W.A.	Tas.	N.T.	A.C.T.	Aust.
30th June, 1959 ..	236	261	248	273	261	248	286	287	251
„ 1960 ..	248	274	260	281	276	262	308	298	263
„ 1961 ..	257	282	268	310	289	270	329	299	274
„ 1962 ..	268	287	274	315	304	281	352	308	282
31st Dec., 1962(a) ..	276	295	283	321	315	279	394	315	290

(a) Census of 31st December, 1962.

3. **New Vehicles Registered.**—(i) *States and Territories, 1962–63.* The following table shows the number of new vehicles registered in each State and Territory during 1962–63.

**NEW MOTOR VEHICLES REGISTERED, 1962-63**

Vehicles	N.S.W.	Vic.	Qld	S.A.	W.A.	Tas.	N.T.	A.C.T.	Aust.
Motor cars(a) ..	107,085	77,838	36,472	27,513	23,142	9,004	631	3,241	284,926
Other motor vehicles(b) ..	21,059	14,260	9,762	5,647	6,367	2,005	445	512	60,057
Motor cycles ..	1,834	656	1,178	859	773	52	67	27	5,446
<b>Total ..</b>	<b>129,978</b>	<b>92,754</b>	<b>47,412</b>	<b>34,019</b>	<b>30,282</b>	<b>11,061</b>	<b>1,143</b>	<b>3,780</b>	<b>350,429</b>

(a) Includes taxis, hire cars and station wagons.

(b) Includes utilities, panel vans, trucks, omnibuses and ambulances.

(ii) *Australia.* Particulars of the number of new vehicles registered in Australia during each of the years 1958–59 to 1962–63 are shown in the following table.

**NEW MOTOR VEHICLES REGISTERED: AUSTRALIA**

Vehicles	1958–59	1959–60	1960–61	1961–62	1962–63
Motor cars, taxis and station wagons ..	176,314	224,055	223,142	215,926	284,926
Other motor vehicles(a) .. ..	66,336	69,080	59,169	52,121	60,057
Motor cycles .. ..	10,036	9,689	7,879	5,314	5,446
<b>Total .. ..</b>	<b>252,686</b>	<b>302,824</b>	<b>290,190</b>	<b>273,361</b>	<b>350,429</b>

(a) Includes utilities, panel vans, trucks, omnibuses and ambulances.

4. **World Motor Vehicle Statistics, 1963.**—At 1st January, 1963, there were 144,269,800 motor cars, trucks and omnibuses registered in various countries of the world. This was an increase of 6.6 per cent. on the figure for the previous year, 135,346,400. Of the 1963 registrations, 78,630,000 or 54.5 per cent. of the world total were in the United States of America, while Australian registration amounted to 2.3 per cent. This information is largely derived from the *Automobile International*, May, 1963.

**CENSUS OF MOTOR VEHICLES, 31st DECEMBER, 1962**

1. **General.**—A census of motor vehicles on the register in each State and Territory at 31st December, 1962, was conducted by the Commonwealth Statistician in co-operation with the Deputy Commonwealth Statisticians and the motor vehicle registration authorities. The census covered items shown on the motor vehicle registration certificate such as make of vehicle, year of model, type of vehicle, horsepower, motive power, location (i.e. address on registration certificate), ownership (private, government, etc.), and for specific types of vehicles such items as unladen weight, carrying capacity, passenger capacity, and in some States gross vehicle weight.

The detailed results of the census are being published in mimeographed and printed bulletins for each State and Territory and for Australia, and in issue No. 54, 1962–63 of the annual bulletin *Transport and Communication*. Previous enumerations of this nature were the census of motor vehicles, 31st December, 1955, and the survey of motor vehicles, 1947–48. The results were published in a series of bulletins and, in summarized form, in issues of the annual bulletin *Transport and Communication* No. 48, 1956–57 (1955 census) and No. 40, 1948–49 (1947–48 survey). Year Book No. 44, 1958, contains on page 415 a summary, for each State and Territory and for Australia, of the vehicles of each type recorded at the census of 31st December, 1955.

2. Summary.—(i) *Types of Vehicles.* (a) *Number.* A summary for each State and Territory of the number of motor vehicles of each type on the register at 31st December, 1962, is given in the following table. The total number of each type recorded for Australia at the previous motor vehicle census (31st December, 1955) is included for purposes of comparison.

## CENSUS OF MOTOR VEHICLES, 31st DECEMBER, 1962: TYPES OF VEHICLE

State or Territory	Motor cars	Station wagons	Utilities	Panel vans	Trucks	Other truck-type	Omnibuses	Motor cycles	Total motor vehicles
New South Wales	742,947	85,746	137,138	49,479	84,670	2,822	5,004	20,398	1,128,204
Victoria	611,497	69,528	94,470	31,328	76,591	2,890	3,409	15,802	905,515
Queensland	258,942	31,253	92,128	13,359	40,502	450	1,836	14,680	453,150
South Australia	220,010	18,895	38,539	9,678	31,684	982	1,580	16,717	338,085
Western Australia	149,799	15,838	37,784	8,585	27,256	541	1,365	12,257	253,425
Tasmania	69,020	6,677	11,183	6,364	8,487	301	940	2,101	105,073
Northern Territory	4,321	1,258	2,806	471	1,326	73	91	325	10,671
Aust. Cap. Terr.	15,591	2,408	1,802	808	935	34	115	296	21,989
Australia, 31st Dec., 1962 No.	2,072,127	231,603	415,850	120,072	271,451	8,093	14,340	82,576	3,216,112
Per cent.	64.4	7.2	12.9	3.7	8.4	0.3	0.5	2.6	100.0
Australia, 31st Dec., 1955 No.	1,356,682	15,948	361,970	(b)53,808	250,630	5,884	10,142	127,129	2,182,193
Per cent.	62.2	0.7	16.6	2.5	11.5	0.3	0.4	5.8	100.0

(a) Includes panel vans, Queensland.

(b) Excludes panel vans, Queensland, which are included with utilities.

(b) *Relation to Population.* The table below shows the number of motor vehicles (cars, station wagons, motor cycles, other motor vehicles, and total vehicles) registered per 1,000 of population in each State and Territory and Australia at 31st December, 1962, and in Australia at 31st December, 1955.

## CENSUS OF MOTOR VEHICLES, 31st DECEMBER, 1962: TYPES OF VEHICLE PER 1,000 OF POPULATION

State or Territory	Motor cars	Station wagons	Other motor vehicles	Total motor vehicles (excl. motor cycles)	Motor cycles	Total motor vehicles
New South Wales	185	21	70	276	5	281
Victoria	203	23	70	296	5	301
Queensland	167	20	96	283	9	292
South Australia	220	19	82	321	17	338
Western Australia	195	21	99	315	16	331
Tasmania	186	18	74	278	6	284
Northern Territory	164	48	182	394	12	406
Australian Capital Territory	227	35	54	316	4	320
Australia, 31st December, 1962	192	21	77	290	8	298
Australia, 31st December, 1955	146	2	73	221	13	234

(ii) *Year of Model. (a) Motor Cars.* In the following table, motor cars on the register in each State and Territory are shown classified by year of model.

**CENSUS OF MOTOR VEHICLES, 31st DECEMBER, 1962: MOTOR CARS,  
BY YEAR OF MODEL**

State or Territory	Year of model									Total
	Before 1951	1951 to 1955	1956	1957	1958	1959	1960	1961	1962	
N.S.W. ..	113,462	198,297	49,025	51,496	58,676	60,405	73,329	58,519	79,738	742,947
Victoria ..	101,085	174,785	43,189	42,488	44,708	49,597	59,330	40,864	55,451	611,497
Queensland ..	42,434	78,691	18,175	19,158	19,265	18,873	22,632	15,025	24,689	258,942
S. Australia ..	39,021	70,498	15,510	15,659	15,202	14,488	18,377	12,298	18,957	220,010
W. Australia ..	23,615	45,707	8,512	9,866	10,121	10,247	13,471	11,199	16,661	149,799
Tasmania ..	10,446	21,331	5,266	4,951	4,955	4,855	6,008	4,549	6,659	69,020
N. Terr. ..	340	1,087	359	362	369	413	572	393	426	4,321
Aust. Cap. Terr.	865	3,558	1,179	1,137	1,513	1,577	1,837	1,763	2,162	15,591
<b>Australia No.</b>	<b>331,268</b>	<b>593,954</b>	<b>141,615</b>	<b>145,117</b>	<b>154,809</b>	<b>160,455</b>	<b>195,556</b>	<b>144,610</b>	<b>204,743</b>	<b>2,072,127</b>
<b>Per cent.</b>	<b>16.0</b>	<b>28.7</b>	<b>6.8</b>	<b>7.0</b>	<b>7.5</b>	<b>7.7</b>	<b>9.4</b>	<b>7.0</b>	<b>9.9</b>	<b>100.0</b>

(b) *Station Wagons.* Station wagons on the register in each State and Territory at 31st December, 1962, are shown in the following table in the same groups as those used for motor cars in the previous table.

**CENSUS OF MOTOR VEHICLES, 31st DECEMBER, 1962: STATION WAGONS,  
BY YEAR OF MODEL**

State or Territory	Year of model									Total
	Before 1951	1951 to 1955	1956	1957	1958	1959	1960	1961	1962	
N.S.W. ..	838	3,832	1,224	2,486	8,040	12,966	18,108	16,413	21,839	85,746
Victoria ..	965	3,284	1,059	2,105	6,422	10,410	14,770	12,932	17,581	69,528
Queensland ..	307	1,403	342	809	2,915	4,480	6,239	5,353	9,405	31,253
S. Australia ..	292	860	216	533	1,687	3,126	4,060	3,194	4,927	18,895
W. Australia ..	286	944	201	439	1,172	2,186	2,753	3,039	4,818	15,838
Tasmania ..	56	341	99	177	628	956	1,330	1,208	1,882	6,677
Nor. Terr. ..	6	40	17	49	148	221	267	252	258	1,258
Aust. Cap. Terr.	12	70	48	55	244	404	461	544	570	2,408
<b>Australia No.</b>	<b>2,762</b>	<b>10,774</b>	<b>3,206</b>	<b>6,653</b>	<b>21,256</b>	<b>34,749</b>	<b>47,988</b>	<b>42,935</b>	<b>61,280</b>	<b>231,603</b>
<b>Per cent.</b>	<b>1.1</b>	<b>4.7</b>	<b>1.4</b>	<b>2.9</b>	<b>9.2</b>	<b>15.0</b>	<b>20.7</b>	<b>18.5</b>	<b>26.5</b>	<b>100.0</b>

(c) *Utilities.* Utilities on the register in each State and Territory at 31st December, 1962, are shown below in the same groups as for previous tables.

**CENSUS OF MOTOR VEHICLES, 31st DECEMBER, 1962: UTILITIES,  
BY YEAR OF MODEL**

State or Territory	Year of model									Total
	Before 1951	1951 to 1955	1956	1957	1958	1959	1960	1961	1962	
N.S.W. ..	18,200	48,061	10,228	10,796	10,953	11,318	9,957	8,446	9,179	137,138
Victoria ..	14,428	33,284	7,509	7,457	7,364	7,225	6,623	5,130	5,450	94,470
Queensland ..	16,842	32,827	6,659	6,439	7,149	6,947	6,180	3,985	5,100	92,128
S. Australia ..	5,973	14,601	2,938	2,813	2,781	2,738	2,324	2,032	2,339	38,539
W. Australia ..	5,030	12,478	2,525	2,423	2,888	3,138	3,211	2,907	3,184	37,784
Tasmania ..	1,719	3,930	791	811	816	849	779	662	826	11,183
Nor. Terr. ..	278	645	236	217	269	248	345	281	287	2,806
Aust. Cap. Terr.	92	480	136	133	192	218	193	172	186	1,802
<b>Australia No.</b>	<b>62,562</b>	<b>146,306</b>	<b>31,022</b>	<b>31,089</b>	<b>32,412</b>	<b>32,681</b>	<b>29,612</b>	<b>23,615</b>	<b>26,551</b>	<b>415,850</b>
<b>Per cent.</b>	<b>15.0</b>	<b>35.1</b>	<b>7.5</b>	<b>7.5</b>	<b>7.8</b>	<b>7.9</b>	<b>7.1</b>	<b>5.7</b>	<b>6.4</b>	<b>100.0</b>

(d) *Panel Vans.* The following table shows the number of panel vans on the register in the various States and Territories at 31st December, 1962, grouped as for previous tables.

**CENSUS OF MOTOR VEHICLES, 31st DECEMBER, 1962: PANEL VANS,  
BY YEAR OF MODEL**

State or Territory	Year of model									Total
	Before 1951	1951 to 1955	1956	1957	1958	1959	1960	1961	1962	
N.S.W. ..	3,583	9,085	3,908	3,998	5,747	8,023	6,176	4,439	4,520	49,479
Victoria ..	2,992	7,601	2,946	2,402	3,380	4,650	2,900	2,098	2,359	31,328
Queensland ..	618	2,117	1,190	1,179	1,571	2,633	1,655	1,069	1,327	13,359
S. Australia ..	911	2,460	952	907	1,018	965	900	749	816	9,678
W. Australia ..	771	1,993	619	691	786	995	1,007	823	900	8,585
Tasmania ..	534	1,766	544	542	618	663	722	491	484	6,364
Nor. Terr. ..	15	56	51	54	63	49	76	63	44	471
Aust. Cap. Terr.	10	90	52	62	88	108	148	111	139	808
Australia No.	9,434	25,168	10,262	9,835	13,271	18,086	13,584	9,843	10,589	120,072
Per cent.	7.8	21.0	8.5	8.2	11.1	15.1	11.3	8.2	8.8	100.0

(e) *Trucks.* The number of trucks on the register in each State and Territory at 31st December, 1962, is shown below, grouped as for previous tables.

**CENSUS OF MOTOR VEHICLES, 31st DECEMBER, 1962: TRUCKS,  
BY YEAR OF MODEL**

State or Territory	Year of model									Total
	Before 1951	1951 to 1955	1956	1957	1958	1959	1960	1961	1962	
N.S.W. ..	25,679	23,727	4,964	4,447	4,461	5,122	6,910	4,509	4,851	84,670
Victoria ..	22,838	19,772	4,362	4,050	4,817	5,071	6,279	4,580	4,822	76,591
Queensland ..	14,464	10,310	2,367	2,002	2,253	2,257	2,627	1,740	2,482	40,502
S. Australia ..	10,717	9,839	1,746	1,563	1,445	1,607	1,773	1,514	1,480	31,684
W. Australia ..	8,152	9,016	1,375	1,031	1,305	1,369	1,788	1,545	1,675	27,256
Tasmania ..	2,320	2,493	549	498	514	540	600	440	533	8,487
Nor. Terr. ..	254	240	132	110	96	97	115	170	112	1,326
Aust. Cap. Terr.	117	197	43	63	75	93	128	105	114	935
Australia No.	84,541	75,594	15,538	13,764	14,966	16,156	20,220	14,603	16,069	271,451
Per cent.	31.2	27.9	5.7	5.1	5.5	5.9	7.4	5.4	5.9	100.0

(f) *Other Truck-type Vehicles.* The following table shows the number of other truck-type vehicles on the register in each State and Territory at 31st December, 1962, grouped as for previous tables.

**CENSUS OF MOTOR VEHICLES, 31st DECEMBER, 1962: OTHER  
TRUCK-TYPE(a), BY YEAR OF MODEL**

State or Territory	Year of model									Total
	Before 1951	1951 to 1955	1956	1957	1958	1959	1960	1961	1962	
N.S.W. ..	1,224	497	140	97	138	132	260	187	147	2,822
Victoria ..	1,442	510	131	69	123	137	185	159	134	2,890
Queensland ..	216	73	19	15	22	16	35	28	26	450
S. Australia ..	267	193	69	50	93	98	49	85	78	982
W. Australia ..	283	87	23	14	23	29	34	22	26	541
Tasmania ..	127	73	14	11	22	13	17	15	9	301
Nor. Terr. ..	25	17	5	4	1	5	6	10	..	73
Aust. Cap. Terr.	9	11	1	2	2	3	2	1	3	34
Australia No.	3,593	1,461	402	262	424	433	588	507	423	8,093
Per cent.	44.4	18.1	5.0	3.2	5.2	5.3	7.3	6.3	5.2	100.0

(a) Includes vehicles such as tankers, concrete agitators, tow trucks, mobile winches or cranes, fire engines.



(g) *Omnibuses.* The number of omnibuses on the register in each State and Territory at 31st December, 1962, is shown in the following table, grouped as for previous tables.

**CENSUS OF MOTOR VEHICLES, 31st DECEMBER, 1962: OMNIBUSES,  
BY YEAR OF MODEL**

State or Territory	Year of model									Total
	Before 1951	1951 to 1955	1956	1957	1958	1959	1960	1961	1962	
N.S.W. ..	1,741	755	161	243	356	467	587	376	318	5,004
Victoria ..	1,124	748	224	176	222	177	264	196	278	3,409
Queensland ..	653	264	96	126	132	134	138	132	161	1,836
S. Australia ..	345	330	126	188	150	119	107	105	110	1,580
W. Australia ..	480	404	59	54	82	61	72	66	87	1,365
Tasmania ..	294	235	39	67	55	40	119	50	41	940
Nor. Terr. ..	11	14	5	4	5	12	12	14	14	91
Aust. Cap. Terr.	14	6	9	10	5	12	21	22	16	115
<b>Australia No.</b>	<b>4,662</b>	<b>2,756</b>	<b>719</b>	<b>868</b>	<b>1,007</b>	<b>1,022</b>	<b>1,320</b>	<b>961</b>	<b>1,025</b>	<b>14,340</b>
<b>Per cent.</b>	<b>32.5</b>	<b>19.2</b>	<b>5.0</b>	<b>6.1</b>	<b>7.0</b>	<b>7.1</b>	<b>9.2</b>	<b>6.7</b>	<b>7.2</b>	<b>100.0</b>

(h) *Motor Cycles.* The following table shows the number of motor cycles on the register at 31st December, 1962, in each State and Territory for which the data were recorded, grouped as for previous tables.

**CENSUS OF MOTOR VEHICLES, 31st DECEMBER, 1962: MOTOR CYCLES,  
BY YEAR OF MODEL**

State or Territory	Year of model									Total
	Before 1951	1951 to 1955	1956	1957	1958	1959	1960	1961	1962	
N.S.W. ..	2,314	5,484	1,629	1,918	1,995	2,280	1,933	1,528	1,317	20,398
Victoria(a) ..	..	..	..	..	..	..	..	..	..	15,802
Queensland ..	1,906	3,840	1,127	1,335	1,697	1,333	1,325	1,065	1,052	14,680
S. Australia(a) ..	..	..	..	..	..	..	..	..	..	16,717
W. Australia ..	1,163	2,836	659	977	1,615	1,851	1,454	862	840	12,257
Tasmania ..	349	724	243	138	310	184	59	65	29	2,101
Nor. Terr. ..	24	65	26	19	42	36	39	19	55	325
Aust. Cap. Terr.	6	59	21	24	31	48	48	35	24	296

(a) Year of model not recorded.

**ROADS AND BRIDGES**

Information on the length of roads in Australia, the class of roads and their composition, together with particulars of the financial operations of the roads authorities in the several States, is included in Chapter XX. Local Government, of this Year Book.

## ROAD TRAFFIC ACCIDENTS

## § 1. Accidents Reported

1. Accidents Involving Casualties.—(i) *States, 1962-63.* The following table gives a summary of accidents involving casualties in each State and Territory for the year 1962-63.

## ROAD TRAFFIC ACCIDENTS INVOLVING CASUALTIES(a): ACCIDENTS RECORDED AND CASUALTIES, 1962-63

State or Territory	Accidents involving casualties	Persons killed			Persons injured		
		Number	Per 100,000 of mean population	Per 10,000 motor vehicles registered	Number	Per 100,000 of mean population	Per 10,000 motor vehicles registered
New South Wales ..	17,891	894	22	8	24,580	612	220
Victoria ..	12,330	803	27	8	17,149	567	179
Queensland ..	6,345	420	27	9	8,779	566	195
South Australia ..	6,343	201	20	6	8,216	822	247
Western Australia ..	3,926	164	21	7	5,360	701	216
Tasmania ..	919	67	19	6	1,354	374	128
Northern Territory	187	14	51	12	256	927	221
Aust. Cap. Terr. ..	411	12	17	5	593	857	259
<b>Total ..</b>	<b>48,352</b>	<b>2,575</b>	<b>24</b>	<b>8</b>	<b>66,287</b>	<b>613</b>	<b>204</b>

(a) Accidents (reported to the police) which occurred in public thoroughfares and which caused death, or injury to an extent requiring surgical or medical treatment.

(ii) *Riders, Drivers, Pedestrians, etc., Killed or Injured.* The following table shows the number of persons killed and the number injured during 1962-63 in each State and Territory, classified into drivers, riders, pedestrians, etc. Responsibility for cause of accident is not indicated by this classification.

## ROAD TRAFFIC ACCIDENTS INVOLVING CASUALTIES(a): DRIVERS, RIDERS, PEDESTRIANS, ETC., KILLED OR INJURED, 1962-63

Drivers, riders, pedestrians, etc.	N.S.W.	Vic.	Qld	S.A.	W.A.	Tas.	N.T.	A.C.T.	Total
<b>PERSONS KILLED</b>									
Drivers of motor vehicles ..	267	279	134	61	57	18	6	4	826
Motor cyclists ..	35	19	25	10	12	3	1	1	106
Pedal cyclists ..	24	42	24	13	4	3	..	..	110
Passengers (all types)(b)	249	212	127	50	51	16	5	4	714
Pedestrians ..	318	246	109	66	40	27	2	3	811
Other classes(c)	1	5	1	1	..	..	..	..	8
<b>Total ..</b>	<b>894</b>	<b>803</b>	<b>420</b>	<b>201</b>	<b>164</b>	<b>67</b>	<b>14</b>	<b>12</b>	<b>2,575</b>
<b>PERSONS INJURED</b>									
Drivers of motor vehicles ..	8,674	6,060	3,012	2,796	1,817	521	100	213	23,193
Motor cyclists ..	927	527	738	897	527	52	16	22	3,706
Pedal cyclists ..	993	1,115	530	840	388	47	10	51	3,974
Passengers (all types)(b)	9,965	6,898	3,551	2,836	2,022	540	117	256	26,185
Pedestrians ..	3,984	2,478	934	845	600	193	12	51	9,097
Other classes(c)	37	71	14	2	6	1	1	..	132
<b>Total ..</b>	<b>24,580</b>	<b>17,149</b>	<b>8,779</b>	<b>8,216</b>	<b>5,360</b>	<b>1,354</b>	<b>256</b>	<b>593</b>	<b>66,287</b>

(a) Accidents (reported to the police) which occurred in public thoroughfares and which caused death, or injury to an extent requiring surgical or medical treatment. (b) Includes pillion riders. (c) Includes tram drivers, riders of horses and drivers of animal-drawn vehicles.

(iii) *Ages of Persons Killed or Injured.* The following table shows the age groups of persons killed or injured in traffic accidents in each State and Territory during 1962-63.

**ROAD TRAFFIC ACCIDENTS INVOLVING CASUALTIES(a): AGES OF PERSONS KILLED OR INJURED, 1962-63**

Age group (years)	N.S.W.	Vic.	Qld	S.A.	W.A.	Tas.	N.T.	A.C.T.	Aust.
<b>PERSONS KILLED</b>									
Under 5 .. ..	29	27	6	7	6	2	..	1	78
5 and under 7 .. ..	16	11	11	3	3	1	..	..	45
7 " " 17 .. ..	62	59	39	19	12	9	1	1	202
17 " " 21 .. ..	119	95	71	21	22	10	4	2	344
21 " " 30 .. ..	155	110	73	29	28	8	5	4	412
30 " " 40 .. ..	96	97	51	21	18	13	2	1	299
40 " " 50 .. ..	94	106	43	20	14	6	2	1	286
50 " " 60 .. ..	105	94	32	29	21	6	..	..	287
60 and over .. ..	218	197	94	44	40	12	..	2	607
Not stated .. ..	..	7	..	8	..	..	..	..	15
<i>Total</i> .. ..	<i>894</i>	<i>803</i>	<i>420</i>	<i>201</i>	<i>164</i>	<i>67</i>	<i>14</i>	<i>12</i>	<i>2,575</i>

<b>PERSONS INJURED</b>									
Under 5 .. ..	760	605	271	258	195	45	6	19	2,159
5 and under 7 .. ..	466	408	133	165	122	33	6	11	1,344
7 " " 17 .. ..	3,037	2,264	1,167	1,177	723	177	17	89	8,651
17 " " 21 .. ..	4,512	2,882	1,890	1,549	1,096	281	35	114	12,359
21 " " 30 .. ..	5,104	3,698	1,757	1,399	994	294	94	153	13,493
30 " " 40 .. ..	3,459	2,465	1,092	970	628	142	44	67	8,867
40 " " 50 .. ..	2,852	1,865	931	844	526	115	32	69	7,234
50 " " 60 .. ..	2,081	1,394	699	619	400	104	15	36	5,348
60 and over .. ..	2,004	1,326	659	493	351	90	7	22	4,952
Not stated .. ..	305	242	180	742	325	73	..	13	1,880
<i>Total</i> .. ..	<i>24,580</i>	<i>17,149</i>	<i>8,779</i>	<i>8,216</i>	<i>5,360</i>	<i>1,354</i>	<i>256</i>	<i>593</i>	<i>66,287</i>

(a) Accidents (reported to the police) which occurred in public thoroughfares and which caused death, or injury to an extent requiring surgical or medical treatment.

(iv) *Accidents Recorded and Casualties, classified according to Type of Vehicle, Road User, etc., Involved.* The following table shows, for the year 1962-63, the number of accidents involving casualties in which each of several classes of vehicles, road users, etc., were involved. The persons killed and injured are similarly classified. As in the table in sub-paragraph (ii), p. 595, responsibility for cause of accident is not indicated by this classification.

**ROAD TRAFFIC ACCIDENTS INVOLVING CASUALTIES(a), CLASSIFIED ACCORDING TO TYPE OF VEHICLE, ROAD USER, ETC., INVOLVED: AUSTRALIA, 1962-63**

Particulars	Motor vehicle	Motor cycle	Pedal cycle	Tram	Animal and animal-drawn vehicle	Pedestrian	Fixed object	Other vehicle
Accidents involving casualties .. ..	46,377	4,262	4,018	148	387	9,172	3,942	277
Persons killed .. ..	2,491	131	113	9	20	805	200	72
Persons injured .. ..	64,106	4,749	4,058	201	469	8,974	5,420	329

(a) Accidents (reported to the police) which occurred in public thoroughfares and which caused death, or injury to an extent requiring surgical or medical treatment.

NOTE.—As accidents and casualties classified according to one type of road user, etc., may also be classified according to another, these totals cannot be added across to obtain grand totals.

The 46,377 accidents involving casualties in which motor vehicles were involved comprised 17,520 collisions with other motor vehicles, 2,975 with motor cycles, 3,507 with pedal cycles, 96 with trams, 285 with animals and animal drawn vehicles, 8,741 with pedestrians, 3,709 with fixed objects, 239 with vehicles other than those mentioned, 8,876 instances of overturning or leaving the roadway, and 429 accidents to passengers only.

2. Road Traffic Accidents Involving Casualties, and Persons Killed or Injured.—The following table shows the number of road traffic accidents involving casualties and persons killed or injured in road traffic accidents in each State and the Australian Capital Territory during each of the years 1958–59 to 1962–63, and for the Northern Territory for the year 1962–63.

**ROAD TRAFFIC ACCIDENTS INVOLVING CASUALTIES(a), AND PERSONS KILLED OR INJURED**

Year	N.S.W.	Vic.	Q'land	S. Aust.	W. Aust.	Tas.	N.T.	A.C.T.	Total	
									Number	Per 10,000 motor vehicles registered

**ACCIDENTS INVOLVING CASUALTIES**

1958–59	15,216	12,462	5,603	3,984	3,450	791	n.a.	260	41,766	162
1959–60	16,871	12,267	5,720	5,340	3,656	743	n.a.	322	44,919	164
1960–61	16,599	12,140	5,424	6,117	3,602	844	n.a.	326	45,052	155
1961–62	15,300	11,639	5,915	6,184	3,571	872	n.a.	302	43,783	143
1962–63	17,891	12,330	6,345	6,343	3,926	919	187	411	48,352	150

**PERSONS KILLED**

1958–59	833	661	333	185	178	68	n.a.	6	2,264	9
1959–60	939	698	359	203	180	79	n.a.	10	2,468	9
1960–61	934	773	353	203	197	75	n.a.	7	2,542	9
1961–62	887	818	341	179	187	72	n.a.	7	2,491	8
1962–63	894	803	420	201	164	67	14	12	2,575	8

**PERSONS INJURED**

1958–59	19,854	16,784	7,700	5,183	4,506	990	n.a.	342	55,359	214
1959–60	22,330	16,595	8,054	6,856	4,788	1,004	n.a.	477	60,104	219
1960–61	22,244	16,757	7,607	7,665	4,806	1,157	n.a.	513	60,749	209
1961–62	19,886	16,074	8,137	7,913	4,856	1,207	n.a.	451	58,524	191
1962–63	24,580	17,149	8,779	8,216	5,360	1,354	256	593	66,287	204

(a) Accidents (reported to the police) which occurred in public thoroughfares and which caused death or injury to an extent requiring surgical or medical treatment.

## § 2. Road Safety Organizations

1. Australian Road Safety Council.—(i) *Origin, Objectives and Organization.* The Australian Road Safety Council was formed in 1947 by the Australian Transport Advisory Council, which comprises Commonwealth and State transport ministers and Commonwealth ministers with associated interests, to conduct a nation-wide road safety public education campaign. It was re-constituted in February, 1961, by the Australian Transport Advisory Council, in order to provide a smaller, more effective, organization.

The objectives of the reconstituted Council are:—

- (a) to conduct a continuous programme of public education, aimed at improving the knowledge, skills, attitudes and practices of all classes of road users;
- (b) to encourage a better understanding and observance of State and Commonwealth traffic laws by road users;
- (c) to stimulate greater public interest, support and active participation in road accident prevention;
- (d) to co-ordinate, in a balanced programme, the Commonwealth and State public education campaigns, and to integrate with these campaigns the support accorded by non-governmental bodies and the general public;
- (e) to collect, collate, publish and distribute educational and informative data regarding road accidents; and
- (f) to advise on specific road safety matters referred to it by the Australian Transport Advisory Council.

The Australian Road Safety Council comprises 16 members, representing the Commonwealth and State Governments and the major categories of organized road users. It meets approximately three times each year and has established a number of temporary sub-committees to investigate and report upon particular aspects of its activities.

The Department of Shipping and Transport provides the central executive for the Council. Each section represented on the Australian Road Safety Council—Commonwealth, State and community/commercial—exercises full control over its own activities. One of the Council's principal functions is to co-ordinate the Commonwealth and State public education campaigns and to integrate with these campaigns the support accorded by commerce, industry, and community service organizations.

A sum of £150,000 is provided annually by the Commonwealth Department of Shipping and Transport for the promotion of road safety practices; £50,000 is distributed to the State Governments for public education in road safety, and the remaining £100,000 is used for the national public education campaign. The £50,000 grant to the States is allocated in the following proportions:—New South Wales, £12,500; Victoria, £10,000; Queensland, £9,250; South Australia, £6,250; Western Australia, £8,250; Tasmania, £3,750.

(ii) *Mode of Operation.* The media used by the Australian Road Safety Council in its national campaigns include metropolitan daily press and metropolitan radio and television, platform and pulpit, plus a wide variety of posters, pamphlets, booklets, publications and films. The official publication of the Council is the *Australian Road Safety Council Report* which is published monthly. Close liaison is maintained with State and Commonwealth educationists in the preparation and distribution of road safety instructional material for schools.

The Council, through its Central Executive in the Department of Shipping and Transport, works in close collaboration with two companion Committees, established by the Australian Transport Advisory Council. These are the Australian Road Traffic Code Committee, which prepares model regulations with the object of attaining national uniformity of traffic laws; and the Australian Motor Vehicle Standards Committee, which devises national standards for the construction, equipment, and operational efficiency of all road vehicles.

Because of the great increases in population and vehicle numbers, the exposure to risk of road users is considerably greater today than ever before. This is the basic problem confronting the Australian Road Safety Council, and in its efforts to deal with it, the Council has recognized the consideration that, notwithstanding advances in road and vehicle design and traffic laws, road safety still remains essentially a problem of human behaviour.

The primary aim of road accident prevention, as envisaged by the Council, is thus to create a state of mind in which all classes of road users realize the imminence and consequence of road accidents, and are willing to accept the restraints necessary to prevent them. It is the Council's belief that, for the most part, this can best, and often only, be done effectively through education in the broad and practical sense, by improving knowledge, skill, attitudes and habits of all classes of road users, and by creating a public conscience about road accidents. The current national public education campaign is based on the theme "Road Safety Starts With You".

2. **National Safety Council of Australia.**—The Council, founded in Victoria in 1927, was registered as a company limited by guarantee and later as a foreign company in New South Wales, Queensland, Tasmania and Western Australia. In 1959, new articles of association were adopted, placing the National Safety Council of Australia on a more truly federal basis reflecting the expanded character of the Council in the 35 years since its formation. It is a membership organization whose members include transport, education and other authorities as well as numerous industrial concerns. Membership is open to any person or organization wishing to further the objects and purposes of the Council.

The objects of the Council, summarized, are:—

- (a) to devise and encourage the adoption of safety measures of all kinds;
- (b) to promote discussion of all matters relating to safety measures;
- (c) to conduct an educational campaign among the people of Australia to stimulate the adoption and observance of safety measures; and
- (d) to consider, initiate and support improvements, calculated to prevent accidents, in the laws of the Commonwealth of Australia, the States and local governing bodies.

The Council is now registered in Canberra, with Divisions established in all States. It is managed by a Federal Council, whose members are appointed by the State Divisions. The Federal Council is responsible for those objectives which are of a national character, and each State Division controls its own affairs which are of State or local character.

The Council is a non-profit making organization and, apart from fees which may be charged to members and others for services provided, its work is financed by subscriptions, grants and donations, which in general are received at State level by the various State Divisions.

## CIVIL AVIATION

1. **Historical.**—A short review of the progress of civil aviation in Australia up to the date of foundation of a Civil Aviation Administration was published in Year Book No. 16, pages 334–5, and a brief account of the foundation and objects of this Administration was published in Year Book No. 19, pag. 299. Year Book No. 38 and earlier issues contain information on the control of civil aviation by the Board (1936) and later (1939) by the Department of that name. The Acts defining the broad principles of operation of the administration of civil aviation and the Regulations amplifying them, and the principal functions of the administration are also described.

The Department has 12 Divisions as follows:—Air Transport; International Relations; Aviation Medicine; Flying Operations; Airworthiness; Airways Operations; Communications and Air Traffic Control; Airport Engineering; Finance Management; Air Safety Investigation; Navigational Aids, Electrical and Mechanical Engineering; and Administrative Management.

2. **International Activity.**—(i) *International Organizations.* A full report of the formation of the International Civil Aviation Organization, the Commonwealth Air Transport Council and the South Pacific Air Transport Council appeared in Year Book No. 37, and particulars of subsequent activity in the international field were included in No. 38. The International Civil Aviation Organization had a membership of 101 nations in November, 1963. Australia has continued her representation on the Council, a position which she held since I.C.A.O. was established in 1947. Further details will be found in Year Book No. 40 and earlier issues.

(ii) *International Agreements.* In November, 1963, there were 17 air services agreements in force between Australia and other countries.

A list of the agreements at 30th June, 1961, was given on pp. 555-6 of Year Book No. 48. The countries concerned were:—Canada, United States of America, Pakistan, India, Ceylon, Netherlands, United Arab Republic, Lebanon, South Africa, Japan, Germany, Ireland, United Kingdom, Malaya and Thailand.

Since June, 1961, two further agreements have entered into force and the routes which may be used by Australia and the reciprocal routes granted in return are as follows.

*New Zealand*—separate Australian routes to Auckland, Wellington and Christchurch and optionally beyond; separate New Zealand routes to Sydney, Melbourne, Brisbane, Norfolk Island and optionally beyond.

*Italy*—an Australian route via specified intermediate points to Rome and beyond via specified points to London; an Italian route via specified intermediate points to Sydney-Melbourne.

(iii) *International Air Services.* Qantas Empire Airways Ltd. has an operational fleet of 11 Boeing 707 jet aircraft and 4 Lockheed Electras. The Boeings operate a round the world service through the United States of America and the United Kingdom and to Hong Kong, Japan and Noumea. The Electras are used on services to New Zealand, Fiji and South Africa. Qantas was operating aircraft over 67,903 unduplicated route miles on international services in June, 1963. A summary of the operations of overseas services wholly or partly Australian-owned appears on page 604.

Three Lockheed Electra aircraft operated by Tasman Empire Airways Ltd. link Sydney with Auckland, Christchurch and Wellington; Melbourne with Auckland and Christchurch; and Brisbane with Auckland.

A total of eleven international airlines operate services into and out of Australia, mainly to and from Sydney.

3. *Australian National Airlines Commission.*—The *Commonwealth Australian National Airlines Act 1945* constituted the Australian National Airlines Commission for the purpose of establishing, maintaining and operating airline services for the transport of passengers and goods between Australian States and/or Territories and within Australian Territories. The Commission may, with the approval of the Minister, undertake services between Australia and places outside Australia, and, in certain circumstances, may engage in intra-State operations.

The operating organization set up to give effect to the Act is Trans-Australia Airlines.

4. *Regular Air Services within Australia.*—Domestic airline services throughout Australia and the Australian sector of Papua-New Guinea are provided by three distinct groups of airlines, operating over a route network of some 95,000 miles. The three groups are as follows.

*Trans-Australia Airlines*—operated by the Australian National Airlines Commission on behalf of the Commonwealth Government. T.A.A. operates on the main interstate routes throughout Australia and on territorial air services, as well as intrastate services in Queensland and Tasmania, and internal services in the Australian sector of Papua-New Guinea.

*Ansett Transport Industries airline group*—a private enterprise organization. This group comprises Ansett-A.N.A., also operating on the main interstate and territorial air routes, and six subsidiary airlines which operate basically intrastate services in Queensland, New South Wales, South Australia, Western Australia and the Australian sector of Papua-New Guinea.

*Small private enterprise airlines*—this group comprises three independent feeder type airlines operating basically intrastate services in New South Wales, Western Australia, Northern Territory and internally in Papua-New Guinea.

Competition between the two major domestic airlines, T.A.A. and Ansett-A.N.A. is controlled by Commonwealth legislation and Airline Agreements. These controls are designed to prevent uneconomic competition between the two companies. The two principal Acts which establish the legislative basis of this controlled competition are the *Airlines Agreement Act 1952-1961* and the *Airlines Equipment Act 1958*. The Airlines Equipment Act establishes the machinery for the achievement and maintenance of comparable aircraft fleets between T.A.A. and Ansett-A.N.A., and is designed to prevent the provision of excess aircraft capacity. The Airlines Agreement Act establishes the basis of the control of the two-airline competitive system and extends this machinery until 1977, and also establishes certain requirements covering the introduction of jet aircraft to Australian domestic services after 1st July, 1964. Under the terms of this Act, on 19th November, 1962, T.A.A. and Ansett-A.N.A. applied for, and received, government approval for each to buy two Boeing 727 jet airliners for introduction on Australian domestic services in late 1964 or early 1965.

A summary of the operations of regular air services within Australia appears on page 604.

5. Air Ambulance Services.—A brief statement on the foundation and objects of the Air Ambulance Services will be found in Year Book No. 32, pages 145 and 146.

During the year 1962-63, the Air Ambulance and Royal Flying Doctor Services continued to provide medical aid for the outback regions of Australia. The Royal Flying Doctor Service of Australia, operating from Broken Hill, New South Wales, Cloncurry, Queensland, and Alice Springs, Northern Territory (operated in conjunction with the Department of Health) covers a wide area of inland Australia. The Bush Church Aid Society for Australia and Tasmania, supported by funds from the Church of England, operates from Ceduna in South Australia. The federal Methodist Inland Mission operates services from Meekatharra, Western Australia, and the Queensland Ambulance Transport Brigade operates a service from Cairns in Queensland. A Flying Surgeon Service is in operation in Queensland.

For further information see Chapter XVIII. Public Health.

6. Training of Air Pilots.—Since 1926, the Commonwealth has subsidized flying training in Australia largely through the Aero Club movement. In 1961 the Government altered the basis of financial assistance to flying training organizations. The new system provides for the payment of £637,000 in subsidies to Australian flying training organizations, including the Aero Clubs, flying schools and the Gliding Federation of Australia, spread over a four-year period from 1961 to 1965. A feature of the new subsidy arrangements was the establishment of the Australian Flying Scholarship scheme which is designed to train career pilots for the Australian commercial aviation industry. The scholarships provide financial assistance in much the same way as Commonwealth scholarships provide for people undertaking other professions. Of the 182 flying scholarships awarded for 1963-64, 138 were scholarships to take the student through to the commercial licence standard, 35 were to commercial licence plus instructor rating and nine were for agricultural rating.

During the year 1962-63, pupils of the Australian flying training organizations (aero clubs and commercial flying schools) received 456 private licences, 102 commercial licences, and 45 instructor licences. Subsidized hours flown by aero clubs and flying schools totalled 116,061 hours out of a total of 157,773 hours flown and their subsidy earnings totalled £93,914. A limit placed on the subsidy restricted the total payment to £75,000. During the year, 19 clubs were also assisted with the purchase of 22 aircraft and 3 aircraft radios. The value of this assistance under the Aircraft Replacement Fund was £20,000. The permanent secretariats of the Royal Federation of Aero Clubs and the Commercial Flying Schools also received £8,000 and £1,000 respectively during 1962-63 as additional financial assistance.

Thirty-three clubs were affiliated with the Gliding Federation of Australia in 1962-63. Membership rose from 1,117 to 1,247 and 363 Certificates and Awards of Competency were obtained during the year. In 1962-63, Australia was represented in the Ninth World Championships at Junin in Argentina by a team of three pilots flying an Australian built "Arrow" glider, assisted by Australian team crews.

During 1962-63 the Commonwealth assisted gliding clubs to the extent of £6,500. This amount was allocated as follows:—£3,000 on the basis of active membership and



certificates and awards gained, £1,000 to the National Gliding School, £2,000 for development and design work and secretarial functions, and £500 towards the costs incurred by the Australian team at the Ninth World Championships.

The Federation Aeronautique Internationale, whose headquarters are in Switzerland, sets certain standards of efficiency which the glider pilot has to attain before he qualifies for an F.A.I. certificate (e.g., certificates are obtainable for height, distance and time aloft). The administrative authority in Australia for F.A.I. is the Royal Aero Club of Australia.

The total of all subsidy payments and financial assistance to flying training organizations and the gliding movement during 1962-63 was £149,000.

**7. Airways Engineering.**—The field of airways engineering includes the provision of radio navigation facilities, radiocommunication systems, and airport lighting systems.

Approvals were given during 1961-62 for extensions and improvement of Australia's airways navigation and communications system. Long-range air traffic control radar units are being installed at Sydney and Adelaide at a cost of £770,000. Both units were expected to be in operation by the end of 1963, and similar units are planned for Melbourne, Brisbane and Perth as part of a radar programme costing £2.5 million. This coincides with the introduction of airborne radar which is a mandatory requirement for all Australian airliners from June, 1963. These two steps will enable radar surveillance of Australia's controlled air space by pilots and controllers to be considerably extended. Approval was also given during the year for the second stage of the Department of Civil Aviation's navigational aids plan. This involves the installation, over the next four years, of 22 visual omni radio ranges for primary directional guidance, and four international standard distance measuring equipment units at Sydney, Melbourne, Brisbane and Perth. In the communications field, work is proceeding steadily to improve further the high quality direct speech facilities between ground controllers and aircraft operating in controlled air space, and improve generally the communications system throughout the entire Australian aviation area.

The international transmitting station at Llandillo, near Sydney, provides air to ground and point to point communications on the international frequency bands for places as far away as Honolulu, Manila and Singapore.

Members of the South Pacific Air Transport Council have agreed that the Commonwealth Pacific Cable should be used for civil aviation purposes. This should enable the existing radioteletype services between Sydney, Nadi, Auckland and Honolulu to be closed down, and result in improved services between these points. Radio equipment and radio frequencies in the high frequency band will also be released for use on other circuits.

**8. Airports.**—Government approval, in principle, during November, 1962, of a £30 million programme of aerodrome development throughout the Commonwealth marked the beginning of a new phase of increased activity in this field. During recent years, airport development has involved an expenditure of approximately £2 million a year. The new programme, to be spread over five years, includes major projects at Sydney, Melbourne and Launceston, as well as other works in all States and in the Territory of Papua-New Guinea.

Considerable planning and design work has already been done. Much of the works proposed for Sydney, Melbourne and Launceston has already been put before the Parliamentary Standing Committee on Public Works for review, in accordance with the requirement that the Committee should review all major new works involving expenditure over £250,000. Construction work on these three principal projects was planned to start during 1963-64.

At Sydney the north-south runway will be extended from 5,500 feet to 7,500 feet to provide better facilities for the operation of large jet aircraft. This work will be followed by the construction of a new international terminal building with aprons, roads, car parks and engineering facilities, on reclaimed land in the north-western corner of the airport. The project is scheduled for completion in 1968.

At Melbourne, a new airport at Tullamarine for domestic and international aircraft will be developed on a 5,300 acre area, with runways of 7,500 feet and 8,500 feet. The airport is expected to be in use by 1967.

The runway at Launceston will be extended to 6,500 feet and strengthened. Other works include a new terminal, operations building, taxiways and general area development. The project is planned for completion in 1966.

Other aerodromes where major developmental projects are in progress are Alice Springs, Bankstown, Jandakot (near Perth), Meekatharra, Mt. Isa, Perth, Port Moresby and Wyndham.

The number of aerodromes in Australia and its Territories increased by 14 during the year to 634. One hundred and forty-two are owned by the Commonwealth and 492 by local authorities or private interests.

Aerodrome development at Commonwealth aerodromes during 1962-63 continued at about the same rate as in previous years with expenditure totalling £1,653,000. For the same period, the maintenance cost of these aerodromes totalled £2,267,000.

9. *Meteorological Services.*—The Department of Civil Aviation is the major user of meteorological services in the Australian Commonwealth and its Territories, and therefore the requirements for civil aviation purposes have played a big part in determining the form of meteorological organization that exists at the present time. The Department and the Commonwealth Bureau of Meteorology have completed working arrangements designed to meet the very precise requirements of modern civil aviation in Australia, which specify the standards of service, times and places of operation and facilities required for the provision of meteorological services for civil aviation.

10. *Search and Rescue.*—The Department of Civil Aviation has assumed responsibility for co-ordination of search and rescue activity throughout all Australian flight information regions, and also arranges for the availability of search and rescue facilities. Particulars of systems and methods of operation were published in Year Book No. 48, page 558.

11. *Statistical Summaries.*—(i) *Registrations, Licences, etc.* The following table provides a summary of the civil aviation registrations and licences in force in Australia at 30th June in each of the years 1959 to 1963.

**CIVIL AVIATION: REGISTRATIONS, LICENCES, ETC., AUSTRALIA(a)**

Particulars	30th June—				
	1959	1960	1961	1962	1963
Registered aircraft owners ..	642	745	850	938	1,006
Registered aircraft ..	1,246	1,360	1,502	(b) 1,600	(b) 1,787
Pilots' licences—					
Private ..	2,801	3,001	3,206	3,627	4,066
Private helicopter ..	..	..	2	2	3
Commercial ..	910	948	973	1,090	1,159
Senior commercial ..	130	132	147	154	176
Helicopter (commercial) ..	17	30	34	33	42
Student ..	3,461	3,696	4,151	4,433	4,845
Student helicopter ..	4	14	10	12	15
1st class airline transport ..	652	618	659	690	684
2nd class airline transport ..	389	418	471	432	464
Flight navigators' licences ..	177	168	142	141	135
1st class flight radio-telegraphy operators' licences ..	56	55	43	37	20
Flight radio-telephone operators' licences ..	2,203	2,651	3,679	5,370	6,552
Flight engineers' licences ..	189	193	200	175	168
Aircraft maintenance engineers' licences ..	2,266	2,382	2,492	2,485	2,521
Aerodromes, Australia—					
Government(c) ..	168	149	132	124	122
Licensed(d) ..	304	323	351	359	380
Flying boat bases(e) ..	13	13	13	13	13

(a) Except for aerodromes and flying-boat bases, includes the Territory of Papua and New Guinea.  
 (b) In addition, there were 125 gliders on the register. (c) Under the control and management of the Department of Civil Aviation. (d) Aerodromes under the control and management of a municipality, shire, station owner, private individual, etc. Includes emergency aerodromes. (e) Includes alighting areas.

(ii) *Types of Aircraft and Gliders on the Australian Register.* The various types of aircraft and gliders on the Australian register at 31st December, 1961, were shown in Year Book No. 48, p. 559.

Details of aircraft and gliders on the Australian register at 30th June, 1963 may be found in *Transport and Communication* bulletin No. 54, 1962-63.

(iii) *Operations of Regular Internal Services.* The next table summarizes the flying activities of regular internal services operating within Australia during each of the years 1958-59 to 1962-63.

**CIVIL AVIATION: OPERATIONS OF REGULAR INTERNAL SERVICES,  
AUSTRALIA(a)**

Particulars	1958-59	1959-60	1960-61	1961-62	1962-63
Hours flown .. .. .	229,396	225,050	219,918	207,210	217,897
Miles .. .. . '000	40,287	43,199	42,301	41,176	43,700
Paying passengers .. .. .	2,235,070	2,660,412	2,639,080	2,666,160	2,832,934
Paying passenger-miles .. .. . '000	944,379	1,132,517	1,109,552	1,119,430	1,221,178
Freight—					
Tons(b) .. .. .	62,755	65,402	62,971	57,207	59,373
Ton-miles(b) .. .. . '000	28,841	29,240	28,220	26,076	28,270
Mail—					
Tons(b) .. .. .	2,727	4,825	5,956	6,311	6,467
Ton-miles(b) .. .. . '000	1,472	2,567	3,064	3,198	3,324

(a) Includes only services operating within the Australian mainland and Tasmania.

(b) In terms of short tons (2,000 lb.).

(iv) *Operations of Oversea Services wholly or partly Australian-owned.* The following table furnishes a summary of oversea services wholly or partly owned by Australian interests during the years 1958-59 to 1962-63. This table incorporates aggregate particulars of all traffic originating on oversea services of Qantas Empire Airways Limited and Tasman Empire Airways Limited, which, in the case of Qantas, includes considerable traffic which does not enter Australia. The transfer of the Australian Government's shares in Tasman Empire Airlines to the New Zealand Government on 25th July, 1961, made TEAL a wholly New Zealand-owned airline, and statistics of its operations are therefore not included in Australian statistics after 1960-61. An air services agreement was signed whereby air traffic rights into and through the two countries were exchanged at the same time, and on 1st October, 1961, both airlines commenced joint scheduling arrangements for trans-Tasman services. The table also includes traffic between Australia and Papua, New Guinea and Norfolk Island.

**CIVIL AVIATION: OPERATIONS OF OVERSEA SERVICES(a)**

Particulars	1958-59	1959-60	1960-61	1961-62	1962-63
Route miles (unduplicated) at 30th June ..	74,704	76,125	72,290	69,712	71,676
Hours flown .. .. .	68,811	54,668	57,385	51,066	48,669
Miles .. .. . '000	16,486	16,992	20,068	19,240	20,343
Paying passengers .. .. .	176,120	232,714	291,258	247,517	294,908
Paying passenger-miles .. .. . '000	534,728	720,099	847,713	836,570	1,014,867
Freight—					
Tons(b) .. .. .	3,431	5,150	6,575	6,432	6,756
Ton-miles(b) .. .. . '000	15,381	24,625	30,134	30,429	33,135
Mail—					
Tons(b) .. .. .	1,647	2,015	2,335	2,015	2,468
Ton-miles(b) .. .. . '000	8,834	10,351	11,269	11,622	15,191

(a) Airlines wholly or partly owned by Australian interests.

(b) In terms of short tons (2,000 lb.).

(v) *Accidents and Casualties.* The number of accidents involving aircraft on the Australian register, in which persons were killed or injured, is shown in the following table for the years 1958-59 to 1962-63.

**CIVIL AVIATION: AUSTRALIAN AIRCRAFT<sup>(a)</sup>, ACCIDENTS INVOLVING CASUALTIES**

Particulars	1958-59	1959-60	1960-61	1961-62	1962-63
Number .. .. .	39	43	40	46	32
Persons killed .. .. .	21	44	28	52	16
Persons injured .. .. .	30	42	38	38	26

(a) Aircraft on Australian register and gliders irrespective of location of accident.

12. Territory of Papua and New Guinea.—For brief particulars of civil aviation in Papua and New Guinea see Chapter V. The Territories of Australia, pages 126 and 132.

**POSTS; TELEGRAPHS; TELEPHONES; OVERSEA TELECOMMUNICATION SERVICES**

NOTE.—In this division, particulars for the Australian Capital Territory are included with those for New South Wales and the South Australian figures include particulars for the Northern Territory, unless otherwise indicated.

**§ 1. General**

1. The Postmaster-General's Department.—Under the provisions of the *Post and Telegraph Act* 1901-1961, the Postmaster-General's Department is responsible for the control and operation of postal, telegraphic and telephonic services throughout Australia. The Postmaster-General's Department is also responsible for the provision and operation of the transmitters and technical facilities required for broadcasting and television services by the Australian Broadcasting Commission (see pp. 617-21), and co-operates with the Overseas Telecommunications Commission (see pp. 612-3) in providing facilities for communication with overseas countries. Subsidiary to its major activities, the Postmaster-General's Department performs a number of important functions for other Commonwealth and State departments, including the payment of pensions, child endowment, and military allotments, the provision of banking facilities on behalf of the Commonwealth Savings Bank, the sale of tax and duty stamps, and the collection of land tax.

2. Postal Facilities.—(i) *Relation to Area and Population.* The following table shows the number of post offices, the area in square miles and the number of inhabitants to each post office (including non-official offices), and the number of inhabitants to each 100 square miles in each State and in Australia at 30th June, 1963.

**POSTAL FACILITIES: RELATION TO AREA AND POPULATION AT 30th JUNE, 1963**

Particulars	N.S.W.	Vic.	Qld	S.A.	W.A.	Tas.	Aust.
Number of post offices—							
Official .. .. .	515	326	229	170	147	54	1,441
Non-official .. .. .	1,937	1,871	1,010	754	492	448	6,512
<b>Total .. .. .</b>	<b>2,452</b>	<b>2,197</b>	<b>1,239</b>	<b>924</b>	<b>639</b>	<b>502</b>	<b>7,953</b>
Number of square miles of territory per office .. .. .	127	40	538	978	1,527	52	374
Number of inhabitants per office ..	1,681	1,391	1,264	1,124	1,209	720	1,373
Number of inhabitants per 100 square miles .. .. .	1,328	3,477	235	115	79	1,378	367

(ii) *Employees and Mail Contractors.* The number of employees and mail contractors in the Central Office and in each of the States at 30th June, 1963, is given in the following table.

**NUMBER OF POSTAL EMPLOYEES AND MAIL CONTRACTORS AT  
30th JUNE, 1963**

Particulars	Central Office	N.S.W.	Vic.	Qld	S.A.	W.A.	Tas.	Aust.
Employees .. ..	1,576	35,857	27,794	14,023	9,967	6,971	3,925	100,113
Mail Contractors .. ..	..	2,112	1,097	1,123	279	315	219	5,145

3. *Gross Revenue, Branches—Postmaster-General's Department.*—(i) *States, 1962-63.* The gross revenue (actual collections) in respect of each branch of the Department during the year 1962-63 is shown in the following table.

**POSTMASTER-GENERAL'S DEPARTMENT: GROSS REVENUE, 1962-63(a)  
(£'000)**

Source	Central Office	N.S.W.	Vic.	Qld	S.A.	W.A.	Tas.	Aust.
Postal .. ..	2,695	19,257	13,409	5,843	4,138	2,914	1,171	49,427
Telegraph .. ..	979	2,401	1,787	1,179	796	596	181	7,919
Telephone .. ..	1,348	36,491	26,353	11,838	8,254	5,426	2,605	92,315
Miscellaneous .. ..	..	39	72	6	23	28	7	175
<b>Total .. ..</b>	<b>5,022</b>	<b>58,188</b>	<b>41,621</b>	<b>18,866</b>	<b>13,211</b>	<b>8,964</b>	<b>3,964</b>	<b>149,836</b>

(a) The figures in this table relate to revenue actually collected during the year as recorded for Treasury purposes.

(ii) *Australia.* The following table shows the gross revenue (actual collections) of the Department for each of the five years 1958-59 to 1962-63.

**POSTMASTER-GENERAL'S DEPARTMENT: GROSS REVENUE, AUSTRALIA(a)  
(£'000)**

Source	1958-59	1959-60	1960-61 (b)	1961-62	1962-63
Postal .. ..	33,165	39,167	45,890	47,104	49,427
Telegraph .. ..	6,321	6,804	7,275	7,448	7,919
Telephone .. ..	59,717	71,209	82,732	85,166	92,315
Miscellaneous .. ..	(c) 4,264	(c) 4,451	224	96	175
<b>Total .. ..</b>	<b>103,467</b>	<b>121,631</b>	<b>d 136,121</b>	<b>139,814</b>	<b>149,836</b>

(a) See footnote (a) to previous table.

(b) Figures not entirely comparable with those for earlier years.

(c) Includes items allocated to other headings after 1959-60. (d) An amount of £43,625 has been excluded from 1960-61 figures published in Year Book No. 48. This amount represents receipts under the Wireless Telegraphy Act which are now credited to broadcasting and television revenue.

4. *Expenditure, Postmaster-General's Department.*—(i) *States.* The following table shows, as far as possible, the distribution of expenditure (actual payments) in each State during 1962-63, as shown by records kept for Treasury purposes. The table must not be regarded as a statement of the working expenses of the Department, since items relating to new works, interest, etc., are included therein.

## POSTMASTER-GENERAL'S DEPARTMENT: DISTRIBUTION OF EXPENDITURE, 1962-63(a)

(£'000)

Particulars	Central Office	N.S.W.	Vic.	Qld	S.A.	W.A.	Tas.	Aust.
<b>Expenditure from Ordinary Services</b>								
Votes—								
Salaries and payments in the nature of salary .. .. .	815	19,119	13,881	7,416	4,869	3,225	1,803	51,128
Administration .. .. .	226	2,509	1,720	596	570	339	191	6,151
Stores and material .. .. .	59	661	444	259	197	110	67	1,797
Mail services .. .. .	6,881	1,907	997	907	440	253	133	11,518
Engineering services (other than capital works) .. .. .	908	12,581	9,640	4,678	3,045	2,269	1,285	34,406
Other services .. .. .	140							140
<b>Total .. .. .</b>	<b>9,029</b>	<b>36,777</b>	<b>26,682</b>	<b>13,856</b>	<b>9,121</b>	<b>6,196</b>	<b>3,479</b>	<b>105,140</b>
Rent, repairs, maintenance .. .. .		606	575	223	202	98	59	1,763
Capital works and services—								
Plant and equipment .. .. .	927	21,162	15,762	6,011	5,672	4,280	1,983	55,797
New buildings, etc. .. .. .		2,486	1,404	953	475	294	331	5,943
<b>Grand Total .. .. .</b>	<b>9,956</b>	<b>61,031</b>	<b>44,423</b>	<b>21,043</b>	<b>15,470</b>	<b>10,868</b>	<b>5,852</b>	<b>168,643</b>

(a) The figures in this table represent actual payments made during the year as recorded for Treasury purposes.

(ii) *Australia.* The following table shows the distribution of expenditure (actual payments) of the Department for Australia as a whole for each of the years 1958-59 to 1962-63. The item "Administration" incorporates the items "General Expenses" and "Proportion of Auditor-General's Expenses" which had previously been shown separately.

## POSTMASTER-GENERAL'S DEPARTMENT: EXPENDITURE, AUSTRALIA(a)

(£'000)

Particulars	1958-59	1959-60	1960-61	1961-62	1962-63
<b>Expenditure from Ordinary Services</b>					
Votes—					
Salaries and payments in the nature of salary .. .. .	42,842	48,174	48,691	50,430	51,128
Administration .. .. .	4,784	5,318	5,811	6,115	6,151
Stores and material .. .. .	2,508	2,563	2,567	2,373	1,797
Mail services .. .. .	8,741	9,637	10,376	10,885	11,518
Engineering services (other than capital works) .. .. .	36,342	40,604	41,006	43,185	34,406
Other services .. .. .	88	108	142	125	140
<b>Total .. .. .</b>	<b>95,305</b>	<b>106,404</b>	<b>108,593</b>	<b>113,113</b>	<b>105,140</b>
Rent, repairs, maintenance .. .. .	1,376	1,374	1,543	1,659	1,763
Capital works and services—					
Plant and equipment .. .. .	32,209	35,658	37,296	40,511	55,797
New buildings, etc. .. .. .	4,144	4,279	4,849	5,428	5,943
Other expenditure, not allocated to States .. .. .	3,799	3,832	3,928	(b)	(b)
<b>Grand Total .. .. .</b>	<b>136,833</b>	<b>151,547</b>	<b>156,209</b>	<b>160,711</b>	<b>168,643</b>

(a) See footnote (a) to previous table.

(b) Items no longer debited against Postmaster-General's Department.

5. Profit or Loss, Postmaster-General's Department.—The foregoing tables of gross revenue and expenditure represent actual collections and payments made, and cannot be taken to represent the actual results of the working of the Department for the year. The net results for each branch, after providing for working expenses (including superannuation, pensions and depreciation) and interest charges (including exchange), are shown in the following table for the years 1961–62 and 1962–63.

**POSTMASTER-GENERAL'S DEPARTMENT: PROFIT OR LOSS, BRANCHES**  
(£'000)

Particulars	1962–63				1961–62
	Postal	Tele- phone	Tele- graph	All branches	All branches
Earnings .. .. .	49,922	93,554	7,993	151,469	140,206
Working expenses—					
Direct working expenses .. ..	43,667	48,804	5,389	97,860	97,142
Management and administration ex- penses .. .. .	1,538	1,830	378	3,746	3,906
Depreciation .. .. .	696	21,044	568	22,308	13,706
Superannuation liability and pensions ..	2,728	3,906	506	7,140	7,328
<i>Total Working Expenses (excluding Interest)</i> .. .. .	<i>48,629</i>	<i>75,584</i>	<i>6,841</i>	<i>131,054</i>	<i>122,082</i>
Profit or loss before charging interest ..	1,293	17,970	1,152	20,415	18,124
Interest .. .. .	768	19,911	499	21,178	20,086
Profit or loss after charging interest ..	525	–1,941	653	–763	–1,962

NOTE.—Minus sign (–) denotes loss.

6. Fixed Assets.—The following table shows particulars of the fixed assets of the Postmaster-General's Department from 1st July, 1962, to 30th June, 1963.

**POSTMASTER-GENERAL'S DEPARTMENT: FIXED ASSETS**

Class of plant	Value at 1st July, 1962	Adjust- ments to values	Additions during year	Instalments of plant written out	Value at 30th June, 1963	
					Amount	Per cent.
	£'000	£'000	£'000	£'000	£'000	%
Telecommunications plant	499,526	+17,862	+59,040	–5,590	570,838	83.6
Postal plant .. .. .	2,525	+29	+533	–31	3,056	0.5
Engineers' movable plant	11,667	+101	+1,689	–307	13,150	1.9
Motor vehicles .. .. .	10,780	–1,075	+1,983	–1,219	10,469	1.5
Other plant and equipment	7,757	+3,284	+1,141	–259	11,923	1.8
Buildings .. .. .	56,612	+1,181	+6,278	..	64,071	9.4
Land .. .. .	8,701	..	+347	–4	9,044	1.3
<b>Total .. .. .</b>	<b>597,568</b>	<b>+21,382</b>	<b>+71,011</b>	<b>–7,410</b>	<b>682,551</b>	<b>100.0</b>

## § 2. Posts

1. **Postal Matter Dealt With.**—(i) *States, 1962-63.* The following table shows a summary of the postal matter dealt with in each State during the year 1962-63. Mail matter posted in Australia for delivery therein is necessarily handled at least twice, but only the number of distinct articles handled is included in the following table.

## POSTAL MATTER DEALT WITH(a), 1962-63

('000)

State	Letters (b)	News- papers and packets (c)	Parcels (d)	Registered articles (e)	Letters (b)	News- papers and packets (c)	Parcels (d)	Registered articles (e)
	Posted for delivery within Australia				Posted for delivery overseas			
New South Wales ..	617,948	123,958	5,598	3,692	37,484	10,617	250	699
Victoria ..	519,132	78,411	4,773	2,961	16,710	3,015	123	173
Queensland ..	212,952	27,250	2,251	1,368	7,525	860	31	25
South Australia ..	147,962	14,185	1,253	749	5,524	847	40	61
Western Australia ..	118,270	9,857	954	533	6,289	1,228	22	53
Tasmania ..	42,548	6,822	201	373	548	75	12	2
<b>Australia</b> ..	<b>1,658,812</b>	<b>260,483</b>	<b>15,030</b>	<b>9,676</b>	<b>74,080</b>	<b>16,642</b>	<b>478</b>	<b>1,013</b>
	Received from overseas				Total postal matter dealt with			
New South Wales ..	49,623	31,980	484	1,027	705,055	166,555	6,332	5,418
Victoria ..	40,084	10,400	325	500	575,926	91,826	5,221	3,634
Queensland ..	4,886	4,914	75	63	225,363	33,024	2,357	1,456
South Australia ..	3,241	4,977	72	28	156,727	20,009	1,365	838
Western Australia ..	3,036	5,963	57	28	127,595	17,048	1,033	614
Tasmania ..	2,107	2,285	24	4	45,203	9,182	237	379
<b>Australia</b> ..	<b>102,977</b>	<b>60,519</b>	<b>1,037</b>	<b>1,650</b>	<b>1,835,869</b>	<b>337,644</b>	<b>16,545</b>	<b>12,339</b>

(a) Number of distinct articles handled. (b) Includes letters, cards and other postal articles enclosed in envelopes and sorted with letters. (c) Includes newspapers and postal articles not included in letter mail. (d) Includes registered, cash on delivery and duty parcels. (e) Includes registered articles other than parcels.

(ii) *Australia.* The next table shows the total postal matter dealt with in Australia in relation to the mean population during each of the years 1958-59 to 1962-63.

## TOTAL POSTAL MATTER DEALT WITH: AUSTRALIA

Year	Letters, postcards and letter-cards		Newspapers and packets		Parcels(a)		Registered articles other than parcels	
	Total (‘000)	Per million of mean popula- tion	Total (‘000)	Per million of mean popula- tion	Total (‘000)	Per million of mean popula- tion	Total (‘000)	Per million of mean popula- tion
1958-59 ..	1,599,400	161	317,633	32	18,903	1.9	15,156	1.5
1959-60 ..	1,602,830	158	319,831	31	16,433	1.6	13,671	1.5
1960-61 ..	1,700,544	164	318,614	31	15,976	1.5	12,935	1.2
1961-62 ..	1,748,054	165	324,694	31	15,854	1.5	12,357	1.2
1962-63 ..	1,835,869	170	337,644	31	16,545	1.5	12,339	1.1

(a) Includes registered, cash on delivery and duty parcels.

During 1962-63, the total amounts paid for the carriage of mails, as disclosed by the Profit and Loss Account of the Postal Branch, were as follows:—road £4,123,000; railway £1,425,000; sea £255,000; air—internal £1,360,000, oversea £5,490,000; grand total £12,653,000.



2. **Money Orders and Postal Notes.**—The issue of money orders and postal notes is regulated by sections 74–79 of the *Post and Telegraph Act* 1901–1961. The maximum amount for which a single money order payable within Australia may be obtained is £40, but additional orders will be issued upon request when larger amounts are to be remitted. The maximum amount permitted to be sent by any one person to a person or persons outside Australia is £A.10 a week. A postal note is not available for a sum larger than twenty shillings.

The following table shows the number and value of money orders and postal notes issued in Australia in each of the years 1958–59 to 1962–63.

**MONEY ORDERS AND POSTAL NOTES: TRANSACTIONS, AUSTRALIA**

Year	Money orders			Postal notes		Poundage £'000
	Issued		Net commission received £'000	Issued		
	Number	Value		Number	Value	
	'000	£'000		'000	£'000	
1958–59.. ..	9,420	87,034	643	18,012	8,845	347
1959–60.. ..	9,535	94,335	805	16,492	8,380	324
1960–61.. ..	9,652	100,760	867	15,959	8,194	307
1961–62.. ..	(a) 10,176	(a)132,496	876	15,514	8,096	307
1962–63 . . .	(a) 11,076	(a)153,433	929	16,330	8,620	321

(a) Includes official money orders used in bringing to account telephone accounts and collections on War Service Homes repayments.

Of the total money orders issued in Australia during 1962–63, 10,683,000 valued at £152,209,000 were payable in Australia, and 393,000 valued at £1,224,000 were payable overseas. Of the total money orders paid in Australia during 1962–63, 10,660,000 (£151,889,000) were issued in Australia, and 168,000 (£1,045,000) were issued overseas.

Of the total postal notes paid in Australia during 1962–63 (16,624,000 valued at £8,803,000), 11,488,000 (£6,376,000) were paid in the State in which issued, and 5,136,000 (£2,427,000) were paid in States other than those in which issued.

### § 3. Telegraphs

1. **General.**—A review of the development of telegraph services in Australia up to 1921 appeared in Year Book No. 15, page 625, and subsequent developments of importance have been dealt with in later issues. During the past few years, substantial improvements in both the speed and grade of telegraph services throughout Australia have been effected, the entire system being subjected to intensive re-organization, and these matters have been dealt with in some detail in recent issues of this Year Book.

2. **Telegraph and Telephone Mileage.**—At 30th June, 1963, the combined single-wire mileages for both telegraph and telephone purposes were:—aerial, underground and submarine cables, 10,976,000 miles; trunk telephone and telegraph cables, 561,000 miles; aerial wires, 1,379,000 miles. There were 123,000 miles of pole routes. Joint use is made of poles for power and telephone reticulation.

3. **Telegraph Offices.**—The numbers of telegraph offices, including railway telegraph offices in the various States at 30th June, 1963, were:—New South Wales, 2,797; Victoria, 2,261; Queensland, 1,679; South Australia, 1,028; Western Australia, 954; Tasmania, 502; total, 9,221.

4. **Telegrams.**—The following table shows the number of telegrams dispatched to places within Australia and to adjacent islands and to ships at sea, according to the class of message transmitted.

**TELEGRAMS DISPATCHED WITHIN AUSTRALIA, 1962-63**  
(’000)

State	Paid and collect						Unpaid (departmental)	Total telegrams	
	Ordinary	Meteorological	Urgent	Radio-grams	Press	Letter-grams			Total
New South Wales	6,060	241	211	50	50	26	6,638	216	6,854
Victoria ..	3,639	164	123	5	20	11	3,962	123	4,086
Queensland ..	3,231	221	94	91	43	18	3,698	139	3,837
South Australia	1,537	111	38	23	16	12	1,737	45	1,782
Western Australia	1,512	158	14	96	17	17	1,814	36	1,850
Tasmania ..	418	53	12	1	2	6	492	23	515
<b>Australia ..</b>	<b>16,397</b>	<b>948</b>	<b>492</b>	<b>266</b>	<b>148</b>	<b>90</b>	<b>18,341</b>	<b>582</b>	<b>18,924</b>

With the steady expansion of telephone and radio communication networks since the second world war, the number of telegrams dispatched to places within Australia and to adjacent islands and to ships at sea has decreased, with few interruptions of trend, since the peak of 35,970,000 in 1945-46.

For particulars of telegrams received from, and dispatched to, other countries, see § 5 para. 2, pages 613-4.

#### § 4. Telephones

1. **General.**—Particulars of the total mileage of lines used exclusively for telephone purposes are not available, but are combined with all other line mileage. Particulars of the total single wire mileage used for telephone, trunk and/or telegraph purposes are shown in § 3, para. 2, p. 610. Developments in the telephone system in recent years have been dealt with in previous issues of this Year Book.

2. **Summary.**—Particulars relating to the telephone services in each State at 30th June, 1963, are shown in the following table.

**TELEPHONE SERVICES: SUMMARY, 30th JUNE, 1963**

Particulars	N.S.W.	Vic.	Qld	S.A.	W.A.	Tas.	Aust.
Exchanges .. .. .	2,105	1,723	1,278	740	765	371	6,982
Services in operation .. '000	695	569	226	162	106	54	1,812
Instruments in operation .. '000	999	772	306	225	145	75	2,522
(i) Subscribers' instruments '000	979	753	296	218	140	72	2,458
(ii) Public telephones .. '000	10	7	4	2	2	1	26
(iii) Other local instruments '000	10	12	6	5	3	2	38
Instruments per 100 of population	24.2	25.3	19.5	21.7	18.8	20.7	23.1

Of the total telephone services (1,812,181) in operation at 30th June, 1963, 688,790 or 38 per cent. were connected to exchanges situated beyond the limits of the metropolitan telephone networks, and 1,445,578 or 79 per cent. were connected to automatic exchanges.

During 1962-63, 1,809 million local calls and 84.5 million trunk line calls were made within Australia, averaging 998 local calls and 47 trunk calls per service.

3. **Oversea Telephone Services.**—Telephone circuits to other countries are provided by the Overseas Telecommunications Commission (see §5, para. 1) for conduct of these services by the Postmaster-General's Department. At 30th June, 1963, telephone calls could be made from Australia direct to 126 countries. International telephone calls to and from Australia during 1962-63 numbered 201,175, an increase of 65,511 or 48 per cent. over 1961-62. Switched radiotelephone services were established with Peru, West Irian and Guam during the year. The marked increase in traffic on the oversea service was brought about largely by the introduction of cable working to New Zealand in July, 1962.

4. **World Telephone Statistics, 1963.**—The following table shows the number of telephones in use in various countries with two million or more telephones at 1st January, 1963, together with the number per 100 of population and the proportion in each country to the world total.

WORLD TELEPHONE STATISTICS(a) AT 1st JANUARY, 1963

Country	Number of telephones ('000)	Telephones per 100 of population	Proportion of total (per cent.)
United States of America .. .. .	80,969	43	50.9
United Kingdom(b) .. .. .	8,911	17	5.6
Japan(b) .. .. .	7,356	8	4.6
Germany, Federal Republic of .. .. .	7,047	12	4.5
Canada .. .. .	6,330	34	4.0
U.S.S.R. .. .. .	5,769	3	3.6
France .. .. .	4,978	11	3.1
Italy .. .. .	4,655	9	2.9
Sweden .. .. .	3,054	40	1.9
Australia(c) .. .. .	2,522	23	1.6
Spain .. .. .	2,096	7	1.3
Other .. .. .	25,513	..	16.0
<i>Total</i> .. .. .	<i>159,200</i>	<i>..</i>	<i>100.0</i>

(a) Partly estimated. Information derived, in the main, from *The World's Telephones* compiled by the American Telephone and Telegraph Company. (b) At 31st March, 1963. (c) At 30th June, 1963.

### § 5. Oversea Telecommunication Services; Radiocommunication Stations Authorized

1. **General.**—The Overseas Telecommunications Commission (Australia) is the authority responsible for the operation of Australia's external telecommunication services by cable and radio.

The Commission was established under the *Overseas Telecommunications Act* 1946-1948. This Act implemented, in Australia, a recommendation of the 1945 Commonwealth Telecommunications Conference for national ownership of the external telecommunication services of the British Commonwealth countries concerned and for the establishment of a representative advisory board, the Commonwealth Telecommunications Board, to co-ordinate their development.

The Commission provides telegraph, telex, photo-telegraph, and, in conjunction with the Postmaster-General's Department, telephone services with oversea countries and Australian Territories. Leased one- and two-way circuits are also provided for large commercial users. In addition, it operates the Australian coastal radio services for communication with ships at sea in Australian waters and high frequency radio services for communication with ships in any part of the world. The Commission's coastal radio stations also provide certain services to a number of remote stations within Australia and its Territories.

Details of oversea communication systems operating in Australia prior to 1946 and developments leading to the establishment of the Commission were published in Year Book No. 37, pages 220-4.

To meet Australia's increasing demand for oversea communication channels, and because of limitations to performance and capacity inherent in current forms of telegraph cables and high frequency radio systems, the Commission, in partnership with the oversea telecommunications authorities of Britain, Canada and New Zealand, installed a large capacity telephone cable across the Pacific Ocean, connecting Australia, New Zealand and Canada via Suva and Honolulu. This project stemmed from the Pacific Cable Conference between representatives of Britain, Canada, Australia and New Zealand held in Sydney, 28th September to 20th October, 1959. Work was commenced in August, 1960, and the first section, between Australia (Sydney) and New Zealand (Auckland), opened in July, 1962. The next section, between New Zealand (Auckland) and Fiji (Suva), was opened in December, 1962, and the remaining section in December, 1963. This cable forms part of the British Commonwealth round-the-world large capacity cable scheme, in which a complementary cable between Britain and Canada (CANTAT) was officially opened in December, 1961. The two cable connexions are linked across Canada by a microwave system.

The Commonwealth cable system feeds into the United States of America network at Hawaii, and into the European network at London.

The Pacific Cable project is administered by a management committee consisting of representatives of the oversea telecommunication authorities of the four partner Governments.

2. International Telegrams.—(i) *Number of Telegrams.* The number of telegrams received from and dispatched overseas in each State during 1962-63 is shown hereunder.

## INTERNATIONAL TELEGRAMS, 1962-63

('000)

Particulars	N.S.W.	Vic.	Qld	S.A.	W.A.	Tas.	Aust.
Received .. ..	737	(a) 400	104	72	80	(a) 21	1,414
Dispatched .. ..	725	475	107	80	85	21	1,493
<b>Total .. ..</b>	<b>1,462</b>	<b>875</b>	<b>211</b>	<b>152</b>	<b>165</b>	<b>42</b>	<b>2,907</b>

(a) Estimated.

The traffic in international telegrams to and from Australia has not varied greatly in recent years.

(ii) *Number of Words.* Particulars of the international business, originating and terminating in Australia, transacted over the cable and radio services during 1962-63 are shown in the following table.

**INTERNATIONAL TELEGRAMS: NUMBER OF WORDS, AUSTRALIA, 1962-63(a)**  
(‘000 words)

Class of telegram	Words transmitted to—			Words received from—		
	United Kingdom	Other countries	Total	United Kingdom	Other countries	Total
Letter .. ..	4,112	11,446	15,558	3,850	10,248	14,098
Ordinary .. ..	4,006	10,246	14,252	3,882	8,376	12,258
Press .. ..	5,811	2,167	7,978	7,142	2,611	9,753
Greetings .. ..	685	593	1,278	563	830	1,393
Government .. ..	62	632	694	216	1,267	1,483
Urgent .. ..	236	374	610	142	310	452
Other .. ..	..	8	8	..	130	130
<b>Total .. ..</b>	<b>14,912</b>	<b>25,466</b>	<b>40,378</b>	<b>15,795</b>	<b>23,772</b>	<b>39,567</b>

(a) Year ended 31st March.

Words transmitted to “Other countries” included 10,676,000 words to other Commonwealth countries and 14,790,000 to foreign countries. Words received from “Other countries” included 10,928,000 words from other Commonwealth countries and 12,844,000 from foreign countries.

3. *Oversea Telephone Services.*—See § 4, para. 3, page 612 for particulars of these services.

4. *Coast Stations.*—At 30th June, 1963, there were 111 radio stations established at points around the Australian coast and 18 about the coast of Papua and New Guinea and other External Territories. During the year ended 31st March, 1963, the radio telegraph service of these stations handled 17,168,000 paid words, of which 6,104,000 were classified as ship traffic and 11,064,000 as fixed point to point traffic. The radio telephone service traffic extended over 96,217 paid minutes, 12,943 of which were taken up with ships calls and 83,274 to Australian Territories.

5. *Radiocommunication Stations Authorized.*—The following table shows particulars of the different classes of radiocommunication stations authorized in Australia and the External Territories at 30th June, 1963. Figures relate to radiocommunication (radio telegraph and radio telephone) stations only; particulars of broadcasting stations and of broadcast listeners’ licences are shown on pages 619 and 623 respectively.

RADIOCOMMUNICATION STATIONS AUTHORIZED, 30th JUNE, 1963

Class of station	N.S.W.	Vic.	Qld	S.A.	W.A.	Tas.	N.T.	A.C.T.	Aust.	Ext. Terr.	Total
<b>TRANSMITTING AND RECEIVING</b>											
<b>Fixed(a)—</b>											
Aeronautical .. .. .	36	6	15	6	15	7	12	1	98	26	124
Services with other countries .. .. .	58	13	..	..	11	..	..	..	82	44	126
Outpost(b) .. .. .	229	..	440	187	370	16	192	..	1,434	566	2,000
Other .. .. .	237	186	173	72	99	30	33	3	833	85	918
<b>Land(c)—</b>											
Aeronautical .. .. .	56	27	33	11	15	7	7	1	157	18	175
<b>Base—</b>											
Land mobile services .. .. .	1,354	947	631	387	244	164	16	63	3,806	32	3,838
Harbour mobile services .. .. .	28	17	22	8	23	9	..	..	107	..	107
Coast(d) .. .. .	30	14	16	14	13	21	3	..	111	18	129
Special experimental .. .. .	114	114	36	40	40	11	2	..	357	10	367
<b>Mobile(e)—</b>											
Aeronautical .. .. .	319	229	222	92	124	28	30	..	1,044	38	1,082
Land mobile services .. .. .	14,405	9,658	5,066	4,181	2,363	1,037	235	169	37,114	205	37,319
Harbour mobile services .. .. .	176	120	54	43	75	38	..	..	506	21	527
Outpost .. .. .	202	..	288	178	260	37	542	..	1,507	77	1,584
Ship .. .. .	1,205	328	710	254	230	210	15	..	3,128	170	3,298
Amateur .. .. .	1,497	1,414	496	586	331	152	22	45	4,543	64	4,607
<b>Total .. .. .</b>	<b>19,946</b>	<b>13,073</b>	<b>8,202</b>	<b>6,059</b>	<b>4,213</b>	<b>1,767</b>	<b>1,109</b>	<b>282</b>	<b>54,827</b>	<b>1,374</b>	<b>56,201</b>
									(f)		

RECEIVING ONLY

Fixed(a) .. .. .	147	178	115	18	50	1	5	..	514	..	514
Mobile(e) .. .. .	..	43	25	6	..	..	..	..	74	..	74
<b>Total .. .. .</b>	<b>147</b>	<b>221</b>	<b>140</b>	<b>24</b>	<b>50</b>	<b>1</b>	<b>5</b>	<b>..</b>	<b>588</b>	<b>..</b>	<b>588</b>

TOTAL STATIONS AUTHORIZED

<b>Grand Total .. .. .</b>	<b>20,093</b>	<b>13,294</b>	<b>8,342</b>	<b>6,083</b>	<b>4,263</b>	<b>1,768</b>	<b>1,114</b>	<b>282</b>	<b>55,415</b>	<b>1,374</b>	<b>56,789</b>
									(f)		

(a) Stations established at fixed locations for communication with other stations similarly established. (b) Stations established in out-back areas for communication with control stations such as those of the Royal Flying Doctor Service. (c) Stations established at fixed locations for communication with mobile stations. (d) Land stations for communication with ocean-going vessels. (e) Equipment installed in aircraft (aeronautical), motor vehicles (land mobile services), harbour vessels (harbour mobile services) and ocean-going vessels (ships), and mobile equipment of organizations such as the Royal Flying Doctor Service. (f) Includes 176 stations which cannot be classified according to State, etc.

BROADCASTING AND TELEVISION

§ 1. General

Broadcasting and television services in Australia operate under the *Broadcasting and Television Act 1942-1963* and comprise the National Broadcasting Service, the National Television Service, the Commercial Broadcasting Service and the Commercial Television Service. General control of these services is a function of the Australian Broadcasting Control Board (see p. 616). Details of each service will be found on pages 617-22. Licence fees for commercial broadcasting and television stations are payable under the *Broadcasting and Television Stations Licence Fees Act 1956*.

The Australian Broadcasting Control Board, which was constituted on 15th March, 1949, consists of five (including two part-time) members and operates under the Ministerial jurisdiction of the Postmaster-General. No person shall be appointed a member of the Board who—

- (a) has any financial interest, whether direct or indirect, in any company which is the licensee of, or an applicant for a licence for, a commercial broadcasting station or a commercial television station, or manufactures or deals in equipment for the transmission or reception of broadcasting or television programmes;
- (b) is a member of the governing body of any company or other association of persons which is the licensee of, or an applicant for a licence for, a commercial broadcasting station or commercial television station; or
- (c) is a licensee of, or an applicant for a licence for, a commercial broadcasting station or commercial television station.

The Board's principal functions, as set out in Section 16 of the *Broadcasting and Television Act 1942-1963* are—

- (a) to ensure the provision of services by broadcasting stations and television stations in accordance with plans from time to time prepared by the Board and approved by the Minister;
- (b) to ensure that the technical equipment and operation of such stations are in accordance with such standards and practices as the Board considers to be appropriate;
- (c) to ensure that adequate and comprehensive programmes are provided by commercial broadcasting and commercial television stations to serve the best interests of the general public; and
- (d) to detect sources of interference, and to furnish advice and assistance in connexion with the prevention of interference, with the transmission or reception of the programmes of broadcasting stations and television stations.

In addition, the Board may exercise such other functions as are prescribed in relation to broadcasting and television stations.

The Board may make recommendations to the Minister as to the exercise by the Minister of any power under Part IV (The Commercial Broadcasting Service and the Commercial Television Service) of the Act.

The Board has power—

- (a) subject to any direction of the Minister, to determine the situation and operating power of a broadcasting station or television station;
- (b) subject to any direction of the Minister, to determine the frequency of a broadcasting station and the frequencies of a television station, within bands of frequencies notified to the Board by the Postmaster-General as being available;
- (c) to determine the hours during which programmes may be broadcast or televised;
- (d) to determine the conditions subject to which advertisements may be broadcast or televised by licensees;
- (e) subject to any direction of the Minister, to regulate the establishment and operation of networks of commercial broadcasting stations or of commercial television stations and the making of arrangements by licensees for the provision of programmes or the broadcasting or televising of advertisements;
- (f) to conduct examinations as to the competency of persons to operate the technical equipment of broadcasting stations and television stations and to charge fees in respect of those examinations; and
- (g) to make recommendations to the Minister, regarding the grant of licences for television translator stations in areas where, in the opinion of the Board, satisfactory reception of television programmes is not being obtained from commercial television stations.

The Board is obliged to hold public inquiries into applications, made to the Minister, for licences for commercial broadcasting and commercial television stations in areas for which the Minister proposes to grant licences and into any other matter within its functions if the Board thinks it necessary or desirable, or the Minister so directs.

In exercising its powers and functions in relation to commercial broadcasting and commercial television stations the Board is obliged to consult representatives of those stations.

The Australian Broadcasting Commission, which consists of seven members, at least one of whom must be a woman, controls the activities of the National Broadcasting Service and the National Television Service.

## § 2. Broadcasting

1. The National Broadcasting Service.—(i) *General.* In sound broadcasting, the programmes of the National Broadcasting Service are provided by the Australian Broadcasting Commission, and the provision and operation of transmitters and technical facilities in the studios are the responsibility of the Postmaster-General's Department.

(ii) *Technical Facilities.* At 30th June, 1963, the National Broadcasting Service comprised the following 72 transmitting stations, of which 62 were medium frequency and 10 high frequency.

### *Medium Frequency Stations—*

New South Wales—2BL and 2FC, Sydney; 2AN, Armidale; 2BA, Bega; 2CO, Albury; 2CR, Orange; 2GL, Glen Innes; 2KP, Kempsey; 2LG, Lithgow; 2ML, Murwillumbah; 2NA and 2NC, Newcastle; 2NB, Broken Hill; 2NR, Grafton; 2NU, Tamworth; 2TR, Taree; and 2WN, Wollongong.

Victoria—3AR and 3LO, Melbourne; 3GI, Sale; 3WL, Warrnambool; and 3WV, Horsham.

Queensland—4QG and 4QR, Brisbane; 4AT, Atherton; 4GM, Gympie; 4MI, Mount Isa; 4QA, Mackay; 4QB, Maryborough; 4QL, Longreach; 4QN, Townsville; 4QS, Toowoomba; 4QY, Cairns; 4RK, Rockhampton; 4SO, Southport.

South Australia—5AN and 5CL, Adelaide; 5CK, Port Pirie; 5LN, Port Lincoln; 5MG, Mount Gambier; 5MV, Renmark; 5PA, Penola; and 5WM, Woomera.

Western Australia—6WF and 6WN, Perth; 6AL, Albany; 6GF, Kalgoorlie; 6GN, Geraldton; 6NM, Northam; and 6WA, Wagin.

Tasmania—7ZL and 7ZR, Hobart; 7NT, Launceston; and 7QN, Queenstown.

Northern Territory—8AL, Alice Springs; 8DR, Darwin; 8KN, Katherine; 8TC, Tennant Creek.

Australian Capital Territory—2CN and 2CY, Canberra.

Territory of Papua and New Guinea—9PA, Port Moresby; and 9RB, Rabaul.

### *High Frequency Stations—*

VLI Sydney, New South Wales; VLG, VLH and VLR Lyndhurst, Victoria;

VLM and VLQ Brisbane, Queensland; VLW and VLX Perth, Western Australia; and VLK and VLT Port Moresby, Papua.

The medium-frequency transmitters operate in the broadcast band 525 to 1,605 kilocycles per second. The high-frequency stations, using frequencies within the band 3 to 30 megacycles per second, provide service to listeners in sparsely populated parts of Australia such as the north-west of Western Australia, the Northern Territory, and northern and central Queensland, and in Papua and New Guinea and adjacent islands.

Many of the programmes provided by country stations are relayed from the capital cities, high-quality programme transmission lines being used for the purpose. A number of programme channels are utilized to link national broadcasting stations in the capital cities of Australia, and, when necessary, this system is extended to connect both the national and commercial broadcasting stations.

In June, 1963, 48 of the Australian medium-frequency stations were situated outside the six State capital cities. Additional country stations are to be established, and, when these additions are complete, the medium-frequency and high-frequency stations together will provide for clear reception of the programmes of the National Broadcasting Service in practically every part of Australia.



(iii) *Programme Facilities. (a) General.* The programmes of the Australian Broadcasting Commission cover a wide range of activities, which are indicated briefly in the following paragraphs. The proportion of broadcasting time allocated to the various types of programme during 1962-63 was as follows:—Classical music, 26.2 per cent.; light entertainment, 18.0 per cent.; light music, 10.3 per cent.; news, 7.3 per cent.; talks, 6.3 per cent.; sporting, 5.3 per cent.; drama and features, 3.7 per cent.; education, 3.6 per cent.; religious, 3.5 per cent.; Parliament, 3.5 per cent.; children's session, 2.8 per cent.; rural, 1.8 per cent.; and non-departmental, 7.7 per cent.

(b) *Music.* The A.B.C., in addition to its extensive activities in the field of musical broadcasting, is one of the largest concert-giving organizations in the world. Its regular broadcasts command a large audience, and a total of 1,017,232 people attended A.B.C. concerts during 1962-63. There are symphony orchestras in Sydney, Melbourne, Brisbane, Adelaide, Perth and Hobart, which have developed from the studio broadcasting orchestras set up in 1936.

In 1962-63, the A.B.C. organized 638 public orchestral concerts (including 191 free concerts for school children and 38 free concerts for adults) and 170 public recitals by famous artists throughout the Commonwealth.

(c) *Drama and Features.* Drama programmes are designed to give listeners opportunities, which they might not otherwise have, of hearing the world's great plays as well as adaptations of the best modern stage plays and also those written specially for broadcasting. The main regular radio drama programmes are broadcast on Sunday afternoons and Sunday and Monday evenings, and special series of longer plays are also given at various times. In recent years, the technique of the feature programme has also been developed. The feature is a form of entertainment which is unique to radio, consisting of specially written programmes designed to present information in an interesting way.

(d) *Youth Education.* The A.B.C. provides a regular series of broadcasts to schools in all States as an addition to normal class-room education. The total number of listening schools at the end of June, 1963, was 9,944 or about 94 per cent. of all schools, State and private, throughout the Commonwealth. (See also Chapter XIX. Education, Cultural Activities, and Research, on this subject.)

(e) *Talks.* The aim of the Talks Department is to provide programmes which will keep the listener well informed on current affairs, literature, science and general topics. Many of the talks in the first category are now presented in a magazine type of session consisting of a number of short items linked by a narrator. An extension of this type of programme is the documentary. Controversial issues are covered in sessions such as "Wednesday Forum", and "Any Questions" as well as in the commentaries. The weekday "News Review" and the weekly session, "World Report" give the background to current news developments recorded over landline from all States in the Commonwealth, or by radio telephone or cable from abroad.

(f) *Rural Broadcasts.* The Rural Broadcasts Department exchanges programmes with several overseas countries and provides service, educational, and entertainment programmes all designed to be of value to the man-on-the-land and industries allied with primary production. Special programmes are designed for country women and junior farmers, while urban dwellers are provided with gardening programmes and shopping guides. A complete weather and marketing service is provided. Rural programmes are broadcast on a national, State, and regional basis, in the Territory of Papua-New Guinea, and on the Overseas Service (Radio Australia). The 23 officers at regional stations present specific information and educational programmes in relation to their own regions. During 1962-63, a total of 7,886 rural talks and interviews, as well as 8,934 weather reports and 7,128 market reports were broadcast.

(g) *News.* The Commission collects all its Australian (including Papua and New Guinea) news through its own staff journalists and part-time correspondents. It also maintains a news room in London for the selection and transmission of news obtained from major overseas agencies, and has special representatives in south-east Asia. Regional bulletins are broadcast from country centres and also from capital cities to cover near-city districts. Radio Australia (the Overseas Service of the A.B.C.) broadcasts Australian and overseas news daily in English, French, Mandarin, Indonesian, Japanese, Cantonese, Vietnamese and Thai, with special attention to Asia and the Pacific. Each day, the A.B.C. re-broadcasts two news bulletins from the British Broadcasting Corporation. The A.B.C. broadcasts more than 186 news bulletins each day, including those given over Radio Australia.

(h) *Other Activities.* The proceedings of the Federal Parliament are broadcast regularly on one of the two national transmitters in each capital city, one in Newcastle and one domestic short-wave station (VLR).

The National Children's Hour, presented seven days a week, is composed of over 40 programme items, including stories, music, games, art, literature, natural history and sport.

In co-operation with the various religious denominations, the A.B.C. broadcasts several religious sessions each week-day in addition to those given on Sundays. These religious broadcasts include relays of normal church services and a variety of special programmes of talks and sacred music. The modern trend towards the use of religious drama is also followed.

The variety and sporting programmes of the A.B.C. provide the lighter side of the service. With its variety session, the policy of the A.B.C. is to assist local artists in order to increase the amount of first-class talent in this country, and encouragement is also given to Australian composers of light music.

A comprehensive coverage of sport at home and abroad is provided by the A.B.C. On Saturday afternoons, the sporting panel provides listeners with progress results, scores and descriptions from several fields of sport. Events of international interest such as Test matches and the Davis Cup are covered by simultaneous descriptions from A.B.C. commentators.

2. **The Commercial Broadcasting Service.**—Commercial broadcasting stations are operated under licences granted and renewed by the Postmaster-General after taking into consideration any recommendations which have been made by the Broadcasting Control Board. The initial period of a licence is five years and renewals are granted for a period of one year. The fee payable for a licence is £25 on the grant of the licence, and thereafter £25 a year plus one per cent. of the gross earnings of the station from the broadcasting of advertisements or other matter during the preceding financial year. Licensees of these stations rely for their income on the broadcasting of advertisements and other publicity.

3. **Oversea Broadcasting Service.**—There are eight high-frequency stations at Shepparton, Victoria, which provide the oversea service known as "Radio Australia". As in the case of the National Broadcasting Service, these stations are maintained and operated by the Postmaster-General's Department, and their programmes are arranged by the A.B.C. The programmes, which give news and information about Australia presented objectively, as well as entertainment, are directed mainly to south-east Asia and the Pacific. The oversea audience has grown very substantially in recent years, as evidenced by a large and increasing number of letters from listeners abroad.

4. **Broadcasting Stations.**—The following table shows the number of broadcasting stations in operation at 30th June, 1963.

BROADCASTING STATIONS, 30th JUNE, 1963

Type of station	N.S.W.	Vic.	Qld	S.A.	W.A.	Tas.	N.T.	A.C.T.	Papua and New Guinea	Total
National—										
Medium frequency	17	5	13	8	7	4	4	2	2	62
High frequency—										
Domestic	1	3	2	..	2	..	..	..	2	10
Oversea	..	8	..	..	..	..	..	..	..	8
Commercial	37	20	21	8	14	8	1	1	..	110

Tables showing the call sign, location, frequency and aerial power of national and commercial broadcasting stations in operation at 30th June, 1963, are shown in *Transport and Communication*, Bulletin No. 54.

### § 3. Television

1. **General.**—Television services in Australia operate under the *Broadcasting and Television Act 1942–1963* and comprise the National Television Service and the Commercial Television Service.

2. **The National Television Service.**—(i) *General.* The National Television Service is provided by the Australian Broadcasting Commission through transmitters operated by the Postmaster-General's Department. At 31st December, 1963, sixteen stations had been established.

Australian Capital Territory—ABC channel 3, Canberra; New South Wales—ABN channel 2, Sydney; ABHN channel 5, Newcastle-Hunter River area; ABWN channel 5a, Illawarra area; Victoria—ABV channel 2, Melbourne; ABEV channel 1, Bendigo area; ABRV channel 3, Ballarat area; ABLV channel 4, Latrobe Valley area; ABGV channel 3, Goulburn Valley area; Queensland—ABQ channel 2, Brisbane; ABDQ channel 3, Darling Downs area; ABRQ channel 3, Rockhampton area; South Australia—ABS channel 2, Adelaide; Western Australia—ABW channel 2, Perth; Tasmania—ABT channel 2, Hobart; ABNT channel 3, North Eastern Tasmania area.

Additional national television stations which had been authorized but had not commenced to operate at 31st December, 1963, are as follows.

New South Wales—Central Tablelands area (channel 1); Richmond-Tweed Heads area (channel 6); Bega-Cooma area (channel 0); Broken Hill area (channel 2); Grafton-Kempsey area (channel 2); Central Western Slopes area (channel 3); Murrumbidgee Irrigation area (channel 7); Upper Namoi area (channel 7); Manning River area (channel 1); South Western Slopes and Eastern Riverina area (channel 0); Victoria—Upper Murray area (channel 1); Mildura area (channel 4); Swan Hill area (channel 2); Queensland—Townsville area (channel 3); Cairns area (channel 9); Mackay area (channel 4); Wide Bay area (channel 6); Southern Downs area (channel 1); South Australia—South East area (channel 1); Spencer Gulf North area (channel 1); Western Australia—Bunbury area (channel 5); Central Agricultural area (channel 4); Southern Agricultural area (channel 2).

It is planned that all services will be in operation by the end of 1966.

(ii) *Programme Facilities.* (a) *General.* The television programmes provided by the A.B.C. cover a wide range of activities. The proportion of television time allocated among the A.B.C.'s various departments to 30th June, 1963, was as follows:—Drama and features, 22.1 per cent.; talks, 18.4 per cent.; sport, 11.1 per cent.; children's session, 10.8 per cent.; news, 9.1 per cent.; light entertainment, 8.0 per cent.; education, 7.4 per cent.; music, 3.2 per cent.; religion, 2.8 per cent.; rural services, 2.5 per cent.; non-departmental, 4.6 per cent. A summary of the activities of the departments in the field of television is given in the following paragraphs. Transmission hours for the year ended 30th June, 1963, totalled 20,765.

(b) *Talks.* In television, talks also cover a wide and growing field, ranging from public affairs type programmes such as "Four Corners" to commentaries on international and Australian affairs and outside telecasts of public events. Film and studio documentaries, discussions on literature, art and science, topical programmes, interviews, magazine programmes, and demonstrations are all part of the regular output.

(c) *Drama and Features.* A considerable proportion of television time is devoted to drama and features, and "live" television plays featuring Australian artists may usually be seen fortnightly in all State capitals. A Television Writers' Workshop gives writers practical advice on television writing. Of 29 live plays produced during 1962–63, 7 were by Australian authors.

(d) *Music.* Extensive development has taken place in the A.B.C.'s television music programmes. Major operas, which are regularly produced in the studios, have achieved a progressively higher standard, and are now fully comparable with overseas productions. Television programmes by resident ballet companies have also been encouraged and further advances in this field are envisaged. The number of telecasts of A.B.C. and visiting overseas symphony orchestras has been increased, while telecasts of overseas and resident artists have become an established part of programme output.

(e) *Rural Services.* Weather reports and forecasts are telecast six evenings a week on National T.V. stations. In Sydney and Melbourne, there are two half-hour magazines each week, namely "Country Call" and "Town and Country". These include rural film items from all States, topical interviews and demonstrations. Gardening programmes are telecast weekly in Sydney and Canberra. Outside broadcast programmes are devised in all States at Royal Shows and other places of rural interest. The National Junior Farmer Radio and Television Competition is a major annual event. Film items are regularly exchanged with member countries of the European Broadcasting Union. In all States, a weekly programme is "To Market, To Market", a practical buying guide for housewives. A half-hour magazine programme, "Town and Country", which includes local interviews, demonstrations and films, and films syndicated from Sydney, is telecast weekly in Brisbane, Adelaide, Perth and Hobart.

The aim of rural broadcasts in television is to provide consumer-interest material for urban viewers and to convey to them aspects of food production and country life and to provide a rural news and extension service to farmer viewers.

(f) *Education.* The A.B.C. provides daily television programmes for schools in all Australian States with certain series repeated to meet their convenience. Programmes for primary schools are of a supplementary type, while those for secondary schools are designed to contribute more directly to classroom instruction. In addition, there is a daily programme for pre-school children entitled "Kindergarten Playtime". At the adult level, there are two television programmes weekly, designed in series and known as "University of the Air" which are presented in the evenings. Initial programmes of a series based on university extension activities have also been transmitted.

(g) *News.* Television news bulletins and newsreels have been included in the programmes presented in both Sydney and Melbourne since the television services began in November, 1956. Since then, those news items have been included in the programmes of other State capitals. The A.B.C. is a member of the British Commonwealth International Newsfilm Agency (B.C.I.N.A.), through which it receives world-wide television newsfilm and provides newsfilm of Australian origin for international distribution.

(h) *Other Activities.* Special television programmes are presented for children, including filmed material obtained on an exchange basis from overseas television organizations. Special religious services and programmes have also been televised. Outside television cameras have covered a number of sporting events, including the Olympic Games, Davis Cup tennis, Test and Sheffield Shield cricket, swimming championships and the Commonwealth Games.

3. **The Commercial Television Service.**—Commercial television stations are operated under licences granted by the Postmaster-General. Licences for commercial television stations have been granted as follows:—*Australian Capital Territory*—Canberra area CTC (channel 7); *New South Wales*—Sydney ATN (channel 7), TCN (channel 9); CBN (channel 8), Central Tablelands area; NBN (channel 3), Newcastle—Hunter River area; RTN (channel 8), Richmond—Tweed Heads area; WIN (channel 4), Murrumbidgee area; *Victoria*—Melbourne GTV (channel 9), HSV (channel 7); BCV (channel 8), Bendigo area; BTV (channel 6), Ballarat area; GLV (channel 10), Latrobe Valley area; GMV (channel 6), Goulburn Valley area; *Queensland*—Brisbane BTQ (channel 7), QTQ (channel 9); DDQ (channel 10), Darling Downs area; TNQ (channel 7), Townsville area; RTQ (channel 7), Rockhampton area; *South Australia*—Adelaide ADS (channel 7), NWS (channel 9); *Western Australia*—Perth TVW (channel 7); *Tasmania*—Hobart TVT (channel 6); TNT (channel 9), north-eastern Tasmania area.

The initial grant of a licence is for a period of five years and thereafter the licence is renewable annually. The fee payable is £100 for the first year and thereafter £100 a year plus one per cent. of the station's gross earnings from the televising of advertisements or other matter during the preceding financial year.

4. **Extension of Television Services.**—On 22nd February, 1962, the Postmaster-General invited applications for the grant of a third commercial television station licence in the Sydney area, the Melbourne area, the Brisbane area and the Adelaide area and for a second commercial television station licence in the Perth area. Licences have been granted in respect of the Sydney and Melbourne areas and the Australian Broadcasting Control Board concluded its inquiries into applications received in respect of the other three areas on 19th September, 1963.

In accordance with the Government's policy of providing both a national and commercial service in each area to which television is extended, the Postmaster-General, on 4th October, 1962, announced that the Government had authorized him to grant licences for commercial television stations in the following areas.

New South Wales—Upper Namoi area, South Western Slopes and Eastern Riverina area, Grafton-Kempsey area; Victoria—Upper Murray area; Queensland—Wide Bay area.

On 18th September, 1963, the Postmaster-General announced the approval of the grant of the following further commercial television station licences.

New South Wales—Manning River area, Central Western Slopes area, Murrumbidgee Irrigation area, Broken Hill area; Victoria—Mildura area; Queensland—Cairns area, Mackay area, Southern Downs area; South Australia—South East area; Western Australia—Bunbury area.

The grant of licences for the Spencer Gulf North area and the Bega-Cooma area have been deferred, as the only applicant for a licence in each area did not desire to proceed with the application at present. The only application for a licence for the Murray Valley area was made on the basis that the applicant would accept licences for both the Murray Valley area and the Mildura area, but not for one area only. As the applicant was unsuccessful in obtaining the licence for the Mildura area, the grant of a licence for the Murray Valley area was deferred. No applications were received for the Southern Agricultural area and the Central Agricultural area of Western Australia.

When the stations commence operation, it is estimated that 91 per cent. of the Australian people will be able to receive a television service.

#### § 4. Licences, Revenue from Fees, etc.

1. **Broadcast Listeners' and Television Viewers' Licences.**—(i) *General.* Broadcast listeners' and television viewers' licences are issued at post offices in accordance with the provisions of the *Broadcasting and Television Act 1942-1963*, which stipulates that, except as prescribed, a person shall not use, maintain or have in his possession a broadcast or television receiver unless there is in force a licence which applies to that receiver. A broadcast listener's licence authorizes the operation of any broadcast receiver, and a television viewer's licence any television receiver, which is—(a) in the possession of the holder of a licence, or of a member of his family, at the address specified in the licence and/or ordinarily kept at that address; (b) installed in a vehicle which is ordinarily in the possession of the holder, or a member of his family, and is ordinarily kept at that address while not in use.

The fee for a broadcast listener's licence or a renewal thereof is:—Zone 1, £2 15s.; Zone 2, £1 8s. Zone 1 is the area within approximately 250 miles of specified broadcasting stations and Zone 2 is the remainder of the Commonwealth. The fee for a licence granted to certain types of pensioners is 10s. in Zone 1 and 7s. in Zone 2.

A licence may be granted free of charge to a blind person over 16 years of age or to a person or authority conducting a school. Inmates of a hospital or charitable institution are covered by the licence held by the institution.

The fee for a television licence is £5 except in the case of certain classes of pensioners who pay a fee of £1 5s. Licences are granted free to blind persons and to schools.

Each broadcast or television receiver let out on hire (except under a hire purchase agreement) must be covered by a hirer's licence held by the person or firm from whom the receiver is hired. Rented receivers are not authorized by an ordinary listener's or viewer's licence. A hirer's licence may be granted in respect of one or a number of broadcast receivers or in respect of one or a number of television receivers for any period not exceeding twelve months.

The keeper of a lodging house (which includes a hotel, motel, boarding house or any other premises where lodging or sleeping accommodation is provided for reward) must take out a licence for each broadcast or television receiver (other than a receiver provided by a lodger or tenant for his own use) installed in any room or part of the lodging house occupied or available for occupation by lodgers or tenants.

(ii) *Broadcast Listeners' Licences.* (a) *Number in Force.* The following table shows the number of broadcast listeners' licences in force at five-year intervals from 1925 to 1960 and for 1963.

## BROADCAST LISTENERS' LICENCES IN FORCE

At 30th June—	N.S.W.(a)	Vic.	Qld	S.A.(b)	W.A.	Tas.	Aust.
1925 .. ..	34,857	20,290	1,267	3,331	3,562	567	63,874
1930 .. ..	111,253	140,072	23,335	25,729	5,755	6,048	312,192
1935 .. ..	279,166	237,247	67,546	76,515	41,257	20,121	721,852
1940 .. ..	458,256	348,264	151,152	124,928	87,790	42,191	1,212,581
1945(c) .. ..	548,074	394,315	180,089	146,611	98,210	47,930	1,415,229
1950(c) .. ..	683,271	505,078	260,033	195,261	133,199	64,369	1,841,211
1955 .. ..	746,050	549,690	293,542	223,593	150,199	71,602	2,034,676
1960 .. ..	832,659	606,587	344,198	249,148	171,693	78,900	2,283,185
1963 .. ..	802,046	607,036	334,566	256,741	165,637	73,760	2,239,786

(a) Includes the Australian Capital Territory. (b) Includes the Northern Territory. (c) Excludes licences for receivers in excess of one. These licences were introduced in July, 1942, and were abolished on 31st December, 1951.

Of the 2,239,786 broadcast listeners' licences in force at 30th June, 1963, 1,312,174 or 58.6 per cent. were held by persons living in metropolitan areas and 927,612 or 41.4 per cent. by persons in country areas. Short-term hirers' licences (included above) at 30th June, 1963, were:—New South Wales, 504; Victoria, 100; Queensland, 150; South Australia, 581; and Western Australia, 13.

(b) *Revenue Received from Fees.* The following table shows the revenue received from broadcast listeners' licence fees for the years 1958–59 to 1962–63.

## REVENUE RECEIVED FROM BROADCAST LISTENERS' LICENCE FEES

(£'000)

Year	N.S.W.(a)	Vic.	Qld	S.A.(b)	W.A.	Tas.	Aust.
1958–59 .. ..	2,116	1,528	812	621	422	192	5,691
1959–60 .. ..	2,023	1,545	846	626	420	196	5,656
1960–61 .. ..	1,992	1,488	827	619	419	191	5,536
1961–62 .. ..	1,957	1,452	797	615	407	185	5,413
1962–63 .. ..	1,937	1,493	792	626	407	179	5,434

(a) Includes the Australian Capital Territory.

(b) Includes the Northern Territory.

(iii) *Television Viewers' Licences.* (a) *Number in Force.* The following table shows the number of television viewers' licences in force each year at 30th June, 1958 to 1963.

## TELEVISION VIEWERS' LICENCES IN FORCE

At 30th June—	N.S.W.	Vic.	Qld	S.A.	W.A.	Tas.	Aust.
1958 .. ..	143,422	147,721	..	..	..	(a) { 43	291,186
1959 .. ..	300,871	270,073	360	6,124	..	{ 74	577,502
1960 .. ..	409,334	353,091	67,337	84,967	35,604	4,662	954,995
1961 .. ..	488,516	401,395	113,954	124,808	69,628	18,985	1,217,286
1962 .. ..	564,707	460,558	142,422	143,794	83,951	29,003	1,424,435
1963 .. ..	637,766	530,256	178,391	167,502	95,907	45,503	1,655,325

(a) These licences were for television sets in the north coast area of Tasmania which were able to receive programmes from Victoria.

Of 1,655,325 television viewers' licences in force at 30th June, 1963, 71,309 were held by short-term hirers, and therefore could not be separated into metropolitan licences or country licences. Persons living in the metropolitan area held 1,161,693 or 73 per cent. of the remainder. Short-term hirers' licences (included above) at 30th June, 1963, were:—New South Wales, 18,343; Victoria, 13,029; Queensland, 13,064; South Australia, 16,956; Western Australia, 6,960; and Tasmania, 2,957.

(b) *Revenue Received from Fees.* The following table shows the revenue received from television viewers' licence fees during the years 1958-59 to 1962-63.

**REVENUE RECEIVED FROM TELEVISION VIEWERS' LICENCE FEES**  
(£'000)

Year	N.S.W.	Vic.	Qld	S.A.	W.A.	Tas.	Aust.
1958-59 .. ..	1,449	1,298	(a)	27	..	(b)	2,775
1959-60 .. ..	1,994	1,717	321	406	165	21	4,624
1960-61 .. ..	2,292	1,938	542	594	324	91	5,781
1961-62 .. ..	2,623	2,170	664	651	380	138	6,626
1962-63 .. ..	2,993	2,491	827	792	462	213	7,778

(a) £262.

(b) £356.

## CHAPTER XVI

### WELFARE SERVICES

NOTE.—The Commonwealth Welfare Services outlined in this chapter are those administered by the Commonwealth Department of Social Services. Particulars of benefits provided under the National Health Service appear in Chapter XVIII. Public Health.

Particulars of Commonwealth capital expenditure on mental hospitals and the Anti-Tuberculosis campaign are given in Chapter XVIII. Public Health. For grants made to private organizations for the construction of homes for elderly people *see* page 640.

Further information on subjects dealt with in this chapter may be found in the annual bulletins *Commonwealth Finance and State, Territories and Local Government Authorities Finance and Government Securities*. Current and summarized information is contained in the *Quarterly Summary of Australian Statistics* and the *Monthly Review of Business Statistics*.

#### § 1. Expenditure on Welfare Services

NOTE.—Information concerning the cost of administering each Commonwealth benefit separately is not compiled. Particulars of the cost of administering the Department of Health and the Department of Social Services are given in Chapter XXII. Public Finance—Commonwealth Consolidated Revenue Fund Expenditure

##### 1. Commonwealth Expenditure on Welfare Services—The National Welfare Fund.—

(i) *General*. The National Welfare Fund was established by the *National Welfare Fund Act* 1943 to finance a scheme of national welfare and has operated from 1st July, 1943. At its commencement, it was used to finance funeral benefits and maternity allowances. Other social and health benefits were made a charge on the fund from time to time. At present, expenditure on all benefits except repatriation and a few minor social and health benefits is met from the fund. The fund is used only to finance the benefits themselves; it is not used to finance the cost of administering the benefits, or of capital works associated with the benefits.

For particulars of the income of the fund, *see* Chapter XXII. Public Finance—Commonwealth Consolidated Revenue Fund Expenditure.

(ii) *Expenditure from the National Welfare Fund 1962–63*. The following table sets out expenditure from the fund during 1962–63.



**COMMONWEALTH EXPENDITURE FROM NATIONAL WELFARE FUND  
ON SOCIAL AND HEALTH SERVICES, 1962-63  
(£'000)**

Service	N.S.W.	Vic.	Qld	S.A.	W.A.	Tas.	N.T. (a)	A.C.T. (a)	Abr- oad	Total
<b>Social Services—</b>										
Age and Invalid Pen- sions .. .. .	74,505	46,864	29,741	16,976	12,791	5,859	421	401	196	187,754
Child Endowment ..	24,035	18,430	10,229	6,430	5,242	2,523	335	464	22	67,710
Commonwealth Re- habilitation Service	196	207	102	99	75	19	..	..	..	698
Funeral Benefits ..	161	108	59	36	25	12	..	..	..	401
Maternity Allowances	1,332	1,059	576	343	276	138	24	28	5	3,781
Unemployment Bene- fits .. .. .	4,088	2,598	2,248	592	719	391	4	11	..	10,651
Sickness Benefits ..	1,392	824	528	263	252	101	5	10	..	3,375
Special Benefits(b) ..	175	278	91	33	32	22	..	..	..	631
Widows' Pensions ..	5,893	3,879	2,611	1,459	1,188	542	33	49	23	15,677
<b>National Health Ser- vices—</b>										
Hospital Benefits ..	9,573	5,651	3,385	2,224	2,095	660	30	45	..	23,663
Medical Benefits ..	4,864	3,011	1,209	1,323	1,013	317	..	..	..	11,737
Medical Benefits for Pensioners .. .. .	1,924	1,152	631	422	316	118	..	10	..	4,573
Milk for School Children .. .. .	1,315	949	571	355	292	188	30	27	..	3,727
Pharmaceutical Bene- fits .. .. .	11,573	7,839	4,067	2,334	1,922	727	..	(c) 60	..	28,522
Pharmaceutical Bene- fits for Pensioners	4,276	2,297	1,528	920	659	253	..	..	..	9,933
Tuberculosis Cam- paign—										
Allowances .. .. .	265	194	191	70	43	40	..	..	..	803
Maintenance and surveys(d) .. .. .	1,746	1,271	894	376	400	182	..	5	..	4,874
Miscellaneous(e) ..	35	51	113	8	12	28	..	(f) 495	..	765
Rental Rebates .. ..	..	..	19	..	..	..	..	..	..	19
<b>Total .. .. .</b>	<b>147,348</b>	<b>96,662</b>	<b>58,793</b>	<b>34,263</b>	<b>27,352</b>	<b>12,120</b>	<b>905</b>	<b>1,605</b>	<b>246</b>	<b>379,294</b>

(a) Payments for some Health Services to residents of the Northern Territory and the Australian Capital Territory are included in the amounts shown for States. (b) Includes special benefits to migrants in reception and training centres. (c) Includes payments to the Royal Flying Doctor Service and Bush Nursing Centres. (d) Paid to State Governments as a contribution towards the cost of surveys and the maintenance of institutions for the treatment of tuberculosis. (e) This item covers the cost of the Commonwealth Health Laboratory Services, subsidies to home nursing services, the cost of radio-active isotopes provided under the National Health Act, and running expenses of the Blood Fractionation Plant. (f) Includes running expenses of the Blood Fractionation Plant at the Commonwealth Serum Laboratories, £305,000, and subsidies to home nursing services, £144,000.

(iii) *Expenditure from the National Welfare Fund, 1958-59 to 1962-63.* Expenditure from the fund during each of the years 1958-59 to 1962-63, and the amount per head of population for each service during 1962-63, are shown in the following table.

**COMMONWEALTH EXPENDITURE ON SOCIAL AND HEALTH SERVICES  
FROM THE NATIONAL WELFARE FUND**

Service	1958-59	1959-60	1960-61	1961-62	1962-63	
	£'000	£'000	£'000	£'000	Amount £'000	Per head £
<b>Social Services—</b>						
Age and Invalid Pensions .. .. .	129,571	147,005	157,926	180,245	187,754	17.37
Child Endowment(a) .. .. .	67,540	62,532	74,303	66,378	67,710	6.26
Commonwealth Rehabilitation Service	670	681	693	723	698	0.06
Funeral Benefits .. .. .	346	353	367	376	401	0.04
Maternity Allowances .. .. .	3,599	3,652	3,898	3,908	3,781	0.35
Unemployment, Sickness and Special Benefits .. .. .	8,652	7,253	7,140	15,905	14,657	1.36
Widows' Pensions .. .. .	10,777	12,137	13,468	15,094	15,677	1.45
<b>National Health Services—</b>						
Hospital Benefits .. .. .	14,802	18,599	20,668	22,202	23,663	2.19
Medical Benefits .. .. .	7,780	9,292	9,976	10,912	11,737	1.09
Medical Benefits for Pensioners ..	3,806	4,113	4,200	4,398	4,573	0.42
Milk for School Children .. .. .	3,069	3,359	3,560	3,742	3,727	0.34
Pharmaceutical Benefits .. .. .	18,455	20,761	20,543	26,092	28,522	2.64
Pharmaceutical Benefits for Pensioners	2,517	3,574	7,338	9,097	9,933	0.92
Tuberculosis Campaign—						
Allowances .. .. .	1,063	1,026	947	873	803	0.07
Maintenance .. .. .	4,787	4,337	4,179	4,333	4,874	0.45
Miscellaneous .. .. .	768	689	1,046	848	765	0.07
Rental Rebates .. .. .	..	..	352	65	19	..
<b>Total .. .. .</b>	<b>278,227</b>	<b>299,363</b>	<b>330,604</b>	<b>365,191</b>	<b>379,294</b>	<b>35.08</b>

(a) See footnote (a) to table on p. 633.

2. **State Expenditure on Welfare Services.**—The following table shows net expenditure from certain funds of the State Governments on welfare services. Because of differences in organization and accounting methods, the information is not on exactly the same basis for all States and may not represent total expenditure. Receipts for services rendered have been deducted from gross expenditure. Loan fund expenditure is excluded.

## NET EXPENDITURE ON WELFARE SERVICES BY STATES, 1962-63

(£'000)

Particulars	N.S.W.	Vic.	Q'land	S. Aust.	W. Aust.	Tas.	Aust.
Relief of aged, child welfare, etc. ..	4,996	3,838	1,723	845	1,157	682	13,241
Miners' phthisis ..	41	43	1	..	36	..	121
<b>Total ..</b>	<b>5,037</b>	<b>3,881</b>	<b>1,724</b>	<b>845</b>	<b>1,193</b>	<b>682</b>	<b>13,362</b>

## § 2. Commonwealth Social Services

1. **Introduction.**—(i) *General.* Under the provisions of section 51 of the Constitution, the Commonwealth Government is empowered to legislate on:—

“(xxiii) Invalid and old-age pensions:

(xxiiiA) The provision of maternity allowances, widows' pensions, child endowment, unemployment, pharmaceutical, sickness and hospital benefits, medical and dental services (but not so as to authorize any form of civil conscription), benefits to students and family allowances:”.

The latter paragraph was inserted in the constitution after being accepted by the electors at a referendum on 28th September, 1946. The enabling Act was assented to on 19th December, 1946.

Before 1947, each social service benefit was paid under a separate Act. On 1st July, 1947, with the passage of the *Social Services Consolidation Act 1947*, all Acts providing social service benefits were amalgamated. This Act eliminated certain anomalies and obsolete provisions and changed the title “old-age pension” to “age pension”. The word “Consolidation” was dropped from the short title of the Act in 1954. The Act is at present styled the *Social Services Act 1947-1963*.

(ii) *Social Service Benefits Provided.* The social service benefits provided by the Commonwealth Government, and the date on which each came into operation, are:—

Age pension .. .. .	..	..	..	..	1st July, 1909
Child endowment .. .. .	..	..	..	..	1st July, 1941
Commonwealth Rehabilitation Service ..	..	..	..	..	10th December, 1948
Funeral benefit .. .. .	..	..	..	..	1st July, 1943
Invalid pension .. .. .	..	..	..	..	15th December, 1910
Maternity allowance .. .. .	..	..	..	..	10th October, 1912
Sickness benefit .. .. .	..	..	..	..	1st July, 1945
Special benefit .. .. .	..	..	..	..	1st July, 1945
Supplementary assistance (age, invalid and widow's pensions) .. .. .	..	..	..	..	15th October, 1958
Unemployment benefit .. .. .	..	..	..	..	1st July, 1945
Widow's pension .. .. .	..	..	..	..	30th June, 1942
Wives' and children's allowances for pensioners who are invalids .. .. .	..	..	..	..	8th July, 1943

**2. Age and Invalid Pensions.**—(i) *General.* Age pensions are payable to men, 65 years of age and over, and women, 60 years of age and over, who are British subjects and who have lived in Australia continuously for at least 10 years, which need not be immediately prior to the date of claim for a pension. If a person has completed five years but not 10 years continuous residence and has lived in Australia for periods which exceed a total of 10 years, the period of continuous residence otherwise required is reduced by the total of his periods of residence in Australia in excess of 10 years. Absence in a Territory of the Commonwealth, any periods of absence during which a person's home remained in Australia, and absences in certain other circumstances, are counted as residence. Residence in New Zealand or the United Kingdom may be treated as residence in Australia.

Invalid pensions are payable to persons, 16 years of age and over, who have lived in Australia for a continuous period of five years (including certain absences) at any time, and who are permanently incapacitated for work to the extent of at least 85 per cent., or permanently blind. If the incapacity or blindness first occurred outside Australia, except during a temporary absence, a period of 10 years' continuous residence is necessary. But if a person has completed five years but not 10 years continuous residence and has lived in Australia for periods which exceed a total of 10 years, the period of continuous residence otherwise required is reduced by the total of his periods of residence in Australia in excess of 10 years. Residence in New Zealand or the United Kingdom may be treated as residence in Australia. Certain absences do not affect eligibility.

Aboriginals, other than those who are nomadic or primitive, are eligible for age and invalid pensions on the same conditions as other members of the community.

A pension is not payable to an alien.

(ii) *Current Rates of Pension.* From 14th November, 1963, a rate of pension, known as the standard rate pension, has been payable to a single, widowed, or divorced pensioner, or a married pensioner whose spouse is not receiving an age or invalid pension, a wife's allowance, an unemployment, sickness or special benefit, a tuberculosis allowance or a service pension. The maximum standard rate of pension is £299 per annum (£5 15s. a week). The maximum married rate is £546 per annum (£10 10s. a week) for a married couple, both pensioners, i.e., £273 per annum (£5 5s. a week) each. The married rate applies to a pensioner whose spouse is also receiving an age or invalid pension or whose spouse receives a wife's allowance, an unemployment, sickness or special benefit, a tuberculosis allowance or a service pension.

A wife's allowance may be granted, subject to the means test, to the non-pensioner wife of an invalid pensioner or a permanently incapacitated or blind age pensioner if she is not receiving an age or invalid pension, or a service pension under the *Repatriation Act 1920-1962* (see Chapter XXVIII. Repatriation). The maximum annual rate of wife's allowance has been £156 per annum (£3 a week) since 3rd October, 1963. A child's allowance of £39 per annum (15s. a week), free of the means test, is payable for the first child under 16 years of a pensioner who is an invalid, and the pension may also be increased by £39 per annum (15s. a week), subject to the means test, for each other child under 16 years.

Since 3rd October, 1963, eligibility for a child's allowance and the additional pension for children has been extended to include a child over 16 years until the end of the calendar year in which he reaches 18 years, provided he is wholly or substantially dependent on the pensioner and is receiving full-time education at a school, college or university. Supplementary assistance of 10s. a week is available to pensioners receiving the full standard rate pension if they pay rent and are considered to depend entirely on the pension. At 30th June, 1963, 533,833 age pensioners (88 per cent. of all age pensioners) and 95,364 invalid pensioners (92 per cent. of all invalid pensioners) were receiving the maximum pension.

If the pensioner is an inmate of a benevolent home, the maximum payable to him is £2 a week if he is eligible for the standard rate pension, or £1 17s. a week otherwise. The rest is paid to the home for his maintenance. The balance is not paid to the home if the pensioner is in an infirmary ward, as payments under the Commonwealth Hospital Benefits Scheme are made in that case.

(iii) *Means Test.* Age and invalid pensions (other than invalid pensions paid to blind persons) and allowances paid to wives of invalid pensioners (but not a child's allowance of 15s. a week) are subject to a means test which applies to income and property. From

March, 1961, the means tests previously applied separately on income and property were merged into one composite means test. The rate of pension payable depends on the claimant's *means as assessed*. These consist of his annual rate of income plus a property component equal to £1 for each complete £10 of his net property above £200. A person's *means as assessed* may consist entirely of income, entirely of the property component or of various combinations of income and property component. The pension payable is calculated by deducting from the applicable maximum annual rate of pension the amount by which *means as assessed* exceed £182. Where the standard rate applies, no pension is payable where the value of property is £5,010 or more. Where the married rate applies, no pension is payable where the value of property is £4,750 or more. The wife's allowance is affected by income and property on the same basis as the pension, i.e., it is reduced by the amount of *means as assessed* over £182.

Certain types of income are excepted. The main exceptions are:—income from property; gifts or allowances from children, parents, brothers or sisters; benefits (other than annuities) from friendly societies; child endowment or other payments for children; Commonwealth health benefits and amounts received from registered benefit organizations.

Certain types of property are disregarded. They include the permanent home of the pensioner, his furniture and personal effects, the surrender value (up to £750) of life insurance policies, the capital value of annuities or contingent interests and the value of any reversionary interests.

For the purposes of the means test, the income and property of a married person are considered to be half the total income and property of the husband and wife unless they are legally separated or in other special circumstances.

(iv) *Rates of Pension since 1909.* The following statement shows the rates of pension at 1st July, 1909, and the rates as they have been varied since that date, subject in all cases to income and property qualifications.

## MAXIMUM RATES OF PENSION PAYABLE(a)

Date from which operative	Maximum pension payable		Limit of income (including pension) per annum	Date from which operative	Maximum pension payable		Limit of income (including pension) per annum
	Per week	Per annum			Per week	Per annum	
1st July, 1909 ..	s. d.	£ s.	£ s.	1st April, 1943(c) ..	s. d.	£ s.	£ s.
12th October, 1916 ..	10 0	26 0	52 0	19th August, 1943(c) ..	26 6	68 18	101 8
1st January, 1920 ..	12 6	32 10	58 10	5th July, 1945 ..	27 0	70 4	102 14
13th September, 1923 ..	15 0	39 0	65 0	13th August, 1946 ..	32 6	84 10	117 0
8th October, 1925 ..	17 6	45 10	78 0	3rd July, 1947 ..	32 6	84 10	136 10
23rd July, 1931 ..	20 0	52 0	84 10	21st October, 1948 ..	37 6	97 10	149 10
13th October, 1932(b) ..	17 6	45 10	78 0	2nd November, 1950 ..	42 6	110 10	188 10
26th October, 1933 ..	15 0	39 0	71 10	1st November, 1951 ..	50 0	130 0	208 0
4th July, 1935(c) ..	18 0	46 16	79 6	2nd October, 1952 ..	60 0	156 0	234 0
24th September, 1936 ..	19 0	49 8	81 18	29th October, 1953 ..	67 6	175 10	253 10
9th September, 1937 ..	20 0	52 0	84 10	14th October, 1954 ..	70 0	182 0	286 0
26th December, 1940 ..	21 0	54 12	87 2	27th October, 1955 ..	70 0	182 0	364 0
3rd April, 1941(c) ..	21 6	55 18	88 8	14th October, 1957 ..	80 0	208 0	390 0
11th December, 1941 ..	21 6	55 18	88 8	24th October, 1957 ..	87 6	227 10	409 10
2nd April, 1942(c) ..	23 6	61 2	93 12	8th October, 1959 ..	95 0	247 0	429 0
2nd April, 1942(d) ..	24 0	62 8	94 18	6th October, 1960 ..	100 0	260 0	442 0
2nd April, 1942(d) ..	25 0	65 0	97 10	5th October, 1961 ..	105 0	273 0	455 0
1st October, 1942(c) ..	25 6	66 6	98 16	14th November, 1963—			
7th January, 1943(c) ..	26 0	67 12	100 2	Standard Rate ..	115 0	299 0	481 0
				Married Rate ..	105 0	273 0	455 0

(a) Excludes amounts payable for wives and children of invalid pensioners and supplementary assistance.

(b) Additional pension of £6 10s. per annum (2s. 6d. a week) was payable to a pensioner with no income. Pensioners with income of less than 2s. 6d. a week were paid additional pension of 2s. 6d. less the amount of income.

(c) Variation according to change in retail price index number.

(d) Increase paid on 9th July, 1942, retrospective to 2nd April, 1942.

NOTE.—Provision for variations according to retail price index numbers was repealed on 6th April, 1944.

(v) *Number and Characteristics of Pensioners, 1962-63.* The number of age pensioners at 30th June, 1963, was 607,350 of whom 187,212 (31 per cent.) were males and 420,138 (69 per cent.) were females. This was an increase of 13,338 for the year.

The number of invalid pensioners at 30th June, 1963, was 104,038 of whom 56,203 (54 per cent.) were males and 47,835 (46 per cent.) were females.

The following table shows the number of pensions in force at 30th June, 1963, in each State and Territory.

#### AGE AND INVALID PENSIONS, 30th JUNE, 1963

Particulars	N.S.W.	Vic.	Qld	S.A.	W.A.	Tas.	N.T.	A.C.T.	Aust.
<b>Age pensions in force—</b>									
Males .. .. .	73,962	45,754	32,079	16,799	12,190	5,572	600	256	187,212
Females .. .. .	163,897	110,824	64,069	39,430	28,471	12,188	616	643	420,138
Persons .. .. .	237,859	156,578	96,148	56,229	40,661	17,760	1,216	899	607,350
<b>Invalid pensions in force—</b>									
Males .. .. .	23,452	12,643	8,980	4,315	4,628	1,844	236	105	56,203
Females .. .. .	21,659	10,339	6,896	3,612	3,542	1,499	161	127	47,835
Persons .. .. .	45,111	22,982	15,876	7,927	8,170	3,343	397	232	104,038

The number of age and invalid pension claims granted during 1962-63 are shown in the following table, classified according to the sex and conjugal condition of the pensioner.

#### SEX AND CONJUGAL CONDITION OF NEW PENSIONERS, 1962-63

Conjugal condition	Age pensioners			Invalid pensioners			Total
	Males	Females	Persons	Males	Females	Persons	
Single .. .. .	2,597	4,739	7,336	3,827	2,651	6,478	13,814
Married .. .. .	14,987	19,355	34,342	6,746	2,987	9,733	44,075
Widowed .. .. .	2,948	10,922	13,870	581	821	1,402	15,272
Divorced .. .. .	286	830	1,116	343	323	666	1,782
<b>Total .. .. .</b>	<b>20,818</b>	<b>35,846</b>	<b>56,664</b>	<b>11,497</b>	<b>6,782</b>	<b>18,279</b>	<b>74,943</b>

The average age of new age pensioners was 69 years for men and 66 years for women. The ages of new invalid pensioners are shown in the following table.

#### INVALID PENSIONS: AGES OF NEW PENSIONERS, 1962-63

Particulars	16-19 years	20-44 years	45-49 years	60-64 years	65 years and over	Total
Number .. .. .	1,737	2,968	8,935	4,112	527	18,279
Per cent. .. .. .	10	16	49	22	3	100

(vi) *Pensioners, 1958-59 to 1962-63.* The following table gives details of age and invalid pensions for the years 1958-59 to 1962-63.

## AGE AND INVALID PENSIONS: SUMMARY, AUSTRALIA

Year	Pensioners at 30th June				Total payments during year (b)	Average weekly pension as at 30th June					
	Age		Invalid	Total		Age	Invalid	Age and invalid combined			
	Number	Rate (a)									
			No.	No.	£'000	s.	d.	s.	d.	s.	d.
1959 ..	513,789	490	83,853	597,642	129,571	83	4	86	8	83	10
1960 ..	(c) 538,022	501	80,816	618,838	147,005	90	3	94	8	90	10
1961 ..	562,790	510	88,642	651,432	157,926	97	10	100	6	98	2
1962 ..	594,012	529	97,246	691,258	180,245	101	11	105	3	102	5
1963 ..	607,350	534	104,038	711,388	187,754	101	7	105	3	102	2

(a) Number of pensioners per 1,000 persons of pensionable age (males aged 65 years and over and females aged 60 years and over). (b) Year ended 30th June. Includes allowances and supplementary assistance. (c) On 30th June, 1960, a number of invalid pensioners were transferred to their correct designation of age pensioners as follows:—Victoria, 4,843; Queensland, 4,908; and Western Australia, 486.

The sum paid in age and invalid pensions in 1962–63, including the amount paid to homes for the maintenance of pensioners and allowances to wives of invalid pensioners, represented an expenditure of £17.4 per head of population, compared with £17.0 in 1961–62.

3. **Child Endowment.**—(i) *General.* A person who is resident in Australia and has the custody, care and control of one or more children under the age of 16 years or of a student child over 16 but under 21 years, or an approved institution of which children are inmates, is qualified to receive an endowment in respect of each such child. There are provisions to meet cases of families divided because of divorce, separation, unemployment or death of a parent. There is no means test.

Twelve months' residence in Australia is required if the claimant and the child were not born here, but this requirement is waived if the Department of Social Services is satisfied that they are likely to remain in Australia permanently. Where the child's father is not a British subject, endowment is payable if the child was born in Australia, if the mother is a British subject, or if the Department is satisfied that the child is likely to remain permanently in Australia.

Under certain conditions, endowment may be paid to Australians who are temporarily absent overseas. Endowment is payable to Aborigines unless they are nomadic or primitive.

(ii) *Rates of Endowment.* From 1st July, 1941, the rate of endowment was 5s. a week for each child under 16 in excess of one in a family, and for each child under 16 in an approved institution. The rate was increased to 7s. 6d. a week in June, 1945, and to 10s. a week in November, 1948. From June, 1950, 5s. a week has been paid for the first child under 16 in a family, 10s. a week for each other child under 16 in a family, and 10s. a week for each child under 16 in an institution.

Since January, 1964, the rate has been increased to 15s. a week for the third and subsequent children under 16 years in families, and for full-time students between 16 and 21 years. Full-time student children are those receiving full-time education at a school, college or university and who are not in employment or engaged in work on their own account.

(iii) *Number of Claims and Endowed Children, 30th June, 1963.* The number of families receiving child endowment at 30th June, 1963, was 1,535,388, an increase of 12,314 or 0.8 per cent. during the year. The following table shows, for each State and Territory, the number of claims for child endowment in force and the number of endowed children at 30th June, 1963.

**CHILD ENDOWMENT: CLAIMS AND ENDOWED CHILDREN, 30th JUNE, 1963**

State or Territory	Family groups			Institutions		Total endowed children
	Claims in force	Endowed children		Number	Endowed child inmates	
		Number	Average number per claim			
New South Wales	568,346	1,225,329	2.16	141	7,155	1,232,484
Victoria ..	421,275	933,628	2.22	119	4,594	938,222
Queensland ..	216,544	512,825	2.37	59	2,803	515,628
South Australia ..	146,377	329,198	2.25	55	1,644	330,842
Western Australia	113,464	267,268	2.36	69	3,468	270,736
Tasmania ..	53,313	127,261	2.39	19	403	127,664
Northern Territory	5,217	12,035	2.31	35	5,387	17,422
Australian Capital Territory ..	10,602	24,081	2.27	..	..	24,081
Abroad ..	250	541	2.16	..	..	541
<b>Total ..</b>	<b>1,535,388</b>	<b>3,432,166</b>	<b>2.24</b>	<b>497</b>	<b>25,454</b>	<b>3,457,620</b>

The following table shows, as at 30th June, 1963, the number of claims in force and the number of endowed children in family groups, classified according to the number of endowed children in the family group. The families included in the table are not necessarily made up entirely of the children of one marriage, but may include step-children, foster children, adopted children, and any other children under the custody, care and control of the claimant.

**CHILD ENDOWMENT: ENDOWED CHILDREN IN FAMILY GROUPS, 30th JUNE, 1963**

	Number of endowed children in family group	Claims in force	Endowed children	Number of endowed children in family group	Claims in force	Endowed children
1 .. ..	528,520	528,520	9 .. ..	1,306	11,754	
2 .. ..	494,112	988,224	10 .. ..	542	5,420	
3 .. ..	285,569	856,707	11 .. ..	184	2,024	
4 .. ..	136,948	547,792	12 .. ..	56	672	
5 .. ..	54,077	270,385	13 .. ..	13	169	
6 .. ..	21,748	130,488	14 and over ..	6	89	
7 .. ..	8,534	59,738				
8 .. ..	3,773	30,184	<b>Total ..</b>	<b>1,535,388</b>	<b>3,432,166</b>	

(iv) *Liability and Expenditure, 1962-63.* The following table shows the annual liability in respect of child endowment at 30th June, 1962, and the actual expenditure thereon for the year 1962-63 in each State and Territory.

**CHILD ENDOWMENT: LIABILITY AND EXPENDITURE, 1962-63 (£)**

State or Territory	Annual liability at 30th June, 1963			Total payments to endowees and institutions during 1962-63
	Family groups	Institutions	Total	
New South Wales ..	24,470,056	186,030	24,656,086	24,034,415
Victoria .. ..	18,797,753	119,444	18,917,197	18,430,350
Queensland .. ..	10,518,378	72,878	10,591,256	10,229,124
South Australia ..	6,656,247	42,744	6,698,991	6,430,487
Western Australia ..	5,473,936	90,168	5,564,104	5,242,656
Tasmania .. ..	2,615,717	10,478	2,626,195	2,522,638
Northern Territory ..	245,089	140,062	385,151	335,546
Australian Capital Territory .. ..	488,280	..	488,280	463,663
Abroad .. ..	10,816	..	10,816	21,584
<b>Total .. ..</b>	<b>69,276,272</b>	<b>661,804</b>	<b>69,938,076</b>	<b>67,710,463</b>

(v) *Child Endowment, 1958-59 to 1962-63.* The following table shows, for Australia, the number of claims, the number of endowed children and the annual liability at 30th June for each of the years from 1959 to 1963 and the actual expenditure for the years 1958-59 to 1962-63.

## CHILD ENDOWMENT: SUMMARY, AUSTRALIA

At 30th June—	Family group claims in force	Institutions	Endowed children	Annual liability for endowment (a)	Total payments (a)(b)
				£	£
1959 .. ..	1,451,516	421	3,171,823	63,597,690	(c) 67,539,615
1960 .. ..	1,476,835	443	3,252,413	65,363,883	62,531,977
1961 .. ..	1,501,180	465	3,340,302	67,332,512	(d) 74,302,614
1962 .. ..	1,523,074	479	3,420,134	69,123,522	66,377,628
1963 .. ..	1,535,388	497	3,457,620	69,938,076	67,710,463

(a) A number of endowments are paid every twelve weeks. During two years out of every three, there are four such payments, but every third year there are five. Figures for annual liability, therefore, reflect trends in expenditure on child endowment more accurately than do figures for payments.  
 (b) Year ended 30th June. (c) Expenditure for this year includes five twelve-weekly payments.  
 (d) Endowment payable on 4th July, 1961, to the credit of bank accounts and in cash at post offices was brought to account in 1960-61.

4. Commonwealth Rehabilitation Service.—(i) *General.* The Commonwealth Rehabilitation Service has been set up to help persons who are unable to work because of physical handicap, or who have had to give up their employment because of sickness or injury. It helps disabled persons to reach their maximum physical fitness and to prepare for suitable employment. They are given suitable treatment and training, the cases selected being those in which the person's disability is remediable and there are reasonable prospects of his engaging in a suitable vocation within three years after the commencement of treatment or training.

The service is available to invalid and widow pensioners, persons receiving unemployment, sickness or special benefits, persons receiving tuberculosis allowances and persons aged 14 or 15 who, without treatment and training, would be likely to qualify for an invalid pension on reaching the age of 16 years. During treatment, payment of pension or benefit continues. When vocational training begins, the pension or benefit is suspended and a rehabilitation allowance, together with a training allowance of £1 10s. a week, is paid instead. With an invalid pensioner, or a sickness, unemployment or special beneficiary, this is equivalent to and calculated in the same manner as an invalid pension. In the case of a widow pensioner, the rate is the same as that of the widow's pension.

Living-away-from-home allowances are paid where necessary. Fares and living expenses (including those of an attendant where required) incurred in connexion with treatment, training or attendance for an interview or for medical examination may also be paid. A person receiving treatment or training may be provided, free of charge, with necessary artificial replacements, surgical aids and appliances. He may also be provided with books, equipment and tools of trade, costing up to £40. If these are retained by him, he is required to pay the cost, but payments may be made by small instalments after he has commenced employment.

If the treatment or vocational training does not result in the trainee being able to engage in employment, he receives the pension or benefit to which he is entitled.

Disabled persons who cannot qualify for the free service may pay for rehabilitation themselves, or they may be sponsored by government or private organizations. Rehabilitation allowances, training allowances, living-away-from-home allowances and other allowances are not payable in these cases. Books, tools, etc., are available on a repayment basis.

(ii) *Numbers dealt with by the Service, 1962-63.* The numbers of persons receiving benefits who were examined, accepted, trained and placed in employment during the year 1962-63 are shown in the following table.



## COMMONWEALTH REHABILITATION SERVICE: AUSTRALIA, 1962-63

Type	Examined	Accepted	Completed training	Placed in employment	
				After training	Without training
Invalid pensioners .. ..	9,436	259	108	80	101
Widow pensioners .. ..	8	..	..	..	..
Unemployment and sickness beneficiaries .. ..	10,052	1,095	197	203	611
Special beneficiaries .. ..	5	1	..	..	..
Recipients of tuberculosis allowance	145	53	23	26	27
Persons aged 14-15 years	187	75	26	3	41
Persons provided with rehabilitation on payment of the cost ..	76	70	2	22	62
<b>Total .. ..</b>	<b>19,909</b>	<b>1,553</b>	<b>356</b>	<b>334</b>	<b>842</b>

There were 1,553 persons accepted during the year, 235 more than during the previous year. Of those, 72 per cent. were under 40 years of age. The average number receiving rehabilitation training during the year was 1,118.

5. **Funeral Benefits.**—(i) *General.* A funeral benefit of up to £10 is payable to the person who has paid, or is liable to pay the cost of the funeral of an age or invalid pensioner or of a claimant who, but for his death, would have been granted an age or invalid pension, or of a person who at the time of his death was receiving, or was a claimant for, a tuberculosis allowance, if he would otherwise have been qualified to receive an age or invalid pension. Where the cost of the funeral has been partly met by payment from a contributory funeral benefit fund of an organization other than a friendly society, funeral benefit is payable to the extent of the amount (not above £10) by which the cost of the funeral exceeded the amount paid from the fund.

(ii) *Number of Benefits, 1958-59 to 1962-63.* The following table shows the number of funeral benefits which were granted in each State and Territory in the years 1958-59 to 1962-63.

## FUNERAL BENEFITS GRANTED: AUSTRALIA

(Number)

State or Territory	1958-59	1959-60	1960-61	1961-62	1962-63
New South Wales .. ..	14,092	14,764	15,019	15,228	16,365
Victoria .. ..	9,290	9,069	9,200	9,702	10,861
Queensland .. ..	4,880	4,891	5,523	6,000	5,952
South Australia .. ..	3,170	3,141	3,192	3,103	3,595
Western Australia .. ..	2,352	2,448	2,654	2,605	2,589
Tasmania .. ..	1,111	1,100	1,100	1,174	1,183
Northern Territory .. ..	8	3	7	11	5
Australian Capital Territory ..	58	49	54	66	74
<b>Australia .. ..</b>	<b>34,961</b>	<b>35,465</b>	<b>36,749</b>	<b>37,88</b>	<b>40,624</b>

6. **Maternity Allowances.**—(i) *General.* Maternity allowances are paid to provide financial assistance towards the expenses associated with the birth of children and are additional to the benefits provided under the Commonwealth hospital benefits scheme. They are not subject to a means test.

A maternity allowance is payable to a woman who, at the date of giving birth to a child, is residing in Australia, is temporarily abroad, or is on board a ship proceeding from a port in Australia or an Australian Territory to another port in Australia or another Australian Territory, or on board a ship proceeding to Australia, provided she receives no maternity benefit from the country from which she came. An alien mother may receive the allowance if she or her husband resided in Australia for at least twelve months immediately prior to the birth of the child, or if she is likely to remain in Australia permanently. Aboriginals, other than those who are nomadic or primitive, are eligible for maternity allowances on the same conditions as other members of the community.

(ii) *Rates of Allowance.* The allowance is £15 if the mother has no other children, £16 if she has one or two children under 16, and £17 10s. if she has three or more other children under 16. The amount is increased by £5 for each additional child born at a birth. An advance payment of £10 may be made four weeks before the expected date of birth. The balance is payable immediately after the birth. Payment may be made in respect of the birth of a still-born child, or a child which lives for less than twelve hours, if the child had developed for at least 5½ months.

(iii) *Claims Paid, 1962-63.* The following table shows the number of claims paid in each State at the several rates of maternity allowances during the year 1962-63.

**MATERNITY ALLOWANCES: CLAIMS PAID AT EACH RATE, 1962-63**  
(Number)

State or Territory	Single births			Multiple births						Total claims paid
	£15	£16	£17 10s.	Twins			Triplets			
				£20	£21	£22 10s.	£25	£26	£27 10s.	
New South Wales	26,442	38,403	17,181	232	272	161	2	4	3	82,700
Victoria ..	20,474	30,666	14,072	190	374	239	1	2	3	66,021
Queensland ..	10,040	15,843	9,422	80	137	131	1	2	3	35,659
South Australia ..	6,526	9,904	4,700	40	120	66	1	..	..	21,357
Western Australia ..	5,097	8,012	3,879	27	79	58	..	..	..	17,152
Tasmania ..	2,533	3,787	2,131	23	47	39	..	..	..	8,560
Northern Territory	509	603	387	6	5	6	..	..	..	1,516
Australian Capital Territory ..	598	814	367	2	5	3	..	..	..	1,789
Abroad ..	112	155	40	3	..	..	..	..	..	310
<b>Total ..</b>	<b>72,331</b>	<b>108,187</b>	<b>52,179</b>	<b>603</b>	<b>1,039</b>	<b>703</b>	<b>5</b>	<b>8</b>	<b>9</b>	<b>235,064</b>

(iv) *Amounts Paid and Number of Claims Paid, 1958-59 to 1962-63.* The following table gives details of the amounts paid in each State for the years 1958-59 to 1962-63.

**MATERNITY ALLOWANCES: AMOUNT PAID**  
(£'000)

Year	N.S.W.	Vic.	Qld	S.A.	W.A.	Tas.	N.T.	A.C.T.	Abroad	Total
1958-59 ..	1,266	1,020	546	328	267	139	11	20	2	3,599
1959-60 ..	1,277	1,008	575	337	275	143	12	21	4	3,652
1960-61 ..	1,399	1,069	590	359	284	148	20	24	5	3,898
1961-62 ..	1,442	1,057	589	344	279	145	23	24	5	3,908
1962-63 ..	1,332	1,059	576	343	276	138	24	28	5	3,781

The following table shows the number of maternity allowance claims paid in each State or Territory during the years 1958-59 to 1962-63.

## MATERNITY ALLOWANCES: NUMBER OF CLAIMS PAID

Year	N.S.W.	Vic.	Qld	S.A.	W.A.	Tas.	N.T.	A.C.T.	Abroad	Total
1958-59.. ..	80,289	63,428	34,266	20,541	16,594	8,608	682	1,276	95	225,779
1959-60.. ..	81,241	62,853	35,515	21,443	17,012	8,985	767	1,311	262	229,389
1960-61.. ..	85,751	66,511	35,587	21,774	17,648	9,077	1,215	1,511	310	239,384
1961-62.. ..	87,659	65,847	36,339	21,328	17,366	8,942	1,398	1,662	300	240,841
1962-63.. ..	82,700	66,021	35,659	21,357	17,152	8,560	1,516	1,789	310	235,064

7. Unemployment, Sickness and Special Benefits.—(i) *General.* Unemployment and sickness benefits are paid to men over 16 and under 65 years of age, and women over 16 and under 60 years of age, who are unemployed or who are temporarily incapacitated for work and thereby suffer loss of income. They must have been living in Australia during the preceding twelve months or be likely to remain permanently in Australia. A person receiving an age, invalid or widow's pension, or a service pension (as distinct from a war pension) under the *Repatriation Act 1920-1962*, or a tuberculosis allowance, is ineligible to receive a benefit.

To qualify for an unemployment benefit, a person must establish that he is unemployed and that his unemployment is not due to his being a direct participant in a strike, that he is capable and willing to undertake suitable work, and that he has taken reasonable steps to obtain such work. Registration with the local Commonwealth District Employment Office is necessary.

To qualify for a sickness benefit, a person must establish that he is temporarily incapacitated for work because of sickness or accident and that he has thereby suffered a loss of salary, wages or other income.

A married woman is not eligible to receive a sickness benefit if it is reasonably possible for her husband to maintain her. Where her husband is able to maintain her only partially, a benefit may be paid at such rate as is considered reasonable in the circumstances. In exceptional cases, a married woman may qualify for an unemployment benefit in her own right.

A special benefit may be granted to a person not qualified for unemployment or sickness benefit who is not receiving an age, invalid or widow's pension or a service pension, if because of age, physical or mental disability or domestic circumstances, or for any other reason, he is unable to earn a sufficient livelihood for himself and his dependants. Recipients of special benefits include, among others, persons caring for invalid parents, deserted wives, and naturalized persons ineligible for age, invalid or widows' pensions.

Special benefits are also paid to migrants who are in reception centres and are awaiting their first placement in employment in Australia. During this time, they receive a short instruction in English and in Australian conditions to facilitate their assimilation into the community and employment.

Aboriginals, other than those who are nomadic or primitive, are eligible for these benefits on the same conditions as other members of the community.

(ii) *Rates of Benefit.* The maximum weekly rates of benefit payable and permissible income in respect of benefit periods which commenced on or after 1st March, 1962, are as follows.

Age and marital status of claimant	Maximum weekly rate	Permissible weekly income
	£ s. d.	£ s. d.
Unmarried person under 18 years of age .. ..	1 15 0	1 0 0
Unmarried person 18 to 20 years of age .. ..	2 7 6	1 0 0
All others .. ..	4 2 6	2 0 0

An additional benefit of £3 a week may be paid for a dependent spouse and 15s. a week for each dependent child under 16 years of age if resident in Australia. Additional benefit, at the same rate as that for a dependent spouse, may be paid where a woman is keeping house for a claimant who has one or more children under 16 years of age in his care. It may be granted only if no such benefit is payable for his wife and the housekeeper is substantially dependent on him but not employed by him.

The weekly rate of benefit is reduced by the amount by which a beneficiary's other income exceeds the amount shown in the relevant line of the final column in the table above. For unemployment benefit purposes, the income of the spouse is also taken into account, unless the claimant and his spouse are permanently separated. For sickness benefit purposes, the income from an approved friendly society or other similar approved body in respect of the incapacity for which sickness benefit is payable is disregarded. "Income" does not include child endowment, or other payments for children, Commonwealth hospital and pharmaceutical benefits, a tuberculosis allowance or an amount paid in reimbursement of medical, dental or similar expenses. There is no means test on property.

The amount of compensation, damages or similar payment, or war pension, if paid in respect of the same incapacity as that for which sickness benefit is claimed, is deducted from the sickness benefit. If not paid in respect of the same incapacity, compensation is regarded as income and war pension is ignored.

There is a waiting period of seven days for which unemployment or sickness benefit is not payable.

(iii) *Benefits, 1962-63.* The following table shows the number admitted to unemployment, sickness, and special benefit during 1962-63, the number of persons on benefit at 30th June, 1963, and the amount paid for each benefit during 1962-63.

## UNEMPLOYMENT, SICKNESS AND SPECIAL BENEFITS, 1962-63

Particulars	N.S.W.	Vic.	Qld	S.A.	W.A.	Tas.	N.T.	A.C.T.	Aust.
Number admitted to benefit—									
Unemployment—									
Males ..	55,149	28,798	40,109	7,179	10,905	4,998	185	244	147,567
Females ..	19,542	10,094	12,646	4,603	4,210	2,143	45	132	53,415
Persons ..	74,691	38,892	52,755	11,782	15,115	7,141	230	376	200,982
Sickness—									
Males ..	18,691	11,347	8,973	4,068	4,662	1,618	93	152	49,604
Females ..	6,477	4,473	2,738	1,206	1,346	481	29	48	16,798
Persons ..	25,168	15,820	11,711	5,274	6,008	2,099	122	200	66,402
Special—									
Ordinary—									
Males ..	397	801	484	77	58	48	5	1	1,871
Females ..	465	1,608	263	52	57	63	2	4	2,514
Persons ..	862	2,409	747	129	115	111	7	5	4,385
Migrants—									
Persons ..	385	3,030	6	174	247	..	..	..	3,842
Total—									
Males(a) ..	74,237	40,946	49,566	11,324	15,625	6,664	283	397	199,042
Females(a) ..	26,484	16,175	15,647	5,861	5,613	2,687	76	184	72,727
Persons(b) ..	101,106	60,151	65,219	17,359	21,485	9,351	359	581	275,611
Persons on benefit at end of year—									
Unemployment—									
Males ..	10,885	6,021	2,903	1,176	2,062	1,123	3	27	24,200
Females ..	5,949	2,527	2,450	1,265	1,117	654	..	26	13,988
Persons ..	16,834	8,548	5,353	2,441	3,179	1,777	3	53	38,188
Sickness—									
Males ..	3,236	1,736	1,264	577	658	228	13	24	7,736
Females ..	1,288	833	497	191	249	75	3	4	3,140
Persons ..	4,524	2,569	1,761	768	907	303	16	28	10,876
Special—									
Ordinary—									
Males ..	127	139	93	35	33	15	2	..	444
Females ..	523	947	263	105	97	88	1	..	2,024
Persons ..	650	1,086	356	140	130	103	3	..	2,468
Migrants—									
Persons ..	44	104	2	3	24	..	..	..	177
Total—									
Males(a) ..	14,248	7,896	4,260	1,788	2,753	1,366	18	51	32,380
Females(a) ..	7,760	4,307	3,210	1,561	1,463	817	4	30	19,152
Persons(b) ..	22,052	12,307	7,472	3,352	4,240	2,183	22	81	51,709
Benefits paid—									
Unemployment £	4,088,096	2,597,493	2,247,924	592,329	718,883	391,435	3,583	10,885	10,650,628
Sickness £	1,391,594	823,916	527,967	262,532	252,507	101,358	5,069	10,292	3,375,235
Special(b) £	174,691	278,277	90,887	33,368	31,692	22,144	290	243	631,592
Total Benefits Paid(b) £	5,654,381	3,699,686	2,866,778	888,229	1,003,082	514,937	8,942	21,420	14,657,455

(a) Excludes migrants in reception centres.

(b) Includes migrants in reception centres.

(iv) *Benefits, 1958-59 to 1962-63.* The following table shows the number of persons who were admitted to benefit, the average number receiving benefit at the end of each week and the amount paid for each benefit during each of the years 1958-59 to 1962-63.

**UNEMPLOYMENT, SICKNESS AND SPECIAL BENEFITS: SUMMARY,  
AUSTRALIA**

Year	Number admitted to benefit			Average number of persons on benefit at end of each week			Amount paid in benefits		
	Un-employment	Sick-ness	Special (a)	Un-employment	Sick-ness	Special (a)	Un-employment	Sick-ness	Special (b)
							£	£	£
1958-59 ..	145,016	58,680	13,701	27,669	8,242	2,596	5,959,248	2,196,527	496,535
1959-60 ..	108,224	59,159	14,590	21,374	8,755	2,650	4,504,504	2,238,281	510,163
1960-61 ..	161,113	58,184	14,001	21,569	8,513	2,829	4,468,532	2,151,479	519,907
1961-62 ..	278,936	63,586	7,466	52,950	9,286	2,867	12,636,766	2,664,922	603,191
1962-63 ..	200,982	66,402	8,227	39,706	10,514	2,647	10,650,628	3,375,235	631,592

(a) Includes migrants in reception and training centres.

(b) Includes payments to migrants in reception and training centres.

**8. Widows' Pensions.—(i) Rates and Conditions.** Widows' pensions are payable according to the following classes. The rates shown have been in operation since 8th October, 1963.

*Class "A".* A widow who has the custody, care and control of one or more children under the age of 16 years—£403 per annum (£7 15s. a week). This includes the standard rate pension at £299 per annum (£5 15s. a week) and a mother's allowance of £104 per annum (£2 a week). In addition, a flat rate allowance of £39 per annum (15s. a week) for one child and, subject to the means test, extra pension of £39 per annum (15s. a week) for each other child under sixteen years are payable. Payment may be made for a child over sixteen years until the end of the calendar year in which he reaches eighteen years, if he is wholly or substantially dependent on the widow and is receiving full-time education at a school, college, or university.

*Class "B".* A widow who has no children under 16 years of age, or eligible full-time student children, in her custody, care and control, and who is not less than 50 years of age or who, after having attained the age of 45 years, ceased to receive a Class "A" widows' pension because she no longer had the custody, care and control of a child—£266 10s. per annum (£5 2s. 6d. a week).

*Class "C".* A widow who is under 50 years of age and has no children under the age of 16 years, or eligible full-time student children, in her custody, care and control, but is in necessitous circumstances within the 26 weeks after the death of her husband—£5 2s. 6d. a week for not more than 26 weeks after the death of her husband. If the widow is pregnant, this period may be extended until the child's birth. She may then become eligible for a Class "A" widow's pension.

Widow pensioners may receive supplementary assistance of £26 per annum (10s. a week) if they pay rent and are considered to be dependent entirely on their pensions.

For classes "A" and "B", the term "widow" includes a wife who has been deserted by her husband without just cause for a period of at least six months, a divorcee, a woman whose husband has been imprisoned for at least six months, and a woman whose husband is in a mental hospital. Certain dependent females also may qualify for "A", "B" or "C" Class pensions.

The residential qualification is five years' continuous residence in Australia immediately prior to the date of lodgment of the claim, but this period may be reduced to one year if the widow and her husband were living permanently in Australia when he died. Certain absences are ignored.

A widow's pension is not payable to an alien, a woman receiving an age or invalid pension, a tuberculosis allowance, a war widow's pension, or a deserted wife or a divorcee who has not taken reasonable action to obtain maintenance from her husband or former husband. Aborigines, other than those who are nomadic or primitive, are eligible for widows' pensions on the same conditions as other members of the community.

(ii) *Means Test.* Widows' pensions are subject to a means test on income and property. The pension payable depends on the claimant's *means as assessed*. These consist of her annual rate of income together with a property component equal to £1 for every complete £10 by which the value of her property is in excess of a stipulated sum. In the case of a Class "B" widow, £200 of property is exempt. A Class "A" widow has a basic exemption of £1,000 when the value of her property exceeds £2,250, but no property component is calculated where she has property of no more than £2,250 in value. A Class "A" pension is not payable where a widow has property valued at £6,850 or more; no Class "B" pension is payable where property is £4,690 or more. There is no specific means test for the Class "C" pension, which is paid only where it is evident that a widow has insufficient means of support. The types of income and property disregarded for means test purposes are the same as for age and invalid pensions.

(iii) *Pensions 1962-63.* The following table shows details of widows' pensions paid in each State and Territory in the year 1962-63.

## WIDOWS' PENSIONS AT 30th JUNE, 1963

State or Territory	Pensions current				Average weekly pension	Amount paid in pensions during 1962-63.
	Class "A"	Class "B"	Class "C"	All classes		
					<i>s. d.</i>	£
New South Wales ..	9,117	13,003	40	22,160	104 1	5,892,388
Victoria .. ..	6,212	8,315	22	14,549	104 7	3,878,918
Queensland .. ..	4,523	5,065	22	9,610	105 10	2,611,269
South Australia ..	2,325	3,060	7	5,392	104 4	1,458,520
Western Australia ..	1,930	2,548	8	4,486	102 6	1,188,639
Tasmania .. ..	1,007	968	2	1,977	105 10	542,233
Northern Territory ..	67	72	3	142	103 3	32,631
Australian Capital Territory .. ..	80	81	..	161	107 0	49,023
Abroad .. ..	(a)	(a)	(a)	(a)	..	23,083
<b>Total .. ..</b>	<b>25,261</b>	<b>33,112</b>	<b>104</b>	<b>58,477</b>	<b>104 6</b>	<b>15,676,704</b>

(a) Included in figures for State in which pensioner is permanently domiciled.

9. *Reciprocal Agreements with Other Countries.*—(i) *New Zealand.* An agreement between the Governments of Australia and New Zealand for reciprocity in social services came into operation on 1st July, 1949.

The reciprocal arrangements cover age and invalid pensions, widows' pensions, child endowment and unemployment and sickness benefits, and apply to both permanent and temporary changes of residence.

Residence in one country may be treated as residence in the other country in relation to entitlement to benefits in which a residential qualification applies.

Persons from one country taking up permanent residence in the other country become eligible for any of the specified benefits of the new country under the same conditions (with one or two exceptions) as apply to citizens of that country.

Persons in receipt of any of the specified benefits in one country may continue to receive those benefits while temporarily absent in the other country.

(ii) *Britain.* A new reciprocal agreement on social services between Britain and Australia came into operation on 1st April, 1958, replacing the original agreement which operated from 7th January, 1954.

Under this agreement, residence in one country may be treated as residence in the other country as the basis for entitlement to benefits in which a residential qualification applies.

Australians going to Britain for permanent residence are treated in Britain as if they had been insured under the National Insurance Scheme while in Australia, so that they can qualify for various National Insurance benefits.

There is also provision for the safeguard of social service rights for persons going from one country to the other for temporary residence.

**10. Commonwealth Assistance to Aged Persons Homes and Sheltered Work Shops.—**  
(i) *The Aged Persons Homes Act.* *The Aged Persons Homes Act 1954–1957* is designed to encourage the provision of homes in which aged persons may reside in conditions approaching normal domestic life.

To be eligible for assistance under this Act an organization must be—

- (a) carried on otherwise than for purposes of profit or gain to the individual members; and
- (b) a religious organization, an organization the principal objects or purposes of which are charitable or benevolent, an organization of former members of the defence forces established in every State or a State branch of such an organization, or an organization approved by the Governor-General for the purposes of this Act.

An organization conducted or controlled by, or by persons appointed by, the Government of the Commonwealth or of a State or a local governing body established under the law of a State, is not eligible for assistance under this Act.

The Director-General of Social Services may make a grant of money to an organization as assistance towards meeting the cost of the construction or purchase of a home, including land, to be used permanently for the accommodation of aged persons. The grant is made on a basis of £2 for each £1 raised by the organization, not counting money which the organization received from a governmental body or borrowed. Before a grant is made, the Director-General must be satisfied that the sum of the money expended and the money presently available for expenditure by the organization towards the capital cost of the home, together with the amount of the grant, will be not less than the capital cost of the home. Expenditure by the Commonwealth Government was £837,895 in 1957–58, £1,767,470 in 1958–59, £1,871,748 in 1959–60, £2,153,551 in 1960–61, £3,472,514 in 1961–62, and £3,186,201 in 1962–63.

(ii) *Disabled Persons Accommodation Act.* *The Disabled Persons Accommodation Act 1963* which came into operation on 25th November, 1963, provides that grants may be made to eligible organizations towards the capital cost of approved buildings which will provide residential accommodation for disabled persons engaged, or likely to be engaged, in paid employment in a sheltered workshop.

The Act covers both the erection of buildings to be used for accommodation and the purchase of existing premises for conversion into accommodation. In both cases the cost of the necessary land may be included.

To be eligible for assistance under this Act an organization must be—

- (a) carried on otherwise than for purposes of profit or gain to its individual members; and
- (b) a religious organization, an organization the principal objects or purposes of which are charitable or benevolent, an organization of former members of the defence forces established in every State or a State branch of such an organization, or an organization approved by the Governor-General for the purposes of this Act.

An organization conducted or controlled by the Commonwealth or a State Government, by a local Government authority, or by persons appointed by these authorities, is not eligible for assistance under this Act.

For the purposes of the Act, a disabled person is a person who is qualified by age (sixteen years or over) and on medical grounds for an invalid pension under the Social Services Act. A sheltered workshop is a factory or workshop, or part thereof, in which all or a substantial number of employees are disabled persons who receive payment for their work.

**11. Protection of Aborigines.—**For the protection of the Aboriginal race, there are institutions, under the supervision of Aborigines Boards, where these people are housed and encouraged to work, the children receiving elementary education. The work is usually

carried on at mission stations, but many of the natives are nomadic and receive food and clothing when they call, while others only rarely come near the stations. The Aboriginal race is extinct in Tasmania. The expenditure from Consolidated Revenue in 1962-63 was as follows (figures in brackets are for the year 1961-62):—New South Wales, £344,545 (£280,838); Victoria, £60,000 (£50,000); Queensland, £805,136 (£803,529); South Australia, £512,552 (£524,038); Western Australia, £1,658,862 (£1,300,443); Northern Territory, £1,297,387 (£1,011,983); Australian Capital Territory, £5,340 (£4,372); Australia, £4,683,822 (£3,975,203).

### § 3. Other Welfare

1. **Children Under Government Authority.**—(i) *General.* The methods of caring for orphans and neglected children differ extensively, some being placed in orphanages and industrial schools, while others are boarded out with their mothers or female relatives or with approved foster-mothers. The children in orphanages and similar institutions may receive, in addition to general education, some craft training. In all cases, employment is found for the children on their discharge from the institution, and they remain for some time under the supervision of the proper authorities. The conditions under which orphans, neglected children and children boarded out live are subject to frequent departmental inspections.

(ii) *Cost of Maintenance.* The following table shows the expenditure by State Departments during 1961-62 in connexion with children under their control or supervision. The figures refer, in addition to neglected children, to uncontrollable and convicted children who are wards of a government authority, as well as children whose parents obtain assistance from the government without giving up the legal right of custody.

#### CHILDREN UNDER GOVERNMENT AUTHORITY: COST OF MAINTENANCE, 1961-62.

(£)

Particulars	N.S.W.	Vic.	Q'land	S. Aust.	W. Aust.	Tas.	Aust.
Gross cost of children's relief .. ..	2,701,015	1,705,713	675,287	553,769	271,508	104,625	6,011,917
Receipts from parents' contributions, etc. . .	136,801	53,220	35,319	63,086	33,891	9,389	331,706
<i>Net Cost to State</i>	<i>2,564,214</i>	<i>1,652,493</i>	<i>639,968</i>	<i>490,683</i>	<i>237,617</i>	<i>95,236</i>	<i>5,680,211</i>

The expenditure on children's relief in the foregoing table shows considerable variation between the States owing to different methods of treating assistance to mothers with dependent children. In South Australia and Tasmania, large amounts have been excluded from the total expenditure on this account owing to the difficulty of obtaining separate particulars for allowances made in respect of the dependent children only. The New South Wales figures include some expenditure for relief to parents as well as children, and some other minor social services of a general nature not necessarily connected with children. Western Australian figures include an amount for unemployment relief, but exclude costs such as administration. Victoria includes an amount for child endowment.

2. **Lifesaving.**—There are two life saving organizations in Australia, the Royal Life Saving Society—Australia, and the Surf Life Saving Association of Australia.

The objects of these organizations are the prevention of death from drowning and other forms of asphyxiation; the education of the general public in methods of life saving and resuscitation of the apparently drowned or asphyxiated; technical education in water safety; the encouragement of swimming and life saving in schools and other organizations; the encouragement of all aspects of swimming and aquatics which would assist in saving lives; and the initiation of research within the field of water safety and lifesaving.



The Royal Life Saving Society operates at lakes, rivers, bay and harbour beaches, and gives instruction to school pupils and members of other bodies throughout Australia except on surf beaches. The Surf Life Saving Association patrols surf beaches.

Numerous certificates and medallions of proficiency in various grades are awarded.

**3. Royal Humane Society.**—The Royal Humane Society of Australasia has as its main object the granting of awards to all who with bravery, skill and perseverance risk their own lives in saving or attempting to save those of their fellow creatures. The classes of awards are (a) Gold Medal; (b) Silver Medal; (c) Bronze Medal; and (d) Certificate of Merit. The Clarke Medal is awarded for the outstanding case of the year, and the Rupert Wilks Trophy is awarded for the most outstanding bravery by a child under 13 years of age.

**4. The Order of St. John.**—The Priory in Australia of the Most Venerable Order of the Hospital of St. John of Jerusalem is the governing body of the various activities of the Order which comprises the St. John Ambulance Association, the St. John Ambulance Brigade and the Hospitallers' Clubs in all States and Commonwealth Territories. In October, 1963, at Canberra, the Priory for the first time held its meetings in Australia under the chairmanship of the Governor-General and Prior.

Members of the St. John Ambulance Association teach first aid, home nursing, hygiene and child welfare.

Members of the St. John Ambulance Brigade provide first aid at public functions.

The Hospitallers' Clubs in each State undertake the collection of funds for the St. John Ophthalmic Hospital in Jerusalem, and other duties which tend to bring together all persons interested in the work of the order.

The Order of St. John maintains ambulance transport services in some States, acts as an auxiliary to such services in other States, and provides technical reserves for the medical services of the Crown.

The Lifesaving Medal is awarded by the Order as warranted.

**5. Other Charitable Institutions.**—Owing to the variety of names and functions of other charitable institutions, it has been found impracticable to give detailed particulars. The aid given in kind—food, clothing, tools of trade, etc.—is considerable, whilst the shelter and treatment afforded range from a bed for a night for casual callers in establishments ministering minor charity, to indoor treatment over long periods in those that exist for the relief of the aged and the infirm. The institutions not particularized include homes for the deaf, dumb and blind, infant homes, homes for the destitute and aged poor, industrial colonies, night shelters, crèches, rescue homes for females, auxiliary medical charities, free dispensaries, benevolent societies and nursing systems, ambulance and health societies, boys' brigades, humane and animals' protection societies, prisoners' aid associations, shipwreck relief societies, bushfire, flood and mining accident relief funds.

## CHAPTER XVII

### PUBLIC JUSTICE

NOTE.—In interpreting statistics of public justice, it should be realized that a number of factors affect comparability from State to State and from year to year, e.g.:

- (a) Differences in the jurisdiction of courts;
- (b) Changes in the law in particular States and differences in the laws between States;
- (c) Differences in the methods of compiling the figures (e.g. in respect of persons convicted for more than one offence);
- (d) The attitude to laws such as those connected with liquor, vagrancy, gaming, and traffic offences;
- (e) The strength and distribution of the police force;
- (f) The proportion of various types of crimes reported and solved.

#### § 1. The Australian Legal System

1. **Development of the System.**—The two major factors in the development of the Australian legal system have been its British origin and the Federal Constitution of 1900. When the various parts of Australia were first settled by British colonists, the common law and statutes of England were brought with them by the settlers. When local law-making bodies were established, the law so brought in was gradually modified and augmented by local legislation, but the Imperial Parliament in London also continued to legislate (to a lesser and lesser extent) in respect of Australia. The Federal Constitution of 1900, which is itself an Imperial Act, limited the legislative power of State Parliaments in some respects and created a federal legislature. Since the *Statute of Westminster Adoption Act 1942*, the Imperial Parliament can legislate for Australia only at Australia's request. The sources of Australian law of today are, therefore, found in Commonwealth and State legislation, in some Imperial legislation and in the common law. No significant attempt has been made at codification of the law, but three of the States (Queensland, Western Australia, and Tasmania) have Criminal Codes. However, separate consolidations of the statutes of the Commonwealth and of all States except Western Australia (which has adopted a system of reprinting of individual statutes at intervals) have been brought out from time to time.

There are few constitutional or other legislative guarantees of individual rights and liberties in Australia. These rights are nevertheless protected, because a basic feature of the Australian system is the "rule of law": no act, official or unofficial, however *bona fide* and apparently reasonable, which infringes the liberty or rights of an individual is justifiable unless it is authorized by law, and for any such unlawful act, by whatever authority commanded, the official or other person is personally liable in an action in the ordinary courts. In the case of subordinate legislation, and even in the case of Federal or State Acts, the validity of the law itself may be challenged in the courts. The remedy for the protection of the personal liberty of the individual is the writ of habeas corpus, which requires the person named therein to be produced in the court.

Australian law adheres to the principle that judicial control must in general be exercised by ordinary courts. There is no integrated system of administrative tribunals, but there is a great variety of such tribunals of various descriptions. The ordinary courts exercise supervision over administrative tribunals either by way of statutory appeal or by the use of prerogative writs of *mandamus*, *prohibition*, or *certiorari*, by which the administrative tribunals can be enjoined to perform a duty or to abstain from excess of jurisdiction, or can have their decisions set aside.

Independence of the judiciary is an essential part of the Australian legal system. Security of tenure of superior court judges is guaranteed, mostly by the Constitutions of the Commonwealth and the States, and they can be removed from office only by resolution of both Houses of Parliament of the Commonwealth or the States, as the case may be, for proven misbehaviour or incapacity. Their independence is further secured by relatively high salaries which, in the case of High Court judges, cannot be reduced during their tenure of office, and liberal (mostly non-contributory) pensions for the judges or their widows.

Civil judgments given in the courts of any part of Australia can be enforced in any other part of Australia under the *Service and Execution of Process Act* 1901-1963 of the Commonwealth. Since 1st January, 1964, this applies also to fines imposed by courts of summary jurisdiction.

**2. State and Territory Courts.**—(i) *Civil jurisdiction.* Lower civil courts (which term includes, for the purposes of this chapter, Magistrates' Courts, Courts of Petty Sessions, Local Courts, Small Debts Courts, Courts of Request and Courts of General Sessions) are usually constituted or presided over by a stipendiary or special magistrate or a commissioner. In some limited instances, justices of the peace may exercise the jurisdiction of the court. Local Courts are sometimes constituted by a Judge. The powers of the magistrates in the various States and Territories are set out in § 2, pages 645-7. In most cases, unless the amount involved is very small, appeal may be made to a higher court against a magistrate's decision. In any case, the Supreme Court has a supervisory power, by means of prerogative writs, to examine whether a lower court has properly exercised its jurisdiction.

In the higher courts (which term includes, for the purposes of this chapter, District Courts, County Courts, and the Supreme Courts), actions are usually tried by a single judge, sitting with or without a jury, from whose judgment appeal lies to the bench of the Supreme Court. In certain cases, the appeal can be carried to the High Court of Australia. Appeals to the Privy Council are referred to on page 645.

(ii) *Criminal jurisdiction.* Criminal courts are of two kinds, namely, courts of summary jurisdiction and higher courts. Courts of summary jurisdiction, usually called Courts of Petty Sessions, may deal summarily with minor offences; higher courts, known as Courts of Sessions, Quarter Sessions or General Sessions (not to be confused with the lower court of civil jurisdiction of that name) and the Supreme Court, hear indictable offences. A court of summary jurisdiction consists of a stipendiary or police magistrate, or two or more justices of the peace; a higher court consists of a judge or chairman, sitting with a jury. The jury finds as to the facts of the case and the judge determines the applicable law and, within the limits of the law, the punishment of the convicted person.

In the case of other than minor offences, a preliminary hearing is held before a stipendiary magistrate or justice of the peace for the purpose of determining whether a *prima facie* case has been made out. If the magistrate or justice of the peace finds that there is a case to answer, the person charged is committed for trial at a higher court. A magistrate or justice of the peace has power to release on bail.

There is an appeal to a higher court from the decision of a court of summary jurisdiction hearing a minor offence, and an appeal from a higher court to the full bench of the Supreme Court, or Court of Criminal Appeal. A further appeal may, with leave, be brought to the High Court of Australia.

**3. Federal Courts.**—(i) *General.* The judicial power of the Commonwealth is vested in the High Court of Australia (the Federal Supreme Court), in the Federal courts created by Parliament (the Federal Court of Bankruptcy and the Commonwealth Industrial Court), and in the State courts invested by Parliament with Federal jurisdiction, both civil and criminal. Further particulars regarding the judicial power of the Commonwealth will be found in Chapter III. (§§ 71-80) of the Commonwealth Constitution (*see* p. 16 of this Year Book).

Particulars concerning the Federal Court of Bankruptcy will be found in § 8 of this chapter. Information regarding the Commonwealth Industrial Court, which was established under the *Conciliation and Arbitration Act* 1904-1961, will be found in Chapter XIII. Labour, Wages and Prices (pp. 446-8).

(ii) *High Court of Australia.* The High Court of Australia consists of a Chief Justice and six other Justices. Its principal seat is in Melbourne, but sittings are held in every State capital as occasion requires. The High Court has both original and appellate jurisdiction. Its original jurisdiction is usually exercised by a single Justice, appellate jurisdiction by at least three Justices.

The Constitution itself confers original jurisdiction on the High Court in all matters (i) arising under any treaty, (ii) affecting consuls or other representatives of other countries, (iii) in which the Commonwealth, or a person suing or being sued on behalf of the Commonwealth, is a party, (iv) between States, or between residents of different States, or between a State and a resident of another State, (v) in which a writ of *mandamus* or prohibition or an injunction is sought against an officer of the Commonwealth. In addition, Parliament may, under the Constitution, confer additional original jurisdiction on the High Court in certain classes of matters, and has in fact conferred original jurisdiction on the High Court in all matters arising under the Constitution or involving its interpretation and in trials of indictable offences against the laws of the Commonwealth. In matters (i) and (v) and in suits between the Commonwealth and a State or between States, the jurisdiction of the High Court is exclusive of that of the State Courts, and in matters (other than trials of indictable offences) involving any question as to the limits *inter se* of the constitutional powers of the Commonwealth and those of the States, the jurisdiction of the High Court is exclusive of that of the Supreme Courts of the States.

Under the Constitution, the High Court has jurisdiction, with such exceptions and subject to such regulations as the Parliament permits, to hear and determine appeals from all judgments, decrees, orders and sentences of (i) any Justice or Justices exercising the original jurisdiction of the High Court, (ii) any other Federal court or court exercising Federal jurisdiction and (iii) from the Supreme Court or other court of any State from which appeal lay to Privy Council at the establishment of the Commonwealth. In respect of (iii), the Parliament has prescribed that, generally, appeal can be brought only by special leave of the High Court. However, in the case of judgments affecting the status of any person under the laws relating to aliens, marriage, bankruptcy or insolvency, or in respect of any sum or matter at issue, or involving any claim, demand, or question, to or regarding any property or civil right, amounting to or of the value of £1,500, appeal may be brought as of right from final judgments, and by leave of the High Court or the Supreme Court from interlocutory judgments.

By Acts of Parliament and by subordinate legislation, the High Court has also been given appellate jurisdiction in respect of the courts of the Territories under the control of the Commonwealth. Provision is also made in various enactments for appeal to the High Court on points of law from administrative determinations, such as decisions of the Commissioner of Taxation, Taxation Boards of Review, the Commissioner of Patents, or the Registrar of Trade Marks. Such proceedings, although called appeals, are in reality proceedings in the original jurisdiction of the High Court.

Transactions of the High Court are shown in § 6. p. 653).

4. **Appeal to the Privy Council.**—There is an appeal, by special leave of the Privy Council, from the High Court to the Privy Council. In certain important types of constitutional disputes, involving questions of the powers of the Commonwealth *vis-a-vis* the States, a certificate of the High Court in effect granting leave to appeal is necessary. There is also an appeal from the State Supreme Courts direct to the Privy Council.

## § 2. Lower (Magistrates') Courts

1. **Powers of the Magistrates.**—(i) *New South Wales.* There is no general limit to the powers of the magistrates with regard to offences punishable summarily, their authority depending in each case on the statute which creates the offence and gives them jurisdiction. Except in the case of a very few statutes, and excluding cumulative sentences, the power of sentence is limited to twelve months. Imprisonment in default of fine is regulated by a scale limiting the maximum period according to the sum ordered to be paid, but in no case exceeding twelve months. Actions for debt and damage within certain limits also come within magisterial jurisdiction. In cases of liquidated debts, and damages whether liquidated or unliquidated the amount is limited to £150 before a court constituted by a stipendiary magistrate. Where the amount claimed exceeds £50, the Court must transfer the action to the District Court when the defendant gives notice that he objects to the action being heard and determined by a Court of Petty Sessions. Magistrates have power to entertain claims of up to £500 under the *Money Lenders and Infants Loans Act* 1941–1961. The amount

in actions of debt before two or more justices of the peace is limited to £30 and in actions of damages it is limited to £10, but may extend to £30 with the consent of the defendant. Outside the Metropolitan Area of Sydney and certain other prescribed districts, one justice of the peace may hear cases of debt, liquidated or unliquidated, or damage, up to £5 or to £30 by consent of parties.

(ii) *Victoria*. The civil jurisdiction of magistrates is restricted to what may be designated ordinary debts, damages for assault, restitution of goods, etc., where the amount in dispute does not exceed £100, and to actions arising out of torts or contracts to the extent of £250. No definite limit is fixed to the powers of the magistrates on the criminal side, and for some offences, sentences of up to two years imprisonment may be imposed. The proportion of long sentences is, however, comparatively small.

(iii) *Queensland*. Generally speaking, the maximum term of imprisonment which justices can impose is six months, but in certain exceptional cases, such as offences against sections 233, 344 and 445 of the Criminal Code (betting houses, aggravated assaults, and unlawfully using animals), sentences of twelve months may be imposed.

There is provision for applying cumulative sentences, but in practice not more than one sentence is generally made cumulative on a previous sentence.

(iv) *South Australia*. The power of special magistrates to impose fines and imprisonment is defined by the special Act creating the offence and conferring jurisdiction. In the case of minor indictable offences which are tried summarily, a maximum penalty of £100 fine or two years imprisonment is fixed by the *Justices Act* 1921-1960. Magistrates also have power to hear certain civil actions in which the amount claimed is less than £1,250.

(v) *Western Australia*. The powers of magistrates and justices with regard to offences which are tried summarily are governed by the Act creating the offence and giving them jurisdiction. Imprisonment in default of payment of a fine is regulated by a scale limiting the period according to the amount of the fine but not to exceed six months.

The civil jurisdiction of Local Courts is restricted in general to £500. By consent of the parties, any action that might be brought in the Supreme Court may be dealt with in a Local Court. Justices may act in the case of illness or absence of the magistrate.

Magistrates are coroners and justices may be appointed as acting coroners.

Magistrates have appellate jurisdiction under some statutes and in country districts act as Chairmen of the Session Courts. They may be appointed as Commissioners of the Supreme Court. On the goldfields, the magistrate is also the warden.

(vi) *Tasmania*. Magistrates are empowered to hear and determine in Courts of Petty Sessions all offences when an enactment expressly or by implication provides that the matter is to be determined summarily, or by or before justices, or that any offence is to be punishable upon summary conviction. In addition, stealing and analogous crimes may be heard and determined summarily on the election of the person charged, when the amount involved does not exceed £100.

No general limit is fixed in respect of sentences, the statute creating the offence almost invariably laying down the penalty. Where this is not the case, the *Contravention of Statutes Act* 1889 provides that a fine of £50 may be imposed. Sentences of imprisonment which justices may impose vary with the nature of the offence, with a maximum of two years. The aggregate of terms of cumulative sentences may not exceed two years.

The civil jurisdiction of magistrates is divided into two categories. A Commissioner of the Court of Requests, provided he is a legal practitioner, may hear actions for the recovery of debts and damages not exceeding £250. As Commissioners are invariably police magistrates, this jurisdiction is State-wide. Courts of General Sessions, constituted by at least two justices, exercise similar powers, but the jurisdiction cannot exceed £50. Only one court, that at Currie, King Island, has the maximum jurisdiction, the others being limited to £30.

(vii) *Northern Territory*. Stipendiary and special magistrates constituting courts of summary jurisdiction try offences punishable summarily. The punishment that may be imposed depends on the law creating the offence. Where there is no magistrate available, the offence may be tried by two or more justices of the peace or, if all parties consent, by one justice. Proceedings for committal on indictable offences may be heard by either a

magistrate or a justice of the peace. Certain indictable offences under the Territory law may be tried summarily by a magistrate or two justices of the peace, who may impose a fine of up to £100 or imprisonment for up to two years.

A stipendiary magistrate constituting a local court has a civil jurisdiction to hear and determine claims for not more than £1,000. A local court constituted by two justices of the peace (every special magistrate is also a justice of the peace) has a civil jurisdiction to hear claims up to £50.

(viii) *Australian Capital Territory.* Stipendiary and special magistrates have general jurisdiction to try offences punishable summarily and also where a person is made liable to a penalty or punishment and no other provision is made for trial. The punishment depends on the law which creates the offence. In addition to jurisdiction (possessed by stipendiary and special magistrates throughout Australia) to try summarily with the consent of the defendant offences indictable under the *Crimes Act 1914-1960* (in which case the magistrate cannot impose a fine exceeding £100 or imprisonment exceeding one year), under Territory law, certain indictable offences may also be tried summarily by a magistrate, who may impose a fine not exceeding £50 or imprisonment for up to one year. Magistrates also hear proceedings for committal on indictable offences. In civil proceedings, magistrates try actions for amounts up to £200. Justices of the peace have no judicial functions.

2. **First Offenders.**—In all States and Territories, statutes are in force for dealing with first offenders. For particulars of the relevant legislation, see Year Book, No. 46, page 632. Provisions are incorporated in the various Acts whereby courts may extend leniency to the offender by means such as: (i) dismissal of the charge without proceeding to a conviction; (ii) freeing the offender or suspending sentence with the requirement of a recognizance for good behaviour for a specified period; and (iii) by placing the offender under the supervision of a probation officer for a specified period. The provisions existing in the individual States and Territories are set out in Year Book No. 46.

3. **Children's Courts.**—Special provisions exist in all States and Territories for dealing with juvenile offenders in special courts. Particulars of the relevant legislation and the constitution and powers of these courts are given in Year Book No. 49, pages 665-6.

4. **Proceedings at Lower (Magistrates') Courts.**—Particulars of the differences in the jurisdiction of Lower Courts in the various States are given in § 2. 1 Powers of Magistrates, pages 645-7. The proceedings of these courts are summarized in this paragraph. In interpreting the statistics in the tables, the factors affecting comparability listed at the beginning of this chapter should be borne in mind.

(i) *Criminal.* (a) *Total Cases.* The total numbers of cases dealt with at magistrates' courts in each State and Territory for the years 1958 to 1962 are shown in the following table.

CASES AT MAGISTRATES' COURTS: OFFENCES CHARGED

State or Territory	1958	1959	1960	1961	1962
New South Wales(a) ..	323,097	331,195	332,728	345,730	322,848
Victoria ..	270,017	287,622	(a)268,104	(a)259,268	(a)270,275
Queensland(a)(b) ..	62,468	65,773	73,804	79,448	79,772
South Australia(a)(b) ..	36,305	38,003	47,427	59,534	61,276
Western Australia(a) ..	49,945	50,696	50,107	48,220	52,764
Tasmania(a) ..	20,009	21,355	24,047	27,227	30,415
Northern Territory ..	3,103	3,617	2,958	3,091	4,350
Australian Capital Territory ..	2,197	2,539	3,168	3,305	4,795
<b>Australia ..</b>	<b>767,141</b>	<b>800,800</b>	<b>802,343</b>	<b>825,823</b>	<b>826,495</b>

(a) Excludes minor traffic offences settled without court appearance. (b) Year ended 30th June.

Differences in the figures in the table above between States, and within a State over a period of time, are influenced by the large number of traffic offences and the arrangements which have been introduced at various times for dealing with them. Provision exists in the States for settlement of parking and minor traffic offences by payment of fines without court appearance. The following table shows the number of such offences for the years 1958 to 1962.

#### MINOR TRAFFIC OFFENCES SETTLED WITHOUT COURT APPEARANCES

State	1958	1959	1960	1961	1962
New South Wales ..	315,058	321,157	351,685	370,688	443,689
Victoria ..	(a)	(a)	69,895	113,874	132,144
Queensland(b) ..	18,803	22,701	40,648	58,977	75,322
South Australia(b) ..	n.a.	145,276	149,241	156,067	191,592
Western Australia ..	36,999	44,973	50,879	44,392	42,582
Tasmania ..	15,022	18,554	25,801	36,745	33,217
<b>Total ..</b>	<b>(c) 385,882</b>	<b>552,661</b>	<b>688,149</b>	<b>780,743</b>	<b>918,546</b>

(a) Not applicable.

(b) Year ended 30th June.

(c) Excludes South Australia.

(b) *Cases in which Convictions were made.* Of the cases dealt with in Magistrates' Courts in 1962, the following table shows the number in which convictions were made.

#### CASES AT MAGISTRATES' COURTS IN WHICH CONVICTIONS WERE MADE, 1962

Class of offence	N.S.W.	Vic.	Qld (a)(b)	S.A. (a)	W.A.	Tas.	N.T.	A.C.T.	Aust.
Against the person ..	3,398	2,183	526	489	508	340	99	47	7,590
Against property ..	28,509	16,317	4,306	3,199	6,305	1,364	275	229	60,504
Forgery and offences against the currency ..	413	516	1	5	1		45	10	991
Against good order ..	107,299	36,618	28,728	8,043	7,452	1,448	2,535	366	192,489
Other ..	152,865	190,383	38,141	41,795	35,425	23,059	1,014	3,437	486,119
<b>Total ..</b>	<b>292,484</b>	<b>246,017</b>	<b>71,702</b>	<b>53,531</b>	<b>49,691</b>	<b>26,211</b>	<b>3,968</b>	<b>4,089</b>	<b>747,693</b>

(a) Year ended 30th June.

(b) A person convicted on several counts at the one hearing is included only once.

The following table shows the number of cases in which convictions were made in each year from 1958 to 1962.

#### CASES AT MAGISTRATES' COURTS IN WHICH CONVICTIONS WERE MADE(a)

State or Territory	1958	1959	1960	1961	1962
New South Wales ..	294,540	303,504	306,436	314,307	292,484
Victoria ..	251,065	265,214	245,807	235,581	246,017
Queensland(b)(c) ..	60,592	60,212	67,508	71,642	71,702
South Australia(b) ..	32,621	34,203	42,531	52,155	53,531
Western Australia ..	47,037	47,579	47,462	45,773	49,691
Tasmania ..	17,216	19,094	20,196	23,212	26,211
Northern Territory ..	2,715	3,212	2,664	2,812	3,968
Australian Capital Territory ..	1,910	1,787	2,280	2,613	4,089
<b>Australia ..</b>	<b>707,696</b>	<b>734,805</b>	<b>734,884</b>	<b>748,095</b>	<b>747,693</b>

(a) Excludes minor traffic offences settled without court appearance.

(b) Year ended 30th June.

(c) A person convicted on several counts at the one hearing is included only once.

(c) *Cases in which Convictions were made for Drunkenness.* The numbers of cases in which convictions were recorded during each of the years 1958 to 1962 are given in the following table.

**DRUNKENNESS: CASES IN WHICH CONVICTIONS WERE MADE**

State or Territory	1958	1959	1960	1961	1962
New South Wales .. ..	68,354	69,201	68,591	67,809	68,546
Victoria .. ..	29,434	29,334	29,116	27,212	28,529
Queensland(a) .. ..	28,196	26,918	28,538	26,136	26,293
South Australia(a) .. ..	4,299	4,439	5,273	5,438	6,178
Western Australia .. ..	4,821	5,587	5,144	5,333	5,320
Tasmania .. ..	718	660	512	534	575
Northern Territory .. ..	926	1,010	822	1,037	1,388
Australian Capital Territory .. ..	380	255	298	307	252
<b>Australia .. ..</b>	<b>137,128</b>	<b>137,404</b>	<b>138,294</b>	<b>133,806</b>	<b>137,081</b>

(a) Year ended 30th June.

The term "drunkenness" includes "drunkenness and disorderliness", and "habitual drunkenness".

The rate of convictions for drunkenness since 1901 is shown below.

**RATE OF CONVICTIONS FOR DRUNKENNESS: AUSTRALIA**

Year .. .. .	1901	1911	1921	1931	1941	1951	1961	1962
Convictions per 10,000 persons ..	133	133	97	57	91	175	129	128

For particulars of legislation relevant to the remedial treatment of drunkenness and some details of the various institutions established for the treatment of inebriates, see Official Year Book, No. 46, p. 632.

(ii) *Civil Proceedings.* Civil proceedings in the lower courts refer to those in the Small Debts Courts in New South Wales, Courts of Petty Sessions in Victoria, Magistrates' Courts in Queensland, Local Courts in South Australia and Western Australia, Courts of Requests in Tasmania, Local Courts in the Northern Territory and the Court of Petty Sessions in the Australian Capital Territory. Statistics of civil proceedings in the Lower Courts are given in § 5.

**§ 3. Higher (Judges') Courts**

1. **General.**—Higher courts are presided over by a judge, sometimes with a jury (see para. 2, page 644. Jurisdiction of the Higher Courts, which include District, County and Supreme Courts, includes appeals from the lower courts, cases of serious crime committed from lower courts and civil cases involving Common Law, Commercial Causes, Equity, etc.

Under powers vested by the Commonwealth under the *Matrimonial Causes Act 1960* and the *Bankruptcy Act 1924-1955*, separate courts within the jurisdiction of the Supreme Courts of the various States and Territories deal exclusively with matrimonial cases and bankruptcy cases respectively.

2. **Habitual Offenders.**—An account of the methods adopted in each jurisdiction in connexion with habitual offenders is given in Year Book No. 49, pages 668-9.



3. **Capital Punishment.**—There were four executions in Australia during the period 1954 to 1963. Two took place in South Australia (in 1956 and 1958), and two in Western Australia (in 1960 and 1961). In each case the offence was murder.

Under the *Criminal Code Amendment Act* of 1922, capital punishment was abolished in Queensland, and in New South Wales the *Crimes Act* was amended in 1955, abolishing capital punishment for all offences except treason and piracy with violence. In the Australian Capital Territory, the *Child Welfare Ordinance* 1957–1962 now provides that no death sentence is to be pronounced or recorded against a person under the age of 18 years.

In the early days of the history of Australia, the penalty of death was attached to a large number of offences, many of which would now be dealt with in a Magistrate's Court. The present tendency is to restrict death sentences to persons convicted of murder. Although rape is a capital offence in some States, the penalty of death has not been imposed in recent years on persons convicted of it.

The average annual number of executions in Australia from 1861 to 1880 was 9; from 1881 to 1900, 6; from 1901 to 1910, 4; from 1911 to 1920, 2; from 1921 to 1930, 2; from 1931 to 1940, 1; from 1941 to 1950, 0.5; and from 1951 to 1960, 1.0.

4. **Proceedings at Higher (Judges') Courts.**—Proceedings at higher courts comprise criminal, civil, divorce and bankruptcy proceedings. Separate details of each are given in § 4, paragraph 2, § 5, § 7, and § 8, respectively.

#### § 4. Serious Crime.

NOTE.—In interpreting the statistics in this section, the factors affecting comparability listed at the beginning of the chapter should be borne in mind.

1. **Lower Courts.**—(i) *Convictions for Serious Crime at Magistrates' Courts.* The figures given in the tables in § 2.4 refer to all convictions, and include offences of a technical nature, drunkenness, and minor breaches of good order, which come under the heading of crime in a very different sense from the more serious offences. The following table has therefore been prepared to show convictions at Magistrates' Courts for what may be regarded as the more serious offences, i.e., offences against the person, offences against property, forgery and offences against the currency.

The following table shows the number of convictions for serious crime at Magistrates' Courts for the years 1958 to 1962.

#### CONVICTIONS FOR SERIOUS CRIME<sup>(a)</sup> AT MAGISTRATES' COURTS

State or Territory	1958	1959	1960	1961	1962
New South Wales .. ..	27,960	30,769	31,529	31,696	32,302
Victoria .. ..	11,132	12,260	15,646	15,949	19,016
Queensland <sup>(b)(c)</sup> .. ..	4,301	4,422	4,678	4,736	4,833
South Australia <sup>(b)</sup> .. ..	2,338	2,554	2,604	3,552	3,693
Western Australia .. ..	6,016	5,423	5,764	5,256	6,814
Tasmania .. ..	1,666	1,634	1,788	1,636	1,704
Northern Territory .. ..	209	297	243	285	419
Australian Capital Territory ..	357	384	331	573	286
<b>Australia .. ..</b>	<b>53,979</b>	<b>57,743</b>	<b>62,583</b>	<b>63,683</b>	<b>69,067</b>

(a) Offences against the person, offences against property, forgery and offences against the currency.  
 (b) Year ended 30th June. (c) A person convicted on several counts at the one hearing is included only once.

The numbers of convictions for serious crime at Magistrates' Courts per 10,000 of population for the same series of years for Australia were:—1958, 55.0; 1959, 57.6; 1960, 61.1; 1961, 60.8; 1962, 64.6.

(ii) *Committals to Higher Courts.* The following table shows the number of offences, classified according to the nature of the offence, which were committed to higher courts for each State and Territory for the year 1962.

#### COMMITTALS TO HIGHER COURTS, 1962

Class of offence	N.S.W.	Vic.	Qld (a)(b)	S.A. (a)	W.A.	Tas.	N.T.	A.C.T.	Australia
Against the person ..	1,518	981	282	354	82	55	51	35	3,358
Against property ..	5,385	3,424	992	301	320	549	20	75	11,066
Forgery and offences against the currency ..	312	441	10	35	38	28	21	..	885
Against good order ..	117	177	4	9	10	4	..	..	321
Other .. .. .	82	445	7	13	..	7	..	..	554
<b>Total .. .. .</b>	<b>7,414</b>	<b>5,468</b>	<b>1,295</b>	<b>712</b>	<b>450</b>	<b>643</b>	<b>92</b>	<b>110</b>	<b>16,184</b>

(a) Year ended 30th June.  
included only once.

(b) A person committed on several counts at the one hearing is

The following table shows the number of committals to higher courts for each of the years 1958 to 1962.

#### COMMITTALS TO HIGHER COURTS

State or Territory	1958	1959	1960	1961	1962
New South Wales .. .. .	7,327	7,522	8,212	8,294	7,414
Victoria .. .. .	4,227	4,523	5,274	4,598	5,468
Queensland(a)(b) .. .. .	911	954	1,211	1,527	1,295
South Australia(a) .. .. .	505	558	542	671	712
Western Australia .. .. .	463	447	362	298	450
Tasmania .. .. .	600	529	475	725	643
Northern Territory .. .. .	66	93	26	86	92
Australian Capital Territory ..	74	65	97	65	110
<b>Australia .. .. .</b>	<b>14,173</b>	<b>14,691</b>	<b>16,199</b>	<b>16,264</b>	<b>16,184</b>

(a) Year ended 30th June.  
included only once.

(b) A person committed on several counts at the one hearing is

2. *Higher Courts.*—(i) *Offences for which Persons were convicted at Higher Courts, 1962.* The following table shows the number of persons convicted at higher courts in each of the States and Territories of Australia during 1962, classified according to the nature of the offence.

## PERSONS CONVICTED AT HIGHER COURTS, 1962

Offence	N.S.W.	Vic.	Qld (a)(b)	S.A.	W.A.	Tas. (c)	N.T.	A.C.T.	Aust.
<b>Against the person—</b>									
Infanticide .. .. .	..	..	..	1	2	..	..	..	3
Concealment of birth .. .. .	..	..	..	..	..	..	..	..	..
Murder .. .. .	17	8	7	2	..	4	..	..	38
Attempted murder .. .. .	3	..	2	4	..	3	1	..	13
Manslaughter(d) .. .. .	16	9	9	8	11	4	5	1	63
Culpable driving .. .. .	15	..	12	4	..	..	1	..	32
Rape .. .. .	10	7	18	1	10	2	..	..	48
Incest .. .. .	..	11	12	10	3	..	..	..	36
<b>Other offences against females</b> .. .. .	224	338	89	237	2	21	8	7	926
Abduction .. .. .	1	2	2	1	..	3	..	..	9
Unnatural offences .. .. .	109	101	12	33	8	4	5	..	272
Abortion and attempt to procure .. .. .	1	2	3	4	3	..	..	..	13
Bigamy .. .. .	17	8	3	4	..	..	..	..	32
Malicious wounding .. .. .	44	..	..	..	..	..	..	..	44
Attempted suicide .. .. .	..	2	..	..	..	..	..	..	2
Aggravated assault .. .. .	56	29	40	16	5	2	9	7	164
Common assault .. .. .	17	27	11	7	..	..	4	1	67
<b>Other offences against the person</b> .. .. .	17	92	2	..	..	11	..	2	124
<b>Total</b> .. .. .	547	636	222	332	44	54	33	18	1,886
<b>Against property—</b>									
Burglary, breaking and entering .. .. .	1,060	956	626	218	110	28	6	22	3,026
Robbery and stealing from the person .. .. .	72	34	23	10	6	152	1	..	298
Livestock stealing .. .. .	..	39	6	7	2	..	..	..	54
Embezzlement and fraudulent misappropriation .. .. .	70	22	9	15	8	4	2	1	131
Other larceny .. .. .	550	186	32	11	28	..	9	4	820
Unlawfully using vehicles .. .. .	1	33	146	..	3	..	..	..	183
Receiving .. .. .	52	31	43	12	4	8	..	1	173
Fraud and false pretences .. .. .	87	46	19	40	8	12	2	5	219
Arson .. .. .	4	16	12	1	1	..	..	6	40
Malicious damage .. .. .	13	14	1	1	..	..	2	..	31
<b>Other offences against property</b> .. .. .	17	23	15	7	..	..	1	..	63
<b>Total</b> .. .. .	1,926	1,420	932	322	170	204	25	39	5,038
<b>Forgery and offences against the currency</b> .. .. .	24	72	12	22	10	7	16	..	163
Against good order .. .. .	4	4	5	..	4	4	..	..	21
Other .. .. .	12	197	4	42	..	1	..	..	256
<b>Grand Total</b> .. .. .	2,513	2,329	1,175	718	228	270	74	57	7,364

(a) Year ended 30th June. (b) A person convicted on several counts at the one hearing is included only once, but if a person has been convicted at different hearings during the year, whether for the same or for a different type of offence, the results of all hearings are recorded separately. (c) Convictions. (d) Includes causing death by dangerous driving.

(ii) *Persons Convicted at Higher Courts, 1958 to 1962.* The number of persons convicted at higher courts for the years 1958 to 1962 are given in the following table.

## PERSONS CONVICTED AT HIGHER COURTS

State or Territory	1958	1959	1960	1961	1962
New South Wales .. .. .	2,274	2,325	2,635	2,712	2,513
Victoria .. .. .	1,779	1,799	1,996	2,307	2,329
Queensland(a)(b) .. .. .	883	915	1,020	1,279	1,175
South Australia .. .. .	457	499	580	606	718
Western Australia .. .. .	255	216	183	203	228
Tasmania(c) .. .. .	276	290	295	304	270
Northern Territory .. .. .	31	69	29	87	74
Australian Capital Territory .. .. .	50	40	62	54	57
<b>Australia</b> .. .. .	<b>6,005</b>	<b>6,153</b>	<b>6,800</b>	<b>7,552</b>	<b>7,364</b>

(a) Year ended 30th June. (b) A person convicted on several counts at the one hearing is included only once. (c) Convictions.

The numbers of persons convicted at higher courts in Australia per 10,000 of population for the years 1958 to 1962 were:—1958, 6.1; 1959, 6.1; 1960, 6.6; 1961, 7.0; 1962, 6.9.

### § 5. Civil Cases

In interpreting the statistics in the two tables in this section, it should be borne in mind that there are factors which affect comparability between States and between courts.

The total number of plaints entered and amounts awarded plaintiffs in the lower courts, during 1962, are shown in the following table.

#### CIVIL CASES AT LOWER COURTS, 1962

Particulars	N.S.W.	Vic.	Qld (a)	S.A.	W.A.	Tas.	N.T.	A.C.T.	Aus- tralia
Plaints entered No.	159,473	192,656	47,113	94,566	49,832	38,673	2,744	8,437	593,494
Amount awarded to plaintiffs £	2,120,496	4,340,179	1,290,943	2,065,832	899,590	591,566	42,265	97,398	11,448,269

(a) Year ended 30th June.

The following table shows the civil judgments (excluding those for divorce and bankruptcy) in the higher courts during 1962. The particulars given below include the number and amount of judgments entered by default or confession or agreement.

#### CIVIL CASES AT HIGHER COURTS, 1962

Particulars	N.S.W.	Vic.	Qld (a)	S.A.	W.A. (b)	Tas.	N.T.	A.C.T.	Total
Judgments No. Amount awarded £	48,672 n.a.	21,602 6,567,790	1,474 1,302,654	206 487,536	388 595,807	867 n.a.	n.a. n.a.	321 147,485	n.a. n.a.

(a) Year ended 30th June, 1962.

(b) Judgments signed and entered.

### § 6. Transactions of the High Court

The following table shows the transactions of the High Court for 1962 and 1963.

#### TRANSACTIONS OF THE HIGH COURT OF AUSTRALIA

Original jurisdiction(a)	1962		1963		Appellate jurisdiction	1962		1963	
Number of writs issued ..		92		84	Number of appeals set down for hearing ..		132		118
Number of cases entered for trial ..		51		42	Number allowed ..		36		33
Judgments for plaintiffs ..		30		18	Number dismissed ..		52		62
Judgments for defendants ..		2		4	Otherwise disposed of ..		20		23
Otherwise disposed of ..		36		15					
Amount of judgments ..		£96,588		£125,823					

(a) Some matters dealt with by the High Court neither originate as writs nor are entered as cases.

During 1962 and 1963, respectively, the High Court dealt also with the following:— appeals from assessments under the Taxation Assessment Act, 49, 22; special cases stated for the opinion of the Full Court, 8, 13; applications for prohibition, etc., 23, 31. The fees collected amounted to £3,239 in 1962, and £3,289 in 1963.

### § 7. Divorce and Other Matrimonial Relief

1. **Separation and Maintenance Orders of Courts of Summary Jurisdiction.**—In all States and Territories, there are laws enabling a wife whose husband leaves her or the children of the marriage without adequate means of support to obtain a maintenance order against the husband from a court of summary jurisdiction. In some States and in the Northern Territory, courts of summary jurisdiction also have power to make separation orders. A separation order is intended primarily for the protection of the person of the wife.

2. **Divorce and Other Matrimonial Relief Granted by Higher Courts.**—A marriage may be terminated by a Supreme Court of a State or Territory in one of three ways. Firstly, there may be a dissolution of the marriage, commonly known as divorce; secondly, the courts may annul a marriage; and thirdly, there can be a judicial separation of the parties.

Until recently, each State was primarily responsible for the provision of matrimonial relief. The law varied from State to State; for example, as to the period of desertion needed to obtain a decree for the dissolution of marriage.

In 1959, however, the Commonwealth Parliament passed the *Matrimonial Causes Act 1959* which came into force on 1st February, 1961. The Act establishes uniform grounds throughout the whole of the Commonwealth for the termination of marriage. While the Act displaces corresponding State law, it vests jurisdiction in existing State and Territorial Courts.

Nearly all decrees granted in 1963 were for petitions filed since the operation of the Commonwealth Act.

3. **Matrimonial Causes Act 1959.**—Under the *Matrimonial Causes Act 1959*, a decree for the dissolution of marriage may be granted on fourteen grounds, which include adultery, desertion, insanity, separation for five years in certain circumstances, and failure to comply with a restitution decree.

Proceedings for nullity of marriage may be instituted in respect of a marriage which is void or voidable. A marriage which is void has no existence at all, and so it is not legally necessary to obtain a decree of nullity of marriage, but since the issue may depend on difficult questions of fact, such as proof that the consent of one of the parties to the marriage was not a real consent, it is advisable and customary to seek a court judgment which decides the question of the validity of the marriage.

Proceedings for annulling a voidable marriage may be instituted on various grounds, as, for example, where at the time of the marriage either party was a mental defective. A voidable marriage is void from the date of the decree absolute, but until then the parties have the status of married people, and transactions concluded on the basis of the existence of that status cannot be undone or re-opened. Since the parties to a marriage which is void or which has been voided do not have the status of married people, they may remarry.

The death of either husband or wife terminates any proceedings for matrimonial relief. A decree for dissolution or annulment of a voidable marriage is first a decree *nisi*. The decree automatically becomes absolute at the expiration of three months, unless it is in the meantime rescinded, appeal proceedings are instituted, or there are children of the marriage under the age of 16, in which case the Court must be satisfied that appropriate arrangements have been made for their welfare before the decree will become absolute. The parties cannot remarry until a decree *nisi* has become absolute.

A decree of judicial separation is available on most of the grounds available for divorce. It leaves unimpaired the status of marriage, but suspends rights and duties with respect to cohabitation. A husband is not responsible for the acts of his wife, except that he is liable for necessities supplied to her if he has failed to pay alimony ordered by a court. Persons who have judicially separated cannot remarry, but a divorce may be obtained on the same facts as those on which the decree of judicial separation was based.

The new Commonwealth Act provides for financial grants to approved marriage guidance organizations, and the courts are enjoined to consider at all times the possibility of reconciliation and they may take certain steps to endeavour to effect a reconciliation.

In the following tables, the term "divorce" is used to cover dissolution of marriage, nullity of marriage and judicial separation.

4. **Number of Petitions Filed.**—The following table shows the number of petitions for dissolution of marriage, nullity of marriage and judicial separation filed in each State during 1963.

PETITIONS FILED FOR DISSOLUTION OF MARRIAGE, NULLITY OF MARRIAGE AND JUDICIAL SEPARATION, 1963

Petition for—	N.S.W.	Vic.	Q'land	S.A.	W.A.	Tas.	N.T.	A.C.T.	Aust.
Dissolution of marriage—									
Husband petitioner ..	1,716	942	474	386	290	125	30	37	4,000
Wife petitioner ..	2,623	1,221	587	619	333	146	20	53	5,602
Total ..	4,339	2,163	1,061	1,005	623	271	50	90	9,602
Nullity of marriage—									
Husband petitioner ..	5	1	..	2	2	1	..	..	11
Wife petitioner ..	13	6	3	3	2	..	..	1	28
Total ..	18	7	3	5	4	1	..	1	39
Dissolution or nullity—									
Husband petitioner ..	1	3	..	1	..	..	..	..	5
Wife petitioner ..	4	5	1	..	..	..	..	..	10
Total ..	5	8	1	1	..	..	..	..	15
Judicial separation—									
Husband petitioner ..	..	1	1	1	..	..	..	..	3
Wife petitioner ..	8	6	3	2	2	1	..	4	26
Total ..	8	7	4	3	2	1	..	4	29
Dissolution or judicial separation—									
Husband petitioner ..	..	1	..	..	..	..	..	..	1
Total ..	..	1	..	..	..	..	..	..	1
Total petitions—									
Husband petitioner No.	1,722	948	475	390	292	126	30	37	4,020
Per cent.	39	43	44	38	47	46	60	39	42
Wife petitioner No.	2,648	1,238	594	624	337	147	20	58	5,666
Per cent.	61	57	56	62	53	54	40	61	58
Grand Total ..	4,370	2,186	1,069	1,014	629	273	50	95	9,686

5. Number of Divorces Granted.—The following table shows the number of dissolutions of marriage, nullities of marriage and judicial separations granted in each State during 1963.

DISSOLUTIONS OF MARRIAGE, NULLITIES OF MARRIAGE AND JUDICIAL SEPARATIONS GRANTED, 1963

Decree for—	N.S.W.	Vic.	Q'land	S.A.	W.A.	Tas.	N.T.	A.C.T.	Aust.
Dissolution of marriage(a)—									
Husband petitioner ..	1,363	759	396	308	251	108	23	18	3,226
Wife petitioner ..	1,930	857	514	390	299	152	15	23	4,180
Petition by both ..	..	..	..	..	3	..	..	..	3
Total ..	3,293	1,616	910	698	553	260	38	41	7,409
Nullity of marriage(b)—									
Husband petitioner ..	2	2	2	..	..	..	..	..	6
Wife petitioner ..	9	5	4	5	1	..	..	..	24
Total ..	11	7	6	5	1	..	..	..	30
Judicial separation—									
Husband petitioner ..	..	..	..	..	..	..	..	..	..
Wife petitioner ..	..	3	3	..	..	1	..	..	7
Total ..	..	3	3	..	..	1	..	..	7
Total decrees—									
Husband petitioner No.	1,365	761	398	308	251	108	23	18	3,232
Per cent.	41	47	43	44	45	41	61	44	43
Wife petitioner No.	1,939	865	521	395	300	153	15	23	4,211
Per cent.	59	53	57	56	55	59	39	56	57
Petition by both No.	..	..	..	..	3	..	..	..	3
Grand Total ..	3,304	1,626	919	703	554	261	38	41	7,446

(a) Decrees absolute. (b) Final decrees.

6. Number of Divorces Granted, 1959 to 1963.—The following table shows the number of dissolutions of marriage, nullities of marriage and judicial separations granted in each State and Territory for each year from 1959 to 1963.

## DISSOLUTIONS OF MARRIAGE, NULLITIES OF MARRIAGE AND JUDICIAL SEPARATIONS GRANTED

State or Territory	1959	1960	1961	1962	1963
<b>DISSOLUTIONS OF MARRIAGE(a)</b>					
New South Wales .. .. .	3,363	3,243	3,156	3,113	3,293
Victoria .. .. .	1,861	1,296	1,248	1,615	1,616
Queensland .. .. .	739	696	779	920	910
South Australia .. .. .	503	610	679	660	698
Western Australia .. .. .	584	540	466	582	553
Tasmania .. .. .	222	210	286	248	260
Northern Territory .. .. .	14	5	23	38	38
Australian Capital Territory .. .. .	29	33	36	44	41
<i>Australia</i> .. .. .	<i>7,315</i>	<i>6,633</i>	<i>6,673</i>	<i>7,220</i>	<i>7,409</i>

<b>NULLITIES OF MARRIAGE(b)</b>					
New South Wales .. .. .	23	27	18	18	11
Victoria .. .. .	16	16	9	8	7
Queensland .. .. .	5	7	2	5	6
South Australia .. .. .	7	9	6	6	5
Western Australia .. .. .	2	2	..	2	1
Tasmania .. .. .	..	..	..	1	..
Northern Territory .. .. .	..	1	..	..	..
Australian Capital Territory .. .. .	..	1	1	..	..
<i>Australia</i> .. .. .	<i>53</i>	<i>63</i>	<i>36</i>	<i>40</i>	<i>30</i>

<b>JUDICIAL SEPARATIONS</b>					
New South Wales .. .. .	..	5	1	..	..
Victoria .. .. .	..	1	..	..	3
Queensland .. .. .	1	2	..	3	3
South Australia .. .. .	..	..	..	1	..
Western Australia .. .. .	1	5	1	1	..
Tasmania .. .. .	..	..	..	..	1
Northern Territory .. .. .	..	..	..	..	..
Australian Capital Territory .. .. .	..	..	..	..	..
<i>Australia</i> .. .. .	<i>2</i>	<i>13</i>	<i>2</i>	<i>5</i>	<i>7</i>

<b>TOTAL DIVORCES GRANTED</b>					
<b>Grand Total</b> .. .. .	<b>7,370</b>	<b>6,709</b>	<b>6,711</b>	<b>7,255</b>	<b>7,446</b>

(a) Decrees absolute.

(b) Final decrees.

7. Average Number of Divorces granted Annually.—The ten-year averages of the numbers of divorces (i.e., dissolutions, nullities and judicial separations) granted annually in Australia for the 80 years from 1881 to 1960 are as follows.

DIVORCES: AUSTRALIA

Decade	1881-90	1891-1900	1901-10	1911-20	1921-30	1931-40	1941-50	1951-60
Average	70	357	399	741	1,692	2,508	6,187	6,973

8. Grounds on which Divorces were Granted.—The grounds on which dissolutions of marriage, nullities of marriage and judicial separations were granted in each State and Territory during 1963 are shown in the following table. Some of the decrees granted during 1963 were for petitions lodged under the former, superseded legislation.

GROUND OF DISSOLUTION OF MARRIAGE, NULLITY OF MARRIAGE AND JUDICIAL SEPARATIONS, 1963

Ground	N.S.W.	Vic.	Q'land	S.A.	W.A.	Tas.	N.T.	A.C.T.	Aust.
<b>DISSOLUTION OF MARRIAGE</b>									
<b>Single Grounds—</b>									
Desertion .. .. .	1,658	642	482	240	161	112	14	15	3,324
Adultery .. .. .	713	278	157	189	192	58	8	16	1,611
Separation .. .. .	541	255	185	147	142	63	9	..	1,342
Cruelty .. .. .	123	14	19	74	3	2	..	5	240
Drunkenness .. .. .	48	7	4	6	3	5	..	..	73
Frequent convictions .. .. .	7	..	1	2	1	2	..	..	13
Failure to pay maintenance .. .. .	1	2	..	2	5	..	..	..	10
Non-compliance with restitution decrees .. .. .	38	..	..	1	1	..	..	..	40
Insanity .. .. .	13	..	3	2	..	2	..	..	21
Refusal to consummate .. .. .	6	4	2	..	2	..	..	..	14
Imprisonment .. .. .	1	1	1	..	1	..	..	..	4
Other single grounds .. .. .	1	..	..	..	1	4	..	..	6
<b>Dual Grounds—</b>									
Desertion and adultery .. .. .	21	62	14	5	6	2	3	2	115
Desertion and separation .. .. .	36	266	26	15	16	7	2	1	369
Desertion and cruelty .. .. .	22	15	6	3	2	..	1	2	51
Desertion and drunkenness .. .. .	10	4	1	1	2	..	..	..	18
Desertion and frequent convictions .. .. .	..	2	..	..	1	..	..	..	3
Desertion and failure to pay maintenance .. .. .	3	4	..	..	..	..	..	..	7
Adultery and separation .. .. .	2	6	2	..	3	..	..	..	13
Adultery and cruelty .. .. .	2	5	..	2	..	..	..	..	9
Cruelty and drunkenness .. .. .	40	11	6	4	..	3	1	..	65
Separation and failure to pay maintenance .. .. .	..	1	..	..	6	..	..	..	7
Refusal to consummate and desertion .. .. .	1	3	..	1	..	..	..	..	5
Other dual grounds .. .. .	1	2	1	2	1	..	..	..	7
Multiple grounds (a) .. .. .	5	31	..	2	4	..	..	..	42
<b>Total .. .. .</b>	<b>3,293</b>	<b>1,616</b>	<b>910</b>	<b>698</b>	<b>553</b>	<b>260</b>	<b>38</b>	<b>41</b>	<b>7,409</b>

NULLITY OF MARRIAGE

Bigamy .. .. .	2	1	3	2	..	..	..	..	8
Incapacity to consummate .. .. .	9	5	3	3	1	..	..	..	21
Invalid marriage .. .. .	..	1	..	..	..	..	..	..	1
<b>Total .. .. .</b>	<b>11</b>	<b>7</b>	<b>6</b>	<b>5</b>	<b>1</b>	<b>..</b>	<b>..</b>	<b>..</b>	<b>30</b>

(a) Three grounds or more.



**GROUND OF DISSOLUTION OF MARRIAGE, NULLITY OF MARRIAGE  
AND JUDICIAL SEPARATION, 1963—continued**

Ground	N.S.W.	Vic.	Q'land	S.A.	W.A.	Tas.	N.T.	A.C.T.	Aust.
<b>JUDICIAL SEPARATION</b>									
Cruelty .. .. .	..	2	..	..	..	..	..	..	2
Desertion .. .. .	..	..	2	..	..	..	..	..	2
Adultery .. .. .	..	1	..	..	..	1	..	..	2
Desertion and cruelty .. .. .	..	..	1	..	..	..	..	..	1
<i>Total</i> .. .. .	..	3	3	..	..	1	..	..	7

**TOTAL DIVORCES GRANTED**

Grand Total ..	3,304	1,626	919	703	554	261	38	41	7,446
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9. **Ages of Husband and Wife at Time of Marriage.**—The following table shows the ages at time of marriage of husbands and wives who were parties to marriages dissolved in 1963.

**DISSOLUTIONS: AGES OF PARTIES AT TIME OF MARRIAGE, AUSTRALIA,  
1963**

Age of husband (years)	Age of wife (years)										Total husbands	
	Under 20	20-24	25-29	30-34	35-39	40-44	45-49	50-54	55-59	60 and over		Not stated
Under 20 ..	349	91	4	2	1	..	..	..	..	..	..	447
20-24 ..	1,440	1,710	244	34	4	1	1	..	..	1	..	3,436
25-29 ..	375	1,064	437	112	22	7	2	..	..	..	1	2,021
30-34 ..	83	259	209	107	53	11	2	2	..	..	..	726
35-39 ..	23	85	87	70	38	26	5	4	..	..	..	338
40-44 ..	5	22	24	53	43	25	12	3	..	..	..	187
45-49 ..	1	7	21	18	25	19	11	6	1	1	..	110
50-54 ..	3	4	4	7	11	12	10	10	2	..	..	63
55-59 ..	..	3	..	2	4	4	3	4	3	2	..	25
60 and over ..	..	..	2	1	3	3	4	5	6	4	..	28
Not stated ..	..	..	1	..	..	..	..	1	..	..	26	28
<b>Total Wives</b>	<b>2,279</b>	<b>3,245</b>	<b>1,033</b>	<b>406</b>	<b>204</b>	<b>108</b>	<b>50</b>	<b>35</b>	<b>12</b>	<b>8</b>	<b>29</b>	<b>7,409</b>

10. **Ages of Husband and Wife at Time of Dissolution of Marriage.**—The following table shows the number of husbands and wives in each age group who were parties to marriages dissolved in 1963. Age is taken at the time the decree absolute was made.

DISSOLUTIONS: AGES OF PARTIES AT TIME OF DISSOLUTION OF MARRIAGE, AUSTRALIA, 1963

Age of husband (years)	Age of wife (years)										Total husbands	
	Under 20	20-24	25-29	30-34	35-39	40-44	45-49	50-54	55-59	60 and over		Not stated
20-24 ..	9	115	26	4	..	..	..	..	..	..	..	154
25-29 ..	5	309	466	51	7	2	..	..	..	..	..	840
30-34 ..	..	83	608	554	91	19	2	..	..	..	..	1,358
35-39 ..	..	18	152	568	522	116	26	10	1	..	1	1,414
40-44 ..	..	5	26	169	449	444	73	16	9	1	1	1,193
45-49 ..	..	..	9	43	125	335	297	71	9	4	..	893
50-54 ..	..	1	4	12	47	130	246	194	45	7	1	687
55-59 ..	..	..	2	3	18	40	83	160	102	34	..	442
60 and over ..	..	1	..	4	8	18	39	60	93	177	..	400
Not stated ..	..	..	..	1	..	..	..	..	1	..	26	28
<b>Total Wives</b>	<b>14</b>	<b>532</b>	<b>1,293</b>	<b>1,409</b>	<b>1,267</b>	<b>1,104</b>	<b>766</b>	<b>511</b>	<b>260</b>	<b>224</b>	<b>29</b>	<b>7,409</b>

11. Duration of Marriages Dissolved and Number of Children.—The following table shows the number of dissolutions of marriage granted in 1963, classified according to the legal duration of the marriage (i.e., the period from the date of marriage to the date when the decree  *nisi* was made absolute) and number of children.

DURATION OF MARRIAGES DISSOLVED AND NUMBER OF CHILDREN(a): AUSTRALIA, 1963

Duration of marriage (years)	Dissolutions of marriages with—											Total dissolutions of marriage	Total children (a)	
	No children	1 child	2 children	3 children	4 children	5 children	6 children	7 children	8 children	9 children	10 children			11 children and over
Under 1 year	1	..	..	..	..	..	..	..	..	..	..	..	1	..
1 year and under 2 ..	11	..	2	..	..	..	..	..	..	..	..	..	13	4
2 years and under 3 ..	30	7	2	..	1	..	..	..	..	..	..	..	40	15
3 " " " " 4 ..	77	37	5	..	..	..	..	..	..	..	..	..	119	47
4 " " " " 5 ..	189	99	31	5	4	..	..	..	..	..	..	..	328	192
5 " " " " 6 ..	191	107	41	4	2	..	..	..	..	..	..	..	345	209
6 " " " " 7 ..	202	144	52	16	4	..	..	..	..	..	..	..	418	312
7 " " " " 8 ..	186	140	87	21	5	..	..	..	..	..	..	..	439	397
8 " " " " 9 ..	147	111	83	39	10	..	..	..	..	..	..	..	390	434
9 " " " " 10 ..	162	109	88	33	6	3	1	..	..	..	..	..	402	429
10 " " " " 11 ..	123	103	97	27	15	1	..	..	..	..	..	..	366	443
11 " " " " 12 ..	110	82	84	39	17	6	1	1	..	..	..	..	340	478
12 " " " " 13 ..	78	83	107	28	25	5	..	..	..	..	..	..	326	506
13 " " " " 14 ..	92	89	93	26	23	5	1	..	..	..	..	..	329	476
14 " " " " 15 ..	86	64	71	61	10	4	3	..	..	..	..	..	299	467
15 " " " " 16 ..	85	69	97	55	19	3	..	..	..	..	..	..	328	519
16 " " " " 17 ..	55	71	95	49	16	4	1	1	..	..	..	..	292	505
17 " " " " 18 ..	77	71	79	45	15	3	6	1	..	..	..	..	297	482
18 " " " " 19 ..	40	56	73	32	21	7	6	..	..	..	..	..	235	453
19 " " " " 20 ..	36	44	58	33	13	6	3	..	..	..	..	..	194	366
20 " " " " 21 ..	43	51	50	33	17	8	2	1	1	..	..	..	207	392
21 " " " " 25 ..	200	157	194	91	43	8	2	1	3	1	..	1	699	1,081
25 " " " " 30 ..	268	121	78	22	14	4	2	..	..	..	..	..	510	439
30 " " " " 40 ..	191	36	23	7	1	..	..	..	..	..	..	..	258	107
35 " " " " 45 ..	123	10	5	1	..	2	..	..	..	..	..	..	141	33
40 " " " " ..	58	2	1	1	..	..	..	..	..	..	..	..	62	7
45 " " and over ..	29	2	..	..	..	..	..	..	..	..	..	..	31	2
<b>Total Dissolutions of Marriage</b>	<b>2,890</b>	<b>1,865</b>	<b>1,596</b>	<b>668</b>	<b>281</b>	<b>69</b>	<b>26</b>	<b>7</b>	<b>5</b>	<b>1</b>	<b>..</b>	<b>1</b>	<b>7,409</b>	<b>..</b>
<b>Total Children (a)</b>	<b>..</b>	<b>1,865</b>	<b>3,192</b>	<b>2,004</b>	<b>1,124</b>	<b>345</b>	<b>156</b>	<b>49</b>	<b>40</b>	<b>9</b>	<b>..</b>	<b>11</b>	<b>..</b>	<b>8,795</b>

(a) The term "children" used in the Commonwealth legislation refers to living "children of the marriage" under 21 years, but the table above includes a small number of dissolutions granted to petitions filed under old legislation in which the term "children" was used differently.

12. Ages of Children of Dissolved Marriages. The following table shows the ages of children of marriages dissolved in 1963. The children referred to are those under 21 years of age at the time of petition.

**CHILDREN OF DISSOLVED MARRIAGES(a), BY AGE AT TIME OF PETITION:  
AUSTRALIA, 1963**

Petitioner	Age of children at time of petition—																	Total number of children	
	Under 12 mths	1 yr	2 yrs	3 yrs	4 yrs	5 yrs	6 yrs	7 yrs	8 yrs	9 yrs	10 yrs	11 yrs	12 yrs	13 yrs	14 yrs	15 yrs	16-20 yrs		Not stated
Husband ..	21	63	110	180	217	220	246	214	251	200	196	201	190	204	188	178	610	11	3,500
Wife ..	34	91	211	279	320	334	345	330	347	353	345	324	329	289	291	271	799	1	5,293
Both ..	..	..	..	..	..	..	..	..	..	1	..	..	..	..	1	..	..	..	2
<b>Total ..</b>	<b>55</b>	<b>154</b>	<b>321</b>	<b>459</b>	<b>537</b>	<b>554</b>	<b>591</b>	<b>544</b>	<b>598</b>	<b>554</b>	<b>541</b>	<b>525</b>	<b>519</b>	<b>493</b>	<b>480</b>	<b>449</b>	<b>1,409</b>	<b>12</b>	<b>8,795</b>

(a) This table refers to children, under 21 years at time of petition, of marriages for which decree absolute for dissolution have been granted in 1961 and 1962. See also footnote (a) to table preceding.

13. Number of Divorced Persons at each Census, 1911 to 1961.—The following table shows the number and proportion of divorced persons in Australia as recorded from returns supplied at each census from 1911 to 1961. A classification of divorced persons by age, for the censuses from 1891 to 1947, appeared in earlier issues of the Year Book (see No. 39, p. 269). Prior to 1911, no record was made of divorced persons in South Australia, so comparisons cannot be made beyond that date.

**DIVORCED PERSONS AT CENSUS DATES: AUSTRALIA**

Sex	Number						Proportion per 10,000 of males or females, 15 years of age and over					
	1911	1921	1933	1947	1954	1961	1911	1921	1933	1947	1954	1961
Males ..	2,368	4,233	10,298	25,052	32,389	38,641	15	23	42	89	100	105
Females ..	2,140	4,304	10,888	27,516	36,650	43,339	15	24	46	96	115	119

**§ 8. Bankruptcy**

1. General.—Particulars of bankruptcy in each State to the end of 1927 were incorporated in issues of the Year Book prior to No. 23. On 1st August, 1928, the Bankruptcy Act of the Commonwealth which is now the *Bankruptcy Act 1924-1960*, came into operation.

Under the *Bankruptcy Act 1924-1960*, the Commonwealth is divided into bankruptcy districts which coincide generally with State boundaries. A Federal Court of Bankruptcy has been established with jurisdiction throughout Australia, but it exercises this jurisdiction mainly in the bankruptcy districts of New South Wales, which includes the Australian Capital Territory, and Victoria. Certain State courts have been invested with federal jurisdiction in bankruptcy and, outside New South Wales and Victoria, usually exercise that jurisdiction in the appropriate bankruptcy district.

Any person unable to pay his debts may apply voluntarily for the sequestration of his estate, or his creditors may apply for a compulsory sequestration, if he has committed an act of bankruptcy. The act of bankruptcy usually relied on is non-compliance by a debtor with a bankruptcy notice which requires the debtor to whom it is addressed to pay within a specified time, to a creditor who has obtained a final judgment or order to pay, the amount of the debt, or satisfy the Court that he has a counter claim, set-off, or cross demand which equals or exceeds the judgment debt. If a bankruptcy notice is not complied with, a creditor may thereupon present a petition against a debtor, provided that—the debt or debts amount to £50; the act of bankruptcy relied on has occurred within the six months preceding the presentation of the petition; and the statutory requirements relating to domicile or residence are applicable to the debtor.

Upon the issue of a sequestration order, the property of the bankrupt vests in the official receiver named in the order, and his property is divisible among his creditors in accordance with the provisions of the Act. No creditor to whom the bankrupt is indebted in respect of any debt provable in bankruptcy has any remedy against the property or person of the bankrupt except by leave of the court.

Under Part XI. of the *Bankruptcy Act 1924–1960*, instead of having a sequestration order made against his estate, a debtor may compound with his creditors or assign his estate for their benefit. Under Part XII of the Act, a debtor may enter into a scheme of arrangement. The object of Parts XI and XII of the Act is to allow a debtor and his creditors to enter into an agreement concerning the debts due to the creditors without having a sequestration order made against the debtor.

The Court has power to decide questions of law affecting a bankrupt estate. Questions of fact may be tried before a jury.

The *Bankruptcy Act 1924–1960* provides for an Inspector-General in Bankruptcy. It also provides for a Registrar and an Official Receiver to be appointed for each bankruptcy district.

A Registrar in Bankruptcy is controlled by the Court and has such duties as the Attorney-General of the Commonwealth directs, or as are prescribed, and exercises such functions of an administrative nature as are authorized by the Court. He may examine a bankrupt or a person indebted to a bankrupt or having in his possession any of the estate or effects of a bankrupt. Stipendiary magistrates are appointed Deputy Registrars in country districts.

All sequestrated estates are vested in an Official Receiver, who is a permanent officer of the Commonwealth Public Service. His duties are to investigate the conduct, property and transactions of the debtor, and the cause of bankruptcy of a debtor, and to realize and administer the estate of the debtor. In respect of these activities, the Official Receiver is under the control of the Court.

Persons registered by the Court as qualified to act as trustees may be appointed by resolution of the creditors to be trustees of estates. In cases where a registered trustee under a deed of arrangement, composition, or assignment (Parts XI and XII of the *Bankruptcy Act*) is removed from or vacates his office, the official receiver may be appointed by the Court to complete the administration of the estate, or the Court may direct the official receiver to convene a meeting of the creditors in the estate to enable them to appoint a registered trustee to complete the administration of the estate.

**2. Bankruptcy Proceedings.**—The following table shows the number of bankruptcies of the various types in each State, together with the assets and liabilities of the debtors, during the twelve months ended 30th June, 1963.

## BANKRUPTCY PROCEEDINGS, 1962-63

State or Territory		Sequestration orders and orders for administration of deceased debtors' estates	Compositions and schemes under Part XI	Deeds under Part XI	Deeds of arrangement, Part XII	Total
N.S.W. (a)	Number ..	806	8	2	56	872
	Liabilities £	2,919,822	105,864	39,136	637,634	3,702,456
	Assets £	1,298,206	86,628	116,142	471,385	1,972,361
Vic. ..	Number ..	511	32	3	79	625
	Liabilities £	1,679,515	434,778	30,978	644,407	2,789,678
	Assets £	621,980	369,869	19,499	670,231	1,681,579
Q'land	Number ..	236	1	1	20	258
	Liabilities £	840,187	12,060	3,818	263,819	1,119,884
	Assets £	472,836	8,872	3,200	227,362	712,270
S. Aust.	Number ..	528	79	10	..	617
	Liabilities £	904,695	470,294	85,014	..	1,460,003
	Assets £	354,641	369,367	69,033	..	793,041
W. Aust.	Number ..	171	63	5	2	241
	Liabilities £	265,162	865,047	25,911	29,246	1,185,366
	Assets £	76,635	935,964	25,411	32,474	1,070,484
Tas. ..	Number ..	116	..	2	1	119
	Liabilities £	383,755	..	31,057	7,430	422,242
	Assets £	137,878	..	23,490	4,886	166,254
N.T. ..	Number ..	3	..	..	..	3
	Liabilities £	11,992	..	..	..	11,992
	Assets £	283	..	..	..	283
Australia	Number ..	2,371	183	23	158	2,735
	Liabilities £	7,005,128	1,888,043	215,914	1,582,536	10,691,621
	Assets £	2,962,459	1,770,700	256,775	1,406,338	6,396,272

(a) Includes the Australian Capital Territory.

For purposes of comparison, the two tables which follow show Australian figures in respect of each of the various types of bankruptcy, and State figures in respect of all types of bankruptcy for the past five years.

## BANKRUPTCY PROCEEDINGS: AUSTRALIA

Year		Sequestration orders and orders for administration of deceased debtors' estates	Compositions and schemes under Part XI	Deeds under Part XI	Deeds of arrangement, Part XII	Total
1958-59	Number ..	1,603	131	19	196	1,949
	Liabilities £	4,534,479	608,040	198,730	1,844,512	7,185,761
	Assets £	2,089,842	697,414	145,712	1,594,706	4,527,674
1959-60	Number ..	1,949	119	28	192	2,288
	Liabilities £	5,126,243	529,885	161,978	1,961,335	7,779,441
	Assets £	2,738,689	411,084	176,205	1,531,283	4,857,261
1960-61	Number ..	2,004	118	21	225	2,368
	Liabilities £	5,609,860	424,969	189,434	2,170,643	8,394,906
	Assets £	3,333,274	325,602	196,254	1,665,396	5,520,526
1961-62	Number ..	2,239	172	31	218	2,660
	Liabilities £	6,988,310	1,078,263	237,796	1,636,481	9,940,850
	Assets £	3,503,851	873,393	193,760	1,384,849	5,955,853
1962-63	Number ..	2,371	183	23	158	2,735
	Liabilities £	7,005,128	1,888,043	215,914	1,582,536	10,691,621
	Assets £	2,962,459	1,770,700	256,775	1,406,338	6,396,272

## BANKRUPTCY PROCEEDINGS: STATES

Year	N.S.W. (a)	Vic.	Qld	S.A.	W.A.	Tas.	N.T.	Aus- ralia.
1958-59	Number .. 745	394	200	316	206	88	..	1,949
	Liabilities £ 2,683,920	1,713,739	832,572	707,481	1,057,664	190,385	..	7,185,761
	Assets £ 1,661,574	952,691	656,757	371,488	775,328	109,836	..	4,527,674
1959-60	Number .. 892	494	234	372	199	96	1	2,288
	Liabilities £ 3,216,889	2,019,268	725,189	801,093	628,876	373,246	14,880	7,779,441
	Assets £ 2,001,621	1,182,287	631,121	446,738	412,387	168,030	15,077	4,857,261
1960-61	Number .. 868	489	253	468	206	81	3	2,368
	Liabilities £ 3,305,964	1,951,320	952,715	1,343,854	545,522	287,718	7,813	8,394,906
	Assets £ 2,342,275	1,297,881	725,656	696,223	327,729	125,340	5,422	5,520,526
1961-62	Number .. 865	587	285	581	238	98	6	2,660
	Liabilities £ 3,260,021	2,406,429	1,320,514	1,756,016	863,282	306,171	28,417	9,940,850
	Assets £ 2,061,455	1,003,823	1,172,556	1,051,451	492,323	164,418	9,827	5,955,853
1962-63	Number .. 872	625	258	617	241	119	3	2,735
	Liabilities £ 3,702,456	2,789,678	1,119,884	1,466,003	1,185,366	422,242	11,992	10,691,621
	Assets £ 1,972,361	1,681,579	712,270	793,041	1,070,484	166,254	283	6,396,272

(a) Includes the Australian Capital Territory.

## § 9. Police

1. General.—The primary duties of the police are to prevent crime, to detect and detain offenders, to protect life and property, to enforce the law, and to maintain peace and good order. In addition, they perform many duties in the service of the State, e.g. they act as clerks of petty sessions in small centres, as crown land bailiffs, foresters, mining wardens and inspectors under the fisheries and various other Acts. In metropolitan and large country areas, they also regulate the street traffic. With the exception of the Commonwealth Police Force (see next page) and the police in the Northern Territory and the Australian Capital Territory, the police forces of Australia are under the control of the State Governments, but their members perform certain functions for the Commonwealth Government, such as acting as aliens registration officers and policing various acts and regulations.

Women police perform special duties at places where young women and girls are subject to moral danger, control traffic at school crossings, and lecture school children on road safety. They also assist male police as required in the performance of normal police duties.

The strength of the police force in each State and Territory and the number of persons to each police officer are shown in the following table for the years 1959 to 1963. The figures include traffic and water police, probationers, cadets, special constables and women police, but exclude parking police, native trackers (Aboriginals employed in outlying districts in tracking lost persons and persons wanted by the police), female searchers, wardresses and interpreters.

## STRENGTH OF POLICE FORCES

30th June—	N.S.W.	Vic.	Q'land	S. Aust.	W. Aust.	Tas.	N.T.	A.C.T.	Aus- ralia
<b>TOTAL STRENGTH</b>									
1959 .. ..	5,245	3,753	2,678	1,425	1,056	524	102	73	14,856
1960 .. ..	5,378	3,867	2,647	1,498	1,142	550	103	77	15,262
1961 .. ..	5,575	4,025	2,673	1,694	1,169	558	105	89	15,888
1962 .. ..	5,687	4,127	2,748	1,727	1,164	579	125	101	16,258
1963 .. ..	5,826	4,290	2,798	1,752	1,184	629	137	115	16,731

## POPULATION TO EACH POLICE OFFICER

1959 .. ..	717	742	548	646	674	648	236	631	677
1960 .. ..	713	739	565	631	632	625	248	680	673
1961 .. ..	703	728	568	572	630	628	258	661	661
1962 .. ..	699	725	561	573	648	617	222	650	659
1963 .. ..	695	712	560	576	525	574	215	639	653

STRENGTH OF POLICE FORCES—*continued*

30th June—	N.S.W.	Vic.	Q'land	S. Aust.	W. Aust.	Tas.	N.T.	A.C.T.	Australia
NUMBER OF POLICEWOMEN(a)									
1959 .. ..	48	50	9	33	12	8	..	2	162
1960 .. ..	54	55	9	34	13	10	..	2	177
1961 .. ..	58	58	9	35	14	10	5	2	191
1962 .. ..	57	60	8	39	14	10	2	2	192
1963 .. ..	57	58	7	39	15	10	6	2	194
NUMBER OF NATIVE TRACKERS(b)									
1959 .. ..	5	1	24	(c)	4	..	35	..	69
1960 .. ..	5	1	18	(c)	4	..	32	..	60
1961 .. ..	5	1	17	(c)	4	..	31	..	58
1962 .. ..	5	1	16	(c)	4	..	34	..	60
1963 .. ..	5	1	14	(c)	4	..	30	..	54

(a) Included in total strength shown above. (b) Not included in total strength shown above.  
(c) One native tracker, who is paid a small weekly retainer and is supplied with rations, is continually on call.

2. The Commonwealth Police Force.—The Commonwealth Police Force commenced operations on 21st April, 1960, and is the principal agency for the enforcement of the laws passed by the Commonwealth Parliament. It is also responsible for the protection of Commonwealth property and interests at various buildings and establishments under the control of the Commonwealth. This force co-ordinates the work of other Commonwealth investigation and law enforcement agencies and acts on behalf of the United Nations Organization for the suppressing of traffic in women and the suppression of obscene literature.

Under the control of the force is the Australian Police College at Manly, N.S.W., which provides training for officers of various police forces and other agencies in Australia and New Zealand.

The force has District Offices in each Capital City and its Head Office in Canberra. The strength of the force at 30th June, 1963, was 563 policemen and 3 policewomen. Twenty-eight guard dogs were available for use by the force and by State police forces as required.

## § 10. Prisons

1. Prisons and Prison Accommodation.—The table below shows the number of prisons in each State and the Northern Territory and the accommodation therein at 30th June, 1962.

## PRISONS AND PRISON ACCOMMODATION, 1962

Particulars	N.S.W.	Vic.	Q'land	S. Aust.	W. Aust.	Tas.	N.T.	Australia
Prisons .. ..	18	12	7	15	19	1	2	74
Accommodation .. ..	3,100	2,346	925	1,018	906	381	87	8,763

There is no gaol in the Australian Capital Territory, but there is a lock-up attached to the police station at Canberra, and another lock-up at Jervis Bay, where offenders are held while awaiting trial or serving short sentences not exceeding one week imposed by a Magistrate's Court.

2. **Convicted Prisoners.**—The number of convicted prisoners at 30th June of each of the years 1958 to 1962 and the proportion per 10,000 of the population are shown in the following table.

**CONVICTED PRISONERS**

30th June—	N.S.W. (a)	Vic.	Q'land (b)	S. Aust. (b)	W. Aust. (b)	Tas. (b)	N.T. (b)	Aus- tralia
NUMBER								
1958 .. ..	3,126	1,397	799	526	527	196	32	6,603
1959 .. ..	2,895	1,539	868	577	477	223	28	6,607
1960 .. ..	2,903	1,678	865	570	526	195	26	6,763
1961 .. ..	3,090	1,827	877	592	526	237	41	7,190
1962 .. ..	3,052	1,844	843	658	573	207	49	7,226

**NUMBER PER 10,000 OF POPULATION**

1958 .. ..	8.5	5.1	5.6	5.9	7.5	5.9	14.5	6.7
1959 .. ..	7.7	5.5	5.9	6.3	6.7	6.6	11.6	6.6
1960 .. ..	7.6	5.9	5.8	6.0	7.3	5.7	10.2	6.6
1961 .. ..	7.9	6.2	5.8	6.1	7.1	6.8	15.1	6.8
1962 .. ..	7.6	6.1	5.4	6.6	7.6	5.7	17.6	6.7

(a) Includes the Australian Capital Territory. Includes short-term prisoners held in lock-ups at police stations.  
(b) Excludes Aborigines.

**§ 11. Patents, Trade Marks and Designs**

1. **Patents.**—Patents for inventions are granted under the *Patents Act 1952-1960*, which applies to the Commonwealth of Australia and the Territories of Norfolk Island, Papua and New Guinea. The Act is administered by a Commissioner of Patents. The principal fees payable up to and including the grant of a patent amount to £19 10s. Renewal fees are payable as follows:—£5 before the expiration of the fourth year, and an amount progressively increasing by £1 before the expiration of each succeeding year up to the final fee of £16, payable before the expiration of the fifteenth year. An extension of time for six months for payment of a renewal fee may be obtained.

The number of separate inventions in respect of which applications were filed and the number of letters patent sealed during the years 1959 to 1963 are shown in the following table.

**PATENTS: AUSTRALIA**

Particulars	1959	1960	1961	1962	1963
Applications .. ..	11,430	11,828	12,901	13,026	13,051
Applications accompanied by provisional specifications ..	4,063	3,772	3,919	3,710	3,557
Letters patent sealed ..	5,488	4,857	4,940	3,866	5,361

2. **Trade Marks and Designs.**—Under the *Trade Marks Act 1955-1958* the Commissioner of Patents is also Registrar of Trade Marks. Provision is made for the registration of users of trade marks and for their assignment with or without the goodwill of the business concerned. A new classification of goods was adopted in 1958, and trade marks registered under repealed Acts are reclassified on renewal.



Under the *Designs Act* 1906–1950, the Commissioner of Patents is also Registrar of Designs.

The following table shows the applications for trade marks and designs received and registered during the years 1959 to 1963.

#### TRADE MARKS AND DESIGNS: AUSTRALIA

Particulars	1959	1960	1961	1962	1963
Trade marks—					
Received .. ..	5,436	6,083	6,209	5,920	6,411
Registered .. ..	3,792	3,203	4,592	3,558	4,224
Designs—					
Received .. ..	1,366	1,283	1,413	1,392	1,425
Registered .. ..	819	1,507	1,522	1,064	1,251

### § 12. Copyright

1. **Legislation.**—Copyright is regulated by the *Commonwealth Copyright Act* 1912–1950 wherein, subject to modifications relating to procedure and remedies, the British *Copyright Act* of 1911 has been adopted and scheduled to the Australian law. The Act is administered by the Commissioner of Patents.

Reciprocal protection of unpublished works was extended in 1918 to citizens of Australia and of the United States of America, under which copyright may be secured in the latter country by registration at the Library of Congress, Washington. The Commonwealth Government promulgated a further Order-in-Council which came into operation on 1st February, 1923, and extended the provisions of the Copyright Act to the foreign countries of the Copyright Union, subject to the observance of the conditions contained therein.

2. **Applications and Registrations.**—The following table shows under the various headings the number of applications for copyright lodged and registered for the years 1959 to 1963.

#### COPYRIGHT: AUSTRALIA

Particulars	1959	1960	1961	1962	1963
Applications lodged—					
Literary .. ..	1,153	1,042	1,088	1,131	1,236
Artistic .. ..	65	53	65	31	29
International .. ..	..	..	..	..	..
Applications registered—					
Literary .. ..	1,038	916	1,005	1,172	1,128
Artistic .. ..	47	61	37	52	18
International .. ..	..	..	..	..	..

### § 13. Cost of Administration of Law and Order

1. **Expenditure by the States.**—The tables below show the net expenditure (i.e., gross expenditure less receipts from fees, fines, recoups for services rendered, etc.) from Consolidated Revenue during 1962–63 in connexion with the administration of justice, police and prisons in each State.

In South Australia, the receipts for legal fees and registrations exceed the expenditure under "Justice". Because of differing legislative and administrative arrangements in the various States, the activities covered by the figures shown are not exactly the same in each State. Small differences also result from differing accounting practices. However, the figures shown for individual States are comparable from year to year.

## NET EXPENDITURE ON LAW AND ORDER, 1962-63

State	Net expenditure			Per head of population		
	Justice	Police	Prisons	Justice	Police	Prisons
	£	£	£	s. d.	s. d.	s. d.
New South Wales ..	1,558,114	9,330,127	1,525,394	7 9	46 6	7 7
Victoria ..	830,634	7,739,027	1,149,871	5 6	51 2	7 7
Queensland ..	438,380	4,866,813	495,011	5 8	62 8	6 5
South Australia ..	-353,523	2,802,990	442,392	-7 1	56 1	8 10
Western Australia ..	218,533	2,000,709	289,053	5 9	52 4	7 7
Tasmania ..	230,254	985,720	222,240	12 9	54 5	12 3
<b>Total ..</b>	<b>2,922,392</b>	<b>27,725,386</b>	<b>4,123,961</b>	<b>5 5</b>	<b>51 9</b>	<b>7 8</b>

2. *Commonwealth Expenditure.*—(i) *Attorney-General's Department.* The expenditure shown in the previous table is that incurred by the State Governments. Since the functions of the Commonwealth Government in the administration of law and order differ considerably from those of the States, precise comparison between Commonwealth and State expenditure in this field is not possible. The following table, however, shows the gross expenditure by the Commonwealth Attorney-General's Department during the year 1962-63 on the main services it performs.

## EXPENDITURE BY THE COMMONWEALTH ATTORNEY-GENERAL'S DEPARTMENT, 1962-63

(£ )

Particulars	Gross expenditure
Administration ..	386,538
Australian Police College ..	27,809
Bankruptcy ..	254,005
Commonwealth Police Force ..	347,744
Conciliation and arbitration ..	248,556
Crown Solicitor's Office ..	479,806
High Court ..	104,860
Judges' salaries and pensions ..	215,426
Legal Service Bureau ..	65,856
Matrimonial causes—Grants to organizations ..	51,750
Patents, trade marks and designs ..	588,759
Rent ..	89,808
Repairs and maintenance ..	32,625
Court Reporting Branch ..	204,505
Territory courts ..	151,202
<b>Total ..</b>	<b>3,249,249</b>

In addition, £89,103 was spent by the Attorney-General's Department on capital works and services.

The items of expenditure shown in the table above are gross. Receipts of the Attorney-General's Department for 1962-63 aggregated £1,039,207, of which revenue on account of Patents, Trade Marks and Designs, and Copyright amounted to £605,732, Bankruptcy £181,013, Court Reporting Branch £182,395, Fees, Fines and Costs of Court £41,022, and Miscellaneous £29,045.

Expenditure and receipts of the Attorney-General's Department for the five years 1958-59 to 1962-63 are shown in the following table.

**EXPENDITURE BY THE COMMONWEALTH ATTORNEY-GENERAL'S  
DEPARTMENT**

(£)

Year	Gross expenditure	Receipts	Net expenditure
1958-59 .. .. .	2,184,038	572,771	1,611,267
1959-60 .. .. .	2,534,609	670,048	1,864,561
1960-61 .. .. .	2,699,095	812,493	1,886,602
1961-62 .. .. .	2,913,966	946,934	1,967,032
1962-63 .. .. .	3,249,249	1,039,207	2,210,042

(ii) *Police and Prisons.* Expenditure (other than capital) by the Commonwealth Government on police in the Australian Capital Territory (excluding the Commonwealth Police Force shown above) and police and prisons in the Northern Territory for the five years 1958-59 to 1962-63 is shown in the following table.

**EXPENDITURE ON POLICE AND PRISONS IN THE NORTHERN TERRITORY  
AND THE AUSTRALIAN CAPITAL TERRITORY**

(£)

Year	Northern Territory	Australian Capital Territory <sup>(a)</sup>
1958-59 .. .. .	227,031	137,894
1959-60 .. .. .	262,261	168,952
1960-61 .. .. .	322,763	197,275
1961-62 .. .. .	335,485	215,921
1962-63 .. .. .	394,984	263,148

<sup>(a)</sup> Expenditure on police only. There is no prison in the Australian Capital Territory.

## CHAPTER XVIII

## PUBLIC HEALTH

## STATE GOVERNMENT ACTIVITIES

(Including activities of the Commonwealth Government in the Northern Territory and the Australian Capital Territory)

## § 1. Public Health Legislation and Administration

1. **New South Wales.**—The Department of Public Health comes under the jurisdiction of the Minister for Health, with an Under-Secretary as Permanent Head of the Department.

There is a Director-General of Public Health and Psychiatric Services who is Chief Medical Adviser to the Government, *ex officio* President of the Board of Health and Chairman of the Nurses Registration Board. He is responsible for the administration of the part of the *Mental Health Act* 1958–1962 relating to the care and treatment of mental patients.

The Department's activities embrace all matters relating to public health and the greater part of the general medical work of the Government. These include:—(a) Supervision of the work of local authorities (municipal and shire councils) in relation to public health matters connected with the following Acts—*Public Health Act* 1902–1961, *Noxious Trades Act* 1902–1957 and *Pure Foods Act* 1908–1958; (b) Scientific divisions (Government Analyst, Microbiological Laboratory, Institute of Clinical Pathology and Medical Research, Division of Occupational Health), and Division of Forensic Medicine; (c) Tuberculosis and Epidemiological Divisions; (d) Medical Officers of Health at Sydney, Broken Hill, Newcastle, Wollongong, Bathurst, Tamworth and Lismore; (e) State hospitals and homes and State sanatoria; (f) Mental hospitals; (g) Maternal and baby welfare (baby health centres); (h) School medical and dental services; and (i) Publicity, nutrition and library services.

Public hospitals, other than State hospitals, are administered by the Hospitals Commission of New South Wales in terms of the *Public Hospitals Act* 1929–1959. The Hospitals Commission of New South Wales is a statutory corporation under the jurisdiction of the Minister for Health.

2. **Victoria.**—(i) *General.* The Ministry of Health combines under the control of one Minister all the health, hospital and associated services either administered directly or supported financially by the Government. The central administration of the Department of Health assists the Minister with the task of co-ordinating the work of a variety of associated bodies as well as carrying out the functions of a headquarters of a Department consisting of four branches—the General Health Branch, the Maternal and Child Welfare Branch, the Tuberculosis Branch and the Mental Hygiene Branch. The functions of these branches are described below.

(ii) *The General Health Branch.* This branch, which, *inter alia*, is the administrative branch for the Commission of Public Health, protects or promotes the health of the community in the following ways.

The Engineering Division scrutinizes from a public health point of view the plans of all public buildings and provincial sewerage installations and makes periodical inspections. Other activities include prevention of air pollution from industrial sources, prevention of stream pollution and supervision of abattoirs and cattle sale yards.

The Poliomyelitis Division provides a comprehensive orthopaedic, physiotherapy, and respirator service for all eligible patients and carries out rehabilitation in conjunction with the Commonwealth Government. Facilities developed for poliomyelitis are now being used for other neurological disorders. The Division is also concerned with the Salk immunization campaign being undertaken in Victoria. Through the municipalities, immunization against poliomyelitis, diphtheria, smallpox, whooping cough, and tetanus is encouraged and supervised.

Prevention and control of infectious diseases are functions of this Branch, which also sponsors original research into virus diseases and epidemiological investigations throughout Victoria.

The Venereal Diseases Division provides a centrally situated headquarters where the use of modern remedies is effecting a general improvement in the standard of treatment.

Standards of quality and purity of foods and drugs are fixed by the Food Standards Committee and are administered and enforced by both departmental and municipal health inspectors.

Investigations into occupational hazards to the health of workers, the treatment and incidence of occupational diseases, and research into the effects of toxic substances used in industry are conducted by the Industrial Hygiene Division.

Subsidies are granted to municipalities to provide meals for pensioners, to clubs for elderly citizens, and to emergency housekeeper services.

Other services operated by the Branch are:—registering plumbers and gasfitters; providing free travel to hospital for people with limited incomes; analysing food, drink, water and sewerage effluents; registering cinematograph operators; administering the Cemeteries Acts; and advising industry on health hazards associated with handling radioactive substances.

(iii) *The Maternal and Child Welfare Branch.* This branch is concerned with pre-natal hygiene, the development of pre-school services, and the school medical and dental services.

(iv) *The Tuberculosis Branch.* The Tuberculosis Branch is concerned with the prevention of tuberculosis and the treatment and rehabilitation of tubercular patients.

(v) *The Mental Hygiene Branch.* This Branch is controlled by the Mental Health Authority and consists of institutions for in-patient care and out-patients' clinics and other services necessary for a comprehensive community mental health programme. Since the appointment of the Authority in 1951, existing buildings have been remodelled and new ones provided. Services have been re-organized to conform with modern requirements.

3. Queensland.—(i) *General.* The *Health Acts 1937 to 1962* are administered by the Director-General of Health and Medical Services subject to the Minister for Health. A central staff controls the following divisions.

(a) *Division of Public Health Supervision.* This Division is controlled by the Deputy Director-General of Health and Medical Services, and comprises separate sections of communicable disease control, environmental sanitation, food and drug control, enthetic (venereal) diseases, hookworm control and Hansen's disease (leprosy) control. Free treatment of venereal diseases is offered at the Department's clinics in Brisbane and at any public hospital. Free immunization against poliomyelitis, diphtheria, whooping cough and tetanus is offered by most of the local authorities. The majority of school children have been immunized against diphtheria, whooping cough, tetanus and poliomyelitis.

(b) *Division of Tuberculosis.* A central chest clinic in Brisbane offers Mantoux tests, X-ray examinations, and inoculations of Mantoux negative reactors free of charge. Similar clinics are situated at the Cairns, Rockhampton, Thursday Island, Toowoomba, and Townsville district hospitals. Children in the final grade of primary schools are Mantoux tested and given B.C.G. vaccine. The compulsory X-ray examination of all persons over the age of 14 years is proceeding. The survey of residents of the metropolitan area is one-third completed, and a survey of country areas has commenced again in the north.

(c) *Division of Industrial Medicine.* The services of this Division are available for the prevention of industrial hazards both to industry and to the trade union movement. The Division is particularly interested in occupational diseases, such as silicosis and lead and other poisoning, and advises on industrial problems such as lighting, ventilation, fatigue, air pollution and the use of radio-active isotopes.

(d) *Division of Maternal and Child Welfare.* This Division offers supervision and advice on the rearing and health of infants and pre-school children at 258 infant welfare centres throughout the State. Outlying centres are visited by air or by special rail car. Homes for in-patient treatment of infants with feeding problems have been established at Brisbane, Toowoomba, Ipswich and Rockhampton.

(e) *Division of School Health Services.* This Division comprises the Chief Medical Officer, School Health Services, and a staff of doctors, dentists and visiting school nurses. The dental officers inspect school children and carry out essential treatment at schools or in the rail dental clinics. The medical examinations are made every one to two years.

(f) *Division of Mental Health.* The Director of Psychiatric Services is responsible for the care and treatment of mentally ill patients in the State's four special hospitals at Brisbane, Toowoomba, Ipswich and Charters Towers. In addition to a separate clinic at Brisbane, psychiatric services are available at Brisbane, Townsville, Rockhampton and Toowoomba Public Hospitals. There is also an epileptic home at Toowoomba.

(g) *Division of Welfare and Guidance.* Clinics for the diagnosis and management of behaviour disorders in children have been set up in the Greater Brisbane Area, and further clinics are planned for Townsville and Toowoomba. This service is extensively used. The Wilson Youth Hospital has been opened for the social and psychiatric rehabilitation of boys convicted in the Children's Court. About 40 boys can be accommodated.

A Child Guidance Unit for out-patients, day-hospital patients, and 30 in-patients is about to be constructed in the grounds of the Brisbane Children's Hospital. A similar unit is planned for Townsville.

(h) *Division of Social Work.* A Division of Social Services has been established to study and advise on social problems and the extension of social work services, and to co-ordinate social work developments in the health and medical services.

(i) *Division of Geriatrics.* A geriatric unit is established at Princess Alexandra Hospital. The unit consists of two wards with accommodation for 102 in-patients, administration section, day hospital, physio-therapy and occupational therapy departments.

(j) *Division of Laboratory Services.* Two laboratories—the Laboratory of Microbiology and Pathology and the Government Chemical Laboratory—are maintained to ensure the purity of a wide range of foodstuffs and materials. The former also offers a service in clinical pathology to institutions, country hospitals and private doctors, and provides a medico-legal service for the whole State. The Institute of Forensic Pathology is controlled by the medical staff of the Laboratory of Microbiology and Pathology, and coroners' autopsies are conducted there.

(ii) *Hospitals.* All public hospitals operate under the district system, which provides for the constitution of hospitals regions and hospitals districts, and a hospitals board for each district. The State is divided into 12 hospitals regions with a base hospital for each region. Each region comprises a number of hospitals districts, the purpose of the regional scheme being to co-ordinate the public hospitals in the region with the base hospital. The administration of the hospital services, including public dental services, in each hospitals district is vested in the hospitals board, which comprises not less than four members or more than eight members appointed by the Governor-in-Council, and one member elected by the component local authorities. During the year 1961-62, there were 60 hospitals boards controlling 137 public hospitals, 13 of which treated out-patients only. In addition, 22 other hospitals, six of which are treated as public hospitals, received aid from the Government, and an institution for the treatment of Hansen's disease in Aborigines was maintained at Fantome Island near Townsville. Other persons suffering from this disease are treated at an annexe of the Princess Alexandra Hospital, South Brisbane.

4. *South Australia.*—The Department of Public Health embraces the activities of the Central Board of Health, the Food Drugs Advisory Committee, the Radiological Advisory Committee, the School Health Services (comprising School Medical and Dental Services and Deafness Guidance Clinic), Poliomyelitis Services and the public health aspects of the control of tuberculosis, including the State X-ray Health Survey and the Chest Clinic.

The Central Board of Health consists of five members, three of whom (including the chairman) are appointed by the Governor, while one is elected by metropolitan local boards and one by all other local boards. The Central Board of Health administers the *Health Act 1935-1963*, *Food and Drugs Act 1908-1962*, *Dangerous Drugs Act 1934-1955*, *Noxious Trades Act 1943-1955*, *Bakehouses Registrations Act 1945-1947* and *Notification of Birth Act 1926-1936*. The Board is also concerned to some degree with Acts relating to local government, abattoirs and cremation. Other legislation administered by the Department of Public Health relates to venereal diseases and vaccination.

The *Health Act 1935-1963* constitutes every municipal council and every district council a local board of health for its municipality or district. There are 142 local boards under the general control and supervision of the Central Board. Under the Food and Drugs Act each local board is constituted the local authority for its respective district except in the metropolitan area, for which the Metropolitan County Board is the local authority.

5. *Western Australia.*—Health services are provided under the *Health Act 1911–1962*. The central authority is the Department of Public Health, controlled by a Commissioner, who must be a qualified medical practitioner. The State is divided into local government areas, each administered by a municipal council. All local government authorities have health administration powers.

In any emergency, the Commissioner may exercise all the powers of a health authority in any part of the State.

Features of legislation since 1957 are as follows:—(a) Act No. 30 of 1958 provides for the establishment of the Health Education Council with the object of promoting and improving the health of the people of Western Australia; (b) Act No. 43 of 1958 provides for the establishment of the Cancer Council of Western Australia with the objects of co-ordinating, promoting and subsidizing cancer research; (c) Act No. 23 of 1960 established a Maternal Mortality Committee to investigate each maternal death and to recommend preventive measures; and (d) Act No. 33 of 1962 empowers medical practitioners to give blood transfusions to minors despite parental objections, where life is endangered.

6. *Tasmania.*—The Department of Health Services is under the jurisdiction of the Minister for Health. The Department consists of a Headquarters and three Divisions. The Director-General of Health Services is the permanent head of the Department, and he administers the Department through Directors of each of the three divisions (Division of Public Health, Division of Psychiatric Services, and Division of Tuberculosis) and through several other clinical directors and other senior officers attached to the headquarters of the Department, including the Directors of Orthopaedics, Pathology and Anaesthetics, and the Government Analyst and Chemist.

In addition to his responsibility for the functioning of the Department as a whole, the Director-General of Health Services administers directly the various branches of the work performed by headquarters. They are concerned particularly with the following:— (a) the administration of the hospital services throughout the State, (b) the District Medical Service, (c) the Hospital and Government Nursing Service, which includes the administration of 24 district nursing centres throughout the State, (d) legislation concerned with health and allied matters, the Nurses' Registration Board and the Dental Mechanics' Registration Board, (e) the National Fitness Council and Handicapped Children's Advisory Council, (f) specialist medical services, (g) statistical classification of diseases and injuries, (h) liaison with other States and the Commonwealth Health Department; and (i) all matters dealing with the maintenance of departmental property and the appointments and salaries of departmental staff.

The Division of Public Health is responsible for the oversight of those services (except those specifically related to tuberculosis) which aim at the attainment and maintenance of good physical health in the community. It controls the school health services (both medical and dental) and the child health service. It supervises the immunization campaigns conducted by local health authorities and is responsible for custody of poliomyelitis vaccine and maintenance of records of its use. The Division also sets standards of food quality and of environmental sanitation, which are policed in detail by local health authorities. The Division administers laws relating to standards of food, drugs, and food premises, and to environmental sanitation, public buildings, infectious disease (other than tuberculosis), and cremation.

The Division of Psychiatric Services provides a community psychiatric service. This includes a mental hospital and a neurosis hospital; institutional care for mental defectives, alcoholics, and sexual offenders; and a community psychiatric service on a regional basis covering the whole State. In addition, the Division administers the *Mental Hospitals Act 1885–1960*, and the *Mental Deficiency Act 1920–1956* and provides a State-wide service for the supervision of mental defectives in the community.

The Tuberculosis Division is concerned with the prevention (including B.C.G. vaccination), detection, notification, examination and treatment of all forms of tuberculosis and the maintenance of chest hospitals and diagnostic clinics.

7. *Northern Territory.*—The Commonwealth Department of Health provides health services in the Northern Territory which include hospital, medical and dental services.

Four general hospitals have been established and at 31st December, 1963, the available accommodation for in-patients was as follows:—Darwin Hospital, 309; Alice Springs Hospital, 134; Katherine Hospital, 36 and Tennant Creek Hospital, 34. The treatment of

Hansen's disease (leprosy) is carried out at East Arm Settlement. A full range of ancillary services is available at the Darwin hospital, which serves as a base hospital for the Territory. Dental clinics have been set up at Darwin and Alice Springs.

Medical and dental services to outback areas are provided by road and air. The Department of Health has two De Havilland Dove aircraft stationed at Darwin, and one at Alice Springs. They are staffed and serviced by Trans-Australia Airlines and are extensively used in ambulance and survey medical work. At Alice Springs, medical officers of the Department of Health provide the medical services to the Royal Flying Doctor Service (South Australian) base.

Public health services are provided, and health inspectors visit all settlements periodically.

A section of the Department of Health undertakes continuous investigation into native health.

8. Australian Capital Territory.—The *Public Health Ordinance* 1928–1951 places under the control of the Minister for Health matters relating to public health and hygiene in the Australian Capital Territory. In addition to the public health activities normally undertaken by the State Governments, the Commonwealth Department of Health undertakes certain duties which in the States would be the responsibility of local government instrumentalities.

A medical officer of health and a staff of four health inspectors have been appointed to administer the Public Health Ordinance and ancillary regulations. During 1963, 754 licences were issued under various public health regulations, while legal action was taken in 25 cases for offences against these regulations. The inspection staff is also responsible for the quarantine inspection of parcels arriving under bond at the Canberra Post Office.

In the campaign to control the incidence of poliomyelitis the Department of Health gave 3,100 anti-poliomyelitis injections of Salk vaccine to adult residents of the Australian Capital Territory in 1963.

The Commonwealth Health Laboratory in Canberra provides full clinical laboratory services to the Canberra Community Hospital and to private medical practitioners in the Australian Capital Territory. In 1963, 258,797 pathological services were carried out, including more than 3,000 chemical and bacterial analyses of water, milk, other foods, and sewage.

The Canberra Community Hospital is administered, subject to the Minister for Health, by a board consisting of five elected members and three members appointed by the Minister. At 31st December, 1963, the hospital had accommodation for 380 in-patients.

The Director of the Tuberculosis Division of the Commonwealth Department of Health, in addition to the responsibility of co-ordinating the activities of the States in the national campaign against tuberculosis, is concerned with the prevention, detection, examination and treatment of tuberculosis in the Australian Capital Territory. In 1963, 14 cases of tuberculosis were notified in the Australian Capital Territory.

The supervision of the hygiene of dairies and piggeries and the control of the Canberra Abattoir is the responsibility of the veterinary service of the Department of Health. The duties of this service also include the prevention and control of disease in stock and advice to district stock owners with field diagnosis on a herd or flock basis supported by laboratory confirmation.

A district nursing service, administered by the Commonwealth Department of Health, was established in 1950 to provide a home-nursing service for the sick and aged. This service, available at the request of a registered medical practitioner, is provided by six sisters, who, in 1963, made 19,554 visits. Throughout the year liaison was maintained by the sisters with agencies engaged in social welfare work.

## § 2. Supervision and Care of Infant Life

1. General.—Because the health of mothers and infants depends largely on pre-natal attention as well as after-care, government, local government, and private organizations provide instruction and treatment for mothers before and after confinement. The health and well-being of mother and child are looked after by infant welfare centres, baby clinics, crèches, etc.

In all States, Acts have been passed with the object of supervising the conditions of infant life and reducing the rate of mortality. Departments control the boarding-out of



the wards of the State to suitable persons. Wherever possible, the child is boarded out to its mother or to a near female relative. Stringent conditions regulate the adoption, nursing and maintenance of children placed in foster-homes by private persons, while special attention is devoted to the welfare of ex-nuptial children.

Under the provisions of the *Social Services Act 1947-1963* maternity allowances are paid to provide financial assistance towards the expenses associated with the birth of children. A sum of £15 is payable to the mother in respect of each confinement at which a living or viable child is born if the mother has no other children under 16 years of age. Where there are one or two other children under 16, the amount payable is £16, and where there are three or more other children under 16, the amount payable is £17 10s. Where more than one child is born at a birth, the amount of the allowance is increased by £5 in respect of each additional child born at that birth. More detailed information concerning maternity allowances is given in Chapter XVI. Welfare Services.

Information regarding infant mortality will be found in Chapter X. Vital Statistics (see pages 336-40).

2. *Nursing Activities.*—Several State Governments maintain institutions which provide treatment for mothers and children, and, in addition, subsidies are granted to various associations engaged in welfare work.

(i) *Infant Welfare Centres.* The following table gives particulars of the activities of infant welfare centres for the year 1963. The figures relate to all centres, whether permanently staffed or on a temporary or part-time basis. Centres may be located at accommodation specially provided for this purpose or at halls, schools, etc.

INFANT WELFARE CENTRES, 1963

Particulars	N.S.W.	Vic.	Q'land (a)	S. Aust. (a)	W. Aust.	Tas.	N.T.	A.C.T.	Aus- tralia
Number of centres	402	663	259	257	71	102	15	27	1,796
Attendances at centres ..	1,136,655	1,387,306	432,793	255,452	244,956	134,431	17,193	35,845	3,644,631
Visits by nurses to homes ..	n.a.	169,882	n.a.	33,567	23,381	75,551	6,638	6,800	n.a.

(a) Year ended 30th June, 1963.

Mobile units are used as centres in some States. The numbers of these in 1963, included in the above table, were as follows:—Victoria, 5; Queensland, 1; South Australia, 3; Western Australia, 4; and Tasmania, 10.

In the last thirty years, the number of attendances at the infant welfare centres has quadrupled. The numbers of attendances, at five-year intervals, since 1930 were as follows:—1930, 919,893; 1935, 1,355,306; 1940, 2,035,299; 1945, 2,927,764; 1950, 3,049,375; 1955, 3,099,233; and 1960, 3,480,203. During the year 1963, the number of attendances was 3,644,631.

(ii) *Bush Nursing Associations.* Treatment for mothers and children is also provided by the Bush Nursing Associations.

The number of centres maintained by the Associations in 1963 were:—New South Wales, 21; Victoria, 56; Queensland, 6; South Australia, 32; Western Australia, 12; and Tasmania, 24.

(iii) *Canberra Mothercraft Society.* This society, which is subsidized by the Commonwealth Department of Health, administers the Infant Welfare Service in Canberra with a staff of nine certificated nurses.

(iv) *Queen Elizabeth II. Coronation Home for Mothers and Babies.* This home, which is under the management of the Canberra Mothercraft Society, was opened on 7th January, 1963. It is staffed by qualified nursing staff and provides post-natal care for mothers and problem babies. The Home, which is an approved public hospital for Hospital Benefits purposes, has accommodation for two mothers and nine babies. The daily occupied bed average for 1963 was 5.2.

### § 3. Medical Inspection of School Children

1. **General.**—Medical and dental inspection of school children is carried out in all States, in the Northern Territory, and in the Australian Capital Territory. In some States, travelling clinics have been established to deal with dental defects.

2. **New South Wales.**—(i) *School Medical Service.* Doctors of the School Medical Service examine children attending all schools administered by the Department of Education and the majority of other schools in the State. They make annual visits to schools in the metropolitan, Newcastle and Wollongong areas, and in Armidale, Bathurst, Lismore and district, Grafton and district, and Cootamundra, and examine children in kindergarten or 1st grade in primary schools and 2nd year in secondary schools. Children in 4th grade in primary schools and 4th year in secondary schools are reviewed. Children in other classes are examined or reviewed as necessary.

In country areas, school children are examined by local medical practitioners according to the normal practice of the School Medical Service and under the supervision of local municipal and shire councils. During the first examination, all children at these schools are examined, and following that, the same procedure is adopted as in the metropolitan area. This scheme is growing and the majority of Councils in New South Wales have expressed interest and are endeavouring to arrange with local medical practitioners to have the scheme introduced. If treatment is necessary, the parent is informed and, if possible, is called in for interview. In the metropolitan, Newcastle, Wollongong, Lismore and Grafton areas, school nurses follow up these cases with the object of persuading parents to seek medical advice for the children.

In each of four circumscribed areas in the Sydney metropolitan area a Child Health Centre has been established. Each centre offers full-time diagnostic and advisory service to approximately 45,000 children in 100 schools, and provides treatment for emotional problems and speech defects. Additional centres are in process of construction. Eleven centres are planned for the Sydney area, one in Newcastle and one in Wollongong.

As well as examining school children, the medical officer examines the sanitary arrangements at each school. Bush nurses act as school nurses in schools at or near the bush nursing centres. Medical officers of this service examined 276,385 children in 1962. Notifiable defects in the children examined were found in 33.0 per cent.

Various surveys of school children are undertaken from time to time, e.g. hearing surveys, hookworm surveys, height-weight surveys, nutrition surveys, and investigations to determine the incidence of enlargement of the thyroid gland, defective vision, and postural defects.

Six child guidance clinics in the metropolitan area and one at Newcastle operate under the administration of the School Medical Service. One clinic functions at the Yasmars Boys' Shelter and deals exclusively with cases which come before the Children's Courts. Each clinic is staffed by a psychiatrist, a psychologist and social workers.

(ii) *School Dental Service.* There are 33 dental officers and 28 dental assistants on the staff of the School Dental Service, Division of Dental Services, Department of Public Health, providing a dental service for New South Wales school children. At the beginning of the 1963 school year, fourteen fully-equipped mobile dental clinics were in service in country areas. The clinics are staffed by a dentist and assistant. They visit country schools and provide treatment free of charge.

There are five fixed clinics, each of two surgeries, a waiting room, office and separate washrooms for patients and staff. These are located at Newcastle and Wollongong, and at Hurstville, Parramatta and Naremburn in the Sydney metropolitan area. Free treatment may be obtained for those school children whose parents desire it. It is necessary to restrict the treatment to children of 6, 7 and 8 years of age in the metropolitan area and 6 to 9 years in the country, although children of any age may obtain free treatment of an emergency nature. A system involving examination only was commenced in September, 1960, whereby as many primary school children as possible are encouraged to seek private treatment by means of notification charts, or children within the age groups are referred to the fixed clinics.

A well-equipped dental surgery is in continuous operation at the Stewart House Preventorium, staffed by officers of the Division, and there is a modern dental clinic at Glenfield Park school which receives regular visits from a school dental officer. A free dental service is provided, in co-operation with the Royal Flying Doctor Service, for children living in far western areas. In country areas where no adequate dental facilities exist, school children of all ages are eligible for treatment in the mobile clinics.

In 1963, 107,595 school children were examined and 14,202 were treated in 55,423 visits; 21,715 extractions, 59,429 fillings and 58,317 other treatments were completed. The parents of a further 62,484 children were notified of dental defects requiring treatment.

3. **Victoria.**—School medical services are conducted in close association with the Education Department. All children between the ages of 5 and 14 years attending State and registered schools are examined regularly, and any disabilities found in the children are brought to the notice of their parents. School nurses, under medical direction, visit the homes and schools. Children suffering from physical and mental disabilities are recommended to attend appropriate schools or classes by the medical officers. Some special training for the handicapped is given.

The School Dental Service has an establishment of 40 dental officers and provides dental attention for children in parts of the metropolitan area at one of three dental centres, and for a number of country districts by means of 15 mobile units, including 6 twin-surgery units. It also provides dental services for children's institutions in and around Melbourne and certain provincial centres. The service is now providing dental attention for some 60,000 primary school children.

4. **Queensland.**—During 1962–63, medical officers and nurses examined 112,483 school children, and of these, 5,002 children had disabilities of which parents were notified and advised to seek attention. In western Queensland, local doctors act as part-time ophthalmic surgeons. Advice is given on school sanitation, infectious diseases in schools, and health education.

During 1962, school dentists gave treatment to 11,358 school children who reside in areas beyond easy reach of hospital dental clinics. The treatment was carried out at four rail dental clinics and with portable equipment at schools. In addition, school children are treated at hospital dental clinics in the larger towns.

5. **South Australia.**—The metropolitan State schools are visited annually and the children are examined while in Grades 1, 4 and 7 in the primary schools and in their second and fourth years in secondary schools. Efforts are made to visit country schools every three years, when all the children are examined. Students who wish to become teachers are examined on appointment as Leaving Teaching Scholars while still attending secondary schools, again immediately prior to entering the Teachers' College and finally when they leave the College to take up teaching. Courses of lectures in health education are given to all College students and, in addition, domestic art students are lectured on home nursing.

During 1963, 77,443 children were examined by medical officers in 205 country and 128 metropolitan schools. Of these, 5,696 required treatment for defective vision, 2,387 for defective hearing, and 11,707 for dental disorders.

Dentists using mobile vans examined 9,685 school children in country areas where a private dental service was not readily available; 5,325 children were offered treatment; 4,157 accepted and were treated free of charge.

There were 1,904 children examined at the Deafness Guidance Clinic during 1963. Of the 1,168 new patients, 593 were referred to doctors or hospitals for treatment.

Educational work was assisted by talks to mothers' clubs and interviews with parents by doctors and dentists, and by home visits and interviews by nurses.

6. **Western Australia.**—The School Medical Service of the State Health Department employs seven full-time medical officers for schools. During 1962, these officers examined 56,519 children (metropolitan 32,882, country 23,637). The 416 schools visited comprised metropolitan, 258 (State schools 186, non-government schools 72), and country, 158 (State schools 128, non-government schools 30). The aim is to examine each school child three times in his school career.

During 1962, the twelve full-time dentists employed by the School Dental Service visited 11 metropolitan schools, 99 country schools, 8 orphanages and 11 native missions. The number of children examined was 8,911. With the consent of their parents, 5,359 of these were treated. The number of dental vans operating was 12. The cost of the School Medical Service and the School Dental Service for 1961-62 was £87,310.

7. *Tasmania*.—During 1963, two full-time and three part-time medical officers examined school children in State and non-government schools. In addition, four specialist medical officers also examined school children. Seventeen full-time and six part-time sisters visited homes and schools. Of the 22,689 children examined by medical officers, 6,781 were found to have defects.

Eleven school dental officers were employed during 1962-63, operating from surgeries at Hobart, Launceston, Burnie, Devonport, Ulverstone, Currie and Flinders Island, and from mobile clinics in other districts. A full-time dental surgeon is in charge of each surgery or clinic. During the year, there were 18,293 new visits to the school dentists and 21,762 repeat visits.

The cost of school medical and school dental services for the year ended 30th June, 1963, was £85,804.

8. *Northern Territory*.—The Schools Medical Officer makes routine physical examinations of all children attending both pre-school centres and the schools which come under the supervision of the Assistant Supervisor of Education in the Northern Territory. The only children not so examined by him are those at the Native Welfare Settlement School, i.e. full-blood Aboriginals, who are examined during native health surveys.

An immunization clinic and a paediatric clinic are held each week at the Darwin Hospital.

A special dental service for school and pre-school children is available in Darwin and Alice Springs. School doctors and dentists travel throughout the Territory to carry out diagnosis and treatment.

9. *Australian Capital Territory*.—The Commonwealth Department of Health is responsible for health aspects of child welfare in the Australian Capital Territory. These include a school medical service carried out by three medical officers and two trained nurses and a school dental service, staffed by 11 dentists and 11 dental nurses.

Medical examinations are carried out at all schools, public and private, within the Territory. During 1963, the total number of children examined was 6,873. The majority of the examinations were of children in the six, eight, 12 and 15 year age groups, but another large group of children were referred for examination of special conditions. In addition, examination of children attending Pre-School Centres was made according to the time available, 487 pre-school children being examined.

Defects notified during the year were:—460 eyesight, 179 ear, nose and throat, and 497 miscellaneous; while 300 cases of hearing loss not requiring further treatment were also found. Triple antigen injections, totalling 8,233 in 1963, were given at regular sessions held throughout the year, while 1,354 anti-poliomyelitis injections were given to school children, and 7,748 at Baby Health Clinics.

Free dental treatment from the School Dental Service is available to infants' and primary schools. During 1963, 7,058 children were examined and treated. Emphasis is placed on preventive dentistry and an extensive campaign of applying stannous fluoride to children's teeth was pursued in 1963, when approximately 2,000 treatments were given.

#### § 4. Disposal of Dead by Cremation

The first crematorium in Australia was opened in South Australia in 1903. At 31st December, 1963, there were eighteen crematoria in Australia, situated as follows:—New South Wales, 7; Victoria, 4; Queensland, 2; South Australia, 1; Western Australia, 2; Tasmania, 2.

There is no crematorium in the Northern Territory or in the Australian Capital Territory at present, but a site has been allocated for one in the Australian Capital Territory and it is expected that construction will begin during 1964.

The following table shows the number of cremations and total deaths in each State for each of the years 1959 to 1963.

### CREMATIONS AND TOTAL DEATHS

State or Territory	1959		1960		1961		1962		1963	
	Cremations	Total deaths	Cremations	Total deaths	Cremations	Total deaths	Cremations	Total deaths	Cremations	Total deaths
New South Wales	13,352	35,249	13,809	35,030	13,991	35,048	15,198	36,861	15,664	37,226
Victoria ..	7,549	25,078	7,839	24,547	7,923	24,500	8,425	25,847	8,782	26,920
Queensland ..	3,678	12,349	3,709	12,370	3,998	12,756	4,220	13,182	4,432	13,275
South Australia ..	779	7,943	915	7,804	908	7,815	1,122	8,232	1,304	8,201
Western Australia ..	1,433	5,497	1,526	5,697	1,576	5,729	1,640	5,810	1,502	5,976
Tasmania ..	666	2,780	692	2,670	731	2,789	792	2,870	786	2,818
Northern Territory ..	..	124	..	134	..	128	..	144	..	161
Australian Capital Territory ..	..	192	..	212	..	196	..	217	..	317
<b>Australia ..</b>	<b>27,457</b>	<b>89,212</b>	<b>28,490</b>	<b>88,464</b>	<b>29,127</b>	<b>88,961</b>	<b>31,397</b>	<b>93,163</b>	<b>32,470</b>	<b>94,894</b>

### COMMONWEALTH GOVERNMENT ACTIVITIES

NOTE.—The Commonwealth services outlined in this chapter are those provided under the National Health Services or otherwise administered by the Commonwealth Department of Health. For particulars of services administered by the Commonwealth Department of Social Services and of Commonwealth expenditure from the National Welfare Fund on all forms of social and health services see Chapter XVI. Welfare Services.

#### § 1. General

At the time of federation, the only health function given to the Commonwealth Government under the Constitution was the power to make laws with respect to quarantine. Following on the passing of the *Quarantine Act* 1908, a branch of the Department of Trade and Customs under the control of a Director of Quarantine was created on 1st July, 1909. An amendment to the Constitution in 1946 gave the Commonwealth power to make laws with respect to pharmaceutical, hospital and sickness benefits, and medical and dental services. In addition, the Commonwealth Government has used its powers under Section 96 of the Constitution to make grants to the States for health purposes.

The Commonwealth Department of Health was formed in 1921 by the extension and development of the quarantine service, the Director of Quarantine becoming the Director-General of Health.

#### § 2. National Health Benefits

1. **Pharmaceutical Benefits.**—A comprehensive range of drugs and medicines is made available to all persons receiving treatment from a medical practitioner registered in Australia. The benefits are supplied by an approved pharmacist upon presentation of a prescription, or by an approved hospital to patients receiving treatment at the hospital.

The patient pays the first 5s. of the cost of the prescription, but pensioners who are eligible for treatment under the Pensioner Medical Service (see para. 5, p. 683) receive all benefits without any contribution being made.

Total Commonwealth expenditure on pharmaceutical benefits in the year 1962–63 was £38,455,079.

2. **Hospital and Nursing Home Benefits.**—(i) *General.* Part V. of the *National Health Act* 1953–1963 which provides for the payment of Commonwealth hospital and nursing home benefits was amended by Act No. 82 of 1962 which received Royal Assent on 12th December, 1962 and came into effect on 1st January, 1963.

Commonwealth benefits are only payable in respect of treatment received in approved hospitals and approved nursing homes. For the purposes of the National Health Act, premises which provide medical treatment, care and accommodation for sick persons are

approved either as hospitals or as nursing homes depending mainly on their clinical standards and the type of patients accommodated. Usually premises are approved as hospitals if their general standards are substantially equivalent to those of a public hospital, and hospital treatment as defined in the National Health Act is provided. Premises are approved as nursing homes where their general standards are similar to those prevailing in benevolent homes, convalescent homes, rest homes or homes for the aged, and nursing home treatment as defined in the Act is provided.

(ii) *Patients in Approved Hospitals.* A basic principle of the provision of benefits for patients in approved hospitals is the Commonwealth support of voluntary insurance against the costs involved. Insured patients in approved hospitals receive a Commonwealth hospital benefit of 20s. a day which is paid through the contributors' registered hospital benefits organizations. Total payments by contributors to organizations range from 1s. to 4s. a week for single persons and from 2s. to 8s. a week for families. Examples of contributions and benefits payable, including Commonwealth benefits of £1 a day, are:—

Weekly contribution		Total benefits	
Single person	Family	Daily	Weekly
<i>s. d.</i>	<i>s. d.</i>	<i>s. d.</i>	£ <i>s. d.</i>
1 0	2 0	44 0	15 8 0
1 6	3 0	56 0	19 12 0
2 0	4 0	68 0	23 16 0
2 6	5 0	80 0	28 0 0
4 0	8 0	116 0	40 12 0

A contribution of 4s. a week covers a family for benefits greater than the public ward charge in any State.

*Contributions are allowable deductions for income tax purposes.*

During the waiting period of two months after joining an organization, the Commonwealth benefit is payable at the rate of 8s. a day, unless the organization pays fund benefits, in which case Commonwealth benefit is payable at the higher rate of 20s. a day. While a member is in arrears with his contributions and fund benefits are not payable, the Commonwealth benefit is payable at the rate of 8s. a day unless the member was in receipt of unemployment or sickness benefits under the *Social Services Act 1947-1963*.

Contributors who would have been excluded from fund benefits because of organizations' rules covering pre-existing ailments, chronic illnesses or maximum benefits are assured of hospital fund benefits by the provisions of the special account plan. The hospital fund benefit usually payable in such cases is 16s. a day and is paid either from special accounts, guaranteed by the Commonwealth, or from the ordinary accounts of the organization. One condition of payment is that the treatment in respect of which the fund benefit was paid was given in an approved hospital, although fund benefit is paid in certain circumstances in respect of treatment given in approved nursing homes. If the payments from the special accounts exceed contributions credited to the account, the amount of deficit is reimbursed by the Commonwealth.

A person who joins a registered hospital benefits organization within two months of being discharged from an approved nursing home is entitled to immediate Commonwealth benefit of 20s. per day and to fund benefits without having to serve a waiting period.

If a qualified patient in an approved hospital is not insured (i.e., not a member of a hospital benefits organization), a Commonwealth benefit of 8s. a day is deducted from his account by the hospital. The Commonwealth subsequently reimburses the hospital.

Under arrangements made with the States, pensioners who are enrolled in the Pensioner Medical Service and are treated in public wards of public hospitals are entitled (with a few exceptions) to free public ward treatment. For this the Commonwealth pays the hospitals a benefit of 36s. a day for each pensioner.

(iii) *Patients in Approved Nursing Homes.* The Commonwealth nursing home benefit of 20s. a day is payable to all qualified patients in approved nursing homes whether the

patients are insured or not. This benefit is deducted from the patient's account and subsequently paid by the Commonwealth to the nursing home. If no charge is made by the nursing home, the Commonwealth nursing home benefit of 20s. a day is still payable to the nursing home in respect of qualified patients.

There is no need for patients in approved nursing homes to be insured with a registered hospital benefits organization. Fund benefits are generally not payable. However, section 82E (2) of the National Health Act provides that where an insured special account patient is treated in an approved nursing home for an acute illness or condition, and is given treatment equivalent to that which he would have received in an approved hospital, approval may be given to the payment of special account fund benefits.

(iv) *Australians Overseas.* Australian residents who receive hospital treatment in recognized hospitals in overseas countries, while temporarily absent from Australia, are eligible to receive the Commonwealth and fund benefits to which they are entitled.

(v) *Expenditure on Hospital and Nursing Home Benefits.* Expenditure on hospital and nursing home benefits for 1962-63 was £21,540,213. In addition, Commonwealth payments towards special account deficits totalled £2,122,836. This does not include expenditure on mental hospitals (see p.p. 681-2).

The following table shows the amount of Commonwealth hospital benefits paid during the year 1962-63 giving the payments under the old arrangements for the six months ended 31st December, 1962, and under the new arrangements for the six months ended 30th June, 1963.

**COMMONWEALTH HOSPITAL BENEFITS PAID, 1962-63**  
(£'000)

Particulars	N.S.W.	Vic.	Qld	S.A.	W.A.	Tas.	N.T.	A.C.T.	Aust.
Arrangements applying until 31st Dec., 1962—									
Ordinary Benefits (8s.)	2,159	1,307	908	457	428	167	30	21	5,477
Additional benefits (12s.) <sup>a</sup>	2,765	1,447	789	673	673	196	(b)	(b)	6,543
Arrangements applying from 1st Jan., 1963—									
Uninsured patients (8s.)	146	96	189	29	28	11	14	1	514
Insured patients (20s.)	1,310	981	371	307	250	99	(b)	(b)	3,318
Pensioner Patients (36s.)	881	533	494	179	199	70	4	6	2,366
Nursing home patients (20s.)	1,310	799	497	308	300	108	..	..	3,322

(a) Does not include payments of £2,122,836 towards Special Accounts Deficits in 1962-63. (b) No hospital benefit organization is registered in the Northern Territory or the Australian Capital Territory. Members who live in one of these Territories, or who are abroad, receive their Commonwealth benefit and fund benefit through membership of an organization registered in one of the States and payments to them are included in the respective States.

(vi) *Registered Hospital Benefit Organizations.* The following table shows the number of registered hospital benefit organizations, the membership at 30th June, 1963, and fund benefit paid during the year 1962-63. As many persons contribute on behalf of both themselves and their dependants, the total number of persons covered by hospital benefit schemes is considerably higher than the number of members.

**HOSPITAL BENEFITS: ORGANIZATIONS AND FUND BENEFITS, 1962-63**

Particulars	N.S.W.	Vic.	Qld	S.A.	W.A.	Tas.	Aust.(a)
Registered organizations at 30th June, 1963(b)	30	(c) 44	3	13	10	10	110
Membership at 30th June, 1963	1,232,467	923,469	296,353	349,831	265,765	108,284	3,176,169
Fund benefit paid, £'000	7,980	4,124	1,750	2,197	1,628	68	18,364

(a) No hospital benefit organization is registered in the Northern Territory or the Australian Capital Territory. Members who live in one of these Territories, or who are abroad, receive their Commonwealth benefit and fund benefit through membership of an organization registered in one of the States and payments to them are included in the respective States. (b) Interstate branches are not included. (c) Includes 18 Bush Nursing Hospitals.

The following table shows the ordinary benefits paid for the years 1958-59 to 1962-63 under the arrangements which existed until 31st December, 1962.

**HOSPITAL BENEFITS: ORDINARY BENEFITS(a) PAID**

(£)

Year	N.S.W.	Vic.	Q'land	S. Aust.	W. Aust.	Tas.	Territories and abroad	Australia
1958-59 ..	3,260,416	2,077,329	1,493,257	746,282	720,164	284,522	65,313	8,647,283
1959-60 ..	3,788,086	2,144,317	1,577,241	820,126	740,266	305,693	71,176	9,446,905
1960-61 ..	3,760,701	2,269,308	1,599,194	824,749	757,225	307,561	74,246	9,592,984
1961-62 ..	3,661,358	2,446,685	1,703,094	807,291	780,274	384,253	62,244	9,845,199
1962-63(b) ..	2,159,258	1,306,688	907,771	456,803	428,483	166,921	50,492	5,476,416

(a) Ordinary benefits were payable in respect of:—(i) beds occupied by pensioners in public hospitals (12s. a day); (ii) beds occupied in certain South Australian hospitals (12s. a day); and (iii) other occupied beds in public hospitals and approved private hospitals (8s. a day). (b) Arrangements under which payment of ordinary benefit at 8s. per day were made ceased on 31st December, 1962. Payments shown for 1962-63 relate only to hospital bed days prior to 1st January, 1963.

3. **Mental Hospitals.**—In 1946, when Commonwealth hospital benefits were introduced for patients in public hospitals, no provision was made for patients in mental hospitals. To help meet the cost of maintaining patients in mental hospitals, the Commonwealth Parliament passed the *Mental Institutions Benefits Act* 1948. This Act ratified agreements with the States, whereunder it was provided that the States would cease making charges for the maintenance of mental patients and that the Commonwealth would pay the States a benefit based on the amount which had been collected by the States from the relatives of patients in mental hospitals by way of charges for maintenance.

These agreements operated for five years, and terminated in the latter half of 1954. The amount contributed by the Commonwealth during the operation of the agreements was approximately one shilling a day for each patient. When the agreements terminated, Dr. Alan Stoller, of the Victorian Mental Hygiene Authority, was commissioned to undertake a survey of mental health facilities and needs in Australia. His report, released in May, 1955, stated that serious overcrowding existed in the majority of mental hospitals in Australia. The provision of more beds was the most urgent need, but other accommodation and rehabilitation facilities were also required.

Following the report, the Commonwealth made an offer of £10 million to the States as part of a capital expenditure programme of £30 million on increasing and improving patient accommodation. All States accepted the Commonwealth offer.

The following table sets out the amounts which have been paid to the State Governments by the Commonwealth Government from 1955-56 to 1962-63.

**EXPENDITURE ON MENTAL HOSPITALS BY THE COMMONWEALTH GOVERNMENT**

(£)

Year	N.S.W.	Vic.	Q'land	S. Aust.	W. Aust.	Tas.	Australia
1955-56 ..	208,763	445,746	66,588	12,245	9,985	29,822	773,149
1956-57 ..	383,555	527,213	88,068	128,467	51,855	68,974	1,248,132
1957-58 ..	324,152	545,365	114,103	152,159	29,236	91,384	1,256,399
1958-59 ..	196,831	619,621	118,512	122,328	17,210	45,892	1,120,394
1959-60 ..	359,060	518,235	74,613	91,770	36,799	66,995	1,147,472
1960-61 ..	432,881	83,820	97,642	45,691	15,276	51,933	727,243
1961-62 ..	648,637	..	70,718	27,839	77,022	..	824,216
1962-63 ..	647,562	..	37,593	52,112	57,894	..	795,161
<b>Total, 1955-56 to 1962-63</b>	<b>3,201,441</b>	<b>2,740,000</b>	<b>667,837</b>	<b>632,611</b>	<b>295,277</b>	<b>355,000</b>	<b>7,892,166</b>



Amounts shown in the foregoing table represent payments made during the years shown under the *States Grants (Mental Institutions) Act 1955*. The total amounts payable to each State under this Act are in aggregate £10,000,000, to be distributed as follows:—New South Wales, £3,830,000; Victoria, £2,740,000; Queensland, £1,460,000; South Australia, £895,000; Western Australia, £720,000; and Tasmania, £355,000. Victoria and Tasmania have received their full entitlement under the Act.

There are no mental hospitals in the Northern Territory or the Australian Capital Territory.

4. **Medical Benefits.**—(i) *General.* A medical benefits scheme has operated since July, 1953, being authorized firstly by the National Health (Medical Benefits) Regulations and then by the *National Health Act 1953–1963*.

The basic principle of the scheme is Commonwealth support of voluntary insurance towards meeting the costs of medical attention. The benefits provided by the Commonwealth are paid either on a fee for service basis in respect of the items set out in the first and second schedules to the National Health Act or in the form of a subsidy not exceeding half of the payments made to doctors by registered organizations under contract arrangements.

In order to qualify for the Commonwealth benefit, a person is required to be insured with a registered medical benefits organization. The organization pays the Commonwealth benefit to the contributor, usually at the time it pays its own benefit. Reimbursement of the Commonwealth benefit is subsequently made to the organization by the Commonwealth.

Commonwealth benefit ranging from 6s. for ordinary general practitioner visits to £22 10s. for major operations is payable to members of registered medical benefits organizations. The fund benefit payable varies according to the weekly contributions paid by the member and the particular medical service.

Examples of the range of benefits are as follows.

Type of service	Combined Commonwealth and fund benefits <sup>(a)</sup>
	£ s. d.
Certain major operations .. .. .	60 0 0
Appendix operation .. .. .	20 0 0
Midwifery .. .. .	12 0 0
Tonsils—	
Under 12 years .. .. .	5 0 0
12 years and over .. .. .	8 0 0
Surgery consultation—general practitioner .. .. .	0 16 0
	(13s. 6d. in some States)

(a) The total benefit varies according to the weekly contribution rate. The most common contribution rates are 2s. a week for single persons and 4s. a week for a family.

Provision is made for the payment of fund benefit from special accounts for claims lodged by contributors who have reached maximum benefits or who make claims in respect of pre-existing ailments. The medical special accounts are operated along the same principles as the hospital special accounts (*see p. 679*) and the special account fund benefit paid usually matches the Commonwealth benefit for the particular service.

(ii) *Australians Overseas.* Australian residents temporarily absent from Australia, who receive medical attention by registered medical practitioners in the country they are visiting, are entitled, if insured, to the Commonwealth benefit and the medical fund benefit to which they would be entitled if the service were rendered in Australia.

(iii) *Expenditure on Medical Benefits.* In 1962–63, Commonwealth expenditure on medical benefits was £11,490,936. In addition, Commonwealth payments towards special account deficits totalled £246,225.

The following table shows the number of registered medical benefit organizations, their membership, the number of medical services rendered to members and their dependants, and payments of Commonwealth benefits and medical fund benefits to members of registered organizations. As many persons contribute on behalf of both themselves and their dependants, the total number of persons covered by medical benefit schemes is considerably higher than the number of contributors.

MEDICAL BENEFITS: SUMMARY, 1962-63.

Particulars		N.S.W.	Vic.	Q'land	S. Aust.	W. Aust.	Tas.	Australia (a)
Registered organizations								
	No.	25	21	6	8	8	10	78
Members	No.	1,184,282	830,278	292,065	308,892	237,029	99,873	2,952,419
Medical services	No.	9,523,313	6,059,989	2,618,677	2,591,400	1,975,334	661,925	23,430,638
Commonwealth benefit	£	4,703,182	2,966,767	1,209,257	1,303,591	992,203	315,936	11,490,936
Fund benefit	£	7,096,745	3,599,713	1,830,835	1,696,760	1,298,280	498,754	16,021,087

(a) No medical benefit organization is registered in the Northern Territory or the Australian Capital Territory. Members who live in one of those territories, or who are abroad, receive their Commonwealth benefit and fund benefit through membership of an organization registered in one of the States.

5. Pensioner Medical Service.—The Pensioner Medical Service, which commenced on 21st February, 1951, was introduced under the authority of the National Health (Medical Services to Pensioners) Regulations made under the provisions of the *National Health Services Act 1948-1949*. The service has been continued under the provisions of the *National Health Act 1953-1963*.

The service provided to eligible pensioners consists of medicine provided free of charge and a medical service of a general practitioner nature such as that ordinarily rendered by a general medical practitioner in his surgery or at the patient's home. Specialist services are not provided. Patients may be charged a small fee by doctors for travelling and attendance outside normal surgery or visiting hours. Doctors participating in the scheme are paid on a fee-for-service basis by the Commonwealth Government.

Persons eligible to receive the benefits of the service are those who satisfy a means test and are receiving an age, invalid or widow's pension under the *Social Services Act 1947-1963* or a service pension under the *Repatriation Act 1920-1963*, persons receiving a tuberculosis allowance under the *Tuberculosis Act 1948*, and dependants of persons eligible for the service.

Since 1st November, 1955, the means test which has applied to new enrolments in the service is the income test that had to be satisfied in order to qualify for a full rate pension as at 31st December, 1953.

The means test does not apply to persons who had applied for and were eligible to receive a pension prior to 1st November, 1955, or to persons receiving a tuberculosis allowance.

At 30th June, 1963, the total number of pensioners and dependants enrolled in the Pensioner Medical Service was 830,950, while the number of doctors participating in the scheme at that date was 6,025.

During the year ended 30th June, 1963, doctors in the scheme performed 7,389,117 services—visits and surgery consultations—for persons enrolled in the scheme. For these services, they were paid £4,572,898. The average number of services rendered by doctors to each person was 9.0.

6. Anti-Tuberculosis Campaign.—(i) *General*. The main provisions of the *Tuberculosis Act 1948* are as follows:—(a) Section 5 authorizes the Commonwealth to enter into an arrangement with the States for a national campaign against tuberculosis; (b) Section 6 empowers the Commonwealth to take over or provide specified facilities for the diagnosis, treatment

and control of tuberculosis; (c) Section 8 provides for the setting up of an advisory council to advise the Commonwealth Minister for Health on matters relating to the national campaign; and (d) Section 9 authorizes the Commonwealth to pay allowances to sufferers from tuberculosis and to their dependants.

Under an arrangement with the Commonwealth Government, each State conducts a campaign against tuberculosis. The Commonwealth Government reimburses the State for all approved capital expenditure in relation to tuberculosis, and for net maintenance expenditure to the extent that it exceeds net maintenance expenditure for the year 1947-48. Thus the States carry out the physical or field work of the national campaign and the Commonwealth acts in an advisory, co-ordinating and financial capacity. For this reason, the Commonwealth has not found it necessary to make much use of its powers under Section 6.

An advisory council, known as the National Tuberculosis Advisory Council, has been set up. There are twelve members, the chairman being the Commonwealth Director-General of Health. Other members are the Commonwealth Director of Tuberculosis, the six State Directors of Tuberculosis, the Consultant (Chest Diseases) of the Department of Repatriation, two specialist private practitioners, and an Administrative Officer of the Commonwealth Department of Health.

To help reduce the spread of infection, the Commonwealth Government pays living allowances to persons suffering from tuberculosis, so that they may give up work and undergo treatment. These allowances have been in operation since 13th July, 1950. The rates now payable are:—married sufferer with a dependent wife, £12 2s. 6d. a week; dependent child or children under sixteen years of age, 15s. a week for each dependent child (additional to child endowment); sufferer without dependants, £7 7s. 6d. a week (reducible to £5 15s. a week if a person is maintained free of charge in an institution).

There is a means test on income but not on property. The allowance is reduced by the amount by which a person's income from sources other than his allowance exceeds, in the case of a married person, £7 a week, and in the case of a person without a dependent wife, £3 10s. a week.

(ii) *New Tuberculosis Cases Notified.* The following table gives particulars of the number of new cases of tuberculosis notified in Australia for the year 1963.

TUBERCULOSIS: NEW CASES NOTIFIED(a), 1963

State or Territory	Age group (years)					Total
	0-14	15-34	35-54	55 and over	Not stated	
New South Wales ..	41	225	508	588	2	1,364
Victoria .. ..	116	205	341	276	1	939
Queensland .. ..	21	135	337	424	12	929
South Australia ..	25	64	74	65	..	228
Western Australia ..	13	42	82	99	..	236
Tasmania .. ..	9	24	51	26	..	110
Northern Territory ..	6	22	22	13	..	63
Australian Capital Territory .. ..	1	4	8	1	..	14
<b>Australia ..</b>	<b>232</b>	<b>721</b>	<b>1,423</b>	<b>1,492</b>	<b>15</b>	<b>3,883</b>

(a) Figures supplied by the Directors of Tuberculosis in each State.

(iii) *Commonwealth Expenditure.* Expenditure by the Commonwealth Government during 1962-63 on its anti-tuberculosis campaign is set out in the following table. The figures for maintenance differ from those in the table shown in Chapter XVI. Welfare Services, because they include administrative costs which are not a charge on the National Welfare Fund.

**COMMONWEALTH EXPENDITURE ON ANTI-TUBERCULOSIS CAMPAIGN,  
1962-63**

(£ )

State or Territory	Allowances	Maintenance (a)	Capital	Total
New South Wales .. ..	265,915	1,771,098	70,020	2,107,033
Victoria .. ..	194,201	1,307,000	55,015	1,556,216
Queensland .. ..	191,257	897,393	315,232	1,403,882
South Australia .. ..	69,837	389,070	13,333	472,240
Western Australia .. ..	42,511	411,349	33,494	487,354
Tasmania .. ..	39,795	190,000	4,899	234,694
Northern Territory .. ..	..	..	..	..
Australian Capital Territory .. ..	..	4,955	..	4,955
<b>Australia .. ..</b>	<b>803,516</b>	<b>4,970,865</b>	<b>491,993</b>	<b>6,266,374</b>

(a) Includes £96,958 for administrative costs.

The following table sets out expenditure by the Commonwealth Government on its anti-tuberculosis campaign since the start of the campaign.

**COMMONWEALTH EXPENDITURE ON ANTI-TUBERCULOSIS CAMPAIGN**

(£ )

Year	Allowances	Maintenance (a)	Capital	Total
1958-59 .. ..	1,062,609	4,864,186	1,411,062	7,337,857
1959-60 .. ..	1,025,472	4,414,620	729,236	6,169,328
1960-61 .. ..	946,445	4,259,012	410,370	5,615,827
1961-62 .. ..	872,853	4,420,633	386,579	5,680,065
1962-63 .. ..	803,516	4,970,865	491,993	6,266,374
<b>Total, 1947-48 to 1962-63 ..</b>	<b>18,640,736</b>	<b>49,731,915</b>	<b>15,455,499</b>	<b>83,828,150</b>

(a) Includes administrative costs.

**7. Anti-poliomyelitis Campaign.—(i) General.** Information concerning the initial production by the Commonwealth Government of anti-polio vaccine in Australia in 1955, and of the testing procedures which were carried out, is contained in Year Book No. 49 and earlier issues.

Distribution of the Salk poliomyelitis vaccine, which was supplied free of charge to the States, began in July, 1956. The States were responsible for the organization and running of their own campaigns and for the distribution of the vaccine in accordance with priority groups established by the National Health and Medical Research Council. Up to 1958, priority was given to children in the 0-14 age group, expectant mothers, and persons subjected to special risk. During 1958, this priority was extended to persons in the 15-44 age group. No child can be vaccinated without the consent of parents or guardian.

Vaccination against poliomyelitis takes the form of four injections of the vaccine. The second injection is given approximately four weeks after the first, the third injection is given not less than 32 weeks after the first and the fourth injection a minimum of one year after the third dose. Where the incidence of the disease in certain areas approaches epidemic proportions, special efforts have been made to vaccinate as soon as possible all persons in the area who give their consent.

One million doses of each of the three types of monovalent Sabin vaccine were imported by the Commonwealth in October, 1962, for use in a possible emergency. The decision whether to use the Sabin vaccine rests with the individual State Health Authorities.

It is difficult to give a completely accurate estimate of the vaccination coverage for the whole of Australia because methods of recording vaccination data differ from State to State. The proportion of children who had received three injections by 12 months of age is considered to be very small; by the recommended dosage schedule the third injection is given at 14 months or later. More than 60 per cent. of children from 15 months to 4 years have received 3 injections. In the age group 5 to 14 years, 90 per cent. have had 3 injections, as also have the 15 to 19 years group. Only 40 per cent. of persons 20 to 45 years old have received 3 or more injections.

Australia-wide information is not available regarding the proportion of the population which has now received a fourth injection, but if information from South Australia can be taken as a guide, it would appear that approximately 16 per cent. of those persons who have already received 3 injections have also received a fourth dose.

(ii) *New Cases of Poliomyelitis Notified.* The numbers of new cases of poliomyelitis notified in each State are shown for each year from 1956 to 1963 in the following table.

#### POLIOMYELITIS: NEW CASES NOTIFIED

Year	N.S.W.	Victoria	Q'land	S. Aust.	W. Aust.	Tas.	N.T.	A.C.T.	Aust.
1956 .. ..	240	251	112	122	401	55	..	13	1,194
1957 .. ..	58	13	24	16	8	6	..	..	125
1958 .. ..	23	60	5	10	2	..	..	..	100
1959 .. ..	16	30	4	1	3	..	..	..	54
1960 .. ..	9	23	6	10	4	36	17	..	105
1961 .. ..	201	50	141	44	2	11	1	..	450
1962p.. ..	177	20	38	17	4	..	1	..	259
1963p.. ..	2	19	1	7	4	..	..	..	33

8. *Free Milk for School Children Scheme.*—The *States Grants (Milk for School Children) Act* 1950 was passed with the object of improving the diet of school children by the addition of a small quantity of milk each day. All children under the age of thirteen years attending government or non-government primary schools, including nursery schools, kindergartens, crèches and missions for Aborigines, are eligible to receive free milk. The cost of the milk and half the capital or incidental costs, including administrative expenses of the scheme, are reimbursed by the Commonwealth to the States. All States now participate in the scheme. At 30th June, 1963, approximately 1,663,000 children were entitled to receive free milk under this scheme.

Expenditure by the Commonwealth Government under the scheme since its inception has been as follows.

**COMMONWEALTH EXPENDITURE ON MILK FOR  
SCHOOL CHILDREN SCHEME**

(£)

Year	N.S.W.	Vic.	Q'land	S. Aust.	W. Aust.	Tas.	N.T.	A.C.T.	Australia
1958-59 ..	1,190,048	782,623	474,909	235,879	182,249	181,025	2,799	19,104	3,068,636
1959-60 ..	1,286,672	910,000	480,246	275,000	229,872	156,358	10,493	22,874	3,371,515
1960-61 ..	1,279,460	1,020,000	518,244	282,000	225,377	200,075	21,994	24,064	3,571,214
1961-62 ..	1,329,363	1,036,165	565,000	332,258	264,392	175,256	23,271	27,734	3,753,439
1962-63 ..	1,317,903	950,407	572,762	356,910	293,069	192,093	26,595	30,014	3,739,753
Total, 1950-51 to 1962-63..	12,719,236	8,017,862	4,290,100	2,640,089	2,039,058	1,922,180	90,215	199,163	31,917,903

The figures in the foregoing table differ slightly from those in the table shown in Chapter XVI. Welfare Services, as they include capital and administrative costs. Figures in the latter table represent only expenditure which is a charge on the National Welfare Fund (i.e., the cost of the milk).

### § 3. Commonwealth Organizations concerned with Health

1. National Health and Medical Research Council.—In 1926, the Commonwealth Government established a Federal Health Council, in accordance with a recommendation of the Royal Commission on Health (1925), "for the purpose of securing closer co-operation between the Commonwealth and State Health Authorities". In 1936, the Commonwealth Government decided to create a body with wider functions and representation, and the National Health and Medical Research Council was established with the following functions:—to advise Commonwealth and State Governments on all matters of public health legislation and administration, on matters concerning the health of the public and on medical research; to advise the Commonwealth Government on the expenditure of money specifically appropriated to be spent on the advice of this Council; to advise the Commonwealth Government on the expenditure of money on medical research and on projects of medical research generally; and to advise Commonwealth and State Governments on the merits of reputed cures or methods of treatment which are from time to time brought forward for recognition.

The council consists of the Commonwealth Director-General of Health (as chairman), two other officers of the Commonwealth Department of Health, the official head of each State Health Department, the Director of Public Health for Papua and New Guinea, a representative of the Commonwealth Serum Laboratories Commission, and ten other members, one each being nominated by the Australian Medical Association, the Australian Dental Association, the Australian Paediatric Association, the Australian College of General Practitioners, the Royal Australasian College of Physicians, the Royal Australasian College of Surgeons, the Australian Regional Council of the Royal College of Obstetricians and Gynaecologists, the College of Pathologists of Australia, the College of Radiologists of Australasia, and the Australian universities having medical schools. An eminent layman and laywoman, appointed by the Commonwealth Minister for Health, also serve on the council.

The first session of the National Health and Medical Research Council was held at Hobart in February, 1937. The fifty-sixth session was held at Canberra in October, 1963.

Under the *Medical Research Endowment Act 1937*, the Commonwealth Government has made an annual appropriation of funds to assist:—(a) departments of the Commonwealth or of a State engaged in medical research; (b) universities for the purpose of medical research; (c) institutions and persons engaged in medical research; and (d) in the training of persons in medical research. In 1962-63, this appropriation was £298,500

Most of the detailed work of the Council is delegated to a number of specialized standing committees, on such subjects as medical research, public health, veterinary public health, occupational health, tropical health, dental health, epidemiology, maternal and child welfare, nutrition, nursing, food standards, food additives, radio-therapy and radio-isotopes. Applications for research grants are considered by the Medical Research Advisory Committee before being submitted to the Council, which then advises the Minister for Health.

**2. The National Biological Standards Laboratory.**—The *Therapeutic Substances Act* 1953–1959 provides the Commonwealth with powers to ensure that therapeutic substances used for the prevention, diagnosis and treatment of disease in man and animals are safe, pure and potent.

The Director-General of Health is authorized under this Act to set up laboratories to test such substances. In 1958, the first steps were taken to establish an Australian National Biological Standards Laboratory in Canberra.

The laboratory is divided into two main divisions, a Biological Division and a Pharmaceutical Division. The Biological Division consists of the Bacterial Products Laboratory, the Viral Products Laboratory, an Endocrine Products Laboratory and an Antibiotic Products Laboratory. The Pharmaceutical Division consists of an Analytical Chemistry Laboratory and a Pharmacology Laboratory.

All these laboratories have now been established and have commenced work.

Samples of therapeutic agents available in Australia are taken and tested for compliance with legal standards. A major function of the laboratories is the establishment of such standards where none at present exist or present standards are unsatisfactory.

The laboratories receive international reference standards of biological substances from stocks maintained by the World Health Organization, and will on request issue Australian reference standards which have been assayed against international standards.

**3. Commonwealth Serum Laboratories.**—The laboratories were established in 1916 under the administration of the Department of Trade and Customs and from 1921 to 1961 were operated under the Department of Health. By Act No. 38 of 1961, control of the laboratories passed to the Commonwealth Serum Laboratories Commission on 2nd November, 1961.

The laboratories' basic function is to ensure the supply of essential biological products in accordance with national health needs. This includes:—production and supply of essential biological products; research and development relating to biological products and allied fields; and the maintenance of potential production capacity for use in emergencies.

Since their foundation, the laboratories have greatly extended in size and scope. They now produce some 450 regular products and many special products for use in the diagnosis, prevention and treatment of human and animal diseases. Professional, technical and other staff total over 900.

Products comprise a full range of human bacterial and virus vaccines, veterinary bacterial and virus vaccines, serum products such as blood fractions, a wide variety of antibacterial and antitoxic sera, antivenenes, penicillin, endocrines, including insulin, A.C.T.H., pituitary and thyroid extracts, allergy testing materials and desensitizing preparations, culture media and diagnostic agents for clinical and laboratory work. More recently, tissue culture materials have been prepared and supplied to virus research workers throughout Australia.

Continuous research is conducted into the relevant aspects of microbiology and immunology, and related fields. As the growth of medical and scientific knowledge in Australia and overseas reveals new methods of diagnosis, prevention and treatment of diseases, this information is applied to the preparation of new biological products at the laboratories.

Facilities are maintained for investigations into public health matters which are inconvenient or impracticable to handle at the Commonwealth Health Laboratories or the School of Public Health and Tropical Medicine.

The laboratories serve as a national centre for the maintenance in Australia of the international standards of the Permanent Commission on Biological Standards (World Health Organization). They act as a regional reference centre for W.H.O. in collating reports of the prevalence of certain infectious diseases, and provide facilities for the identification of these diseases.

Veterinary biological products produced at the laboratories have given the lead to other producers in Australia, resulting in the diminution of incidence of a number of serious infectious stock diseases.

4. **The Commonwealth Health Laboratories.**—Health laboratories, of which there are fifteen, are situated in the following towns: Albury, Alice Springs, Bendigo, Cairns, Canberra, Darwin, Hobart, Kalgoorlie, Launceston, Lismore, Port Pirie, Rockhampton, Tamworth, Toowoomba and Townsville. They were established as an essential part of the quarantine system but were also to undertake research into local health problems and to provide doctors of each district with up-to-date facilities for laboratory investigation and diagnosis. It was realized that co-operation between the general practitioner, with his clinical observations and knowledge of the environment of disease on the one hand, and the staff of a well-equipped laboratory on the other, is essential to the investigation and control of disease.

From this standpoint, the laboratories have proved their value in the determination of leptospirosis and endemic typhus in North Queensland, in the investigation of special local problems in Darwin, of undulant fever throughout Australia, of silicosis and tuberculosis at Kalgoorlie and of plumbism at Port Pirie. In these investigations, close co-operation exists with State and local health and hospital services, especially in Queensland, where collaboration has yielded exceptionally valuable results in differentiating the groups of fevers previously unclassified in that State. In this investigational work, as well as in more routine activities, the laboratories have at their disposal the full resources and technical and specialist facilities available at the Commonwealth Serum Laboratories and the School of Public Health and Tropical Medicine, Sydney.

The laboratories are unique in that, with the exception of the use of X-rays, they cover all the fields of diagnostic requirements, namely, pathology, public health, haematology, parasitology, mycology, bacteriology, biochemistry and blood group serology.

5. **Commonwealth Acoustic Laboratories.**—Sponsored by the National Health and Medical Research Council, the Acoustic Research Laboratory, Sydney, investigated inter-communication difficulties and noise problems in aircraft and tanks (1942–46). It then investigated the problem of congenital deafness in children resulting from maternal rubella. The Department of Health took over the laboratory in January, 1947, and subsequently established branch laboratories in all other State capitals.

The *Acoustic Laboratories Act* 1948 gave the Minister for Health the right to establish, maintain and operate, within the Commonwealth, acoustic laboratories for scientific investigations, including tests in respect of hearing aids and their application to the needs of individuals, and in respect of problems associated with noise as it affects individuals. Scientific investigations are carried out in the Central Laboratories in Sydney by specialized scientific groups in psychology and audiology, acoustics and electroacoustics, medical ultrasonics, and psychoacoustics. The results of this research are published in scientific literature and Commonwealth Acoustic Laboratories reports. In 1949, the Government approved the provision and maintenance of hearing aids, without charge, to deaf school and pre-school children. This service has since been extended to those whose hearing loss is discovered after leaving school, but who are still under 21 years of age. The laboratories' functions also include:—provision and maintenance of hearing aids on behalf of Repatriation and other Commonwealth Departments; assistance to the State Education Departments in measuring deafness by providing and maintaining portable audiometers; the making of hearing tests of Civil Aviation aircrew as required by international agreement; and the making of independent tests on behalf of State and other authorities.



The Central Laboratories located in Sydney are responsible for staff training, production of equipment, calibration of hearing-aids and audiometers, and the technical administration of branch laboratories.

**6. Commonwealth X-ray and Radium Laboratory.**—In 1928, the Commonwealth Government purchased ten grammes of radium for use in medical treatment and research in Australia. The use of this radium was to be co-ordinated by the Department of Health, and in 1929 the Department established the Commonwealth Radium Laboratory to act as custodian of the radium and to ensure its equitable distribution and efficient use.

The radium is distributed on loan to treatment centres throughout Australia. Under the terms of these loans, treatment at well-equipped clinics is available to all persons requiring it, irrespective of their ability to pay. Portions of the original stock of radium have been remounted from time to time, reflecting changes in techniques of treatment.

In 1935, the work of the laboratory was extended to include physical aspects of X-ray therapy and the name of the laboratory was changed at this time to its present form.

Since 1939, the functions of the laboratory have included investigations of the physical aspects of the diagnostic use of X-rays with particular emphasis on miniature radiography and high-kilovoltage techniques.

In 1946, the laboratory imported the first artificially-produced radioactive isotopes used in Australia and established a system for the procurement and distribution of these substances.

A radiochemical laboratory and associated facilities were set up in the laboratory to permit the assay of radioactive materials present in minute amounts in the environment—in air, water, soil, and foods such as milk, grain and vegetables. A programme of monitoring the fall-out in Australia arising from the testing of nuclear weapons is continuing.

The laboratory co-operates with the physical services which have been developed in the other capital cities of Australia to provide local facilities for the production of radon, for the calibration of X-ray therapy equipment, and for the measurement of the exposure to radiation of those who work with X-rays and radioactive materials. The services of the laboratory are available to all who work with ionizing radiations.

A radon service has been operated by the laboratory since its inception. During the year ended 30th June, 1963, 33,701 millicuries of radon were issued by the laboratory in the form of implants, needles and tubes for use in Victoria, Tasmania, South Australia and Western Australia. A further 20,483 millicuries were issued by the associated centres in Sydney and Brisbane. The corresponding figures for 1961–62 were 32,724 millicuries and 24,825 millicuries, respectively. The issue of radon from a few centres to serve hospitals all over the continent is an Australian development which enables very efficient use to be made of the radium available.

Since 1935, the laboratory has maintained the Australian (free-air) standard for the precise measurement of X-ray dose. Sub-standard clinical dosimeters used by the laboratory and by centres in other States are calibrated in terms of this standard.

Through the development of atomic energy programmes overseas, supplies of radio-isotopes have been available for use in Australia since 1946. Some of the radio-isotopes required in Australia are prepared by the Australian Atomic Energy Commission in its reactor at Lucas Heights. At the present time, the procurement and distribution of radio-isotopes to be used in medicine and medical research are the responsibility of the Department of Health, and these isotopes are procured by the laboratory, as a central procurement agency, principally from Great Britain, Canada and the United States of America. The procurement and distribution of radio-isotopes for industrial and non-medical uses are the responsibility of the Australian Atomic Energy Commission.

The importation of radio-isotopes is restricted under the Customs (Prohibited Imports) Regulations. Approval for importation is given either by the Director-General of Health or by the Australian Atomic Energy Commission, depending on the category of use, after it has been established that the isotope will be used safely and usefully.

During 1962-63, 28 different isotopes were procured for use in medicine and medical research. They represented 1,329 separate deliveries, of which 68 (including five different isotopes) were from the Australian Atomic Energy Commission. Of the 28 isotopes, sixteen were for use in medical diagnosis or treatment, as distinct from medical research. Bulk supplies of radio-isotopes used for diagnosis or treatment are obtained regularly, and these are distributed by the laboratory as individual doses for use on patients throughout Australia in accordance with a policy developed by the Committee on Radio-isotopes of the National Health and Medical Research Council. These radio-isotopes are issued free of charge. In the year ended 30th June, 1963, 14,327 individual doses of these materials were issued for use on patients.

Investigations of the degree of protection necessary in particular applications of X-rays and radioactive materials continue to be an important activity of the laboratory. It prepares specifications of the protection facilities necessary in departments and laboratories employing ionizing radiations in medicine, research, and industry, and carries out measurements of radiation levels in existing departments and laboratories. A film-badge service to measure the radiation dose received by those exposed to ionizing radiations is maintained. In 1962-63, 46,370 film-badges were processed, assessed and reported on; the corresponding figure for the previous year was 31,118.

The laboratory maintains a library of radiological literature and issues library bulletins at appropriate intervals. Technical communications on topics related to its functions are issued from time to time.

**7. The School of Public Health and Tropical Medicine.**—In March, 1930, the Commonwealth Government, under an agreement with the University of Sydney, established a School of Public Health and Tropical Medicine at the University of Sydney for the purpose of training medical graduates and students in the subjects of public health and tropical medicine. The organization of the Australian Institute of Tropical Medicine at Townsville was merged in the new school, and the staff, equipment and material were transferred to Sydney.

The School comprises sections of Preventive Medicine, Tropical Medicine, Occupational Health, Environmental Health, Biochemistry, Bacteriology and Pathology, Parasitology, Medical Entomology, and Medical Statistics. The Child Welfare section of the Institute of Child Health is located at the School, with which it is closely associated. The Occupational Health Section undertakes surveillance of the health of persons employed at the Small Arms Factory, Lithgow, and at the Munitions Filling Factory, St. Mary's. The Library, which includes approximately 17,000 bound volumes and a large collection of official and institutional papers and reports, forms an important information centre in the subjects of public health and tropical medicine.

The work of the school comprises both teaching and investigation. Courses are held for the university post-graduate diploma in public health and the diploma in tropical medicine and hygiene. Lectures are given in public health and preventive medicine as prescribed for the fifth year of the medical curriculum. Courses are provided also in hygiene and social medicine for students of architecture and social studies; in tropical medicine for lay officers, nurses in tropical service, and missionaries; and in industrial health for engineering students. Training is also provided for certain personnel of the armed services, for laboratory workers from various services and institutions, and for post-graduate nursing diploma students.

Investigations cover a wide range of public health and medical subjects, both in the laboratory and in the field. Field work has been carried out in Australia and in Papua, New Guinea, Norfolk Island, and Nauru in co-operation with the local administrations and the South Pacific Commission. Limited accommodation and other facilities for investigation can be made available at the school for independent research workers.

**8. Institute of Child Health.**—Associated with the School of Public Health is the Institute of Child Health, part of which is located in the School of Public Health and Tropical Medicine in the grounds of the University of Sydney, and part at the Royal Alexandra Hospital for Children, Camperdown. The activities of the Institute are concerned with research into medical and social problems of childhood, undergraduate teaching of students

of the Faculty of Medicine in the University of Sydney, post-graduate teaching of doctors and members of associated professions, and collaboration with other bodies concerned with the general field of child health.

The establishment of the Institute at present consists of the director, two senior medical officers, one child psychiatrist, five other medical officers, a psychologist, two social workers, and clerical staff.

The director of the Institute is the Professor of Child Health in the University of Sydney. He is also a senior honorary paediatrician on the staff of the Children's Hospital. The child psychiatrist is also Associate Professor of Child Psychiatry in the University of Sydney.

The director is required to co-ordinate and control undergraduate and post-graduate teaching in paediatrics and child health. Each group of medical students attends the Children's Hospital for 10 weeks tuition in paediatrics and child health.

The particular research activities of the Institute vary with the immediate and long-term problems which present themselves. Fields of study have included rheumatic fever, scurvy, accidents, prematurity, hypothyroidism and mental deficiency. Studies are undertaken into the problems of infants and children deprived of a normal home life.

Members of the Institute staff are available for consultation by Commonwealth and State authorities and voluntary agencies.

**9. Commonwealth Bureau of Dental Standards.**—This Bureau is concerned with research, standards, and testing related to dental and allied materials and processes. It became part of the Department of Health in January, 1947, but for the preceding eight years it was sponsored by the National Health and Medical Research Council. During that time, the then Dental Materials Research Laboratory established itself as a recognized authority in its special field and proved to be of value to the defence services, government departments, the dental profession and manufacturers of dental products. By maintaining the quality of dental materials and improving techniques for their use, the Bureau continues to assist the dentist in his service to the community—a service that calls for restorations and appliances of a high degree of precision and permanence under very exacting conditions.

The functions of the Bureau are:—original research into dental equipment, materials, techniques and processes; regular reporting of the results of these investigations in recognized Australian scientific journals; the development of specifications for dental materials and equipment, through the Standards Association of Australia, in consultation with a committee representing the Commonwealth Department of Health, the Australian Dental Association, and manufacturers and distributors; and the provision of a consultative service and testing facilities for manufacturers and distributors of dental materials with a view to assisting them in the improvement of existing products and the development of new materials.

**10. The Australian Institute of Anatomy.**—The Australian Institute of Anatomy is situated in a building erected in Canberra by the Commonwealth Government under the *Zoological Museum Agreement Act 1924*. Prior to the passing of this Act, the Commonwealth Government had expressed regret that the Australian nation possessed neither a collection of specimens of the unique and fast disappearing fauna of Australia, nor a museum in which such specimens could be preserved for future generations. Sir Colin MacKenzie, the first Director of the Institute of Anatomy, presented his entire private collection of Australian fauna to the Commonwealth Government. This gift was housed in the Institute. The Institute became part of the Commonwealth Department of Health in 1931.

The original collection has been greatly augmented. In addition to donations of material, there have been several endowments for orations and lectures.

The Institute consists of a museum section and a laboratory section. In the museum section, which is open to the public, a portion of the original collection of anatomical specimens assembled by Sir Colin MacKenzie is displayed, together with ethnological collections

which have been added since the foundation of the Institute. The material has been arranged to present simple lessons in human hygiene, to display the anatomical features and peculiarities of Australian fauna, and to display aspects of the character of Australian Aborigines and indigenes of Papua and New Guinea.

A number of Health Department sections are now situated in the Institute. These include the Museum and Medical Artistry Section, the Nutrition Section, the Commonwealth Health Laboratory for the Australian Capital Territory, and a Veterinary Laboratory.

The scientific research work of the Institute is now concentrated on problems of nutrition. It takes the form of field surveys of the dietary status of the Australian population and laboratory investigations into the biochemistry of nutrition and metabolism.

#### § 4. Control of Infectious and Contagious Diseases

1. **General.**—The provisions of the various Acts with regard to the compulsory notification of infectious diseases and the precautions to be taken against their spread are dealt with under the headings of quarantine and notifiable diseases (including venereal diseases).

2. **Quarantine.**—The *Quarantine Act* 1908–1961 is administered by the Commonwealth Department of Health, and has three sections of disease control, as follows:—(i) human quarantine, which controls the movements of persons arriving from overseas until it is apparent that they are free of quarantinable disease; (ii) animal quarantine, which controls the importation of animals and animal products from overseas and the security of other animals present on vessels in Australian ports; and (iii) plant quarantine, which regulates the conditions of importation of all plants and plant products with the object of excluding plant diseases, insect pests and weeds.

In respect of interstate movements of animals and plants, the Act becomes operative only if the Governor-General considers that Commonwealth action is necessary for the protection of any State or States, and in general the administration of interstate movements of animals and plants is left in the hands of the States.

(i) *Human Quarantine.* All passengers and crews arriving in Australia from overseas, whether by air or sea, are subject to a medical inspection for the purpose of preventing the introduction of disease into Australia. At the major ports, full-time quarantine officers carry out the work, but in the minor ports local doctors act as part-time quarantine officers. In each State, quarantine activities are controlled by the Commonwealth Director of Health, who is a medical officer of the Commonwealth Department of Health.

The main concern of the examining officers is to detect cases of the quarantinable diseases smallpox, cholera, yellow fever, plague and typhus fever. These diseases are not endemic to Australia, and it is of great importance to prevent their entry. Quarantine stations at the major ports and at Darwin and Townsville are kept ready for occupation at all times. In addition, persons arriving in Australia and suffering from infectious diseases such as chicken pox, mumps, scarlet fever and measles are directed to appropriate care and placed in isolation where necessary.

The increasing use of air travel has created particular quarantine problems. Before the use of air transport, persons suffering from an infectious disease would show symptoms on arrival and before disembarkation. Passengers travelling by air, however, can arrive well within the incubation period, and they are, therefore, required to be vaccinated against smallpox before departure. Those from an area infected with cholera or yellow fever are required to be inoculated, in addition, against the particular disease prevalent in that area. Children under one year of age are exempt from inoculation against smallpox and cholera but there is no age exemption from yellow fever inoculation. Passengers are also required to report any sickness which they might suffer within fourteen days after arrival.

Passengers arriving in Australia by sea are also required to be vaccinated against smallpox, but exemption is granted to infants under twelve months of age, and to those who hold religious convictions against vaccination or who are suffering from a medical condition

which makes vaccination undesirable. All passengers, whether they arrive by sea or air, are required to give their intended place of residence, so that they may be traced if a case of disease occurs among the passengers on the aircraft or ship by which they travelled to Australia.

The number of cases of infectious (non-quarantinable) diseases which were discovered among the passengers and crew of overseas vessels and aircraft calling at Australian ports during the year ended 30th June, 1963, and during the preceding four years, are shown in the following tables.

**HUMAN QUARANTINE: CASES OF INFECTIOUS (NON-QUARANTINABLE) DISEASES ON OVERSEA VESSELS AND AIRCRAFT CALLING AT AUSTRALIAN PORTS, 1962-63**

Disease	Number of overseas vessels and aircraft on which cases were found	Number of cases of infectious disease	
		Passengers	Crew
Chicken pox .. .. .	35	74	6
Gastro enteritis .. .. .	1	1	..
Gonorrhoea .. .. .	9	..	20
Infectious diarrhoea .. .. .	1	2	..
Infectious hepatitis .. .. .	3	1	2
Influenza .. .. .	2	18	2
Measles .. .. .	45	323	1
Mumps .. .. .	9	12	..
Pulmonary tuberculosis .. .. .	4	2	2
Rubella .. .. .	4	5	..
Syphilis .. .. .	2	..	2
<b>Total .. .. .</b>	<b>(a) 91</b>	<b>438</b>	<b>35</b>

(a) On some vessels there were cases of more than one disease.

**HUMAN QUARANTINE: OVERSEA VESSELS AND AIRCRAFT ARRIVING IN AUSTRALIA AND CASES OF INFECTIOUS (NON-QUARANTINABLE) DISEASE FOUND**

Year	Number of overseas vessels and aircraft cleared		Number of overseas vessels and aircraft on which cases were found	Number of cases of infectious disease	
	Ships	Aircraft		Passengers	Crew
1958-59 .. .. .	2,826	1,938	63	344	9
1959-60 .. .. .	3,046	2,063	61	234	12
1960-61 .. .. .	3,481	2,354	55	296	4
1961-62 .. .. .	3,761	2,417	67	221	15
1962-63 .. .. .	2,943	3,414	91	438	35

(ii) *Animal Quarantine.* Animal quarantine, authorized by the provisions of the *Quarantine Act 1908-1961*, aims at preventing the introduction or spread of animal diseases. It covers the importation of all animals, raw animal products and biological cultures associated with animal diseases, and goods associated with animals.

Of the domesticated animals, only horses, dogs, cats and poultry are admitted from a limited number of countries depending on diseases present in the country of origin. All must be accompanied by health certificates which include prescribed tests. On arrival in Australia, they are subject to quarantine detention.

Zoological specimens are imported into registered zoos, where they remain in permanent quarantine. Circuses are also registered if exotic species of animals are kept. In a similar manner, animals for scientific purposes are imported to approved laboratories. All these premises are kept under constant surveillance. Raw animal products such as hair, types of wool, skins and hides, are specially treated under quarantine control. Such items as raw meat, sausage casings and eggs, which cannot be sterilized, are admitted from very few countries. Other items, such as harness fittings, fodder, and ship's refuse, are treated to destroy any possible infection.

The Animal Quarantine Service is also responsible for the health certification of animals for export overseas in accordance with requirements of the various countries.

The Division of Veterinary Hygiene was created in 1926 to deal with the administration of animal quarantine. The central administration is situated within the Health Department at Canberra, with a director, an assistant director, and veterinary officers. The Principal Veterinary Officer of the Department of Agriculture in each State is appointed Chief Quarantine Officer (Animals) of that State, and members of his staff Quarantine Officers (Animals). These State officers carry out the quarantine policy formulated by the central administration. Quarantine accommodation is provided in permanent animal quarantine stations at each capital city.

The Division participates in world-wide international notification of the more serious contagious diseases of animals and maintains a census of such diseases throughout the world. Information regarding animal diseases and parasites in Australia is also collected and disseminated by means of service publications. Consultation on technical matters is maintained with various scientific institutions, notably the Commonwealth Scientific and Industrial Research Organization. In matters of policy and the quarantine control of imports, there is a close liaison with the Department of Customs and Excise.

The Division collaborates with the General and Plant divisions of the quarantine service. Many diseases of animals are communicable to man, and for this reason animal and general quarantine administration are in some respects inseparable. Similarly the interests of animal and plant divisions overlap, many items such as insects, fodder and straw being the subject of combined control.

Every two years the director of the Division convenes the Biennial Conference of Principal Commonwealth and State Veterinarians, which meets under the auspices of the Australian Agricultural Council to discuss problems of animal health and disease control and animal quarantine.

(iii) *Plant Quarantine.* Since 1st July, 1909, the importation into Australia of all plants or parts of plants, cuttings, seeds and fruits, whether living or dead, has been subject to an increasingly stringent quarantine with the object of preventing the introduction of insect pests, plant diseases and weeds not yet established in this country. Under the *Quarantine Act 1908-1961*, quarantine inspectors are required to examine all plant material at the first port of entry and to release only material free from diseases and pests. Everyone entering Australia is required to declare if he or she has any plant material in luggage or personal effects. Heavy penalties are laid down for those found evading the regulations. All plant material entering as cargo must also be declared.

When the Commonwealth became responsible for all plant quarantine, the State Governments agreed to co-operate by providing and maintaining inspection facilities and personnel, for which they are reimbursed by the Commonwealth. In 1921, the administration of the regulations came under the newly-formed Department of Health, and in 1927 the Division of Plant Quarantine was created, under a director who is responsible for policy and legislation and for co-ordinating the work of the State officers, who carry out the detailed administration in their capacity as Commonwealth officers.

Any plant material found carrying diseases or pests, or suspected of doing so, may be ordered into quarantine for remedial treatment, or, if treatment is impracticable, may be destroyed. The cost of treatment is met by the importer. Regulations governing the different types of plants are based on the following broad principles. (a) The importation

of plants likely to be infected with plant diseases, noxious fungi or poison plants is prohibited. (b) Agricultural seed must conform to standards of purity, insect pest and disease freedom. Some seeds are prohibited except with special permission of the Director of Quarantine, who specifies conditions of importation. (c) Many commodities such as hops, cotton, peanuts in shell, potatoes, certain crop seeds, vines and specified plants may be imported only by approved importers under special conditions. (d) Certain plant products such as bulbs and timber (in logs or sawn) from specified areas may be imported only if accompanied by certificates showing that prescribed treatment has been given in the country of origin. (e) All nursery stock, including bulbs, must be grown in post-entry quarantine. Propagating material for commercial fruits, vines and berries is permitted importation only after being specially screened for virus diseases. Such material may be imported only by approved importers who are registered for this purpose. The numbers of plants which may be imported in any one year are limited.

3. Notifiable Diseases.—(i) *General.* (a) *Methods of Prevention and Control.* Provision exists in the Health Acts of all States for the compulsory notification of certain infectious and other diseases and for the application of preventive measures. When any such disease occurs, the local authority must be notified at once, and in some States notification must be made also to the Health Department.

As a rule, the local authorities are required to report from time to time to the Central Board of Health in each State on the health, cleanliness and general sanitary state of their several districts, and on the appearance of certain diseases. Regulations provide for the disinfection and cleansing of premises, and for the disinfection or destruction of bedding, clothing or other articles which have been exposed to infection. Regulations also provide that persons suspected to be suffering from, or to be carriers of, infectious disease must submit to clinical and laboratory examination. Persons suffering from certain communicable diseases, for example, smallpox and leprosy, are detained in isolation.

(b) *Diseases Notifiable and Cases Notified in each State and Territory.* The following tables show, for each State and Territory, the diseases notifiable in 1963, and the number of cases notified. Diseases not notifiable in a State or Territory are indicated by an asterisk.

Factors such as the following affect both the completeness of the figures and the comparability from State to State and from year to year:—availability of medical aid; diagnostic practices of doctors—e.g., infectious hepatitis may not be diagnosed as such unless jaundice is also present; enforcement and follow-up of notifications by Health Departments; differences in sources of notifications; differences in definitions of notifiable diseases in Health Acts—e.g., puerperal fever and encephalitis; and varying degrees of attention to notification of diseases of minor importance.

**DISEASES NOTIFIABLE<sup>(a)</sup> IN EACH STATE AND TERRITORY OF AUSTRALIA  
AND NUMBER OF CASES REPORTED, 1963**

Disease	N.S.W.	Vic.	Qld	S.A.	W.A.	Tas.	N.T.	A.C.T.	Aust.
<b>DISEASES NOTIFIABLE IN ALL STATES AND TERRITORIES<sup>(b)</sup></b>									
Acute rheumatism (rheumatic fever) ..	29	37	(c) 89	5	16	26	4	1	207
Ankylostomiasis .. .. .	34	2	21	..	..	..	223	..	280
Brucellosis .. .. .	13	39	7	..	7	1	..	2	69
Diarrhoea, infantile .. .. .	326	414	211	34	24	..	135	8	1,152
Diphtheria .. .. .	34	181	3	..	5	..	..	..	223
Encephalitis .. .. .	44	45	11	10	..	..	..	1	111
Infectious hepatitis .. .. .	2,822	3,840	1,433	293	145	856	104	20	9,513
Leprosy (Hansen's disease) ..	..	1	10	..	10	..	64	..	85
Meningococcal infection .. .. .	40	44	97	6	4	21	..	2	214
Paratyphoid fever .. .. .	6	20	(d)	11	3	3	1	..	44
Poliomyelitis .. .. .	2	19	1	7	4	..	..	..	33
Puerperal fever .. .. .	39	13	31	1	4	..	2	..	90
Scarlet fever .. .. .	371	585	55	198	31	57	1	7	1,305
Tuberculosis(e) .. .. .	1,364	939	(f)929	228	236	110	63	14	3,883
Typhoid fever .. .. .	9	4	2	3	7	..	1	..	26
Typhus (flea, mite or tick borne) ..	..	..	9	..	2	1	..	..	12

NOTE.—For footnotes see next page.

DISEASES NOTIFIABLE(a) IN EACH STATE AND TERRITORY OF AUSTRALIA  
AND NUMBER OF CASES REPORTED, 1963—continued

Disease	N.S.W.	Vic.	Qld	S.A.	W.A.	Tas.	N.T.	A.C.T.	Aust.
DISEASES NOTIFIABLE IN SOME STATES AND TERRITORIES(b)									
									Total for the States, etc., in which the disease is notifiable
Acute nephritis .. .. .	•	24	•	•	•	•	•	•	24
Amoebiasis .. .. .	•	11	29	•	4	•	•	•	44
Anthrax .. .. .	•	•	•	•	•	•	•	•	•
Ascariasis .. .. .	71	•	•	•	•	•	•	•	71
Bilharziasis .. .. .	•	1	•	•	•	•	•	•	1
Breast abscess .. .. .	6	31	•	•	•	•	3	•	67
Chorea .. .. .	1	1	(c)	•	1	•	•	•	3
Dengue .. .. .	1	•	•	•	•	•	•	•	1
Dysentery, bacillary .. .. .	•	48	39	196	104	15	177	•	579
Eclampsia .. .. .	•	5	•	•	•	•	•	•	5
Erythema nodosum .. .. .	•	18	(f)	1	1	•	•	2	22
Filaria .. .. .	•	•	•	•	•	1	•	•	1
Glandular fever .. .. .	•	•	•	•	•	23	•	•	23
Helminthiasis .. .. .	•	2	•	•	•	•	•	•	2
Homologous serum jaundice .. .. .	•	•	(g)	•	•	•	•	•	•
Hydatid .. .. .	•	17	1	•	•	17	1	5	41
Lead poisoning .. .. .	•	•	3	1	1	•	•	•	5
Leptospirosis .. .. .	13	•	94	1	16	•	•	•	124
Leukaemia .. .. .	•	74	94	•	•	•	4	•	78
Malaria .. .. .	•	19	46	•	30	1	2	1	99
Melioidosis .. .. .	•	•	•	•	•	•	•	•	•
Ophthalmia .. .. .	•	•	•	2	36	•	•	•	38
Ornithosis .. .. .	•	3	1	8	1	•	•	•	13
Pleural effusion .. .. .	•	22	(f)	•	•	•	1	•	23
Q-fever .. .. .	•	•	236	•	•	•	•	•	236
Relapsing fever .. .. .	•	•	•	•	•	•	•	•	•
Rubella .. .. .	•	1,768	810	621	102	13	4	12	3,330
Salmonella infection .. .. .	•	•	•	50	36	•	5	•	95
Staphylococcal infection (infancy) .. .. .	400	29	4	•	•	•	•	4	433
Staphylococcal pneumonia .. .. .	16	•	•	•	•	•	•	•	16
Taeniasis .. .. .	•	•	7	•	•	•	•	•	7
Tetanus .. .. .	•	5	27	•	9	•	•	•	41
Trachoma .. .. .	•	1	•	54	240	•	100	•	395
Trichinosis .. .. .	•	•	•	•	•	•	•	•	•
Veneral diseases—									
Syphilis .. .. .	493	73	60	•	26	7	4	31	694
Gonorrhoea .. .. .	3,625	1,214	1,232	•	364	221	82	52	6,790
Other .. .. .	187	•	71	•	•	•	9	•	267

(a) No cases of cholera, plague, smallpox, epidemic typhus or yellow fever were notified. (b) There are popular names for various diseases mentioned in the table above. While these names may not be clearly defined or acceptable for diagnostic purposes, the most common ones are listed here for the information of the lay reader:—hookworm (ankylostomiasis); undulant fever (brucellosis); St. Vitus dance (chorea); Weil's disease or seven-day fever or swamp fever (leptospirosis); parrot fever (ornithosis); childbed fever (puerperal fever); German measles (rubella). (c) Chorea is included with acute rheumatism (rheumatic fever). (d) Included with typhoid fever. (e) These are figures supplied by the Directors of Tuberculosis in each State. (f) Under the Queensland Health Acts notifications of tuberculosis include erythema nodosum and pleural effusion. (g) Included with infectious hepatitis. \* Not notifiable.

(ii) *Specific Diseases.* (a) *Tuberculosis and Poliomyelitis.* The number of new cases of tuberculosis notified in each State and Territory by age groups for the year 1963 is shown on page 684. Some data regarding deaths from tuberculosis are shown on page 347 of Chapter X. Vital Statistics.

Cases of poliomyelitis notified in each State and Territory for the years 1956 to 1963 are shown on page 686.

(b) *Infectious Hepatitis.* The following table shows the number of cases of infectious hepatitis notified in each State and Territory during the years 1959 to 1963.



## INFECTIOUS HEPATITIS: CASES NOTIFIED.

State or Territory	1959	1960	1961	1962 p	1963 p
New South Wales .. .. .	3,183	4,925	6,050	3,358	2,822
Victoria .. .. .	1,452	2,385	3,515	3,533	3,840
Queensland .. .. .	762	713	1,022	884	1,433
South Australia .. .. .	749	1,121	1,406	504	293
Western Australia .. .. .	142	256	262	117	145
Tasmania .. .. .	21	44	304	630	856
Northern Territory .. .. .	53	23	61	101	104
Australian Capital Territory .. .. .	16	88	281	88	20
<b>Australia .. .. .</b>	<b>6,378</b>	<b>9,555</b>	<b>12,901</b>	<b>9,215</b>	<b>9,513</b>

(c) *Venereal Diseases.* The prevention and control of venereal diseases are the responsibility of State Health Departments. The necessary powers for the purpose are provided either by a special Venereal Diseases Act or by a special section of the Health Act. Venereal diseases are notifiable in all States except in South Australia, where however, the Director-General of Public Health is empowered to compel a venereal disease suspect to submit to medical examination and, if found infected, to medical treatment. While the provisions of the legislation differ from State to State, the Acts usually make it obligatory upon the patient to report for and continue under treatment until certified as cured. Treatment of venereal disease must be by a registered medical practitioner. Facilities for treatment of venereal disease free of charge may be arranged at subsidized hospitals or at special clinics. Penalties may be imposed on a patient who fails to continue under treatment. Clauses are inserted in the Acts which aim at preventing the marriage of any infected person, or the employment of an infected person in the manufacture or distribution of foodstuffs.

## § 5. Commonwealth Grants to Organizations Associated with Public Health

1. *General.*—In addition to providing the services mentioned in §§ 2-4 above, the Commonwealth Government gives financial assistance to certain organizations associated with public health. Examples of organizations included in this category are the National Fitness Organizations, the Royal Flying Doctor Service of Australia, the Red Cross Blood Transfusion Service, the Lady Gowrie Child Centres, and the National Heart Foundation of Australia.

2. *National Fitness.*—In 1938, arising from a recommendation of the National Health and Medical Research Council, the Commonwealth Government appointed a National Co-ordinating Council for National Fitness, under the Commonwealth Minister for Health, to effect collaboration of Commonwealth, State and local government authorities in the National Fitness Movement. Following the recommendations of the first Co-ordinating Council meeting in 1939, the Commonwealth Government agreed to make available an annual sum of £20,000 for five years, and grants were allocated to each State for purposes of organization and to each of the six Australian universities to establish lectureships in physical education.

The movement was placed on a statutory basis with the passing of the *National Fitness Act* 1941. The Act provides for a Commonwealth Council for National Fitness to advise the Minister for Health concerning the promotion of national fitness. It provides also for the establishment of a Trust Account, known as the *National Fitness Fund*, to assist in financing the movement. In June, 1942, the annual appropriation from revenue to the National Fitness Fund was increased to £72,500 to include grants to the State Education Departments and for the work in the Australian Capital Territory. The annual appropriation was increased to £100,000 in 1962, the increase of £27,500 being made available to the National Fitness Councils in the States. The £100,000 is disbursed as follows:—State National Fitness Councils, £64,454; Universities, £12,400; State Education Departments, £17,000; central administration, £3,396; and Australian Capital Territory, £2,750.

The annual grant of £2,750 allocated in the Australian Capital Territory is distributed mainly on a £1 for £1 basis to youth and sports organizations for the purchase of equipment, the development of coaching schemes, and the extension of club and camp facilities.

3. **Royal Flying Doctor Service of Australia.**—The purpose of the Royal Flying Doctor Service of Australia is to provide medical and dental services to persons in isolated areas. Most remote homesteads are equipped with two-way radio sets which they use for receiving ordinary radio programmes, participating in the School of the Air, and for contacting each other. In cases of minor illness or injury, they also use these sets to seek medical advice. If the illness or injury is serious, a doctor flies to the homestead and, if necessary, flies the patient to the nearest hospital. Standard medicine chests are supplied by the service. Each chest contains a first-aid book and instructions on the use of the various drugs and medical supplies. Further instructions are given by doctors over the air.

From time to time, special purpose work is undertaken in connexion with flood relief, searching for lost parties and co-ordinating cattle movements.

The service is not conducted for profit. In some sections, small charges are made for particular services or a fixed annual charge is levied on graziers. Other sections rely on voluntary contributions from those who use their services. Donations and government contributions help to provide much of the overhead and capital expenditure incurred each year.

The Commonwealth has made an annual grant to the service for operational expenses since 1936. The Commonwealth annual grant to the Royal Flying Doctor Service of Australia towards maintenance was increased from £40,000 to £55,000 per annum for three years from 1st July, 1962. The Commonwealth grant towards capital expenditure was increased from £27,500 to £40,000 per annum for the same period. This capital expenditure grant is made on a £1 for £1 basis, in respect of approved projects.

The Royal Flying Doctor Service of Australia is conducted by a federal council comprising representatives of six sections, namely Queensland, New South Wales, Victoria, South Australia, Western Australia and the Eastern Goldfields of Western Australia. The Queensland, New South Wales and South Australian sections are centred in their own States, but in Western Australia there are three centres, that in the far north being under the control of the Victorian section, and that in the south-east under the control of the Eastern Goldfields section. The third, which has bases at Port Hedland and Meekatharra, is sponsored by the Western Australian section.

4. **Red Cross Blood Transfusion Service.**—The Australian Red Cross Society conducts a blood transfusion service in all States.

Before 1952–53, the cost of the Red Cross Blood Transfusion Service was borne by the Red Cross Society with assistance from the State Governments. In 1952, the Commonwealth made an amount of £50,000 available to the Red Cross Society through the State Governments. The States were to continue to assist the society at the same level as previously and make arrangements with the society to share any deficit still remaining.

The Commonwealth recognized that the proper maintenance of a blood transfusion service was of the utmost importance to the welfare of the community and that the service was one eminently suited for operation by the Australian Red Cross Society. In March, 1954, therefore, the Commonwealth offered each State Government a grant equal to 30 per cent. of the certifiable operating expenses incurred by the Society in the conduct of the blood transfusion service in that State. The grant was to be made subject to the condition that the Government of the State concerned agreed to meet 60 per cent. of the cost of operating the service in that State, leaving the society to meet the remaining 10 per cent. of the cost. All States accepted this proposal. The payments made by the Commonwealth government to the State governments in 1962–63 were as follows:—New South Wales, £47,996; Victoria, £55,846; Queensland, £36,953; South Australia, £21,008; Western Australia, £17,427; Tasmania, £5,385; total, £184,615.

5. **Lady Gowrie Child Centres.**—In 1940, the Commonwealth Government established a pre-school demonstration centre in each of the six capital cities. These centres are known as the Lady Gowrie Child Centres and are administered by the Australian Pre-school Association. A grant of £50,000 per annum is made available by the Commonwealth towards the operation of the centres.

The specialized function of the centres is that of demonstration and research, and the programmes are carried out under the supervision of the Federal Pre-school Officer. Each centre is concerned with a study of the factors promoting and retarding physical and mental health in young children, and in demonstrating an educational health programme based on the developing needs of children aged 3 to 6 years.

The centres are used for observation by students of medicine, psychology, education, social studies, architecture, nursing, domestic science, and by student teachers.

6. **Home Nursing Subsidy Scheme.**—The Home Nursing subsidy scheme provides payments to assist the expansion of home nursing activities. To be eligible for a subsidy, an organization must be non-profit making and must receive assistance from a State Government, local government body, or other authority established by or under a State Act. It must employ registered nurses. It is provided that Commonwealth subsidy must not exceed the amount of State assistance received by the organization concerned. Eligible organizations established prior to November, 1956, now receive £1,000 a year in respect of each additional qualified nurse employed, and new organizations established since November, 1956, receive £500 a year in respect of each qualified nurse employed.

Expenditure during the year on the promotion of the Home Nursing Service was £144,388. The Commonwealth subsidy paid to various district nursing organizations has led to the employment of 192 trained nurses.

7. **National Heart Foundation of Australia.**—The National Heart Foundation of Australia is a national organization established to promote research in cardiovascular disease, to rehabilitate heart sufferers and to foster the dissemination of information about heart diseases.

Formed in 1960, as a result of a public appeal yielding £2,500,000 to which the Commonwealth Government contributed £10,000, the Foundation has its headquarters in Canberra.

The organization is controlled by a Board of Directors assisted by various Committees. State Divisions with their own administrations deal especially with rehabilitation and education.

From its inception to the end of 1963, the Foundation has allocated over £640,000 for grants-in-aid towards research in university departments, hospitals and research institutes, research fellowships tenable in Australia and overseas, and oversea travel grants. Most of the annual expenditure of about £300,000 is devoted to supporting research in cardiovascular disease.

## INSTITUTIONS

NOTE.—Institutions referred to under this heading are classified into the following groups:—(i) Public (other than mental); (ii) Mental; (iii) Private; (iv) Repatriation; (v) Isolation (leper).

### § 1. Public Hospitals (other than Mental Hospitals)

1. **General.**—The statistics shown in this section refer to all institutions affording hospital relief, whether general or special, with the exception of mental hospitals, repatriation hospitals, leper hospitals, and private hospitals conducted commercially. They include hospitals wholly provided for by the State, hospitals partially subsidized by the State or by State endowments but receiving also private aid, and hospitals established and endowed by individuals for the benefit of the needy generally. All the State capitals have several large and well-equipped hospitals, and there is at least one in every important town. In large centres there are special hospitals for infectious diseases, tubercular patients, women, children, and patients suffering from chronic diseases.

2. **Number, Staff and Accommodation.**—Details regarding the number of public hospitals, staff, and accommodation for the year 1961–62 are given in the following table.

**PUBLIC HOSPITALS: NUMBER, STAFF AND ACCOMMODATION, 1961-62**

Particulars	N.S.W.	Vic.	Q'land	S. Aust.	W. Aust.	Tas.	N.T.	A.C.T.	Aust.
Number of hospitals	269	142	143	65	91	28	4	1	743
Medical staff—									
Honorary ..	4,656	1,507	9	607	350	122	..	80	7,331
Salaried ..	921	914	872	220	143	111	17	6	3,204
Total ..	5,577	2,421	881	827	493	233	17	86	10,535
Nursing staff(a) ..	14,543	10,237	5,947	3,121	3,307	1,442	198	287	39,082
Accommodation—									
Number of beds and cots ..	23,193	13,193	12,450	4,403	4,922	2,683	480	318	61,642

(a) Qualified and student nurses, assistant nurses, assistant nurse trainees, nursing aides and nursing aide trainees.

3. **In-patients Treated.**—The following table gives particulars of in-patients treated. The figures shown refer to cases, that is to say, a person who is admitted to hospital twice during a year is counted twice. Newborn babies are excluded unless they remain in hospital after their mothers' discharge.

## PUBLIC HOSPITALS: IN-PATIENTS TREATED, 1961-62

Particulars	N.S.W.	Vic.	Q'land	S. Aust.	W. Aust.	Tas.	N.T.	A.C.T.	Aust.
In-patients at beginning of year—									
Males ..	7,289	3,827	3,910	1,186	1,315	885	172	82	18,666
Females ..	9,740	5,442	4,468	1,540	1,667	945	151	133	24,086
Persons ..	17,029	9,269	8,378	2,726	2,982	1,830	323	215	42,752
Admissions and re-admissions during year—									
Males ..	192,707	104,378	99,305	37,357	44,103	14,400	4,097	3,223	499,570
Females ..	302,048	173,480	125,668	49,326	53,058	21,689	4,528	6,298	736,095
Persons ..	494,755	277,858	224,973	86,683	97,161	36,089	8,625	9,521	1,235,665
Total in-patients (cases) treated—									
Males ..	199,996	108,205	103,215	38,543	45,418	15,285	4,269	3,305	518,236
Females ..	311,788	178,922	130,136	50,866	54,725	22,634	4,679	6,431	760,181
Persons ..	511,784	287,127	233,351	89,409	100,143	37,919	8,948	9,736	1,278,417
Discharges—									
Males ..	184,565	99,149	95,901	35,661	42,841	13,703	3,995	3,123	478,938
Females ..	295,494	169,504	122,911	47,990	52,070	21,059	4,450	6,199	719,677
Persons ..	480,059	268,653	218,812	83,651	94,911	34,762	8,445	9,322	1,198,615
Deaths—									
Males ..	8,150	5,288	3,622	1,619	1,289	701	111	90	20,870
Females ..	6,556	4,255	2,765	1,337	1,062	566	82	76	16,699
Persons ..	14,706	9,543	6,387	2,956	2,351	1,267	193	166	37,569
In-patients at end of year—									
Males ..	7,281	3,768	3,692	1,263	1,288	881	163	92	18,428
Females ..	9,738	5,163	4,460	1,539	1,593	1,009	147	156	23,805
Persons ..	17,019	8,931	8,152	2,802	2,881	1,890	310	248	42,233
Average daily number resident ..	16,695	9,004	8,166	2,769	3,059	1,845	330	237	42,105

In addition to those admitted to the hospitals, there are large numbers of out-patients treated. During 1961-62, there were 1,233,225 out-patients treated in New South Wales, 626,397 in Victoria, 655,463 in Queensland, 112,445 in South Australia, 132,000 (estimated) in Western Australia, 92,929 in Tasmania, 78,210 in the Northern Territory and 16,120 in the Australian Capital Territory, making an estimated total for Australia of 2,946,800. The figures quoted refer to cases, as distinct from persons and attendances.

4. Revenue and Expenditure.—Details of the revenue and expenditure for the year 1961-62 are shown in the next table. The revenue includes the Commonwealth Hospital Benefits Scheme.

## PUBLIC HOSPITALS: REVENUE AND EXPENDITURE, 1961-62

(£'000)

Particulars	N.S.W.	Vic.	Qld	S.A.	W.A.	Tas.	N.T.	A.C.T.	Aust.
Revenue—									
Government aid ..	29,619	18,378	13,464	5,183	8,181	3,406	1,120	819	84,094
Commonwealth Hospital Benefits, etc.									
Municipal aid ..		3,076		806	1		42		247
Public subscriptions, legacies, etc. ..	155	2,571	63	145	51				2,985
Fees ..	12,984	7,594	2,082	2,290	2,757	704	72	185	28,668
Other ..	593	497	1,771	526	62	10		3	3,462
<b>Total ..</b>	<b>43,351</b>	<b>32,137</b>	<b>17,380</b>	<b>9,175</b>	<b>11,052</b>	<b>4,120</b>	<b>1,234</b>	<b>1,007</b>	<b>119,456</b>
Expenditure—									
Salaries and wages ..	25,391	14,126	8,803	4,816	5,455	1,927	560	450	61,528
Upkeep and repair of buildings and grounds ..	1,216	674	615	463	489	70	78	34	3,639
All other ordinary ..	11,657	10,144	6,340	2,378	2,943	915	313	179	34,869
Capital ..	5,461	6,177	1,996	1,455	2,392	1,205	283	331	19,300
<b>Total ..</b>	<b>43,725</b>	<b>31,121</b>	<b>17,754</b>	<b>9,112</b>	<b>11,279</b>	<b>4,117</b>	<b>1,234</b>	<b>994</b>	<b>119,336</b>

5. **Summary.**—A summary, for the years 1957–58 to 1961–62, of the number of public hospitals in Australia, medical and nursing staffs, beds, admissions, in-patients treated, out-patients, deaths, average daily number resident, revenue and expenditure is given in the following table.

## PUBLIC HOSPITALS: AUSTRALIA

Particulars	1957-58	1958-59	1959-60	1960-61	1961-62
Hospitals .. .. .	735	733	736	736	743
Medical staff(a) .. .. .	9,098	9,354	9,954	10,386	10,535
Nursing staff(b) .. .. .	32,436	34,372	36,023	37,607	39,082
Beds and cots .. .. .	56,618	58,544	60,203	61,039	61,642
Admissions during year .. .. .	1,085,503	1,133,172	1,153,690	1,182,198	1,235,665
Total in-patients (cases) treated .. .. .	1,123,799	1,172,861	1,196,111	1,225,060	1,278,417
Out-patients (cases)(c) .. .. .	2,641,000	2,665,700	2,754,400	2,794,400	2,946,800
Deaths .. .. .	33,689	35,848	35,407	36,619	37,569
Average daily number resident .. .. .	38,470	40,021	40,672	41,009	42,105
Revenue .. .. . £'000	87,692	90,512	98,976	109,399	119,456
Expenditure .. .. . £'000	86,817	90,157	97,987	108,556	119,336

(a) Honorary and salaried. (b) Qualified and student nurses, assistant nurses, assistant nurse trainees, nursing aides and nursing aide trainees. (c) Partly estimated.

## § 2. Mental Hospitals

1. **General.**—Statistics of mental hospitals presented in the following tables, with the exception of those relating to revenue and expenditure, include particulars of the two authorized hospitals conducted by religious organizations in New South Wales. The figures exclude reception houses and observation wards in gaols. There are no mental hospitals in the Northern Territory or the Australian Capital Territory.

2. **Hospitals, Staff and Accommodation.**—Particulars regarding the number of hospitals, the medical and nursing staff, and accommodation are given in the following table for the year 1962. Figures for Victoria and Western Australia relate to 31st December, 1962. Figures for the other States relate to 30th June, 1962.

## MENTAL HOSPITALS: NUMBER, STAFF, ACCOMMODATION, 1962

Particulars	N.S.W.	Vic.(a)	Q'land (b)	S. Aust.	W. Aust. (a)	Tas.	Aust.
Number of Hospitals .. .. .	15	(c) 9	5	2	(d) 6	1	38
Medical Staff—							
Males .. .. .	93	107	17	13	16	5	251
Females .. .. .	14	18	3	3	..	..	38
Persons .. .. .	(e) 107	125	20	16	16	5	289
Nursing Staff and Attendants—							
Males .. .. .	1,288	1,196	639	247	242	114	3,726
Females .. .. .	1,378	1,403	489	290	201	100	3,861
Persons .. .. .	2,666	2,599	1,128	537	443	214	7,587
Accommodation—							
Number of beds and cots .. .. .	13,494	8,891	4,267	2,696	1,915	850	32,113

(a) 31st December, 1962. (b) Includes the Epileptic Home. (c) Excludes two institutions previously listed as mental hospitals which were re-classified in 1962 as Intellectual Deficiency Training Centres. (d) Includes two mental institutions not included in years previous to 1962. (e) In addition, there are in New South Wales 57 visiting specialists who are paid for their services.

3. **Patients.**—Information regarding patients treated during 1961–62 is given in the following table. The figures include voluntary patients in all States with the exception of South Australia, but they are included in the average daily resident shown for that State. They were excluded from figures for New South Wales published for years previous to 1962.

Persons who are well advanced towards recovery are allowed to leave the hospitals and live with their relatives or friends, but they are under supervision and their names are kept in the records. These persons have been included in the table below as patients at the end of the year.

MENTAL HOSPITALS: PATIENTS, DEATHS, ETC., 1961-62

Particulars	N.S.W.	Vic. (a)(b)	Q'land (c)	S. Aust. (d)	W. Aust. (a)(e)	Tas.	Aust.
Number of patients at beginning of year—							
Males .. .. .	7,174	4,382	2,424	1,371	1,263	340	16,954
Females .. .. .	7,312	4,505	1,887	1,135	1,016	415	16,270
Persons .. .. .	14,486	8,887	4,311	2,506	2,279	755	33,224
Admissions and re-admissions (excluding absconders retaken and transfers from other mental hospitals)—							
Males .. .. .	2,942	2,054	786	330	858	297	7,267
Females .. .. .	3,419	1,795	830	279	744	303	7,370
Persons .. .. .	6,361	3,849	1,616	609	1,602	600	14,637
Number of persons treated during year—							
Males .. .. .	10,116	6,436	3,210	1,701	2,121	637	24,221
Females .. .. .	10,731	6,300	2,717	1,414	1,760	718	23,640
Persons .. .. .	20,847	12,736	5,927	3,115	3,881	1,355	47,861
Discharges (including absconders not retaken)—							
Males .. .. .	2,510	1,918	645	287	849	268	6,477
Females .. .. .	3,109	1,607	757	259	796	273	6,801
Persons .. .. .	5,619	3,525	1,402	546	1,645	541	13,278
Deaths—							
Males .. .. .	470	364	138	72	54	22	1,120
Females .. .. .	525	407	115	88	48	24	1,207
Persons .. .. .	995	771	253	160	102	46	2,327
Number of patients at end of year—							
Males .. .. .	7,136	4,154	2,427	1,342	1,218	347	16,624
Females .. .. .	7,097	4,286	1,845	1,067	916	421	15,632
Persons .. .. .	14,233	8,440	4,272	2,409	2,134	768	32,256
Average daily number of patients resident—							
Males .. .. .	6,252	3,745	2,261	1,340	1,057	349	15,004
Females .. .. .	5,912	3,862	1,689	1,052	773	414	13,702
Persons .. .. .	12,164	7,607	3,950	2,392	1,830	763	28,706
Average number of patients resident in mental hospitals per 1,000 of population—							
Males .. .. .	2.68	2.49	2.90	2.71	2.75	1.93	2.61
Females .. .. .	2.59	2.60	2.26	2.17	2.08	2.35	2.44
Persons .. .. .	2.64	2.54	2.59	2.44	2.42	2.14	2.53

(a) Year ended 31st December, 1962. (b) Excludes patients at two institutions listed as mental hospitals in previous years which were re-classified in 1962 as Intellectual Deficiency Training Centres. (c) Includes persons treated at the Epileptic Home. (d) Includes voluntary patients average daily resident only. (e) Includes patients at two mental institutions excluded in years previous to 1962.

4. Revenue and Expenditure, 1961-62.—Mental hospitals are maintained by the State governments. They derive a small proportion of their revenue from other sources (chiefly patients' fees, pharmaceutical benefits and sale of farm produce), but in 1961-62 these sources provided less than six per cent. of all their revenue. For a statement on the funds provided by the Commonwealth Government for mental hospitals, see para. 3, Mental Hospitals, pages 681-2.

In New South Wales, the expenditure includes the cost of Broken Hill patients treated in South Australian mental hospitals.

## MENTAL HOSPITALS: FINANCES, 1961-62

(£'000)

Particulars	N.S.W. (a)	Vic. (b)	Q'land (c)	S. Aust.	W. Aust.	Tas.	Australia
Revenue (excluding Government Grants)—							
Fees of patients	569	288	107	75	71	20	1,130
Other ..	59	338	10	30	31	4	472
Total ..	628	626	117	105	102	24	1,602
Expenditure—							
Salaries and wages	4,142	4,896	1,538	727	869	343	12,515
Upkeep and repair of buildings, etc.	409	310	7	98	57	14	895
All other ..	2,854	2,398	844	452	383	190	7,121
Capital(d) ..	2,080	1,051	382	19	168	116	3,816
Total ..	9,485	8,655	2,771	1,296	1,477	663	24,347

(a) Excludes the two authorized hospitals conducted by religious organizations. (b) Includes institutions in addition to the nine hospitals. (c) Includes the Epileptic Home. (d) Capital expenditure includes purchases of land, cost of new buildings and additions to buildings.

5. Summary for Australia.—The following table gives a summary relating to mental hospitals in Australia for each of the years 1957-58 to 1961-62.

## MENTAL HOSPITALS: SUMMARY, AUSTRALIA

Particulars	1957-58	1958-59	1959-60	1960-61	1961-62
Hospitals .. .. .	37	38	38	38	38
Medical staff .. .. .	206	219	232	250	289
Nursing staff and attendants ..	6,761	6,895	7,027	7,335	7,587
Beds .. .. .	31,587	32,025	32,068	31,996	32,113
Admissions .. .. .	9,244	9,477	8,854	9,001 (a)	14,637
Discharged as recovered, relieved, etc.	6,288	6,797	8,052	7,320 (a)	13,278
Deaths .. .. .	2,468	2,658	2,394	2,139 (a)	2,327
Patients at end of year .. .. .	33,521	33,543	31,951	31,493 (a)	32,256
Average daily number of patients resident .. .. .	29,323	29,553	29,209	28,204 (a)	28,706
Revenue (excluding Government grants) .. .. . £'000	1,027	1,071	1,139	1,505	1,602
Total expenditure .. .. . £'000	18,236	18,196	20,073	21,786	24,347

(a) Voluntary patients for New South Wales were excluded for earlier years (see para. 3, p. 702).

6. Patients in Mental Hospitals.—The total number of inmates of mental hospitals and patients on trial leave at the end of each year from 1958 to 1962 is shown in the following table. A more rational attitude towards the treatment of mental cases has resulted in a greater willingness in recent years to submit afflicted persons to treatment at an early stage, and an increase in the number of recorded cases, therefore, would not necessarily imply an increase in mental diseases. The numbers of patients in mental hospitals in the several States is affected to some extent by differences in practice. For instance, in some States there is a greater tendency to treat certain mental diseases in clinics attached to general hospitals. Figures for Victoria and Western Australia relate to 31st December of the year shown; figures for the other States relate to 30th June of the year shown.

## PATIENTS IN MENTAL HOSPITALS

State	1958	1959	1960	1961	1962
New South Wales .. .. .	13,761	13,792	12,665	12,213	(a) 14,233
Victoria .. .. .	9,800	9,739	9,600	9,773	(b) 8,440
Queensland(c) .. .. .	4,610	4,624	4,364	4,311	4,272
South Australia .. .. .	2,667	2,643	2,564	2,506	2,409
Western Australia .. .. .	1,926	1,966	1,971	1,935	(d) 2,134
Tasmania .. .. .	757	779	787	755	768
<b>Australia .. .. .</b>	<b>33,521</b>	<b>33,543</b>	<b>31,951</b>	<b>31,493</b>	<b>32,256</b>

(a) Includes voluntary patients excluded in years previous to 1962. (b) Excludes patients in two institutions listed as mental hospitals in previous years but re-classified in 1962 as mental deficiency training centres. (c) Includes persons treated at the Epileptic Home. (d) Includes patients in two institutions excluded in years previous to 1962.

## § 3. Private Hospitals

In addition to the other hospitals referred to in previous sections, there are private hospitals in each State. The figures shown in the following table refer to those private hospitals which have been approved for the payment of hospital benefits under the Commonwealth *National Health Act* 1953-1963.

## PRIVATE HOSPITALS: AUSTRALIA

State or Territory	1958	1959	1960	1961	1962
NUMBER OF HOSPITALS					
New South Wales .. .. .	410	429	444	461	474
Victoria .. .. .	240	239	256	254	260
Queensland .. .. .	69	74	79	92	116
South Australia .. .. .	125	140	144	143	156
Western Australia .. .. .	60	63	74	79	85
Tasmania .. .. .	21	28	33	32	34
Northern Territory .. .. .	..	..	..	..	..
Australian Capital Territory .. .. .	..	..	..	..	..
<b>Australia .. .. .</b>	<b>925</b>	<b>973</b>	<b>1,030</b>	<b>1,061</b>	<b>1,125</b>

## NUMBER OF HOSPITAL BEDS

New South Wales .. .. .	7,438	8,172	8,864	9,678	10,563
Victoria .. .. .	4,827	4,830	5,013	4,998	5,556
Queensland .. .. .	1,877	1,949	2,162	2,445	2,943
South Australia .. .. .	2,382	2,742	2,796	2,866	3,440
Western Australia .. .. .	1,554	1,605	1,799	1,945	2,381
Tasmania .. .. .	478	607	665	687	763
Northern Territory .. .. .	..	..	..	..	..
Australian Capital Territory .. .. .	..	..	..	..	..
<b>Australia .. .. .</b>	<b>18,556</b>	<b>19,905</b>	<b>21,299</b>	<b>22,619</b>	<b>25,646</b>



PRIVATE HOSPITALS: AUSTRALIA—*continued*

State or Territory	1958	1959	1960	1961	1962
<b>NUMBER OF HOSPITAL PATIENTS (AVERAGE DAILY NUMBER RESIDENT)</b>					
New South Wales .. .. .	6,044	6,398	7,129	7,955	8,644
Victoria .. .. .	3,354	3,494	3,620	4,014	4,410
Queensland .. .. .	1,305	1,476	1,708	1,905	2,219
South Australia .. .. .	1,725	1,956	2,049	2,255	2,477
Western Australia .. .. .	1,186	1,362	1,524	1,707	1,839
Tasmania .. .. .	345	400	510	573	598
Northern Territory .. .. .	..	..	..	..	..
Australian Capital Territory .. .. .	..	..	..	..	..
<i>Australia</i> .. .. .	<i>13,959</i>	<i>15,086</i>	<i>16,540</i>	<i>18,409</i>	<i>20,187</i>

## § 4. Repatriation Hospitals

The medical care of eligible ex-servicemen and dependants of deceased ex-servicemen is a major function of the Commonwealth Repatriation Department (*see* Chapter XXVIII. Repatriation), which provides a comprehensive service.

In-patient treatment is provided at Repatriation General Hospitals in each capital city and at auxiliary hospitals in all States except Tasmania. "Anzac Hostels" are maintained in Queensland and Victoria for long-term patients. In-patient treatment may also be provided in country hospitals at the Department's expense in certain circumstances. Mental patients requiring custodial care are, by agreement with the State Governments, accommodated at the expense of the Department in mental hospitals administered by the State authorities.

The average daily number of patients resident in Repatriation General Hospitals during the year ended 30th June, 1963, was 3,334.

## § 5. Isolation (Leper) Hospitals

Isolation hospitals for the care and treatment of persons suffering from Hansen's disease (leprosy) are located at Little Bay, New South Wales; Fantome Island, North Queensland; Derby, Western Australia; and East Arm Settlement, Northern Territory. Special wards for the isolation of leprosy patients have been provided at Fairfield (Victoria) and Wooroloo (Western Australia). At the end of 1963, there were 11 cases at Little Bay, 18 at Fantome Island, five at South Brisbane Hospital, 166 at Derby, two at Wooroloo, 118 at East Arm Settlement and nine at Fairfield. Of the 329 cases, 259 were full-blood Aborigines, 41 were half-caste Aborigines, two were Pacific Islanders, two were Asians and 25 were Europeans.

## CHAPTER XIX

## EDUCATION, CULTURAL ACTIVITIES AND RESEARCH

NOTE.—For the most recent statistics available on subjects dealt with in this Chapter, reference should be made to the series of mimeographed bulletins *Social Statistics* issued by this Bureau. The *Quarterly Summary of Australian Statistics* contains summarized information on these subjects, and financial aspects are dealt with in the annual bulletins *Commonwealth Finance and State, Territories and Local Government Authorities' Finance and Government Securities*.

## EDUCATION

NOTE.—An account of the development of the Australian school system up to 1929 may be found in Year Books Nos. 1, 2, 17 and 22. In Year Book No. 40, a review of changes which occurred up to 1951 and of the practices then current was presented from material furnished by the Commonwealth Office of Education, which contributed much of the textual matter in the following sections. The information relating to the educational programme applies mainly to the year 1963. The statistics given in the tables relate to 1962 and 1963.

## § 1. Education in Australian Schools

1. Administration and Organization.—(i) *General*. In Australia, the provision of schools is mainly a responsibility of the governments of the States. During the nineteenth century, all six Australian colonies had established systems of compulsory education, beginning with the *Education Act* 1872 in Victoria, and followed by similar Acts in Queensland (1875), South Australia (1875), New South Wales (1880), Tasmania (1893), and Western Australia (1893). These Acts, with subsequent amendments, constitute the legal basis of compulsory education in the Australian States to-day.

School attendance is compulsory throughout Australia between the ages of 6 and 14 at least. The minimum leaving age is 15 years in New South Wales, Victoria and South Australia; 14 years in Queensland; until the end of the year in which the child turns 14 years in Western Australia; and 16 years in Tasmania.

The Education Acts require that all children between the prescribed ages must attend either a government school or some other recognized educational institution. Children may be exempted from the requirement of compulsory attendance if they live too far from a school or suffer a physical disability. These children usually receive correspondence tuition.

The school year in Australia begins at the end of January or early in February; it ends in mid-December. The long vacation is taken over the summer months (December to February) and two short vacations divide the school year into three terms.

At government primary schools, it is usual for both boys and girls to attend the same school; at the secondary level, practices vary, but the trend is towards mixed schools. Non-government schools cater mainly for boys and girls separately.

(ii) *Government School Systems*. Government schools are a responsibility of the six State Governments, except in the Commonwealth Territories. Although the educational systems are not identical, they have many similar features. Responsibility for framing educational policy and having it put into effect rests with a Minister for Education, who is a member of the State Cabinet.

The administrative authority in each State is an Education Department headed by a Director-General, or Director of Education. Separate divisions of the Education Department in each State administer primary, secondary and technical education (in New South Wales there is a separate Department of Technical Education). Other divisions look after such matters as the recruitment and training of teachers, pupil guidance, research and the education of atypical children.

In some States, administration has been decentralized to a degree by the appointment of "Area" or "Regional" directors, who are responsible for policy in the area which they control.

Tuition at government primary and secondary schools is free in all States. Parents usually are expected to bear the cost of text-books, prescribed uniforms, and charges for such things as the use of sports materials. However, income tax concessions exist in respect of these expenditures.

(iii) *Non-government Schools System.* More than three-quarters of the children at non-government primary and secondary schools attend Roman Catholic schools, which form a highly developed but not centralized system. At the primary level, these children normally attend mixed parish schools, but at the secondary level there are boys' schools, approximately half taking boarders, and girls' schools. Some of the small convent schools in country districts enrol young boys as well as girls. The organization of Roman Catholic schools is primarily on a diocesan basis under the general direction of the bishop, although many of the religious orders which conduct schools are Australia-wide, and have their own internal organization.

The majority of other non-government schools, sometimes known as "private" or "independent" schools, are conducted by, or are under the auspices of, various religious denominations, particularly the Church of England, Presbyterian, and Methodist Churches. Others are conducted by the Baptist, Lutheran, Congregational and Seventh-day Adventist Churches and by smaller religious groups. There are Jewish schools in several capital cities. A few non-government schools, including some of the foremost, are undenominational and conducted under the auspices of corporate bodies.

The methods adopted by the educational authorities to ensure an acceptable standard of education at non-government schools vary from State to State. In New South Wales, Victoria, Western Australia, and Tasmania, these schools are regularly inspected. In Victoria and Tasmania, schools and teachers must be registered. In Queensland, eight grammar schools, which exist by statutory authority and are subsidized by the State, are subject to annual inspection. Other non-government schools in Queensland, and also those in South Australia, are not subject to inspection.

The principals of a number of the larger non-government schools have formed organizations with both State and Australia-wide coverage, namely, the Headmasters' Conference of Australia, and the Headmistresses' Association of Australia.

2. *Schools and Courses.*—(i) *Primary Education in Government Schools.* Though school attendance is not compulsory until the age of six, most Australian children begin school when they are five, attending infants' schools or infants' classes attached to a primary school. In some States, the first year in the infants' department is known as "kindergarten".

The emphasis in infants' classes, which occupy two or three years, is on general development, play activities and the informal aspects of education, with a gradual shift towards more formal activities in the second and third years. Creative expression through drawing, dancing, handiwork, dramatization, painting and similar activities is encouraged. Attention is given to speech training and to activities with music.

At the end of their infants' school training, most children are able to read with some fluency, carry out simple arithmetical operations founded on the basic number facts, and write in pencil. In addition, they have acquired elementary skills in art, music and the like.

At about the age of eight, most children pass into the primary school proper, where they usually spend four or five years. Primary schools are normally provided when and where there is sufficient population to justify them. Irrespective of the size or the location of the school, standards of tuition do not vary appreciably, because teachers within a State follow similar courses of training and transfer freely between metropolitan and country areas.

The Education Departments prescribe syllabuses of instruction, which are drawn up with the assistance of expert committees. The primary syllabuses have an emphasis on basic subjects like reading, writing and arithmetic, social studies and oral language, but the teacher has some freedom to modify courses to suit local circumstances and the varying abilities of his students.

Children attend primary schools in their own districts, usually within walking distance of their homes, on five days each week. The school day is broken up into three or four sessions by a lunch break and by a morning and sometimes an afternoon recess. The total period of instruction is  $4\frac{1}{2}$  to 5 hours' daily with individual subject lessons lasting 20 to 30 minutes. Periods are set aside for physical education and sport. One teacher generally has charge of a class and teaches it all the subjects set out in the curriculum for the particular grade.

Pupils do not, as a rule, sit for a public examination during or at the end of their primary course, and progression from primary to secondary school is automatic. Allocation to particular schools or particular courses is based on the recommendations of the headmaster, general ability tests, tests of achievement in the basic subjects and parents' wishes. In South Australia, pupils may proceed to secondary school on receiving the Progress Certificate, which is awarded on satisfactory completion of the seventh grade, the highest grade at primary level.

(ii) *Secondary Education in Government Schools.* The age of transfer from a government primary to secondary school is usually between 12 and 13. Most secondary schools in the country are co-educational; in the cities the practice varies according to the State and the type of school concerned.

In the cities and larger country centres, secondary courses are provided in separate schools from primary courses, but in less populous areas secondary classes sometimes share buildings with primary classes.

The secondary student takes up new studies such as foreign languages and technical or commercial subjects, and moves on to more specialized studies in natural and social sciences and mathematics. The study of basic subjects begun in primary school is continued. The actual subjects studied depend on the ability of the pupil and the type of school. A school day is divided into "periods", and the children are taught by a number of teachers, each specializing in a particular subject or group of subjects.

To meet the varying abilities and needs of students, various kinds of secondary schools have been established in which different types of education are provided, although in country areas secondary schools tend necessarily to be comprehensive and offer a full range of secondary courses. But, following the re-examination by expert committees in all States of the problems associated with the provision of appropriate secondary education for all, significant changes in the structure and curricula of secondary schools are taking place. In New South Wales, for example, following a committee's recommendation that the secondary curriculum should offer a core of common basic education to all students, an increasing number of secondary schools are becoming comprehensive; in future, pupils of different aptitudes and interests in a given locality will attend the same secondary school, undertake this core of common basic studies, and in addition specialize according to their proven abilities and interests.

The main types of government secondary schools are described below.

*High Schools.* Until recently, high schools were organized on traditionally academic lines, offering courses of four to six years' duration which prepared students for public examinations qualifying them for entry to universities, teachers' colleges, other tertiary institutions and the public service. Curricula varied, but usually included English language and literature, foreign languages, mathematics, physics, chemistry, biology, history, and social sciences. In the comprehensive or multi-purpose high schools, which are becoming more common, a broader range of subjects is offered. There are high schools specializing in technical and commercial subjects, and as mentioned below, in agricultural subjects.

*Junior Secondary Schools.* Junior secondary schools operate under various names. These schools provide general education, but also give pupils preparatory vocational training in trade, technical, commercial or agricultural courses, and assist them to determine the work for which they are best suited. Courses cover three to four years' study.

*Home Science Schools.* Home science schools offer two to five year courses in home science and commercial subjects. These courses prepare girls for the responsibilities of home-making and also for occupations in business, commerce, the public service and nursing.

*Agricultural Schools.* In each State, there are a few separate agricultural high schools, many of them residential. The curriculum consists of general educational subjects and practical farm training. There are also "area" and "rural" schools offering up to three years of secondary study, and in some States courses in agriculture are also given at high schools.

(iii) *Primary and Secondary Education in non-government Schools.* Non-government schools follow curricula similar to those laid down by Education Departments, and prepare their students for examinations conducted by public examining authorities. There are similarities between non-government and government schools in the courses they provide, but, in denominational schools, more emphasis is given to the religious training of pupils. Non-government schools at the secondary level, although usually organized along traditional academic lines, also cater for students who may wish to take commercial, junior technical or domestic science subjects. A few schools, mostly Roman Catholic secondary schools, specialize in agricultural and technical courses. Non-government schools offer some facilities additional to those normally found in government schools, such as personal tuition in music, ballet, etc. A few are organized on "experimental" lines.

3. *Examinations.*—During the course of secondary education, State-wide examinations are taken at two levels. The earlier examination, usually called the Intermediate or Junior Examination, qualifies pupils for entry to trade courses at technical colleges and agricultural colleges, to junior commercial positions in, for instance, insurance and banking, to nursing

and secretarial courses, to lower grades of the public service and to industry. The examination at the end of the secondary school course is usually called the Leaving Examination and qualifies students for entry to teacher's colleges, the higher grades of the public service, and commercial occupations. In the majority of States, the Leaving Examination is also the qualification for entry to the university, certain subjects and combinations of subjects being set down as the matriculation requirements by the respective universities.

In most States, the Leaving Examination is controlled by a Board consisting of representatives of the Department of Education, the universities, and non-government schools, and sometimes of other bodies such as teachers' organizations. In Victoria and Tasmania, the final secondary examination is under university control and designed specifically for matriculation.

A brief description of the examinations in each State follows.

*New South Wales.* The Intermediate Certificate examination has been taken internally after three years secondary study, at about the age of 15, and the Leaving Certificate examination after five years, at about 17. The structure of secondary education is being changed so that children entering secondary schools in 1962 and subsequent years are to follow a six-year course. The Intermediate Certificate examination will be taken as at present by those who wish to leave school at that stage. A School Certificate examination will be taken at the end of four years and a Higher School Certificate examination (Matriculation) after a further two years.

At present, a student presenting himself for the Leaving Certificate examination qualifies for matriculation by obtaining passes in prescribed subjects. In addition, the University of Sydney conducts its own matriculation examination, for which students may sit in place of the Leaving Certificate examination.

*Victoria.* The Intermediate Examination is taken at the end of the fourth secondary year, at about the age of 16, the School Leaving Examination at the end of fifth year, at 17, and the matriculation examination conducted by the University of Melbourne at the end of sixth year, at the age of 18. Pupils at approved non-government schools may be accredited for the Intermediate and Leaving Certificate by passing the examinations set by their own schools.

*Queensland.* The Junior Public Examination is taken at the end of second year, at about the age of 16. The Senior Public Examination conducted by the University of Queensland is taken at the end of fourth year, at the age of 18, and matriculation is obtained on results in this examination. At the beginning of the 1964 school year, a five-year secondary course was introduced. Pupils enter secondary school one year earlier than formerly, and the Junior Public Examination will be taken at the end of the third year and the Senior Public Examination at the end of the fifth year.

*South Australia.* The Intermediate Examination is taken at the end of the third year, at about the age of 15½. The Leaving Examination is taken at the end of the fourth year and matriculation is gained on results in this examination. A further year may be taken, leading to the Leaving Honours Examination. The Leaving Honours year is designed primarily as additional preparation for university work, though it is not compulsory for intending students of the University of Adelaide.

*Western Australia.* The Junior Certificate examination is taken at the end of third year, at about the age of 15½. Students who pursue a less academic course may take the High School Certificate examination at this level. The Leaving Certificate examination is taken at the end of fifth year, at an average age of 17½, and matriculation is gained on results in this examination.

*Tasmania.* The Secondary School Certificate examination is taken at the end of third year, at about the age of 15½; the Schools Board Certificate examination at the end of fourth year, at 16½; and the matriculation examination conducted by the University of Tasmania at the end of sixth year.

## § 2. Numbers of Schools, Teachers and Pupils.

1. *General.*—The statistics which follow relate generally to schools providing education according to the primary and secondary school curricula of the various State Education Departments, whether provided in government or non-government schools. Junior technical schools, correspondence schools and schools in institutional homes, hospitals and similar establishments are included. Institutions providing only pre-school education, senior technical colleges, evening schools, continuation classes and various unregistered schools such as coaching establishments are excluded.

"School Censuses" are conducted annually, at or about the beginning of August, throughout all States and Territories of Australia. The numbers of pupils refer to the position at the school census date. The numbers of schools and teachers refer to the position at dates which vary from State to State and in some instances from year to year.

It has not been possible to present all figures on a uniform basis between States. However, continuity of the figures for any one State over the period of years shown has been maintained as far as possible.

Particulars relating to senior technical colleges are given in § 6, pages 723-5.

2. Statistical Summary.—The numbers of schools, teachers and pupils for 1962 and 1963 are shown in the following tables.

SCHOOLS: NUMBER, TEACHERS, PUPILS, 1962

Type of school	N.S.W.	Vic.	Qld	S.A.	W.A.	Tas.	N.T.	A.C.T.	Aust.
NUMBER OF SCHOOLS									
Government .. .. .	2,724	2,207	1,459	656	532	286	17	23	7,904
Non-government—									
Denominational—									
Church of England ..	37	36	17	13	9	5	..	3	120
Hebrew .. .. .	2	6	..	..	1	..	..	..	9
Lutheran .. .. .	3	7	2	13	..	..	..	..	25
Methodist .. .. .	7	4 (a)	5	4	3	1	..	..	24
Presbyterian .. .. .	13	14	3	2	2	..	..	..	36
Roman Catholic .. ..	691	448	286	123	171	51	4	11	1,785
Seventh-day Adventist	20	7	3	3	5	3	..	..	41
Other .. .. .	..	4	..	2	2	2	..	..	10
Undenominational .. ..	52	25	8	4	2	2	..	..	93
<b>Total .. .. .</b>	<b>825</b>	<b>551</b>	<b>324</b>	<b>164</b>	<b>195</b>	<b>66</b>	<b>4</b>	<b>14</b>	<b>2,143</b>
<b>Grand Total .. .. .</b>	<b>3,549</b>	<b>2,758</b>	<b>1,783</b>	<b>820</b>	<b>727</b>	<b>352</b>	<b>21</b>	<b>37</b>	<b>10,047</b>

TEACHERS(b)									
Government .. .. .	21,614	17,724	9,351	6,744	4,332	2,908	141	429	63,243
Non-government—									
Denominational—									
Church of England ..	871	821	300	246	200	119	..	66	2,623
Hebrew .. .. .	19	116	..	..	3	..	..	..	138
Lutheran .. .. .	15	14	33	79	..	..	..	..	141
Methodist .. .. .	203	204 (a)	111	99	78	27	..	..	722
Presbyterian .. .. .	361	416	64	88	63	50	..	..	1,042
Roman Catholic .. ..	5,573	3,091	2,006	823	818	331	20	126	12,788
Seventh-day Adventist	67	27	6	10	24	10	..	..	144
Other .. .. .	..	120	..	26	4	53	..	..	203
Undenominational .. ..	465	293	148	83	3	7	..	..	999
<b>Total .. .. .</b>	<b>7,574</b>	<b>5,102</b>	<b>2,668</b>	<b>1,454</b>	<b>1,193</b>	<b>597</b>	<b>20</b>	<b>192</b>	<b>18,600</b>
<b>Grand Total .. .. .</b>	<b>29,188</b>	<b>22,826</b>	<b>12,019</b>	<b>8,198</b>	<b>5,525</b>	<b>3,505</b>	<b>161</b>	<b>621</b>	<b>82,043</b>

PUPILS (CENSUS ENROLMENT)									
Government .. .. .	612,371	456,619	250,990	179,900	129,455	68,346	3,973	10,987	1,712,641
Non-government—									
Denominational—									
Church of England ..	11,864	14,537	4,618	4,216	3,351	1,943	..	939	41,468
Hebrew .. .. .	299	1,995	..	..	70	..	..	..	2,364
Lutheran .. .. .	214	325	561	1,425	..	..	..	..	2,525
Methodist .. .. .	2,855	3,866 (a)	2,016	1,829	1,321	355	..	..	12,242
Presbyterian .. .. .	5,281	7,399	779	1,419	1,137	614	..	..	16,629
Roman Catholic .. ..	174,481	134,011	63,604	25,752	28,601	9,712	861	4,184	441,206
Seventh-day Adventist	1,114	442	151	145	423	164	..	..	2,439
Other .. .. .	..	2,203	..	507	131	952	..	..	3,793
Undenominational .. ..	5,753	4,186	3,150	1,109	86	136	..	..	14,420
<b>Total .. .. .</b>	<b>201,861</b>	<b>168,964</b>	<b>74,879</b>	<b>36,402</b>	<b>35,120</b>	<b>13,876</b>	<b>861</b>	<b>5,123</b>	<b>537,086</b>
<b>Grand Total .. .. .</b>	<b>814,232</b>	<b>625,583</b>	<b>325,869</b>	<b>216,302</b>	<b>164,575</b>	<b>82,222</b>	<b>4,834</b>	<b>16,110</b>	<b>2,249,727</b>

(a) Presbyterian and Methodist Schools' Association. (b) These figures are not on a uniform basis between States. Differences exist because of the varying methods of counting teachers, particularly part-time staff, the inclusion or exclusion of special purpose teachers and the classification of teachers who, besides primary and secondary teaching, are also engaged on other duties.

## SCHOOLS: NUMBER, TEACHERS, PUPILS, 1963

Type of school	N.S.W.	Vic.	Qld	S.A.	W.A.	Tas.	N.T.	A.C.T.	Aust.
NUMBER OF SCHOOLS									
Government .. ..	2,763	2,223	1,417	656	527	288	18	23	7,915
Non-government—									
Denominational—									
Church of England	39	35	17	13	9	5	..	3	121
Hebrew .. ..	2	7	..	..	1	..	..	..	10
Lutheran .. ..	3	7	2	13	..	..	..	..	25
Methodist .. ..	7	4(a)	5	4	3	1	..	..	24
Presbyterian .. ..	13	14	3	2	2	2	..	..	36
Roman Catholic ..	685	461	290	125	173	51	4	13	1,802
Seventh-day Adventist	19	7	6	3	5	3	..	..	43
Other .. ..	..	4	..	2	2	1	..	..	9
Undenominational ..	52	23	8	4	2	3	..	..	92
Total .. ..	820	562	331	166	197	66	4	16	2,162
Grand Total .. ..	3,583	2,785	1,748	822	724	354	22	39	10,077

TEACHERS(b)									
Government .. ..	23,293	19,041	9,596	7,326	4,488	3,102	164	445	67,455
Non-government—									
Denominational—									
Church of England	869	980	296	253	187	119	..	69	2,773
Hebrew .. ..	23	146	..	85	5	..	..	..	174
Lutheran .. ..	17	17	34	85	..	25	..	..	153
Methodist .. ..	195	250(a)	110	101	78	45	..	..	759
Presbyterian .. ..	354	461	58	85	63	45	..	..	1,066
Roman Catholic ..	5,764	3,686	2,085	846	826	334	21	132	13,694
Seventh-day Adventist	70	28	11	16	23	10	..	..	158
Other .. ..	..	148	..	26	5	54	..	..	233
Undenominational ..	509	300	154	72	5	12	..	..	1,052
Total .. ..	7,801	6,016	2,748	1,484	1,192	599	21	201	20,062
Grand Total .. ..	31,094	25,057	12,344	8,810	5,680	3,701	185	646	87,517

PUPILS (CENSUS ENROLMENT)									
Government .. ..	626,241	469,840	253,499	186,250	133,783	69,633	4,298	12,339	1,755,883
Non-government—									
Denominational—									
Church of England	11,862	14,950	4,843	4,153	3,410	1,926	..	999	42,143
Hebrew .. ..	333	2,116	..	..	95	..	..	..	2,544
Lutheran .. ..	226	402	603	1,475	..	..	..	..	2,706
Methodist .. ..	2,915	3,817(a)	1,995	1,897	1,344	349	..	..	12,317
Presbyterian .. ..	5,318	7,627	755	1,442	1,155	605	..	..	16,902
Roman Catholic ..	176,953	138,252	65,516	26,155	29,490	10,016	917	4,591	451,890
Seventh-day Adventist	1,067	445	205	146	456	166	..	..	2,485
Other .. ..	..	2,250	..	516	135	902	..	..	3,803
Undenominational ..	6,391	3,894	3,357	1,247	94	230	..	..	15,213
Total .. ..	205,065	173,753	77,274	37,031	36,179	14,194	917	5,590	550,003
Grand Total .. ..	831,306	643,593	330,773	223,281	169,962	83,827	5,215	17,929	2,305,886

(a) Presbyterian and Methodist Schools' Association. (b) These figures are not on a uniform basis between States. Differences exist because of the varying methods of counting teachers, particularly part-time staff, the inclusion or exclusion of special purpose teachers, and the classification of teachers who, besides primary and secondary teaching, are engaged on other duties also.

3. **Growth of Schools.**—The numbers of schools, teachers and pupils in Australia are shown in the following table for the years 1959 to 1963.

**SCHOOLS: NUMBER, TEACHERS, PUPILS, AUSTRALIA**

Particulars	1959	1960	1961	1962	1963
Number of schools—					
Government schools ..	7,844	7,886	7,917	7,904	7,915
Non-government schools ..	2,069	2,084	2,113	2,143	2,162
<i>Total</i> .. ..	<i>9,913</i>	<i>9,970</i>	<i>10,030</i>	<i>10,047</i>	<i>10,077</i>
Number of Teachers(a)—					
Government schools ..	54,897	56,837	59,810	63,243	67,455
Non-government schools ..	16,716	17,452	18,099	18,800	20,062
<i>Total</i> .. ..	<i>71,613</i>	<i>74,289</i>	<i>77,909</i>	<i>82,043</i>	<i>87,517</i>
Number of Pupils(b)—					
Government schools ..	1,558,309	1,612,046	1,662,679	1,712,641	1,755,883
Non-government schools ..	489,121	508,021	524,470	537,086	550,003
<i>Total</i> .. ..	<i>2,047,430</i>	<i>2,120,067</i>	<i>2,187,149</i>	<i>2,249,727</i>	<i>2,305,886</i>

(a) These figures are not on a uniform basis between States. See note (b) to table on p. 712.

(b) Census enrolment.

Particulars of the average daily attendance at schools for a series of years back to 1891 may be found in earlier issues of this Year Book. For detailed statistical information in respect of schools in each State, see the Annual Reports of the respective State Education Departments.

4. **Ages of Pupils.**—The ages of pupils at government and non-government schools at the school census date 1962 and 1963 are shown in the following tables.

**SCHOOLS: AGES OF PUPILS, AUSTRALIA**

(Census Enrolment)

Age last birthday (years)	Government schools			Non-government schools			Total		
	Boys	Girls	Total	Boys	Girls	Total	Boys	Girls	Total
1962									
Under 6 ..	71,418	67,252	138,670	20,383	20,956	41,339	91,801	88,208	180,009
6 ..	86,410	79,807	166,217	24,141	24,225	48,366	110,551	104,032	214,583
7 ..	84,812	80,052	164,864	23,923	24,670	48,593	108,735	104,722	213,457
8 ..	83,251	78,462	161,713	23,316	23,805	47,121	106,567	102,267	208,834
9 ..	84,427	79,089	163,516	23,104	24,438	47,542	107,531	103,527	211,058
10 ..	83,223	77,552	160,775	23,195	23,747	46,942	106,418	101,299	207,717
11 ..	82,122	76,339	158,461	23,291	24,383	47,674	105,413	100,722	206,135
12 ..	81,738	74,504	156,242	23,085	24,976	48,061	104,823	99,480	204,303
13 ..	77,850	70,191	148,041	22,310	25,376	47,686	100,160	95,567	195,727
14 ..	72,540	63,077	135,617	20,781	23,300	44,081	93,321	86,377	179,698
15 ..	56,424	43,165	99,589	17,988	18,594	36,582	74,412	61,759	136,171
16 ..	24,219	15,433	39,652	11,165	9,487	20,652	35,384	24,920	60,304
17 and over ..	13,172	6,112	19,284	8,008	4,439	12,447	21,180	10,551	31,731
<b>Total</b> ..	<b>901,606</b>	<b>811,035</b>	<b>1,712,641</b>	<b>264,690</b>	<b>272,396</b>	<b>537,086</b>	<b>1,166,296</b>	<b>1,083,431</b>	<b>2,249,727</b>



**SCHOOLS: AGES OF PUPILS, AUSTRALIA—continued**  
(Census Enrolment)

Age last birthday (years)	Government schools			Non-government schools			Total		
	Boys	Girls	Total	Boys	Girls	Total	Boys	Girls	Total
1963									
Under 6 ..	74,153	70,230	144,383	21,152	21,125	42,277	95,305	91,355	186,660
6 ..	87,559	82,296	169,855	24,846	25,133	49,979	112,405	107,429	219,834
7 ..	87,445	80,553	167,998	24,711	24,920	49,631	112,156	105,473	217,629
8 ..	85,392	80,392	165,784	23,535	24,438	47,973	108,927	104,830	213,757
9 ..	83,364	78,397	161,761	23,503	24,440	47,943	106,867	102,837	209,704
10 ..	85,284	79,318	164,602	23,648	24,715	48,363	108,932	104,033	212,965
11 ..	84,013	77,664	161,677	23,304	24,408	47,712	107,317	102,072	209,389
12 ..	82,072	75,376	157,448	23,311	25,639	48,950	105,383	101,015	206,398
13 ..	81,925	73,846	155,771	22,714	25,830	48,544	104,639	99,676	204,315
14 ..	72,553	63,704	136,257	20,957	23,560	44,517	93,510	87,264	180,774
15 ..	53,947	41,815	95,762	17,352	17,931	35,283	71,299	59,746	131,045
16 ..	31,146	20,860	52,006	13,026	11,871	24,897	44,172	32,731	76,903
17 and over ..	15,160	7,316	22,476	8,983	4,951	13,934	24,143	12,267	36,410
<b>Total ..</b>	<b>924,013</b>	<b>831,767</b>	<b>1,755,780</b>	<b>271,042</b>	<b>278,961</b>	<b>550,003</b>	<b>1,195,055</b>	<b>1,110,728</b>	<b>2,305,783</b>

(a) Excludes 54 boys and 49 girls at subsidized schools for Aborigines in South Australia.

The ages of all pupils in each State and Territory for 1962 and 1963 are shown in the following table.

**SCHOOLS: AGES OF PUPILS**  
(Census Enrolment)

Age last birthday (years)	N.S.W.	Vic.	Qld	S.A.	W.A.	Tas.	N.T.	A.C.T.	Aust.
1962									
Under 6 ..	74,254	55,120	18,147	16,184	7,353	6,792	513	1,646	180,009
6 ..	75,971	59,375	32,014	20,348	16,956	7,751	537	1,631	214,583
7 ..	75,705	58,963	31,857	20,272	16,778	7,815	534	1,533	213,457
8 ..	74,776	57,211	31,263	19,788	16,306	7,611	471	1,408	208,834
9 ..	75,576	57,765	31,309	20,350	16,341	7,761	520	1,436	211,058
10 ..	74,503	56,322	31,108	20,051	16,208	7,587	483	1,455	207,717
11 ..	74,544	56,263	30,471	19,901	15,903	7,196	459	1,398	206,135
12 ..	74,183	55,417	30,453	20,009	15,435	7,054	418	1,334	204,303
13 ..	70,604	53,089	29,090	19,046	15,397	6,831	336	1,334	195,727
14 ..	70,301	46,702	24,594	16,816	12,892	6,926	260	1,207	179,698
15 ..	46,097	39,965	19,851	14,214	9,093	5,777	198	976	136,171
16 ..	19,394	19,343	8,566	6,666	3,624	2,124	79	508	60,304
17 ..	6,784	7,859	4,391	2,168	1,628	769	20	198	23,817
18 and over ..	1,540	2,189	2,755	489	661	228	6	46	7,914
<b>Total ..</b>	<b>814,232</b>	<b>625,583</b>	<b>325,869</b>	<b>216,302</b>	<b>164,575</b>	<b>82,222</b>	<b>4,834</b>	<b>16,110</b>	<b>2,249,727</b>
1963									
Under 6 ..	77,877	56,597	18,843	(a) 16,511	7,353	7,012	557	1,910	186,660
6 ..	78,581	60,769	32,569	20,888	17,007	7,730	607	1,683	219,834
7 ..	76,699	60,551	32,291	20,523	17,314	7,995	539	1,717	217,629
8 ..	75,471	58,830	32,104	20,408	17,071	7,759	494	1,620	213,757
9 ..	74,896	57,374	31,286	20,084	16,464	7,513	524	1,563	209,704
10 ..	76,086	58,458	31,095	20,839	16,698	7,710	522	1,557	212,965
11 ..	74,870	57,102	31,311	20,130	16,471	7,503	462	1,540	209,389
12 ..	74,193	56,334	30,462	20,119	16,288	7,019	429	1,554	206,398
13 ..	73,831	55,473	30,204	20,064	15,642	7,252	415	1,434	204,315
14 ..	68,910	47,019	25,026	17,677	13,669	6,792	301	1,380	180,774
15 ..	45,246	38,045	18,125	13,908	8,977	5,557	212	975	131,045
16 ..	24,731	25,148	10,094	8,776	4,491	2,846	113	704	76,903
17 ..	8,117	9,413	4,524	2,724	1,876	894	32	246	27,826
18 and over ..	1,798	2,480	2,839	527	641	245	8	46	8,584
<b>Total ..</b>	<b>831,306</b>	<b>643,593</b>	<b>330,773</b>	<b>223,178</b>	<b>169,962</b>	<b>83,827</b>	<b>5,215</b>	<b>17,929</b>	<b>2,305,783</b>

(a) Excludes 103 pupils at subsidized schools for Aborigines.

The ages of all pupils in Australia from 1959 to 1963 are shown in the following table.

SCHOOLS: AGES OF PUPILS, AUSTRALIA

(Census Enrolment)

Age last birthday (Years)	1959		1960		1961		1962		1963	
	Boys	Girls	Boys	Girls	Boys	Girls	Boys	Girls	Boys	Girls
Under 6	83,470	80,444	86,329	83,462	90,219	85,518	91,801	88,208	95,305	91,355
6 ..	105,101	100,863	104,499	100,131	107,069	102,905	110,551	104,032	112,405	107,429
7 ..	103,918	99,294	106,765	102,980	106,046	101,615	108,735	104,722	112,136	105,473
8 ..	102,953	99,065	104,747	99,883	106,902	103,090	106,567	102,267	108,927	104,830
9 ..	102,281	98,077	103,493	99,048	105,561	100,303	107,531	103,527	106,867	102,837
10 ..	99,232	95,506	103,484	98,973	104,860	100,516	106,418	101,299	108,932	104,033
11 ..	100,229	95,709	100,469	96,449	104,298	99,549	105,413	100,722	107,317	102,072
12 ..	107,564	102,698	101,237	95,971	100,687	95,897	104,823	99,480	105,383	101,015
13 ..	89,352	83,778	107,783	102,781	100,986	95,538	100,160	95,567	104,639	99,676
14 ..	76,720	71,071	80,601	73,322	99,348	90,987	93,321	86,377	93,510	87,264
15 ..	48,822	40,485	53,194	44,377	58,341	47,706	74,412	61,759	71,299	59,746
16 ..	22,427	17,332	26,915	20,069	30,339	22,127	35,384	24,920	44,172	32,731
17 ..							15,147	8,670	17,709	10,117
18 and over	13,765	7,274	15,453	7,652	17,926	8,816	6,033	1,881	6,434	2,150
Total	1,055,834	991,596	1,094,969	1,025,098	1,132,582	1,054,567	1,166,296	1,083,431	1,195,055	1,110,728
							(a)	(b)		

(a) Excludes 54 boys at subsidized schools for Aborigines in South Australia. (b) Excludes 49 girls at subsidized schools for Aborigines in South Australia.

5. Grades of Pupils.—The numbers of pupils enrolled in grades in each State and Territory are shown in the following table. The grading of pupils differs for the various school systems in Australia because of the differences in curricula set by Education Departments. In addition, the methods of allocating classes to grades vary from State to State, and there are also differences in the administrative methods of aggregating grades of a more or less similar nature. The figures presented in these tables are therefore not comparable between States.

SCHOOLS: GRADES OF PUPILS, 1963

Grade, year or form	Government schools			Non-government schools			All schools		
	Boys	Girls	Total	Boys	Girls	Total	Boys	Girls	Total
NEW SOUTH WALES									
Infants—Kindergarten ..	31,941	30,290	62,231	10,507	10,506	21,013	42,448	40,796	83,244
1 ..	37,653	33,985	71,638	10,187	9,757	19,944	47,840	43,742	91,582
2 ..	33,758	31,128	64,886	9,751	9,787	19,538	43,509	40,915	84,424
Primary—									
3 ..	32,104	30,093	62,197	9,487	9,555	19,042	41,591	39,648	81,239
4 ..	31,170	29,209	60,379	9,137	9,595	18,732	40,307	38,804	79,111
5 ..	30,546	28,618	59,164	9,324	9,738	19,062	39,870	38,356	78,226
6 ..	29,614	28,010	57,624	9,307	9,773	19,080	38,921	37,783	76,704
Secondary—									
1st ..	30,304	27,615	57,919	8,790	9,715	18,505	39,094	37,330	76,424
2nd ..	28,313	26,035	54,348	8,183	8,912	17,095	36,496	34,947	71,443
3rd ..	22,157	19,368	41,525	7,681	8,491	16,172	29,838	27,859	57,697
4th ..	9,643	6,455	16,098	4,386	3,898	8,284	14,029	10,353	24,382
5th ..	7,433	5,040	12,473	4,135	3,248	7,383	11,568	8,288	19,856
Other grades and classes ..	3,630	2,129	5,759	663	552	1,215	4,293	2,681	6,974
Total ..	328,266	297,975	626,241	101,538	103,527	205,065	429,804	401,502	831,306

## SCHOOLS: GRADES OF PUPILS, 1963—continued

Grade, year or form	Government schools			Non-government schools			All schools		
	Boys	Girls	Total	Boys	Girls	Total	Boys	Girls	Total
<b>VICTORIA</b>									
1(a) .. .. .	47,146	42,873	90,019	15,390	15,077	30,467	62,536	57,950	120,486
2 .. .. .	23,805	21,705	45,510	8,314	8,253	16,567	32,119	29,958	62,077
3 .. .. .	22,882	20,983	43,865	7,877	8,001	15,878	30,759	28,984	59,743
4 .. .. .	22,221	20,525	42,746	7,964	8,008	15,972	30,185	28,533	58,718
5 .. .. .	22,679	21,141	43,820	8,001	8,042	16,043	30,680	29,183	59,863
6 .. .. .	22,277	20,610	42,887	7,832	8,226	16,058	30,109	28,836	58,945
7 or I .. .. .	22,929	20,098	43,027	6,674	8,190	14,864	29,603	28,288	57,891
8 or II .. .. .	21,342	18,130	39,472	6,127	7,402	13,529	27,469	25,532	53,001
III .. .. .	19,286	14,875	34,161	5,572	6,416	11,988	24,858	21,291	46,149
IV .. .. .	14,135	11,255	25,390	4,644	5,295	9,939	18,779	16,550	35,329
V .. .. .	6,251	5,477	11,728	3,798	3,958	7,756	10,049	9,435	19,484
VI .. .. .	2,813	1,904	4,717	2,563	1,864	4,427	5,376	3,768	9,144
Ungraded .. .. .	1,410	1,088	2,498	145	120	265	1,555	1,208	2,763
<b>Total .. .. .</b>	<b>249,176</b>	<b>220,664</b>	<b>469,840</b>	<b>84,901</b>	<b>88,852</b>	<b>173,753</b>	<b>334,077</b>	<b>309,516</b>	<b>643,593</b>

## QUEENSLAND

Primary—Preparatory .. .. .				357	318	675	357	318	675
I .. .. .	15,565	14,136	29,701	4,007	3,865	7,872	19,572	18,001	37,573
II .. .. .	14,696	13,208	27,904	3,632	3,636	7,268	18,328	16,844	35,172
III .. .. .	14,051	12,915	26,966	3,538	3,581	7,119	17,589	16,496	34,085
IV .. .. .	13,581	12,635	26,216	3,369	3,433	6,802	16,950	16,068	33,018
V .. .. .	13,809	12,706	26,515	3,413	3,694	7,107	17,222	16,400	33,622
VI .. .. .	13,458	12,495	25,953	3,514	3,579	7,093	16,972	16,074	33,046
VII .. .. .	12,994	12,304	25,298	3,526	3,520	7,046	16,520	15,824	32,344
VIII .. .. .	12,077	11,371	23,448	3,449	3,588	7,037	15,526	14,959	30,485
Secondary—									
1st .. .. .	9,784	8,868	18,652	3,589	3,737	7,326	13,373	12,605	25,978
2nd .. .. .	7,654	6,757	14,411	3,081	3,032	6,113	10,735	9,789	20,524
3rd .. .. .	2,821	1,725	4,546	1,950	1,358	3,308	4,771	3,083	7,854
4th .. .. .	2,523	1,366	3,889	1,554	954	2,508	4,077	2,320	6,397
<b>Total .. .. .</b>	<b>133,013</b>	<b>120,486</b>	<b>253,499</b>	<b>38,979</b>	<b>38,295</b>	<b>77,274</b>	<b>171,992</b>	<b>158,781</b>	<b>330,773</b>

## SOUTH AUSTRALIA

Kindergarten .. .. .	(b)	(b)					2,137	1,851	3,988
I .. .. .	2,137	1,851	3,988						
II .. .. .	11,240	10,166	21,406	2,312	2,337	4,649	13,552	12,503	26,055
III .. .. .	9,898	9,283	19,181	1,718	1,842	3,560	11,616	11,125	22,741
IV .. .. .	9,981	8,994	18,975	1,682	1,761	3,443	11,663	10,755	22,418
V .. .. .	9,853	9,077	18,930	1,621	1,688	3,309	11,474	10,765	22,239
VI .. .. .	9,661	8,882	18,543	1,556	1,616	3,172	11,217	10,498	21,715
VII .. .. .	9,718	8,966	18,684	1,560	1,745	3,305	11,278	10,711	21,989
VIII .. .. .	8,643	8,150	16,793	1,553	1,663	3,216	10,196	9,813	20,009
VIII or 1st .. .. .	8,335	7,644	15,979	1,618	1,829	3,447	9,953	9,473	19,426
XI or 2nd .. .. .	7,244	6,537	13,781	1,472	1,605	3,077	8,716	8,142	16,858
X or 3rd .. .. .	6,282	5,271	11,553	1,450	1,603	3,053	7,732	6,874	14,606
XI or 4th .. .. .	3,188	2,130	5,318	1,056	908	1,964	4,244	3,038	7,282
5th .. .. .	981	447	1,428	513	300	813	1,494	747	2,241
Ungraded .. .. .	1,003	585	1,588	13	10	23	1,016	595	1,611
<b>Total .. .. .</b>	<b>98,164</b>	<b>87,983</b>	<b>186,147</b>	<b>18,124</b>	<b>18,907</b>	<b>37,031</b>	<b>116,288</b>	<b>106,890</b>	<b>223,178</b>

(a) In Victoria, children are admitted at the beginning of the school year if they will turn five years of age by 1st July of that year. The younger children may not reach grade 2 until they have been at school for two years.

(b) Excludes 54 boys and 49 girls at subsidized schools for Aborigines.

SCHOOLS: GRADES OF PUPILS, 1963—continued

Grade, year or form	Government schools			Non-government schools			All schools		
	Boys	Girls	Total	Boys	Girls	Total	Boys	Girls	Total
WESTERN AUSTRALIA									
Primary—Kindergarten ..				191	205	396	191	205	396
1 ..	7,988	7,127	15,115	1,941	1,878	3,819	9,929	9,005	18,934
2 ..	7,564	6,791	14,355	1,746	1,743	3,489	9,310	8,534	17,844
3 ..	7,389	6,915	14,304	1,686	1,795	3,481	9,075	8,710	17,785
4 ..	6,772	6,591	13,363	1,480	1,691	3,171	8,252	8,282	16,534
5 ..	6,964	6,606	13,570	1,442	1,690	3,132	8,406	8,296	16,702
6 ..	6,842	6,375	13,217	1,442	1,694	3,136	8,284	8,069	16,353
7 ..	6,813	6,049	12,862	1,472	1,794	3,266	8,285	7,843	16,128
Special classes ..	751	345	1,096				751	345	1,096
Secondary—									
1 ..	6,563	5,828	12,391	1,716	1,849	3,565	8,279	7,677	15,956
2 ..	5,657	5,254	10,911	1,540	1,688	3,228	7,197	6,942	14,139
3 ..	4,296	3,530	7,826	1,364	1,457	2,821	5,660	4,987	10,647
4 ..	1,278	894	2,172	788	728	1,516	2,066	1,622	3,688
5 ..	903	560	1,463	663	496	1,159	1,566	1,056	2,622
Special classes ..	223	152	375				223	152	375
Special schools ..	451	312	763				451	312	763
<b>Total ..</b>	<b>70,454</b>	<b>63,329</b>	<b>133,783</b>	<b>17,471</b>	<b>18,708</b>	<b>36,179</b>	<b>87,925</b>	<b>82,037</b>	<b>169,962</b>

TASMANIA

Pro-school ..	1,154	1,125	2,279	73	76	149	1,227	1,201	2,428
Kindergarten ..	922	789	1,711	164	164	328	1,086	953	2,039
1 ..	4,962	4,407	9,369	843	912	1,755	5,805	5,319	11,124
2 ..	3,799	3,504	7,303	715	641	1,356	4,514	4,145	8,659
3 ..	3,459	3,331	6,790	576	608	1,184	4,035	3,939	7,974
4 ..	3,398	3,249	6,647	592	636	1,228	3,990	3,885	7,875
5 ..	3,379	3,241	6,620	594	631	1,225	3,973	3,872	7,845
6 ..	3,463	3,118	6,581	636	688	1,324	4,099	3,806	7,905
I ..	3,316	3,041	6,357	666	841	1,507	3,982	3,882	7,864
II ..	3,253	2,932	6,185	635	828	1,463	3,888	3,760	7,648
III ..	2,787	2,642	5,429	504	636	1,140	3,291	3,278	6,569
IV ..	1,437	1,282	2,719	487	535	1,022	1,924	1,817	3,741
V and VI ..	484	296	780	271	242	513	755	538	1,293
Special schools ..	436	427	863				436	427	863
<b>Total ..</b>	<b>36,249</b>	<b>33,384</b>	<b>69,633</b>	<b>6,756</b>	<b>7,438</b>	<b>14,194</b>	<b>43,005</b>	<b>40,822</b>	<b>83,827</b>

NORTHERN TERRITORY

Kindergarten ..	29	29	58				29	29	58
I ..	464	405	869	107	81	188	571	486	1,057
II ..	258	223	481	75	74	149	333	297	630
III ..	286	271	557	55	69	124	341	340	681
IV ..	256	194	450	54	52	106	310	246	556
V ..	238	212	450	50	50	100	288	262	550
VI ..	201	201	402	34	37	71	235	258	493
VII ..	123	177	300	40	30	70	163	207	370
VIII or 1st ..	162	136	298	7	19	46	169	175	344
IX or 2nd ..	106	94	200	11	39	30	117	113	230
X or 3rd ..	96	73	169		13	13	96	86	182
XI or 4th ..	32	18	50				32	18	50
Ungraded ..	10	4	14				10	4	14
<b>Total ..</b>	<b>2,261</b>	<b>2,037</b>	<b>4,298</b>	<b>433</b>	<b>484</b>	<b>917</b>	<b>2,694</b>	<b>2,521</b>	<b>5,215</b>

## SCHOOLS: GRADES OF PUPILS, 1963—continued

Grade, year or form	Government schools			Non-government schools			All schools		
	Boys	Girls	Total	Boys	Girls	Total	Boys	Girls	Total
AUSTRALIAN CAPITAL TERRITORY									
Infants—Kindergarten ..	689	640	1,329	323	317	640	1,012	957	1,969
1 .. .. .	763	683	1,446	300	273	573	1,063	956	2,019
2 .. .. .	621	638	1,259	250	275	525	871	913	1,784
Primary—									
3 .. .. .	602	572	1,174	260	244	504	862	816	1,678
4 .. .. .	590	543	1,133	229	192	421	819	735	1,554
5 .. .. .	609	554	1,163	216	272	488	825	826	1,651
6 .. .. .	552	562	1,114	226	249	475	778	811	1,589
Secondary—									
1st .. .. .	555	479	1,034	264	287	551	819	766	1,585
2nd .. .. .	528	447	975	267	191	458	795	638	1,433
3rd .. .. .	454	419	873	219	219	438	673	638	1,311
4th .. .. .	230	196	426	144	84	228	374	280	654
5th .. .. .	185	148	333	142	108	250	327	256	583
Ungraded .. .. .	52	28	80	..	39	39	52	67	119
<b>Total .. .. .</b>	<b>6,430</b>	<b>5,909</b>	<b>12,339</b>	<b>2,840</b>	<b>2,750</b>	<b>5,590</b>	<b>9,270</b>	<b>8,659</b>	<b>17,929</b>

## § 3. Teacher Training and Recruitment

1. Teachers for Government Schools.—(i) *Recruitment.* The teacher shortage evident in past years has now to a certain extent been overcome. Some States have no difficulty in recruiting and training sufficient staff to meet the present needs of primary schools. Despite expanded training programmes, the shortage of secondary school teachers has proved a greater problem, especially in mathematics and science.

State Education Departments recruit most prospective teachers for government service from students leaving schools after a secondary course. Each Department offers training awards annually on the basis of academic merit and personal suitability. The traineeships cover the cost of a teacher training course (which may include university studies) and provide a living allowance. Students are usually required to enter into a bond to serve for a specified number of years in the government schools of the State where they have trained. In some States, intending teachers can obtain a scholarship at Intermediate Certificate level to enable them to complete teachers' college entrance requirements. Such an award entails a bond of service for a longer period.

(ii) *Training of Primary School Teachers.* In most States, teachers for government primary schools are trained in teachers' training colleges controlled and administered by the State Education Departments. These colleges are described in para. 2, p. 743. Generally, the duration of courses for primary teachers is two years. The basic subjects taken in the various courses are history and principles of education, general and special methods of teaching in the primary school, school organization, and educational psychology. In addition, students undertake courses in English (including speech training), mathematics, handicrafts, music, art, social studies, natural science, physical and health education. Optional subjects may include dramatic art, visual aids, and so on. Supervised practice teaching in schools, and the observation of demonstration lessons form part of all training courses. Since primary teachers in Australia may be called upon at some time to teach grouped classes in a small school or a "one-teacher" school, special training for this kind of work is included in their course.

(iii) *Training of Secondary School Teachers.* Secondary teachers are normally specialists in a combination of subjects, such as English and history, modern languages, or mathematics and science. Intending secondary school teachers are required to complete a university degree, followed by a year of professional training qualifying for a Diploma in Education.

The degree courses followed are usually in arts, science or economics, with the major studies providing the essential background for future subject teaching. During the post-graduate or professional year, the student takes such subjects as the history and principles of education, comparative education, educational psychology, and special teaching methods. Training also includes practice teaching under the supervision of teachers' college and university staff, and the observation of demonstration lessons.

At several Australian universities, students wishing to take up teaching as a profession can receive their professional training along with the study of their teaching subjects as part of a first degree course in Education. The time taken to complete such a Bachelor of Education degree course is four years.

(iv) *Training for Specialist Teaching.* Teachers of specialist subjects, such as music, art, manual arts, domestic science and commercial subjects, receive from two to five years training which varies according to the institution concerned and the type of secondary school in which the teacher is to serve. In several States the shorter courses are provided wholly by the teachers' colleges. Where the specialist course is given at an institution other than the teachers' college—for example, at a university, technical college or conservatorium of music—as is usual for teachers of specialist subjects in high schools, trainees are required to attend teachers' college or university lectures in education, and in some cases the specialist course is followed by a year of professional training. In four States, teachers of music receive their specialist training at conservatoria of music.

Courses designed to train physical education teachers are offered in universities in all States, and in three States at a teachers' college as well.

Training for teachers of agricultural subjects in secondary schools is available in five States and consists of either an agricultural college diploma or a university degree course together with professional training. In Victoria, the two-year agricultural college diploma course follows on the normal two-year primary teachers' course.

Teachers of technical subjects in secondary schools may be trained in manual or industrial arts courses of two to four years' duration, at teachers' colleges, technical colleges, or, in one State, at a university. These courses include basic training in such subjects as wood and metal work, and geometrical drawing. In Victoria, there is a separate Technical Teachers' College. Some teachers of trade subjects in technical schools are recruited from the ranks of qualified tradesmen engaged in industry or commerce. These teachers usually receive instruction in classroom teaching techniques and procedures upon appointment.

(v) *In-service Training.* As almost all teachers now enter the profession by way of teachers' colleges or universities, where they receive basic professional training, in-service training in Australia is directed chiefly towards keeping teachers abreast of developments and adding to their basic training.

In-service training usually takes the form of short courses held sometimes during vacations, sometimes during school-time or in the evening. Courses consist of discussions and lectures given by senior staff members of Education Departments and university and teachers' college lecturers on such subjects as classroom techniques and supervision, librarianship, visual aids, music, arts and crafts, and physical education. In some States, there are also in-service courses for special groups of teachers such as headmasters or teachers in one-teacher schools. In addition, district inspectors are responsible for organizing short conferences of teachers, where professional topics are discussed. Education Departments encourage teachers to pursue university courses, and in some States pay the cost of courses undertaken by selected teachers.

In 1963, a group of Australian teachers attended a refresher course in New Caledonia for teachers of French. The course was made available by the French Government for Australian and New Zealand teachers.

The official publications of the Education Departments contain articles dealing with educational theory and practice. Magazines of the teachers' organizations, which reach the majority of government teachers, also contain articles of this type.

(vi) *Status.* Most teachers in government schools are permanent public servants and have security of tenure, superannuation rights, and the right of appeal in matters of promotion. The centralized education systems and the general policy of providing fully trained teachers for both city and country areas mean that teachers are subject to transfer to any part of the State in which they serve. It is common for a teacher's first appointment to be to a country school.

In each State there is a federation or union of State school teachers and these together form a federal body, the Australian Teachers' Federation. Their aim is to advance the teacher's status and conditions and to stimulate community interest in educational problems.

2. **Training of Non-government School Teachers.**—Teachers for non-government schools receive their training in a number of ways. The Roman Catholic Church staffs both its primary and secondary schools mainly with members of religious orders whose training has been obtained in conformity with the requirements of the particular order concerned. In recent years, there has been a growth in the number of lay teachers being employed in Catholic schools, and some training of students to become lay primary teachers has now been instituted. Secondary teachers receive their academic training mostly through courses provided by Australian universities.

Other non-government schools tend to recruit their staffs from teachers who have already obtained qualifications in Australia or overseas. There are two training institutions—one each in New South Wales and Victoria—which offer courses designed principally for teaching in non-government schools. Non-government schools recruit also university graduates who are then given some guidance by senior members of the school staff.

Private students may enrol at government teachers' colleges on payment of a fee, but the number of places available is limited. Some teachers destined for non-government schools are trained in this way.

In-service training to provide the basic training for teachers is used only to a limited extent by non-government schools, mainly in the case of the graduate recruits mentioned above. Recently vacation courses have been provided by bodies other than Education Departments for teachers from both government and non-government schools. For example, an independent body—the Nuclear Research Foundation—has provided such courses for teachers of science in secondary schools in New South Wales.

The training of pre-school teachers is carried out in five States in Kindergarten Training Colleges, set up by the Kindergarten Unions. These are described in § 10, para. 3, p. 743.

#### § 4. Other Aspects of School Education

NOTE.—Information relating to school medical and dental services is given in Chapter XVIII. Public Health, and particulars of School Savings Banks in Chapter XXI. Private Finance.

1. **Provisions for Isolated Areas.**—(i) *General.* Although the task of bringing education to isolated areas in Australia presents problems, all education authorities have aimed at providing opportunities for country children comparable to those available to city children. Country children follow the same curricula (with local adaptation, if desirable) and are under the guidance of teachers who are trained for service in country and city schools alike.

In areas where there are sufficient children of school age, a "one-teacher" school may be formed with all primary grades in a single classroom under the control of the one teacher. Special training is given to teachers undertaking work of this kind. Children who complete a primary course in a one-teacher school and cannot attend a secondary school may do secondary correspondence lessons under the teacher's supervision.

In districts where a number of small centres are scattered around a larger centre or country town, the tendency is to close the one-teacher schools and transport pupils each day by buses to a "consolidated" school in the larger centre. Consolidated schools provide primary instruction and from two to four years of post-primary instruction. The post-primary curriculum adopted is usually directed towards practical activities and training in subjects bearing on the primary industries of the locality.

Where a group of children is too small to warrant the establishment of a one-teacher school at public expense, a "subsidized" school may be opened. The Education Department pays part of the cost and in some States appoints a teacher. Some States also administer "provisional" schools, which are completely financed by the Government but which are not large enough, or sufficiently assured of adequate continued attendance of pupils, to warrant classification as permanent schools.

(ii) *Correspondence Schools.* These have been established in each State capital city to meet the needs of children whose daily attendance at school is prevented by distance between home and school, by illness or by physical disability. The correspondence schools also cater for inmates of penal institutions, Australian children overseas, pupils of other schools in which particular courses are not available, student teachers, members of the Defence Forces and other adults completing their secondary education. Lessons are done with the help of a supervisor, usually a member of the child's family, and posted back to the correspondence school in the capital city, where they are corrected and returned with helpful comments. Every endeavour is made to maintain a personal link between teacher and pupil. Correspondence schools began with primary grades only, but were soon extended to cater for secondary pupils, and it is now possible to do a complete secondary course to matriculation standard by correspondence. Some 25,000 students, including adults, are receiving primary and secondary instruction through correspondence courses.

(iii) *Schools of the Air.* These are intended to give the outback child of school age some of the benefits of school life and to supplement correspondence education. Using the two-way wireless equipment developed first by the Royal Flying Doctor Service, children hundreds of miles apart participate in the same lesson, and teacher and pupils can talk directly with each other. The first School of the Air was established in 1950 at Alice Springs in the Northern Territory; it has been followed by similar schools at Broken Hill in the far west of New South Wales; at Ceduna and Port Augusta in South Australia; Cloncurry and Charters Towers in Queensland; and Meekatharra, Derby and Kalgoorlie in Western Australia. These nine schools serve children in an area of a million square miles.

2. *Handicapped Children.*—Special provision is made for the education of physically and mentally handicapped children, both by the State authorities and by church and voluntary organizations, often working in conjunction. In many cases where residential schools are necessary for particular groups, educational facilities and teaching staff are provided by a State Education Department, while a voluntary organization provides accommodation and accepts responsibility for the general welfare of the children. Among the facilities available are:—hospital schools for sick and crippled children; "spastic centres" for cerebral palsied children; special schools and special classes for deaf children; schools for blind children; and special schools and classes for mentally retarded children. Special schools and classes have involved the appointment of departmental specialists, the provision of special training courses, and close liaison with school health services. In some States, clinics attached to hospitals, or functioning as an independent child welfare service, handle cases of personality maladjustment and work in co-operation with the psychological services of the Education Departments.

3. *Educational Guidance.*—Each Australian State now has a comprehensive system of educational guidance administered by trained and experienced educational psychologists and backed by a system of individual pupil record cards. The functions of these services are the selection of pupils for courses at secondary level, diagnosis and guidance of atypical children, preliminary guidance and, in some States, research. The weight given to each of these functions varies from State to State, but the aim is to provide thorough educational guidance for all children.

Throughout Australia, branches of the Commonwealth Employment Service co-operate with State Education Departments by giving post-school vocational guidance, using the data obtained and made available by the Education Departments during the school career of the children. In New South Wales, a similar service is also provided by the Youth Welfare Section of the State Department of Labour and Industry.

4. *Research.*—All State Education Departments have set up branches undertaking research directed towards departmental activities. The work of the research branches is concerned with such matters as curriculum content, new teaching methods, evaluation procedures, wastage rates and educational statistics.

5. *School Broadcasting and Television.*—Over the years, an extensive school broadcasting system has been developed in Australia by the co-operative efforts of the Australian Broadcasting Commission and education authorities. The Australian Broadcasting Commission's Education Department is responsible for preparing and broadcasting programmes, but it draws freely on the advice and services of teachers and maintains permanent liaison with State Education Departments. It is estimated that in 1963 over 90 per cent. of Australian schools were equipped to receive radio lessons.



School broadcasts are presented as part of the regular Australian Broadcasting Commission programmes without separate stations or wave lengths. Special efforts are made, however, to relate the broadcasts to school work by the extensive distribution of booklets, giving details of programmes in advance, and subject notes accompanied by picture sheets, work books, and teachers' notes.

Broadcasting has proved to be a most effective way of reaching the outback children of Australia, and radio lessons have been designed to supplement correspondence lessons.

The year 1963 saw a big increase in the number of schools receiving television broadcasts and in the number of programmes produced. Even though the use of television in education is still in its early stages in Australia, more than 600 schools made use of the telecasts provided for schools by the Australian Broadcasting Commission during 1963. In 1963, over 2,400 programmes were broadcast to schools, mostly for primary pupils.

**6. Scholarships and Bursaries.**—All States have schemes of financial assistance to school pupils, mostly at the secondary level, through scholarships or bursaries. As tuition in government schools is free, this assistance is usually in the form of maintenance allowances, both for children living with their parents and for those living away from home. These may be paid in a lump sum or in instalments throughout the year. Awards are usually made on the results of a competitive examination, and sometimes a means test is applied. Other government and private authorities, such as the Repatriation Department and the Legacy War Orphans Fund, assist special categories of pupils with their school education. Many non-government schools also award scholarships on a competitive basis which enable students to attend the particular schools without payment of fees.

The Commonwealth Government has announced plans to provide some new forms of financial assistance for education. Arrangements have begun for the provision annually, from the beginning of the 1965 school year, of 10,000 competitive secondary school scholarships for students enrolled in the final two years of secondary school.

**7. School Transport.**—All States have systems of subsidies whereby transport is made available free or at concession rates for children travelling to and from school. In some States allowances are paid if private transport has to be used.

**8. School Buildings.**—The great increase in the school population in the last decade led to an expansion in school building, first for infants' and primary classes and later for secondary pupils. To cope with this growth in population, it was necessary at first to make use of temporary and emergency structures, but the period of resorting to this expedient is now giving way to one of consolidation and development in school building programmes. Quite large schools may be built in stages to match increase in local population in new and rapidly developing suburbs in metropolitan areas. Authorities are giving much attention to the use of new materials and especially to the planning of sites. An increasing number of schools are planned with playing fields and tennis courts. Gymnasiums which may also serve as assembly halls are included, and lighting, heating and ventilation to meet different climatic conditions are carefully planned.

An amount of £5,000,000 annually, beginning with 1964-65, is to be provided by the Commonwealth Government for the building and equipping of science laboratories in both government and non-government schools.

**9. Textbooks, Materials and Other Equipment.**—The State Education Departments supply government schools, free of charge, with essential equipment, including scientific apparatus, maps, blackboards, chalk and cleaning materials, and non-consumable equipment for commercial, home science and manual training. Garden tools and physical training equipment are also supplied in most States.

Primers and writing equipment for individual pupils are usually supplied free in primary schools, and several Education Departments produce monthly school magazines which are supplied free or cheaply. In primary schools (except in one State) and in all secondary schools, textbooks must, however, be purchased by students. In several States, schools own stocks of textbooks which are hired to students, and in one State secondary textbooks are sold at reduced prices.

Equipment such as radios, film and filmstrip projectors, pianos, duplicators and library books is ordinarily purchased for individual schools by the parent and citizen organizations associated with them, with the assistance of subsidies from the Departments.

The design of school furniture is undergoing considerable change following research on posture and the physical measurement of children. Dual desks are now being replaced

in many schools by individual tables and chairs, provided in a range of sizes suitable to each class. The new type of furniture is more suitable for flexible arrangement of the class in line with modern educational practice.

10. **Visual Aids.**—Visual aids are widely used in Australian education. Each of the State Education Departments has a visual education branch to handle the production and distribution of such materials. Film strips and posters are distributed free or at low cost. Films are held in central libraries and are requisitioned by schools as required for teaching purposes.

### § 5. Pre-school Education

Pre-school centres of various kinds are conducted by private individuals, church bodies and voluntary organizations such as the Kindergarten Unions. Over recent years, the Commonwealth Government, State Governments, and some municipal councils have provided an increasing amount of financial assistance and themselves maintain centres in certain areas.

The Australian Pre-School Association is a federal body composed of the Kindergarten Unions and several other organizations. Its aim is to promote the development of pre-school education throughout Australia. It is also responsible for the administration of six Lady Gowrie Child Centres which were established in capital cities by the Commonwealth Government as model pre-school centres.

Centres are located in city and country areas. Programmes are adapted to suit the areas in which centres are situated. Types of pre-school centres are nursery kindergartens, crèches with full-day care for children in closely settled industrial areas, play groups and play centres, occasional care centres and residential holiday homes.

Pre-school centres can cater only for a small proportion of children in the three to five or six year age group, but radio and television have brought a form of education within the reach of practically every pre-school child in Australia. "Kindergarten of the Air", the first programme of its kind in the world, is a session of 25 minutes broadcast every week-day over the national radio network of the Australian Broadcasting Commission. Through it, young children in hospitals, in homes in city and country towns, and in bush homesteads in the outback, perhaps many miles from any school, receive some of the advantages of pre-school training.

"Kindergarten Playtime" is a 15-minute television programme transmitted each week-day. It is based on the interests of children from three to five years and is now broadcast in all State capital cities and many country regions by the Australian Broadcasting Commission.

### § 6. Technical Education

1. **General.**—The following description of technical education refers to training in technical fields given by institutions other than secondary schools and universities. Students may proceed to this kind of training after completing three to five years at secondary school.

Each State has developed a system of technical education based on institutions set up in all the State capital cities and in many country areas. These institutions are known variously as technical colleges, technical schools, institutes of technology and schools of mines. The earliest began as local and even private ventures in the second half of the nineteenth century, but almost all of them have now come under the control of the State governments.

The technical colleges in Queensland, South Australia, Western Australia and Tasmania are administered by branches of the State Education Departments and are financed from the budget of the State Minister for Education. New South Wales has a separate State Department of Technical Education. In Victoria there is a dual system with a number of the older colleges controlled by their own "councils" in addition to government-controlled colleges administered by the Technical Education Branch of the Education Department. The Council-controlled colleges receive government grants-in-aid and their teachers' salaries are paid by the State government.

Australian technical colleges offer training in all the major industrial skills and in a wide variety of commercial, artistic and domestic occupations. The three main types of courses are described below.

**2. Trade Courses.**—These offer part-time training for apprentices. In developing a system of technical education, the Australian authorities were influenced by the British tradition which regards practical experience on the job as the fundamental training procedure, to be supplemented by theoretical and practical training at an appropriate school. In each of the Australian States there is an apprenticeship authority which supervises the administration of apprenticeships and an education authority which provides technical education through its technical colleges.

The time spent on training varies from three to five years in different trades and States. Between four and eight hours' instruction a week are required. Most of this takes place in the employer's time, and it is unusual for more than two hours a week to be spent in attending classes outside working hours.

**3. Certificate Courses.**—There is considerable variation between the States in the aims and organization of certificate courses. In New South Wales, they provide training of a semi-professional nature in occupations for which no apprenticeship awards exist. Some of the courses are open to qualified tradesmen only. For others, no occupational entry qualifications are demanded, but it is necessary to hold an Intermediate Certificate or its equivalent. The courses are usually for four years, most of them being part-time.

The Victorian certificate course is designed to develop specialized skills in a particular phase of an occupation. In the building field, for instance, there is a certificate course in architectural drafting. The courses are offered at three levels—professional certificate courses which include diploma subject matter and can be counted towards a diploma; special short courses which are designed to increase the efficiency of people in their chosen field; and technicians' courses which give a standard of training between trade and professional courses. In general, they consist of part-time day and/or evening instruction concurrent with employment in the field, and entrance requirements are of approximately Intermediate Certificate standard.

Courses in other States are mostly part-time, and of two to seven years' duration. They provide a wide range of training for skilled technical and semi-professional workers, and, in most cases, entrance is at the level of the Intermediate Certificate or equivalent.

**4. Diploma Courses.**—Diploma courses are designed to provide professional training in fields such as architecture, art, building, commerce, management, public administration, manual arts, the various branches of engineering and metallurgy, and pure and applied science. They usually follow completion of a full secondary school course.

The courses consist of complete progressive units of study in which the lecture room, laboratory and workshop are closely associated. They vary from three to five years' full-time and from three to seven years' part-time study. At least one full year's employment in an appropriate occupation is usually required.

The aim of the courses is to develop highly trained technologists with the qualifications and experience required for membership of a professional institution.

**5. Other Courses.**—Most colleges provide short post-diploma and refresher courses to keep students in touch with new developments in their fields, as well as courses of general interest such as women's handicrafts and motor mechanics. Training in certain technical aspects of agriculture such as farm mechanics and wool classing is often given in the technical colleges. Some also offer general secondary courses to enable adults to prepare for matriculation and other public examinations.

**6. Correspondence Teaching.**—Each State has a well developed system of technical education by correspondence to extend the facilities of a metropolitan college to rural students. Entrance qualifications are identical with those for the regular classes. A major problem of correspondence work is the linking of theory with practice. This is overcome to a certain extent by holding practical sessions at appropriate training centres once or twice a year at the technical college where the correspondence school is based or at a mobile workshop stationed for the time at a focal point within the district. In New South Wales, these mobile workshops are rail cars equipped with machinery and fittings to make them self-contained training schools for engineering and other trades. Among practical courses offered by correspondence are trade drawing, fitting and machinery, welding, diesel engine operation, automotive engineering and workshop practice, and farm mechanics.

7. Colleges, Teachers and Students.—The number of colleges, teachers and enrolments of individual students during the years 1958 to 1962 is given in the following table.

TECHNICAL EDUCATION: COLLEGES, TEACHERS, AND ENROLMENTS

State	Colleges	Teachers			Students enrolled		
		Full-time	Part-time	Total	Males	Females	Persons
<b>New South Wales(a)(b)—</b>							
1958 .. .. .	48	1,259	1,337	2,596	54,104	28,361	82,465
1959 .. .. .	48	1,299	1,691	2,990	57,064	31,736	88,800
1960 .. .. .	51	1,286	1,682	2,968	62,523	34,195	96,718
1961 .. .. .	51	1,302	2,051	3,353	66,715	35,495	102,210
1962 .. .. .	52	1,348	2,390	3,738	68,889	35,165	104,054
<b>Victoria—</b>							
1958 .. .. .	54	2,382	1,488	3,870	36,489	11,400	47,889
1959 .. .. .	63	2,644	1,678	4,322	39,820	11,435	51,255
1960 .. .. .	70	2,796	1,766	4,562	42,526	11,390	53,916
1961 .. .. .	76	3,133	1,929	5,062	(c)47,053	(c)13,424	(c)60,477
1962 .. .. .	82	3,874	1,994	5,868	(c)48,939	(c)12,487	(c)61,426
<b>Queensland(a)—</b>							
1958(d) .. .. .	13	166	568	734	17,031	8,030	25,061
1959(d) .. .. .	13	176	517	693	17,293	8,396	25,689
1960(d) .. .. .	14	174	647	821	18,155	9,942	28,097
1961 .. .. .	14	174	663	837	18,290	9,156	27,446
1962 .. .. .	15	228	718	946	19,365	10,843	30,208
<b>South Australia(a)(e)—</b>							
1958 .. .. .	25	280	770	1,050	16,991	8,570	25,561
1959 .. .. .	25	294	779	1,073	18,130	9,271	27,401
1960 .. .. .	25	323	737	1,060	15,728	7,722	23,450
1961 .. .. .	25	363	712	1,075	15,596	8,457	24,053
1962 .. .. .	24	387	827	1,214	17,599	10,177	27,776
<b>Western Australia(a)—</b>							
1958 .. .. .	23	(f) 278	(f) 735	(f) 1,013	15,977	8,436	24,413
1959 .. .. .	24	(f) 282	(f) 739	(f) 1,021	15,604	8,888	24,492
1960 .. .. .	19	(f) 307	(f) 802	(f) 1,109	17,017	8,739	25,756
1961 .. .. .	20	(f) 317	(f) 862	(f) 1,179	17,992	9,083	27,075
1962 .. .. .	25	352	1,136	1,488	20,362	10,386	30,748
<b>Tasmania—</b>							
1958 .. .. .	8	98	404	502	4,625	2,354	6,979
1959 .. .. .	8	104	398	502	4,837	2,463	7,300
1960 .. .. .	8	111	413	524	5,253	2,085	7,338
1961(g) .. .. .	12	97	383	480	4,871	1,427	6,298
1962 .. .. .	11	95	414	509	4,884	1,763	6,647
<b>Total—</b>							
1958 .. .. .	171	4,463	5,302	9,765	145,217	67,151	212,368
1959 .. .. .	181	4,799	5,802	10,601	152,748	72,189	224,937
1960 .. .. .	187	4,997	6,047	11,044	161,202	74,073	235,275
1961 .. .. .	198	5,386	6,600	11,986	170,517	77,042	247,559
1962 .. .. .	209	6,284	7,479	13,763	180,038	80,821	260,859

(a) Excludes correspondence students. (b) Includes A.C.T. (c) Number enrolled at Census. (d) Student figures are enrolments at end of year. (e) Student figures are individual enrolments. (f) Number of teaching positions. (g) In 1961 there was a transfer of classes in the hobby category to the Adult Education Board.

8. Training of Technical Instructors.—Prior to the 1939–45 War, technical colleges were staffed chiefly by trained teachers in the employment of the Education Departments or technicians drawn from industry. Although some of the latter were highly qualified, the great majority had not been trained as teachers.

To preserve links with industry and trade practice, schemes have been developed which continue the recruitment of specialist tradesmen as instructors but provide also for their training in educational method and teaching techniques. In Victoria, the Technical Teachers' College provides training for students with appropriate diploma or trade qualifications and suitable industrial experience. In New South Wales, technical college lecturers and tradesmen-instructors receive an in-service course of teacher training in general educational theory and teaching method, while correspondence courses and visiting lecturers assist the newly appointed tradesman-instructor in country colleges. Variations of this scheme are in operation in other States. Many technical teachers, principally of academic, commercial and domestic science subjects, hold trained teacher's certificates from teachers' colleges.

### § 7. Government Expenditure on Schools and Technical Education

1. **General.**—The following tables show particulars of the total net expenditure (i.e., gross expenditure less receipts for services rendered) from certain funds on government schools, education departments and technical education. The data have been compiled on the same basis as far as differences in organization and accounting methods between States and Territories will permit.

The tables include only expenditure from the consolidated revenue funds and certain trust or special funds. They exclude loan fund expenditure; expenditure on debt charges, payroll tax and superannuation payments, in so far as it is possible to identify these items; and some items for which information cannot be obtained from the public accounts of all States.

2. **Government Schools' and Education Departments' Expenditure.**—(i) *Total Net Expenditure.* The figures relate throughout to years ended 30th June. Net expenditure per pupil relates the total net expenditure to the mean of the numbers of pupils enrolled at two subsequent school censuses. Net expenditure per head of population relates the total net expenditure to the mean population.

#### GOVERNMENT SCHOOLS AND EDUCATION DEPARTMENTS: NET EXPENDITURE

Year	N.S.W.	Vic.	Q'land	S. Aust.	W. Aust.	Tas.	N.T.	A.C.T.	Aust.
TOTAL NET EXPENDITURE (£'000)									
1957-58	33,132	22,222	9,953	6,853	7,274	3,380	197	408	83,419
1958-59	36,544	24,563	11,347	7,963	7,541	3,662	217	504	92,341
1959-60	40,445	27,323	12,130	9,232	8,246	4,327	278	587	102,568
1960-61	46,580	30,762	13,931	10,354	9,271	4,773	353	792	116,816
1961-62	50,934	34,172	15,109	11,577	10,102	5,427	428	913	128,662

#### TOTAL NET EXPENDITURE PER PUPIL (£ s. d.)

1957-58	60 18 10	59 13 11	45 7 10	46 11 4	67 2 8	56 0 3	75 18 4	66 12 3	57 2 11
1958-59	64 16 5	62 7 0	49 12 5	51 6 3	66 8 11	58 17 0	74 1 3	72 12 10	60 9 10
1959-60	69 15 0	66 2 7	51 7 6	56 12 9	69 19 11	67 11 7	86 14 3	73 9 4	64 13 11
1960-61	78 8 1	71 7 3	57 13 7	60 18 5	75 17 3	72 10 0	101 0 7	86 6 5	71 6 11
1961-62	83 18 10	76 4 11	61 1 1	65 11 5	79 10 3	80 8 0	112 13 2	88 0 7	76 4 8

#### TOTAL NET EXPENDITURE PER HEAD OF POPULATION (£ s. d.)

1957-58	9 10 0	8 5 5	7 0 0	7 14 8	10 9 8	10 3 8	9 7 7	10 9 3	8 11 3
1958-59	9 16 0	8 18 8	7 16 5	8 15 4	10 13 8	10 16 2	9 12 10	11 12 2	9 5 8
1959-60	10 13 1	9 13 9	8 4 2	9 17 8	11 10 8	12 11 7	11 6 2	11 14 10	10 1 10
1960-61	12 0 5	10 12 7	9 5 4	10 16 4	12 14 1	13 12 8	13 15 0	14 6 9	11 4 10
1961-62	12 18 0	11 11 0	9 17 11	11 16 2	13 10 15	15 4 3	16 2 2	14 12 5	12 2 7

(ii) *Classification of Expenditure.* The following table shows, for the six States, the net expenditure on government schools and education departments classified into the following headings:—(i) Primary Education, (ii) Secondary Education, (iii) Administration, (iv) Transportation of School Children and Students, and (v) Training of Teachers. Expenditure on technical and agricultural education is excluded from the tables.

It has been necessary to estimate some items of expenditure, largely because the meanings of "primary" and "secondary" differ between States, and because elementary and higher education are sometimes given in the same school by the same teachers.

Expenditure on government schools in the Northern Territory and Australian Capital Territory is not included in the following table because the detail is not available.

GOVERNMENT EXPENDITURE ON SCHOOLS AND TECHNICAL EDUCATION 727

GOVERNMENT SCHOOLS AND EDUCATION DEPARTMENTS:  
CLASSIFICATION OF EXPENDITURE  
(£'000)

Year	N.S.W.	Vic.	Q'land	S. Aust.	W. Aust.	Tas.	Total(a)
<b>PRIMARY EDUCATION</b>							
1957-58 .. ..	19,037	12,659	7,065	4,409	4,044	1,625	48,839
1958-59 .. ..	20,562	13,953	7,980	4,905	4,095	1,751	53,246
1959-60 .. ..	22,272	14,892	8,325	5,527	4,464	1,858	57,338
1960-61 .. ..	25,076	16,366	9,352	6,009	4,930	1,926	63,659
1961-62 .. ..	27,025	17,769	9,717	6,621	5,286	2,023	68,441

<b>SECONDARY EDUCATION</b>							
1957-58 .. ..	9,241	4,870	1,532	1,362	1,480	814	19,299
1958-59 .. ..	10,661	5,406	1,830	1,800	1,631	997	22,325
1959-60 .. ..	12,139	6,372	2,148	2,237	1,894	1,261	26,051
1960-61 .. ..	14,826	7,538	2,791	2,714	2,218	1,509	31,596
1961-62 .. ..	16,551	9,000	3,453	3,048	2,583	1,835	36,470

<b>ADMINISTRATION</b>							
1957-58 .. ..	1,323	584	419	198	281	328	3,133
1958-59 .. ..	1,479	651	465	199	314	230	3,338
1959-60 .. ..	1,703	760	518	246	274	419	3,920
1960-61 .. ..	1,853	810	607	245	363	531	4,413
1961-62 .. ..	2,074	836	638	265	358	559	4,730

<b>TRANSPORTATION OF SCHOOL CHILDREN AND STUDENTS</b>							
1957-58 .. ..	1,616	1,913	423	404	930	443	5,729
1958-59 .. ..	1,613	2,002	502	467	910	458	5,952
1959-60 .. ..	1,813	2,120	601	486	957	516	6,493
1960-61 .. ..	2,058	2,393	685	523	998	569	7,226
1961-62 .. ..	2,282	2,524	778	567	1,054	615	7,820

<b>TRAINING OF TEACHERS</b>							
1957-58 .. ..	1,915	2,196	514	480	539	170	5,814
1958-59 .. ..	2,229	2,551	570	592	591	226	6,759
1959-60 .. ..	2,518	3,179	538	736	657	273	7,901
1960-61 .. ..	2,767	3,655	496	859	762	238	8,777
1961-62 .. ..	3,002	4,043	523	1,076	821	395	9,860

(a) Excludes Northern Territory and Australian Capital Territory.

3. Technical Education Expenditure.—The following table shows the net expenditure on technical education from the State consolidated revenue funds, together with expenditure in the Australian Capital Territory.

TECHNICAL EDUCATION: NET EXPENDITURE  
(£'000)

Year	N.S.W.	Vic.	Q'land	S. Aust.	W. Aust.	Tas.	A.C.T.	Aust.
1957-58 .. ..	2,981	4,110	964	1,144	691	407	47	10,344
1958-59 .. ..	3,163	4,287	1,120	1,429	735	450	54	11,238
1959-60 .. ..	3,763	5,435	1,237	1,645	789	397	61	13,327
1960-61 .. ..	4,114	6,050	1,234	1,853	918	345	69	14,583
1961-62 .. ..	5,010	6,640	983	2,383	1,088	246	73	16,423

### § 8. Non-government Schools Finance

Most Roman Catholic parochial schools charge fees, but payment is not insisted on in the case of families who cannot afford it. At the majority of non-government secondary schools, privately endowed scholarships are available in varying numbers, and reductions in fees are normally made for children of clergy or for two or more members of one family attending the same school. With these exceptions, pupils of non-government schools must pay fees.

Certain State scholarships and bursaries are tenable at approved non-government secondary schools. Since the establishment of educational systems by the State governments, official policy has been largely against the provision of direct financial assistance to non-government schools. The eight undenominational grammar schools in Queensland, however, receive a State subsidy under the *Grammar Schools Acts* 1860-1900. In 1956, the Commonwealth Government undertook to contribute to the interest payments on loans raised in order to build non-government secondary school accommodation in the Australian Capital Territory. This contribution is now available for both primary and secondary school buildings extensions and additions.

As from 1964-65 the Commonwealth Government will also provide assistance to non-government schools for the building and equipping of science laboratories. (See § 4, para. 8, p. 722.)

### § 9. Universities

1. **General.**—Students qualify for entrance to Australian universities by passing a matriculation examination in one of the States after 5 or 6 years of secondary education. Each university has its own regulations for matriculation, specifying the number and combination of subjects to be passed for admission. Students entering the universities have the choice of undergraduate study in various faculties. All universities provide also post-graduate courses of study.

The Australian universities, with their faculties, are listed below in the order of their foundation.

*University of Sydney*, 1850, Sydney, New South Wales: Agriculture, Architecture, Arts, Dentistry, Economics, Engineering, Law, Medicine, Science, Veterinary Science.

*University of Melbourne*, 1853, Melbourne, Victoria: Agriculture, Applied Science, Architecture, Arts, Dental Science, Economics and Commerce, Education, Engineering, Law, Medicine, Music, Science, Veterinary Science.

*University of Adelaide*, 1874, Adelaide, South Australia: Agricultural Science, Architecture and Town Planning, Arts, Dentistry, Economics, Engineering, Law, Medicine, Music, Science, Technology.

*University of Tasmania*, 1890, Hobart, Tasmania: Agricultural Science, Arts, Commerce, Education, Engineering, Law, Science.

*University of Queensland*, 1909, Brisbane, Queensland: Agriculture, Architecture, Arts, Commerce and Economics, Dentistry, Education, Engineering, Law, Medicine, Science, Veterinary Science.

*University of Western Australia*, 1912, Perth, Western Australia: Agriculture, Arts, Dental Science, Economics and Commerce, Education, Engineering, Law, Medicine, Science.

*Australian National University*, 1946, Canberra, Australian Capital Territory.—Institute of Advanced Studies: John Curtin School of Medical Research, Research School of Physical Sciences, Research School of Social Sciences, Research School of Pacific Studies. School of General Studies: Arts, Economics, Law, Oriental Studies, Science.

*University of New England*, 1954 (formerly New England University College, established in 1938), Armidale, New South Wales: Agricultural Economics, Arts, Economics, Rural Science, Science.

*University of New South Wales*, 1958 (formerly the New South Wales University of Technology, established in 1948), Sydney, New South Wales: Applied Science, Architecture, Arts, Commerce, Engineering, Medicine, Science.

*Monash University*, 1958, Melbourne, Victoria: Arts, Economics and Politics, Engineering, Medicine, Science.

Each of the universities was established by a parliamentary Act as an autonomous institution, with its own Governing Council or Senate. Nevertheless, the Australian universities receive substantial government support from both State and Commonwealth sources, only part of their income being derived from students' fees, private donations and bequests.

There are also three university colleges. Newcastle University College, founded in 1951, is affiliated with the University of New South Wales, and has degree courses in the faculties of Applied Science, Architecture, Arts, Commerce, Engineering, and Science. Townsville University College, founded in 1961, is a constituent part of the University of Queensland. It offers some courses in the faculties of Agriculture, Arts, Commerce and Economics, Dentistry, Education, Engineering, Law, Medicine, Science, and Veterinary Science. Wollongong University College was opened in 1962, and is affiliated with the University of New South Wales. It offers some courses in the faculties of Arts, Commerce, Engineering, and Science. In 1966, the University of Adelaide plans to open additional facilities at Bedford Park, where four schools will be established initially in Biological Sciences, Language and Literature, Physical Sciences and Social Science.

**2. Organization of Courses.**—Bachelor degree courses are from three to six years in length, depending on the faculty, and for the majority full-time attendance is required. Certain courses, however, may also be undertaken by part-time or evening students. The university academic year begins in March and finishes in early December. At most universities, two short vacation periods divide the year into three terms, but there are four terms in some universities.

Several universities make provision for external tuition, whereby students living away from university towns may take a restricted number of courses by correspondence. The University of Queensland has developed a system of correspondence tuition which now caters not only for students within the State but for those in the Northern Territory, Papua and New Guinea, adjacent Pacific islands and Asian countries. External students living in Queensland receive tutorial assistance at university centres in the principal country towns.

The University of New England's Department of External Studies offers a wide range of subjects for external study, leading to the degrees of Bachelor of Arts and Bachelor of Letters, and to the Diploma of Education and the Diploma in Educational Administration. External students must attend short annual residential schools of instruction in their subjects, usually held at the university.

Post-graduate courses leading either to a Master's degree or to a Doctorate are available at all universities. Facilities cover the humanities, social sciences, pure and applied sciences.

Additional courses are constantly being introduced by the universities at both the undergraduate and the post-graduate level, to cover new fields of knowledge and specialization. Announcements of the following new courses were made in 1963 and 1964: at the University of New South Wales, Master of Librarianship, Bachelor of Engineering in Fuel Engineering, Bachelor of Science (Medical), and Bachelor of Science in Sheep and Wool Technology; at the University of New England, a course towards an Economics degree, and a Diploma in Farm Economics; at the University of Melbourne, Master of Business Administration; at Monash University, Master of Arts (Sociology); at the University of Queensland, Bachelor of Applied Science in Geophysics, Bachelor of Divinity, Bachelor of Medical Science, Diploma in Computing, and a Certificate in Education for oversea students; and at the University of Western Australia, Bachelor of Psychology.

**3. Research.**—A wide range of research work and training in research techniques is carried out by the universities as part of their normal functions. Post-graduate students and members of university staff are engaged in research, both as part of their work for post-graduate degrees and also as part of group and departmental research programmes. Support for research in universities is derived from public and private sources, including funds and foundations established to encourage research in a particular field.

**4. University Expansion and Development.**—Since the 1939–45 War, the Australian universities have had to face greatly increased demands on their facilities, firstly from large numbers of ex-service personnel in the immediate post-war years, and later from greatly increased numbers of students leaving secondary schools each year. By 1962, the total enrolments in Australian universities had reached a figure of 63,317 compared with an early post-war peak of 32,453 in 1948.

To assist the universities to cope with these demands, increasing co-operation between the Commonwealth Government and the State Governments in university finance became necessary. The Commonwealth Government set up a Committee on Australian Universities, whose 1957 report ("The Murray Report") led to more finance becoming available to universities and to the setting up of a permanent body, the Australian Universities Commission, to advise the Commonwealth Government on university development. In the years since the Murray Report, the following major developments have taken place in the Australian university structure:—the University of New South Wales was created from the earlier University of Technology in 1958; in the same year, Monash University was established in Victoria; in 1960, the Australian National University was reconstituted, combining both



undergraduate and post-graduate facilities, and now consists of the Institute of Advanced Studies and the School of General Studies created from the Canberra University College; the University of Queensland set up the University College of Townsville in 1961; and the University of New South Wales established the Wollongong University College in 1962.

The New South Wales Government is proceeding with plans for the construction of a fourth university on a site at North Ryde. It is intended that the new university should be opened not later than 1967.

Despite rapid expansion, the Australian universities are still faced with a problem in providing tuition for all students who reach matriculation standard. As a result, several universities have found it necessary to impose quotas on enrolments in their courses.

The Commonwealth Government has set up a committee to examine the problems of tertiary education. Committees set up in Victoria and New South Wales to examine the same problems have reported in favour of a large increase in places at universities and the establishment of additional university institutions.

5. Teaching and Research Staff.—The following table shows particulars of the teaching and research staff of the universities during 1962 and 1963.

UNIVERSITIES: TEACHING AND RESEARCH STAFF

University	Teaching and research staff(a)					Research only staff(a)				
	Full-time					Part-time (b)	Full-time			Part-time (c)
	Professors	Associate professors and readers	Senior lecturers and lecturers	Assistant lecturers, demonstrators, tutors and teaching fellows	Total					
1962										
Australian National University ..	19	12	91	17	139	28	497	..	6	
Sydney ..	72	47	416	163	698	922	215	..	1	
New South Wales ..	47	56	491	78	672	575	20	..	5	
New England ..	19	15	132	61	227	19	39	..	5	
Melbourne ..	58	68	414	151	691	710	176	..	5	
Monash ..	15	1	69	36	121	17	30	..	1	
Queensland ..	41	45	325	169	580	556	52	..	4	
Adelaide ..	41	42	264	59	406	342	131	..	3	
Western Australia ..	31	34	164	18	247	236	103	..	2	
Tasmania ..	20	10	72	18	120	67	40	..		
<b>Total ..</b>	<b>363</b>	<b>330</b>	<b>2,438</b>	<b>770</b>	<b>3,901</b>	<b>3,472</b>	<b>1,303</b>	<b>27</b>		
1963										
Australian National University ..	23	16	100	29	168	45	517	..	5	
Sydney ..	77	60	452	188	777	945	242	..	16	
New South Wales ..	54	70	517	88	729	607	29	..	1	
New England ..	20	18	138	72	248	7	39	..	7	
Melbourne ..	66	75	455	152	748	771	169	..	3	
Monash ..	22	1	119	51	193	110	10	..	1	
Queensland ..	41	49	340	166	596	599	75	..	7	
Adelaide ..	46	41	280	58	425	353	173	..	3	
Western Australia ..	36	34	185	26	281	257	128	..	3	
Tasmania ..	19	10	77	21	127	63	24	..		
<b>Total ..</b>	<b>404</b>	<b>374</b>	<b>2,663</b>	<b>851</b>	<b>4,292</b>	<b>3,757</b>	<b>1,406</b>	<b>35</b>		

(a) Filled positions. Teaching and research staff includes all staff with teaching functions, but excludes Research only staff which is shown separately. (b) Teaching hours in units of 100 hours per annum. (c) In equivalent full-time units of 35 hours per week.

The next table gives details of the teaching and research staff of Australian universities for each year from 1961 to 1963.

**UNIVERSITIES: TEACHING AND RESEARCH STAFF, SUMMARY, AUSTRALIA**

Year	Teaching and research staff(a)					Research only staff(a)		
	Full-time					Part-time (b)	Full-time	Part-time (c)
	Professors	Associate professors and readers	Senior lecturers and lecturers	Assistant lecturers, demonstrators, tutors and teaching fellows	Total			
1961 .. ..	337	289	2,142	628	3,396	3,199	1,103	32
1962 .. ..	363	330	2,438	770	3,901	3,472	1,303	27
1963 .. ..	404	374	2,663	851	4,292	3,757	1,406	35

(a) Filled positions. Teaching and research staff includes all staff with teaching functions, but excludes Research only staff which is shown separately. (b) Teaching hours in units of 100 hours per annum. (c) In equivalent full-time units of 35 hours per week.

6. Students.—(i) Total. The number of students enrolled for courses at the universities for each of the years 1962 and 1963 is shown in the following table.

**UNIVERSITIES: STUDENTS ENROLLED**

University	Degree courses	Diploma courses		Certificate courses	Miscellaneous subjects (a)	Adjusted total(b)
		Post-graduate	Sub-graduate			
1962						
Australian National University ..	1,462	..	3	..	158	1,564
Sydney .. ..	12,970	506	307	..	326	14,030
New South Wales .. ..	8,071	187	466	11	442	9,164
New England .. ..	2,673	231	..	1	59	2,951
Melbourne .. ..	10,580	308	546	227	626	12,054
Monash .. ..	798	..	..	..	..	798
Queensland .. ..	7,813	66	602	1,615	485	10,507
Adelaide .. ..	5,232	381	1,365	17	225	6,824
Western Australia .. ..	3,644	115	..	..	112	3,853
Tasmania .. ..	1,166	64	53	135	154	1,572
<b>Total .. ..</b>	<b>54,409</b>	<b>1,858</b>	<b>3,342</b>	<b>2,006</b>	<b>2,587</b>	<b>63,317</b>

NOTE.—For footnotes see next page.

UNIVERSITIES: STUDENTS ENROLLED—*continued*

University	Degree courses	Diploma courses		Certificate courses	Miscellaneous subjects (a)	Adjusted total(b)
		Post-graduate	Sub-graduate			
1963						
Australian National University ..	1,801	..	2	..	148	1,910
Sydney .. ..	13,673	560	241	..	242	14,618
New South Wales .. ..	8,935	199	377	13	348	9,865
New England .. ..	2,996	275	..	..	41	3,299
Melbourne .. ..	11,619	115	527	..	873	13,134
Monash .. ..	1,587	..	..	..	..	1,587
Queensland .. ..	9,290	82	566	1,263	370	11,466
Adelaide .. ..	5,670	335	1,575	22	236	7,416
Western Australia .. ..	3,872	135	..	..	95	4,088
Tasmania .. ..	1,290	63	61	126	151	1,691
<b>Total .. ..</b>	<b>60,733</b>	<b>1,764</b>	<b>3,349</b>	<b>1,424</b>	<b>2,504</b>	<b>69,074</b>

(a) Includes *ad hoc* courses.

(b) Adjustment made for students enrolled for more than one course.

Of the students enrolled in 1963, 51,894 were males and 17,180 females. Included in those enrolled for degrees were 4,551 enrolled for higher degree courses—Australian National University, 409; Sydney, 1,253; University of New South Wales, 624; New England, 159; Melbourne, 617; Monash, 83; Queensland, 525; Adelaide, 464; Western Australia, 342; and Tasmania, 75.

The following table shows the number of students enrolled at Australian universities for each of the years from 1959 to 1963.

## UNIVERSITIES: STUDENTS ENROLLED, AUSTRALIA

Year	Degree courses		Diploma courses		Certificate courses	Miscellaneous subjects (a)	Adjusted total(b)
	Higher degrees	Bachelor degrees	Post-graduate	Sub-graduate			
1959 .. ..	2,226	34,108	1,007	6,405	1,575	2,367	47,151
1960 .. ..	2,770	38,934	1,309	6,898	1,786	2,300	53,391
1961 .. ..	3,170	(c)46,132	1,595	(c)3,402	1,935	2,263	57,672
1962 .. ..	3,814	50,595	1,858	3,342	2,006	2,587	63,317
1963 .. ..	4,551	56,182	1,764	3,349	1,424	2,504	69,074

(a) Includes *ad hoc* courses.

(b) Adjustment made for students enrolled for more than one course.

(c) From 1961, a new degree of B.Sc. (Technology) replaced many sub-graduate diploma courses at the University of New South Wales.

(ii) *New Students Enrolled.* The numbers of new students enrolled for courses at the universities during the years 1962 and 1963 are shown in the following table.

## UNIVERSITIES: NEW STUDENTS ENROLLED

University	Degree courses	Diploma courses		Certificate courses	Miscellaneous subjects (a)	Adjusted total(b)
		Post-graduate	Sub-graduate			
1962						
Australian National University ..	638	..	..	..	113	713
Sydney .. .. .	3,566	105	96	..	38	3,803
New South Wales .. .. .	2,219	61	42	10	260	2,588
New England .. .. .	911	85	..	1	24	1,021
Melbourne .. .. .	2,497	18	194	10	293	2,945
Monash .. .. .	542	..	..	..	..	542
Queensland .. .. .	2,046	7	179	401	261	2,864
Adelaide .. .. .	1,264	3	417	2	48	1,700
Western Australia .. .. .	941	5	..	..	30	976
Tasmania .. .. .	361	2	15	41	55	474
<b>Total .. .. .</b>	<b>14,985</b>	<b>286</b>	<b>943</b>	<b>465</b>	<b>1,122</b>	<b>17,626</b>

1963

Australian National University ..	716	..	..	..	111	811
Sydney .. .. .	3,073	174	124	..	50	3,415
New South Wales .. .. .	2,631	55	46	13	178	2,923
New England .. .. .	965	104	..	..	18	1,087
Melbourne .. .. .	2,765	31	173	..	312	3,281
Monash .. .. .	886	..	..	..	..	886
Queensland .. .. .	2,551	11	158	182	167	3,030
Adelaide .. .. .	1,368	5	436	..	51	1,847
Western Australia .. .. .	946	4	..	..	15	964
Tasmania .. .. .	393	3	7	41	58	502
<b>Total .. .. .</b>	<b>16,294</b>	<b>387</b>	<b>944</b>	<b>236</b>	<b>960</b>	<b>18,746</b>

(a) Includes *ad hoc* courses.

(b) Adjustment made for students enrolled for more than one course.

Of the new students enrolled in 1963, 13,163 were males and 5,583 females. Included in those enrolled for degrees were 538 enrolled for higher degree courses—Australian National University, 127; Sydney, 75; University of New South Wales, 100; New England, 22; Melbourne, 48; Monash, 44; Queensland, 36; Adelaide, 40; Western Australia, 15; and Tasmania, 31.

The following table shows the number of new students enrolled at Australian universities during each of the years from 1959 to 1963.

## UNIVERSITIES: NEW STUDENTS ENROLLED, AUSTRALIA

Year	Degree courses		Diploma courses		Certificate courses	Miscellaneous subjects	Adjusted total(a)
	Higher degrees	Bachelor degrees	Post-graduate	Sub-graduate			
1959 .. .. .	252	10,099	198	1,712	483	1,139	13,803
1960 .. .. .	278	11,647	242	1,985	526	1,094	15,685
1961 .. .. .	349	(b) 13,265	239	(b) 892	620	1,017	16,263
1962 .. .. .	475	14,510	286	943	465	1,122	17,626
1963 .. .. .	538	15,756	387	944	236	960	18,746

(a) Adjustment made for students enrolled for more than one course.

(b) From 1961, a new degree of B.Sc. (Technology) replaced many sub-graduate diploma courses at the University of New South Wales.

(iii) *Full-time, Part-time and External Students.* The following table classifies students at each university in 1962 and 1963 according to whether they were studying full-time, part-time or externally.

**UNIVERSITIES: FULL-TIME, PART-TIME AND EXTERNAL STUDENTS**

University	Full-time	Part-time	External	Total
1962				
Australian National University .. .. .	695	869	..	1,564
Sydney .. .. .	10,633	3,397	..	14,030
New South Wales .. .. .	3,035	6,094	35	9,164
New England .. .. .	823	167	1,961	2,951
Melbourne .. .. .	7,453	3,985	616	12,054
Monash .. .. .	738	60	..	798
Queensland .. .. .	4,402	3,575	2,530	10,507
Adelaide .. .. .	3,901	2,454	469	6,824
Western Australia .. .. .	2,144	1,334	375	3,853
Tasmania .. .. .	874	520	178	1,572
<b>Total .. .. .</b>	<b>34,698</b>	<b>22,455</b>	<b>6,164</b>	<b>63,317</b>
1963				
Australian National University .. .. .	942	968	..	1,910
Sydney .. .. .	11,046	3,572	..	14,618
New South Wales .. .. .	3,849	5,963	53	9,865
New England .. .. .	945	171	2,183	3,299
Melbourne .. .. .	8,276	4,243	615	13,134
Monash .. .. .	1,398	189	..	1,587
Queensland .. .. .	4,920	4,049	2,497	11,466
Adelaide .. .. .	4,250	2,662	504	7,416
Western Australia .. .. .	2,346	1,389	353	4,088
Tasmania .. .. .	928	577	186	1,691
<b>Total .. .. .</b>	<b>38,900</b>	<b>23,783</b>	<b>6,391</b>	<b>69,074</b>

The next table shows full-time, part-time and external students enrolled at Australian universities during each of the years from 1959 to 1963.

**UNIVERSITIES: FULL-TIME, PART-TIME AND EXTERNAL STUDENTS, AUSTRALIA**

Year	Full-time	Part-time	External	Total
1959 .. .. .	28,394	13,893	4,864	47,151
1960 .. .. .	31,590	16,304	5,497	53,391
1961(a) .. .. .	30,811	21,071	5,790	57,672
1962 .. .. .	34,698	22,455	6,164	63,317
1963 .. .. .	38,900	23,783	6,391	69,074

(a) The figures of full-time and part-time students for 1961 and following years are not comparable with those shown for previous years, as from 1961 all universities used a uniform classification of students which differed from that used previously by some universities.

(iv) *Assistance to Students.* The Commonwealth Government, through the Commonwealth Scholarships Board, grants undergraduate and post-graduate scholarships to university students. (Details of the Commonwealth Scholarship Scheme are given on page 745.) Commonwealth, State and local governments also award cadetships and other assistance to their employees. Foreign students are assisted by the Commonwealth Government under arrangements such as the Colombo Plan. The Universities themselves grant exhibitions and scholarships as well as special assistance to teachers, etc.

The following table gives details of students assisted at each university in 1962 and 1963.

## UNIVERSITIES: ASSISTED STUDENTS

University	Source of assistance					Type of course	
	Commonwealth Government	State Governments	Universities	Other	Adjusted total (a)	Higher degrees	Other
1962							
Australian National University ..	325	..	437	25	725	232	493
Sydney ..	4,564	349	2,603	249	7,041	378	6,663
New South Wales ..	1,411	690	1,358	695	3,549	316	3,233
New England ..	265	393	1,230	15	1,877	87	1,790
Melbourne ..	3,747	2,276	3,143	143	7,084	223	6,861
Monash ..	208	277	37	6	528	36	492
Queensland ..	2,368	657	409	202	3,636	242	3,394
Adelaide ..	1,572	1,614	1,367	136	4,215	270	3,945
Western Australia ..	1,043	583	58	63	1,683	84	1,599
Tasmania ..	311	367	68	19	703	23	680
<b>Total ..</b>	<b>15,814</b>	<b>7,206</b>	<b>10,710</b>	<b>1,553</b>	<b>31,041</b>	<b>1,891</b>	<b>29,150</b>
1963							
Australian National University ..	422	3	623	46	952	334	618
Sydney ..	4,760	(b)2,251	2,953	265	7,530	448	7,082
New South Wales ..	1,491	787	1,512	606	3,696	335	3,361
New England ..	326	393	1,381	35	2,097	123	1,974
Melbourne ..	3,839	2,600	3,484	121	7,611	317	7,294
Monash ..	371	500	105	28	999	81	918
Queensland ..	2,281	723	386	252	3,642	262	3,380
Adelaide ..	1,661	1,846	1,472	157	4,616	295	4,321
Western Australia ..	1,083	575	61	94	1,728	100	1,628
Tasmania ..	402	356	86	16	807	30	777
<b>Total ..</b>	<b>16,636</b>	<b>10,034</b>	<b>12,063</b>	<b>1,62</b>	<b>33,678</b>	<b>2,325</b>	<b>31,353</b>

(a) Adjustment made for students assisted from more than one source. (b) Assisted students have been classified on a new basis more comparable with other universities.

The next table shows the numbers of assisted students at Australian universities in the years 1959 to 1963.

## UNIVERSITIES: ASSISTED STUDENTS, AUSTRALIA

Particulars	1959	1960	1961	1962	1963
Government assistance ..	18,756	20,345	20,937	23,020	26,670
University assistance ..	5,958	6,649	9,025	10,710	12,063
Other assistance ..	2,278	2,648	2,726	1,553	1,620
<b>Adjusted Total(a) ..</b>	<b>23,342</b>	<b>26,061</b>	<b>28,953</b>	<b>31,041</b>	<b>33,678</b>

(a) Adjustment made for students assisted from more than one source.

(v) *Resident Students.* In 1963, 5,279 full-time and 314 part-time students were in residence at affiliated colleges, halls of residence and university hostels. The 5,593 students in residence were distributed as follows:—Australian National University, 291; Sydney, 803; New South Wales, 209; New England, 827; Melbourne, 1,332; Monash, 76; Queensland, 1,021; Adelaide, 363; Western Australia, 451; and Tasmania, 220. There were 4,227 male students and 1,366 female students in residence.

7. *Degrees Conferred, etc.*—The following table shows the number of degrees conferred and diplomas and certificates granted for males and females separately at each university during the years ended 31st July, 1962 and 1963.

## UNIVERSITIES: DEGREES CONFERRED, AND DIPLOMAS AND CERTIFICATES GRANTED

Course	Aus-tralian National University		Sydney		New South Wales		New Ei g-land		Mel-bourne		Queens-land		Ade-laide		West-ern Australia		Tas-mania		Australia	
	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.
YEAR ENDED 31ST JULY, 1962																				
<b>Degrees—</b>																				
Arts .. .. .	33	23	238	252	28	28	92	50	243	175	70	59	45	55	106	60	35	31	890	733
Divinity .. .			1								2								3	
Music .. .									8	16			1	1					9	17
Psychology ..					8	1													8	1
Law .. .	5	1	87	6					153	21	19	1	26		10	1	10		310	30
Commerce / Econo-mics ..	20	1	89	5	95	5			195	30	89	6	39	1	11		14	1	552	49
Education .. .			22	2					40	12	13	3			22	2			97	19
Social Studies ..												5								5
Science .. .	15	3	187	91	205	26	41	15	195	48	118	38	158	29	86	20	37	6	1,042	276
Architecture and Town Planning ..			19	3	14				33	2	8		5						79	5
Building .. .									2										2	
Engineering ..			130		222				163		90		134		38		11		788	
Surveying .. .					5				2		4								11	
Dentistry .. .			53	9					33	2	39	2	10	3	4				139	16
Medicine .. .			189	32					128	31	62	6	61	11	26	4			466	84
Pharmacy .. .													1							1
Physiotherapy ..							15	2	34	3	37	2	20		20	1			164	11
Agriculture ..							4	1											4	1
Physiotherapy ..			10				1		2		3								16	
Forestry .. .			39	4							26								65	4
Veterinary Science ..																				
<b>Total</b>	<b>73</b>	<b>28</b>	<b>1,102</b>	<b>407</b>	<b>577</b>	<b>60</b>	<b>153</b>	<b>68</b>	<b>1,231</b>	<b>340</b>	<b>580</b>	<b>123</b>	<b>499</b>	<b>100</b>	<b>323</b>	<b>88</b>	<b>107</b>	<b>38</b>	<b>4,645</b>	<b>1,252</b>
<b>Post-graduate Diplo-mas—</b>																				
Education .. .			149	199	2	27	43	33	43	25	34	13	21	6	39	9	13	9	344	321
Engineering .. .			2		8	1					2								12	1
Medicine .. .			39	3					17										56	3
Agriculture .. .			3	1															3	1
<b>Total</b>			<b>193</b>	<b>203</b>	<b>10</b>	<b>28</b>	<b>43</b>	<b>33</b>	<b>60</b>	<b>25</b>	<b>36</b>	<b>13</b>	<b>21</b>	<b>6</b>	<b>39</b>	<b>9</b>	<b>13</b>	<b>9</b>	<b>415</b>	<b>326</b>
<b>Sub-graduate Diplo-mas</b>	<b>2</b>		<b>18</b>	<b>37</b>					<b>30</b>	<b>41</b>	<b>39</b>	<b>34</b>	<b>81</b>	<b>88</b>			<b>6</b>		<b>176</b>	<b>200</b>
<b>Certificates</b>						<b>28</b>	<b>1</b>	<b>2</b>			<b>114</b>	<b>20</b>	<b>4</b>				<b>7</b>	<b>15</b>	<b>155</b>	<b>36</b>

## YEAR ENDED 31ST JULY, 1963

<b>Degrees—</b>																				
Arts .. .	38	23	243	287	32	36	104	73	241	258	79	94	42	61	114	77	42	37	a 936	946
Divinity .. .			1																1	
Music .. .				2					7	23			1						8	25
Psychology ..					12	1													12	1
Law .. .	7	1	85	9					113	20	12	3	26	2	11	3	6	1	260	39
Commerce / Econo-mics ..	22	3	80	11	98	1			196	35	96	3	18	3	14	2	21	1	545	59
Education .. .			20	3					53	9	14	4			16	4			103	20
Social Studies ..	4										2	8							6	8
Science .. .	8	2	223	104	244	24	40	16	283	64	136	43	183	42	80	18	55	7	a 1,253	320
Architecture and Town Planning ..			34	1	27				52	6	9		11	1					133	8
Building .. .					2				4										6	
Engineering ..			142		250				165		100		104	1	48		20		829	1
Surveying .. .					10				2		3								15	
Dentistry .. .			46	1					21	1	55	10	1	9					141	3
Medicine .. .	11	1	182	29					137	22	100	7	75	13	33	2			538	74
Pharmacy .. .			36	24							17	15							53	39
Physiotherapy ..							15	2			1	3							1	3
Agriculture ..			51	4					49	6	44	3	17		13				189	15
Agricultural Econo-mics ..							2	2											2	2
Forestry .. .			9						7		6				2		2		27	
Veterinary Science ..			46	2			1				33	2							79	4
<b>Total</b>	<b>90</b>	<b>30</b>	<b>1,198</b>	<b>477</b>	<b>675</b>	<b>62</b>	<b>162</b>	<b>93</b>	<b>1,330</b>	<b>444</b>	<b>707</b>	<b>185</b>	<b>487</b>	<b>124</b>	<b>340</b>	<b>106</b>	<b>146</b>	<b>46</b>	<b>a 5,137</b>	<b>1,567</b>
<b>Post-graduate Diplo-mas—</b>																				
Education .. .			90	147	13	31	48	57	44	45	42	14	28	14	50	12	21	11	336	331
Engineering .. .					31				6										37	
Medicine .. .			36	6					12										48	6
Agriculture .. .			4																4	
<b>Total</b>			<b>130</b>	<b>153</b>	<b>44</b>	<b>31</b>	<b>48</b>	<b>57</b>	<b>62</b>	<b>45</b>	<b>42</b>	<b>14</b>	<b>28</b>	<b>14</b>	<b>50</b>	<b>12</b>	<b>21</b>	<b>11</b>	<b>425</b>	<b>337</b>
<b>Sub-graduate Diplo-mas</b>			<b>19</b>	<b>23</b>	<b>4</b>				<b>23</b>	<b>68</b>	<b>2</b>	<b>29</b>	<b>89</b>	<b>98</b>			<b>4</b>		<b>141</b>	<b>218</b>
<b>Certificates</b>						<b>26</b>					<b>26</b>	<b>13</b>	<b>1</b>				<b>22</b>	<b>7</b>	<b>75</b>	<b>20</b>

(a) Degrees were conferred by Monash University for the first time in 1963 (Ph.D. (Arts), 1; M. Sc., 1). These are included in the totals for Australia.

The next table shows total degrees conferred at all Australian universities during each of the years 1959 to 1963.

UNIVERSITIES: DEGREES CONFERRED, AUSTRALIA

Degree	1959			1960			1961(a)			1962(a)			1963		
	M.	F.	P.	M.	F.	P.	M.	F.	P.	M.	F.	P.	M.	F.	P.
Arts .. .. .	657	540	1,197	752	597	1,349	742	647	1,389	890	733	1,623	936	946	1,882
Divinity .. .. .	5	..	5	..	..	..	1	..	1	3	..	3	1	..	1
Music .. .. .	5	16	21	9	26	35	9	15	24	9	17	26	8	25	33
Psychology .. .. .	..	..	..	..	..	..	..	..	..	8	1	9	12	1	13
Law .. .. .	185	24	209	218	24	242	244	29	273	310	30	340	260	39	299
Commerce/Economics .. .. .	243	16	259	288	28	316	389	42	431	552	49	601	545	59	604
Education .. .. .	88	15	103	87	19	106	94	20	114	97	19	116	103	20	123
Social Studies .. .. .	..	..	..	..	..	..	4	4	4	..	5	5	6	8	14
Science .. .. .	695	159	854	868	192	1,060	997	247	1,244	1,042	276	1,318	1,253	320	1,573
Architecture and Town Planning .. .. .	54	5	59	65	9	74	60	9	69	79	5	84	133	8	141
Building .. .. .	..	..	..	..	..	..	..	..	..	2	..	2	6	..	6
Engineering .. .. .	517	2	519	551	..	551	703	..	703	788	..	788	829	1	830
Surveying .. .. .	4	..	4	8	..	8	5	..	5	11	..	11	15	..	15
Dentistry .. .. .	103	14	117	118	10	128	117	17	134	139	16	155	141	3	144
Medicine .. .. .	367	65	432	413	65	478	453	71	524	466	84	550	538	74	612
Pharmacy .. .. .	..	..	..	..	..	..	..	..	..	..	..	..	53	39	92
Physiotherapy .. .. .	..	..	..	1	8	9	..	1	1	..	1	1	1	3	4
Agriculture and Agricultural Economics .. .. .	149	11	160	146	16	162	178	16	194	168	12	180	191	17	208
Forestry .. .. .	16	..	16	20	1	21	32	..	32	16	..	16	27	..	27
Veterinary Science .. .. .	40	2	42	56	2	58	58	4	62	65	4	69	79	4	83
<b>Total—</b>															
Higher Doctorates .. .. .	29	2	31	21	1	22	26	2	28	35	1	36	32	1	33
Ph.D.'s .. .. .	113	10	123	127	10	137	112	14	126	124	14	138	161	13	174
Master's Degrees .. .. .	201	27	228	223	31	254	279	28	307	301	31	332	319	47	366
Bachelor's Degrees .. .. .	2,785	830	3,615	3,229	955	4,184	3,665	1,078	4,743	4,185	1,206	5,391	4,625	1,506	6,131
<b>Grand Total</b> .. .. .	<b>3,128</b>	<b>869</b>	<b>3,997</b>	<b>3,600</b>	<b>997</b>	<b>4,597</b>	<b>4,082</b>	<b>1,122</b>	<b>5,204</b>	<b>4,645</b>	<b>1,252</b>	<b>5,897</b>	<b>5,137</b>	<b>1,567</b>	<b>6,704</b>

(a) Figures for 1962 and 1963 refer to degrees conferred during the 12 months ended July. Figures for 1961 and previous years refer to degrees conferred during the calendar year. Details of degrees conferred during the five months ended December, 1961, which are included in both 1961 and 1962 figures shown in the table, are as follows: Arts, 129; Music, 10; Law, 59; Commerce and Economics, 45; Education, 18; Science, 97; Architecture and Town Planning, 9; Engineering, 56; Dentistry, 8; Medicine, 207; Physiotherapy, 1; Agriculture and Agricultural Science, 15; Forestry, 3; Veterinary Science, 25; total degrees, 682, including 10 Higher Doctorates, 34 Ph.D.'s, 86 Master's Degrees and 552 Bachelor's Degrees.

8. Finance.—(i) *General.* Australian universities are incorporated by statute. Since their establishment, they have come to depend greatly on government grants for their income. In recent years, large amounts have been required for new buildings, as well as for current expenditure to provide staff and equipment to cope with increased student enrolments. In 1962, income other than from State and Commonwealth grants, including student fees, amounted to only about one-fifth of the total income. Income from non-government sources includes grants, mainly for research purposes, from businesses, international foundations, and private individuals. Some income is also received from endowments.

(ii) *Financial Assistance from the Commonwealth Government.* (a) *General.* Prior to 1939, Commonwealth assistance was almost entirely concerned with research projects carried out by or in collaboration with the universities. During and since the 1939-45 War, the Commonwealth extended assistance to university students, at first to increase the number of highly trained people required for the war effort, then with the object of rehabilitating ex-servicemen, and finally as a social service benefit to the community. For the purpose of reconstruction training, the Commonwealth Government made available to the universities approximately £1 million for buildings and £500,000 for equipment.

Following a report submitted by a committee of inquiry appointed to report on university finances and requirements, the Commonwealth, since 1951, has made matched grants to the States for recurrent expenditure on university purposes. Since 1958 the Commonwealth has also assisted with the capital needs of the universities for building projects and for equipment, and provided unmatched recurrent grants and grants for the building programmes of residential colleges affiliated with universities. In the 1961-63 triennium the Commonwealth matched State grants for buildings at teaching hospitals and in 1964 instituted grants for special research projects at universities. As well as making grants available for State universities, the Commonwealth has continued to support the university institutions for which it is responsible.



In 1959, following the Report of the Committee on Australian Universities, the Commonwealth Government established the Australian Universities Commission under the *Australian Universities Commission Act 1959*. The Commission's principal functions are to advise the Prime Minister on financial assistance to Commonwealth universities and to States in relation to their universities and also on the balanced development of Australian universities. The Commission commenced its work in July, 1959. Since its establishment, the Commission has produced two reports; the first, presented in October, 1960, and covering the years 1961 to 1963, recommended Commonwealth grants totalling £110 million for State universities. The Commission's second report was presented in August, 1963, and recommended Commonwealth grants totalling more than £151 million for State universities for the period 1964 to 1966. The *Universities (Financial Assistance) Act 1963*, gave effect to the major financial recommendations contained in the Commission's second report.

(b) *Commonwealth Grant for Recurrent Expenditure in Universities*. This is a continuation of matched grants provided since 1951. The maximum amount available in 1964 is shown in the following table.

**STATE UNIVERSITIES, ETC.: COMMONWEALTH GRANT FOR RECURRENT EXPENDITURE, 1964**

University, etc.	Amount
	£'000
Sydney .. .. .	2,074
New South Wales(a) .. .. .	1,995
New England .. .. .	613
Melbourne .. .. .	1,694
Monash .. .. .	936
Queensland(b) .. .. .	1,326
Adelaide .. .. .	1,142
Western Australia .. .. .	799
Tasmania .. .. .	324
South Australian Institute of Technology .. .. .	100
<b>Total .. .. .</b>	<b>11,003</b>

(a) Includes grants for the University Colleges at Newcastle and Wollongong. For the University College at Townsville.

(b) Includes grant

Since 1961, matched grants have been made on a basis of £1 of Commonwealth money for every £1. 85 of income received by a university from fees and State grants. From 1951 to 1960, the matching ratio was, in general, £1 to £3.

(c) *Commonwealth Grants for the Teaching and Administrative Costs of Residential Colleges*. From 1964, the grants consist of unmatched Commonwealth payments each year of £2,500 (previously £2,000) to each college affiliated with or administered by a university, plus the sum of £15 for each resident student, and a further £5 for each non-resident student-receiving tutorial assistance. The Commonwealth total grant paid in 1963 was £177,500.

(d) *Commonwealth Grants for Selected Building Projects in Universities*. Those grants, for the period 1964-66, are shown in detail in the Second Schedule to the 1963 Act. Payments are made up to a given maximum for each project, on the basis of £1 from the Commonwealth for every £1 of State grants. From 1964 there is a change in this grant in that, where appropriate, an allowance for furnishings and equipment is included in the building grants for each project. Previously, separate grants were provided for these items. Also, from 1964, the schedule showing grants for university building projects includes grants for university computing facilities, but grants for the erection and alteration of buildings for halls of residence administered by universities are shown elsewhere. The total Commonwealth grant for each University is shown in the following table.

**STATE UNIVERSITIES, ETC.: COMMONWEALTH GRANTS FOR BUILDING  
PROJECTS, ETC.. 1964-1966**

University, etc.	Amount
	£'000
Sydney .. .. .	2,340
New South Wales .. .. .	2,400
New England .. .. .	676
Melbourne .. .. .	2,406
Monash .. .. .	2,235
Queensland .. .. .	1,508
Adelaide .. .. .	1,634
Western Australia .. .. .	960
Tasmania .. .. .	468
Macquarie, New South Wales .. .. .	550
Latrobe, Victoria .. .. .	550
 South Australian Institute of Technology .. .. .	 331
 <b>Total .. .. .</b>	 <b>16,058</b>

(e) *Commonwealth Grants for Special Research Projects in Universities.* Under the 1963 Act, special provision is made to assist universities to develop and extend their research programmes, including the purchase of equipment. Under the 1961-1963 legislation, grants were provided for equipment only. The grants are available on the basis of £1 from the Commonwealth for every £1 of State grants. The maximum amount available to each university is shown in the following table.

**STATE UNIVERSITIES: COMMONWEALTH GRANTS FOR SPECIAL  
RESEARCH PURPOSES, 1964-1966**

University	Amount
	£'000
Sydney .. .. .	80
New South Wales .. .. .	63
New England .. .. .	37
Melbourne .. .. .	80
Monash .. .. .	38
Queensland .. .. .	55
Adelaide .. .. .	55
Western Australia .. .. .	55
Tasmania .. .. .	37
 <b>Total .. .. .</b>	 <b>500</b>

(f) *Commonwealth Grants for Buildings for Halls of Residence and Affiliated Residential Colleges.* Under the 1963 Act, an amount representing the grant available to each university for both types of student residence is shown in the Fourth Schedule. Previously, grants for buildings for university-administered halls of residence were included in the Schedule showing university building projects. Payments are made up to a given maximum for each project. For halls of residence the grant comprises £1 from the Commonwealth for every £1 of State grants. For affiliated residential colleges Commonwealth grants are up to one-half of the cost of a project, the other half being met from college or State Government sources. The maximum Commonwealth grants available for each State university in the 1964-66 triennium are shown in the following table.

**STATE UNIVERSITIES: MAXIMUM COMMONWEALTH GRANTS FOR BUILDINGS FOR HALLS OF RESIDENCE AND AFFILIATED RESIDENTIAL COLLEGES, 1964-66**

University								Amount
								£'000
Sydney .. .. .	..	..	..	..	..	..	..	316
New South Wales .. .. .	..	..	..	..	..	..	..	403
New England .. .. .	..	..	..	..	..	..	..	475
Melbourne .. .. .	..	..	..	..	..	..	..	280
Monash .. .. .	..	..	..	..	..	..	..	605
Queensland .. .. .	..	..	..	..	..	..	..	387
Adelaide .. .. .	..	..	..	..	..	..	..	320
Western Australia .. .. .	..	..	..	..	..	..	..	309
Tasmania .. .. .	..	..	..	..	..	..	..	178
<b>Total .. .. .</b>	..	..	..	..	..	..	..	<b>3,273</b>

(iii) *University Income.* The following table summarizes the income of each university in 1962.

**UNIVERSITIES: INCOME, 1962**

(£'000)

University	Government grants(a)		Other income			Total income
	Commonwealth Government grants	State Government grants	Donations and endowments(b)	Student fees(c)	Other income	
Australian National University .. .. .	1,829	..	9	..	1	1,839
Sydney .. .. .	752	692	290	..	..	1,734
New South Wales .. .. .	1,063	1,443	..	..	..	2,506
New England .. .. .	125	203	..	..	8	336
Melbourne .. .. .	564	1,157	214	..	..	1,935
Monash .. .. .	1,494	1,744	..	..	..	3,238
Queensland .. .. .	237	629	91	..	..	957
Adelaide .. .. .	409	409	..	..	..	818
Western Australia .. .. .	376	389	..	..	..	765
Tasmania .. .. .	325	340	..	..	..	665
<b>Total .. .. .</b>	<b>7,174</b>	<b>7,006</b>	<b>604</b>	<b>..</b>	<b>9</b>	<b>14,793</b>

**INCOME FOR SPECIFIC CAPITAL PURPOSES(d)**

Australian National University .. .. .	1,829	..	9	..	1	1,839
Sydney .. .. .	752	692	290	..	..	1,734
New South Wales .. .. .	1,063	1,443	..	..	..	2,506
New England .. .. .	125	203	..	..	8	336
Melbourne .. .. .	564	1,157	214	..	..	1,935
Monash .. .. .	1,494	1,744	..	..	..	3,238
Queensland .. .. .	237	629	91	..	..	957
Adelaide .. .. .	409	409	..	..	..	818
Western Australia .. .. .	376	389	..	..	..	765
Tasmania .. .. .	325	340	..	..	..	665
<b>Total .. .. .</b>	<b>7,174</b>	<b>7,006</b>	<b>604</b>	<b>..</b>	<b>9</b>	<b>14,793</b>

NOTE.—For footnotes see next page.

UNIVERSITIES: INCOME, 1962—*continued*  
(£'000)

University	Governments grants(a)		Other income			Total income
	Commonwealth Government grants	State Government grants	Donations and endowments(b)	Student fees(c)	Other income	

INCOME FOR OTHER PURPOSES

Australian National University .. ..	3,325	..	116	68	243	3,752
Sydney .. ..	2,009	2,174	1,038	1,064	200	6,485
New South Wales .. ..	1,724	2,499	229	587	266	5,305
New England .. ..	572	850	31	106	188	1,747
Melbourne .. ..	1,772	1,637	515	1,010	438	5,372
Monash .. ..	323	523	68	72	30	1,016
Queensland .. ..	1,177	1,413	640	669	88	3,987
Adelaide .. ..	1,056	1,457	201	245	141	3,100
Western Australia .. ..	737	1,002	159	178	181	2,257
Tasmania .. ..	326	460	56	81	64	987
<i>Total</i> .. ..	<i>13,021</i>	<i>12,015</i>	<i>3,053</i>	<i>4,080</i>	<i>1,839</i>	<i>34,008</i>

TOTAL INCOME

Australian National University .. ..	5,154	..	125	68	244	5,591
Sydney .. ..	2,761	2,866	1,328	1,064	200	8,219
New South Wales .. ..	2,787	3,942	229	587	266	7,811
New England .. ..	697	1,053	31	106	196	2,083
Melbourne .. ..	2,336	2,794	729	1,010	438	7,307
Monash .. ..	1,817	2,267	68	72	30	4,254
Queensland .. ..	1,414	2,042	731	669	88	4,944
Adelaide .. ..	1,465	1,866	201	245	141	3,918
Western Australia .. ..	1,113	1,391	159	178	181	3,022
Tasmania .. ..	651	800	56	81	64	1,652
<i>Total</i> .. ..	<i>20,195</i>	<i>19,021</i>	<i>3,657</i>	<i>4,080</i>	<i>1,848</i>	<i>48,801</i>

(a) Includes funds expended by various government departments and other bodies in respect of universities but not controlled by the universities. (b) In the case of endowments, only income from property and other investment of these endowments is included. The treatment of donations depends on the terms of the gift, etc. When the capital sum is specified to be expended over several years, only the portion of the capital sum allocated to each year is shown as income in that year, but if the capital sum is available for spending without limitation as to time, the full amount is recorded as income in the year it is received, irrespective of whether it is spent in that year or not. The capital value of land and buildings donated to the universities is not recorded as income, unless these properties are sold, in which case the amounts realized are included. (c) Excludes fees collected on behalf of student unions. (d) Income received specifically for new buildings, major alterations and additions to buildings, installation of services, purchase of land and buildings and major equipment.

(iv) *University Expenditure.* The following table summarizes the expenditure of each university in 1962. The statistics are compiled on a different basis from those published in previous years.

**UNIVERSITIES: EXPENDITURE, 1962**  
(£'000)

University	Teaching and research	Administration and general overhead	Libraries	Buildings, premises, grounds	Sundry auxiliary expenditure	Total expenditure
Australian National University .. ..	3,158	369	195	2,220	184	6,126
Sydney .. ..	4,838	590	199	2,398	146	8,171
New South Wales .. ..	3,740	465	227	3,224	244	7,900
New England .. ..	1,000	243	87	659	349	2,338
Melbourne .. ..	3,798	397	225	2,705	581	7,706
Monash .. ..	780	102	80	3,541	24	4,527
Queensland .. ..	2,671	271	143	1,188	90	4,363
Adelaide .. ..	2,291	233	145	917	153	3,739
Western Australia .. ..	1,587	185	107	730	244	2,853
Tasmania .. ..	666	91	68	741	66	1,632
<b>Total .. ..</b>	<b>24,529</b>	<b>2,946</b>	<b>1,476</b>	<b>18,323</b>	<b>2,081</b>	<b>49,355</b>

(v) *Income and Expenditure.* The following table shows income and expenditure at each Australian university for each of the years 1958 to 1962.

**UNIVERSITIES: INCOME AND EXPENDITURE**  
(£'000)

University	1958	1959	1960	1961(a)	1962(a)
<b>Australian National University—</b>					
Income .. ..	2,196	2,964	3,786	5,664	5,591
Expenditure .. ..	2,214	2,555	3,587	5,053	6,126
<b>Sydney—</b>					
Income .. ..	4,541	5,184	5,997	7,016	8,219
Expenditure .. ..	4,123	4,756	5,725	7,303	8,171
<b>New South Wales—</b>					
Income .. ..	3,240	3,951	5,160	7,070	7,811
Expenditure .. ..	2,900	3,530	4,922	7,453	7,900
<b>New England—</b>					
Income .. ..	1,163	1,812	1,693	1,923	2,083
Expenditure .. ..	1,234	1,379	1,976	2,043	2,338
<b>Melbourne—</b>					
Income .. ..	3,414	4,800	5,735	5,597	7,307
Expenditure .. ..	3,678	4,154	5,158	6,114	7,706
<b>Monash—</b>					
Income .. ..	4	329	1,446	3,999	4,254
Expenditure .. ..	3	323	1,017	3,921	4,527
<b>Queensland—</b>					
Income .. ..	2,007	2,747	3,787	4,180	4,944
Expenditure .. ..	2,017	2,698	3,663	4,161	4,363
<b>Adelaide—</b>					
Income .. ..	1,968	2,279	2,595	3,507	3,918
Expenditure .. ..	1,982	2,421	2,758	3,367	3,739
<b>Western Australia—</b>					
Income .. ..	1,702	1,798	2,335	2,403	3,022
Expenditure .. ..	1,744	1,790	2,061	2,563	2,853
<b>Tasmania—</b>					
Income .. ..	1,050	1,429	1,177	1,275	1,652
Expenditure .. ..	1,043	1,441	1,153	1,324	1,632
<b>Total Income .. ..</b>	<b>21,285</b>	<b>27,293</b>	<b>33,711</b>	<b>42,634</b>	<b>48,801</b>
<b>Total Expenditure .. ..</b>	<b>20,938</b>	<b>25,047</b>	<b>32,020</b>	<b>43,302</b>	<b>49,355</b>

(a) Figures for 1961 and 1962 were compiled on a new basis and totals for individual universities are not necessarily comparable with previous years.

## § 10. Other Tertiary Institutions

1. **General.**—In addition to the degree-granting universities, there is a variety of institutions offering courses at tertiary level; the courses may lead to a certificate, diploma, or similar qualification. Included among the institutions are technical colleges, which have been described in § 6.

2. **Teachers' Colleges.**—The State Education Departments conduct teachers' colleges to train teachers for government schools. There are eight colleges in New South Wales, twelve in Victoria, three in South Australia, and two each in Queensland, Western Australia and Tasmania, making a total of 29 colleges. Two of these opened for the first time in 1962 (Wollongong Teachers' College in New South Wales and Western Teachers' College in South Australia), and one in 1963 (Hobart Teachers' College in Tasmania).

A variety of teacher training courses is provided in these colleges, including those for primary teachers, secondary teachers, and those specializing in teaching infants, handicapped children, art, music, and handicrafts. A description of these courses is given in § 3.

Teachers' colleges are co-educational, and, in the larger States, have been established in country areas as well as in cities. Students entering them have completed their secondary schooling and are usually about 17 years of age. The principal and staff of the colleges are responsible to the Director of Education in the State concerned.

3. **Kindergarten Training Colleges.**—The Kindergarten Unions in all States except Tasmania have established teacher training colleges providing three-year courses. The minimum entrance age is usually 17 years, and the Leaving Certificate is required for admission. In addition, in New South Wales, the Sydney Day Nursery and Nursery Schools' Association maintains a training college.

The pre-school teacher training courses in these colleges are all full-time diploma courses and are similar in content and standards. Teachers are trained for work with children between the ages of 2 and 7 years, and the training courses include the study of general educational theory, the theory of pre-school education, general cultural subjects, and art and crafts (including music). In addition, training is given in practical pre-school teaching.

4. **Agricultural Colleges.**—There are seven State agricultural colleges—Hawkesbury and Wagga (New South Wales), Longerenong and Dookie (Victoria), Gatton (Queensland), Roseworthy (South Australia), and Muresk (Western Australia), offering a comprehensive course of two or three years leading to the award of a Diploma in Agriculture, or in a specialized field such as animal husbandry, dairy manufactures, and horticulture. The School of Horticulture, Burnley, Victoria, also offers a three-year diploma course.

Agricultural colleges are government institutions administered by the State Departments of Agriculture in New South Wales, Victoria, South Australia and Western Australia and by the State Department of Education in Queensland. Their purpose is to teach the principles and practices of agriculture and its specialized branches to those intending to take up farming as a career and to those who propose to enter such occupations as agricultural field officer or technical officer in food processing industries.

The minimum entrance standard is the Intermediate Certificate or Junior Public examination in all cases except Western Australia where it is Sub-leaving. As entry is competitive, there is a tendency for students to hold better than the minimum qualifications. All the colleges are fully residential, and the age at which students may enter them varies from 15 to 17 years, depending on the college and the type of course.

In addition to their formal courses of training, agricultural colleges offer short courses of from three days to one month to farmers and teachers in country districts.

5. **Schools of Forestry.**—Training in Forestry is carried out at the Australian Forestry School, Canberra, and at the Creswick School of Forestry in Victoria. Reference to these institutions is made in Chapter XXIV. Forestry.

6. **Conservatoria of Music.**—There are conservatoria of music in four States. Those in Victoria and South Australia are attached to the Universities of Melbourne and Adelaide respectively. The New South Wales State Conservatorium and the Queensland Conservatorium are controlled by the Department of Education in each State.

All four conservatoria offer diploma courses for which matriculation status is not required; at Melbourne and Adelaide, degree courses are also available to matriculated students.

7. *Service and Administrative Colleges.*—Each of the three Armed Services maintains institutions for the training of officers. Descriptions of these can be found in Chapter XXVII. Defence. Two of the institutions, the Royal Military College, Duntroon, Australian Capital Territory, and the Royal Australian Air Force College, Point Cook, Victoria, have arrangements with universities whereby their graduates may enter university courses at an advanced stage.

The Australian School of Pacific Administration, controlled by the Department of Territories, trains students in the various aspects of service and administration in Commonwealth Territories, including teaching.

8. *The Australian Administrative Staff College.*—The Australian Administrative Staff College was opened in 1957, following discussions among prominent leaders in business and government on the need to raise the standards of administration in all walks of Australian life.

The College is a private body, working in close co-operation with governments and other public bodies, the armed services and the Trade Union movement. It was founded and is owned by a large group of the leading Australian companies. It has as its permanent premises a nineteenth century mansion at Mt. Eliza, thirty miles from Melbourne.

The College is based on the model of the Administrative Staff College at Henley-on-Thames, England, but incorporates features drawn from comparable activities in other parts of the world. Its courses are conducted by a Principal, a small permanent directing staff, and by extensive use of visits by practising senior administrators.

The College conducts a ten-week advanced course in administration designed to enable mature administrators to exchange their views and experiences and further their study of the problems which arise in any managerial work. There is also an intermediate course designed to offer a similar opportunity to men and women at a much earlier stage of their careers. The advanced course is offered thrice annually and the intermediate course twice; both courses are fully residential. Each session of each course comprises forty diversely selected candidates. Certain scholarships are available for the advanced course.

The College has a library and facilities for research in administrative fields.

## § 11. Commonwealth Activities in Education

1. *General.*—(i) *Fields of Activity.* Although education is primarily the responsibility of the States, the Commonwealth is engaged in educational activities incidental to its responsibilities in such areas as defence, external relations, immigration and social services. It is also responsible for public education in its own Territories. Activities of the Commonwealth in education are not administered by a single authority but are divided among a number of departments and instrumentalities. Education in Commonwealth Territories is described in Chapter V. The Territories of Australia; various schools and colleges for the defence services are treated in Chapter XXVII. Defence; the Australian Forestry School is mentioned in Chapter XXIV. Forestry; and other activities which may be considered broadly as educational are described in the section on Broadcasting and Television and elsewhere in Chapter XV. Transport and Communication.

(ii) *The Commonwealth Office of Education.* The Commonwealth Office of Education was set up under the *Education Act 1945* to provide advice to the Commonwealth Government on educational matters and to serve as a channel for liaison between Commonwealth and State educational authorities. Among its major commitments are those which arise from international relations in education, including the association of Australia with the aims and activities of the United Nations Educational, Scientific and Cultural Organization (UNESCO), and the planning and supervision of training for oversea students given awards by the Australian Government to attend Australian universities and similar institutions.

The Office also acts as the administering authority for Australian participation in the Scheme of Commonwealth Co-operation in Education and concerns itself with the techniques of teaching English as a second language in connexion with the assimilation of immigrants and tuition for sponsored foreign students.

(iii) *The Commonwealth Scholarships Board.* The Office of Education also provides the secretariat for the Commonwealth Scholarships Board. This Board under its former title of the Universities Commission was also established by the *Education Act* 1945. Prior to 1945, the Commission had functioned under wartime National Security Regulations. The Board consists of a chairman, who is the Director of the Office of Education, and three other members. The main responsibilities of the Board at present are advising the Government on the policy and co-ordinating the administration of the Commonwealth Scholarship Scheme and of Commonwealth Post-Graduate Awards. The Board is responsible for arranging and supervising the training of ex-service personnel and war widows at university and university type institutions under the Commonwealth Reconstruction Training Scheme, the Korea and Malaya Training Scheme, and the Disabled Members' and Widows' Training Scheme.

**2. Assistance to Students.**—The Commonwealth Government provides financial assistance to students who are undergoing tertiary training through a number of scholarship schemes, all of which are administered by the Commonwealth Scholarships Board. The most extensive of these is the Commonwealth Scholarship Scheme, under which 5,000 scholarships are offered annually to undergraduates at universities and other approved institutions.

The majority of the undergraduate scholarships are Open Entrance awards allocated amongst the States on a population basis and awarded competitively on the results of examinations accepted for matriculation in each State. In addition, 1,280 Later Year awards are available to students who have completed one or more years of a course, and Mature Age awards are available to older persons in the 25 to 30 years age group. All successful applicants have their fees paid. Scholarship holders may also be paid a living allowance subject to a means test. As from 1st April, 1962, the maximum rates of allowance have been £383 10s. per annum for a scholar living away from home and £247 per annum when living at home.

At 30th June, 1963, 14,686 Commonwealth scholars were enrolled in undergraduate courses including 4,064 new award holders. Up to the end of 1963, 21,848 scholars had completed undergraduate courses under the scheme.

In 1959, a scheme of Commonwealth Post-Graduate awards tenable at Australian universities was introduced under which 100 awards were made available each year. The benefits comprise a living allowance without means test, and payment of university fees. From 1963, the possible number of Post-Graduate awards was increased to 225. The Commonwealth Government contribution towards the stipend in respect of each award was raised to £900 per annum from 1st January, 1964. Awards may be renewed annually up to a maximum period of four years; in 1963, 340 students were holding awards.

During 1963, the Commonwealth Scholarships Board also continued to arrange and supervise the training of ex-service personnel and war widows at university and university-type institutions. Training of this kind under the Commonwealth Reconstruction Training Scheme was completed at the end of 1961, a total of 21,424 students having completed training. At the end of 1963, 31 students were in training under the Korea and Malaya Training Scheme and the Disabled Members' and Widows' Training Scheme, 14 of them following full-time courses and 17 studying part-time.

**3. International Relations.**—The Commonwealth has been actively involved in the considerable extension which has recently taken place in relations and exchanges with other countries in the field of education. A significant encouragement to this growth has been membership in UNESCO, to which Australia has belonged since 1946 when the organization was founded.

Twelve specialist UNESCO committees in Australia are responsible for a wide and varied programme of activities and have helped to make Australia's contribution to many international conferences and seminars highly effective. The Committees' projects include the organization of Australian and regional seminars, information programmes, and the preparation and circulation of travelling exhibitions which deal with subjects forming part



of UNESCO's programme. The Australian National Advisory Committee for UNESCO co-ordinates the work of the specialist committees and advises the Commonwealth Government on Australian participation in UNESCO.

With the co-operation of educational institutions, State Education Departments and other bodies, the Commonwealth has accepted increasing commitments in schemes of international assistance and co-operation. The Colombo Plan Technical Co-operation Scheme, the United Nations Expanded Programme of Technical Assistance, the Australian International Awards Scheme, and the Special Commonwealth African Assistance Plan are some of the programmes through which the Commonwealth Government is providing training for overseas students in Australia and is sending Australian experts and equipment to many of the newly developing countries, especially in Asia and Africa. Australia is also actively sharing with other Commonwealth countries in the Scheme of Commonwealth Co-operation in Education which includes the Commonwealth Scholarship and Fellowship Plan. There were some 1,370 sponsored foreign students in Australian institutions in 1963, compared with about 800 in 1956. About 400 of these were Colombo plan trainees enrolled in science, applied science, engineering and technology courses.

Support is given to Australian participation in many international governmental and non-governmental organizations. For example, Australian educationists have attended yearly meetings of the International Bureau of Education, and regular contributions are made to the Bureau's international surveys into various aspects of education. Assistance has been given to bodies such as the Australian Teachers' Federation in sending delegates to meetings of the World Confederation of Organizations of the Teaching Profession.

4. **Grants for other Educational Purposes.**—The Commonwealth gives assistance to various educational schemes and institutions. Grants are made each year by the Commonwealth to the Australian Pre-school Association for the development of kindergarten education, to the Commonwealth National Fitness Council, to the Australian Council for Educational Research, to the Department of Tutorial Classes at the University of Sydney for the publication of the *Current Affairs Bulletin*, and to assist in the provision of training in Occupational Therapy, Physiotherapy and Nursing. The cost of the Departments of Indonesian and Malayan Studies at the University of Melbourne and the University of Sydney is also met by the Commonwealth Government.

5. **Migrant Education.**—The Commonwealth Government's post-war immigration policy has brought to Australia a large number of immigrants with little or no knowledge of English. To assist their assimilation into the Australian community, a system of migrant education has been developed to teach them English and to give them information about Australia. This service is provided free of charge to immigrants above school leaving age.

Before arriving in Australia, migrants who do not speak English are given some instruction in English by shipboard education officers. Some may have attended classes in Europe organized by the Inter-governmental Committee for European Migration with which the Australian Government co-operates.

In Australia, evening classes are arranged by State Education Departments wherever nine or more migrants in country areas, or twelve or more migrants in city areas, wish to learn English. There is also available through State Education Departments a free correspondence course in English. In addition, English lessons are broadcast regularly by the Australian Broadcasting Commission. The Commonwealth Office of Education provides technical advice on all aspects of migrant education and is responsible for the preparation of teaching materials, while responsibility for the overall supervision of the programme rests with the Department of Immigration, which also meets the costs.

In March, 1963, 16,872 migrants were enrolled in classes and 7,632 were taking correspondence lessons. At the same time, 14,941 were receiving the monthly booklet accompanying the radio lessons. Since the inception of the programme in 1948, close to 500,000 migrants have been enrolled for English tuition.

6. **Technical Training by Government Departments.**—Although most needs of departments for trained staff are met by apprenticeship schemes and other technical college courses and by the universities, some departments provide training which is not available elsewhere. The most important field for which such training is provided is the training of telephone, telegraph, radio and television technicians by the Postmaster-General's Department.

## § 12. Adult Education

1. **General.**—The term "adult education" as used in Australia refers mainly to non-vocational educational and cultural activities for adults. While the nature of the recognized adult education authorities varies from State to State, their major activities have many common features. Regular courses of lectures are organized on such topics as literature, music, drama, international affairs, languages and crafts. Some authorities also organize discussion groups, festivals and summer schools, and provide special services for groups in remote areas. In 1960, an Australian Association of Adult Education was formed, and its first Annual Conference was held in Adelaide in 1961. The Association handles matters pertaining to adult education at a national level and arranges liaison with similar bodies in other countries.

One of the first bodies active in the field of adult education in Australia was the Workers' Educational Association, which formed associations in all States in 1913. Its aims are to bring the universities into closer relationship with the community in general and to provide for higher education in civic and cultural subjects. These associations have been superseded by Adult Education Boards or Councils set up by the State Governments in Victoria, Queensland and Tasmania and by the University in Western Australia. In the other two States, New South Wales and South Australia, the associations continue to co-operate with the universities in their extension work and are given direct grants by the governments concerned.

The organization of adult education, and some of the activities in each State are described below.

2. **New South Wales.**—State Government grants for adult education are allocated on the advice of the Adult Education Advisory Board. Grants are made to the University of Sydney (Department of Tutorial Classes), the Workers' Educational Association, the University of New England (Department of Adult Education), the Public Library of New South Wales (Adult Education Section), and the Arts Council of Australia (New South Wales Division).

(i) *University of Sydney.* At the University of Sydney, there are two separate authorities concerned with adult education, the Extension Board and the Department of Tutorial Classes. Plans are being made to create a new Department of Adult Education under a Director of Adult Education, which will take over the work of these authorities.

The Extension Board provides two forms of education—the extension of existing university education to the public in the form of lectures, or to graduates in the form of refresher courses; and the extension of academic education beyond the existing university curriculum, for example by special courses or classes in subjects such as scientific Russian and scientific German.

The Department of Tutorial Classes works in conjunction with the Workers' Educational Association through the Joint Committee for Tutorial Classes appointed by the university senate, and its activities include the provision of tutorial classes in a wide variety of subjects, discussion groups and "kits" to serve the needs of country districts and people who cannot be catered for by tutorial classes. It also publishes the fortnightly *Current Affairs Bulletin*.

In 1962, there were 439 tutorial classes and discussion groups with a total enrolment of 8,575 at the University of Sydney.

(ii) *University of New England.* The Department of University Extension at the University of New England brings university extension activities especially to the people of northern New South Wales and conducts classes in arts and social sciences in towns throughout this region. Short residential courses are held on topics of interest to primary producers in the area. Vacation schools attract participants from many other areas as well.

(iii) *Workers' Educational Association.* In addition to co-operating with the Sydney University Department of Tutorial Classes, the Workers' Educational Association itself provides classes in a wide variety of fields. It publishes *Highway*, a bi-monthly journal of adult education, and maintains a property near Sydney where short residential schools are held throughout the year. In 1962, the Association ran 74 classes, for which there were 3,563 enrolments.

(iv) *Public Library of New South Wales.* The Public Library of New South Wales Adult Education section provides an adult education library service for all classes and groups conducted by the bodies mentioned above.

(v) *New South Wales Department of Education.* The New South Wales Department of Education has established evening colleges consisting of classes held in school buildings and staffed largely by departmental teachers. Such colleges provide a wide range of educational, cultural and leisure activities for adolescents and adults, and at some there are facilities enabling adults to prepare for Intermediate and Leaving Certificate examinations. In 1962, there were about 40,000 enrolments for classes at evening colleges.

(vi) *Arts Council of Australia.* Adult education of a more informal kind is provided by the New South Wales Division of the Arts Council of Australia which maintains a mobile theatre unit and organizes touring companies in ballet, opera and drama to country towns.

3. *Victoria.*—The Council of Adult Education is a government instrumentality established by the *Adult Education Act 1946*. Its aims are to stimulate adult education in Victoria and to encourage voluntary organizations and associations by giving them advice and assistance. Its activities include a variety of classes, usually lasting from 10 to 20 weeks, on topics ranging from social studies, psychology, language and literature, to crafts, music and drama. An annual 10-day summer school is another important activity. The Council publishes every two months a bulletin, *C.A.E. Newsletter*, and a quarterly journal, *Adult Education*. Its group service assists, and provides programme material for, discussion groups formed by organizations and individuals throughout the State. In 1961–62, there were 8,386 enrolments for classes and 3,448 individual enrolments in 312 discussion groups.

An important development is the extension of the council's activities, including classes and discussion groups, to the prisons, as part of a general plan for penal reform in Victoria.

Through its Community Arts Service, the Council organizes tours by musicians and by theatrical and other companies to country towns which otherwise would have no opportunity of seeing such performances.

The Council's income is derived mainly from a government grant, but also from student fees and Community Arts Service performances.

4. *Queensland.*—The Queensland Board of Adult Education was constituted in 1944 and is responsible under the Minister for Education for the provision of adult education facilities throughout the State. Under the executive officer of the Board are six district officers, one based in Brisbane and five in large country towns, who are responsible for organizing activities in country areas.

The cost of the programme is borne by the State Government and admission to all courses is free. Activities include lectures, group meetings on a variety of topics, generally short-term but some extending over a full year, and film screenings. Library and film services are provided.

In 1962, there was a total attendance of 146,825 at 7,546 lectures and class meetings.

5. *South Australia.*—Since 1917, the University of Adelaide, through the Joint Committee for Tutorial Classes, has provided in the metropolitan area a series of tutorial classes, lecture classes and study circles on a wide range of subjects of cultural and current interest, in co-operation with the Workers' Educational Association of South Australia.

In 1957, a Department of Adult Education was established in the University and a full-time Director appointed. A wide range of university extension courses and educational conferences, summer schools and seminars, including a number dealing with subjects at post-graduate level, are organized directly by the University. In 1962, enrolments for tutorial and university extension classes totalled 2,246, for special schools and seminars 1,250, and for discussion groups 208.

The Workers' Educational Association of South Australia, in addition, carries on an independent educational programme of classes, schools, exhibitions, and film festivals.

The State Education Department also arranges an extensive programme of educational activities for adults.

6. *Western Australia.*—Adult education in Western Australia is organized by the Adult Education Board established in 1928 under the terms of the statutes of the University of Western Australia. The Board has a considerable degree of autonomy. Its executive officer is the Director of Adult Education.

The Board in the metropolitan areas conducts classes, refresher courses and short schools, conferences, seminars and public lectures, and maintains a library. Classes were held in 1962 with a total enrolment of 3,835. The Board's country work operates mainly through a box library scheme for discussion groups, of which there were 74 in 1962. Lecture tours and week-end schools are held, and local adult education is encouraged through local committees. Metropolitan work and country work are drawn together in an annual summer school. The Board also operates a community arts service and arranges screenings of foreign films. Regional drama festivals and music festivals are arranged, culminating in the annual Festival of Perth, inaugurated and administered by the Board.

7. *Tasmania*.—Some form of adult education has existed since the formation in 1913 of a Workers' Educational Association, which worked in conjunction with the University of Tasmania for a number of years, receiving a grant through the university, which had a Director of Tutorial Classes. Later, the grant was paid direct to the Association by the Government and the university's tutorial department ceased to exist. The Adult Education Board, established under the *Adult Education Act* of 1948, organizes classes of ten weeks' duration on a wide range of subjects. In 1962, 490 courses were held with a total enrolment of 5,258. The Board sponsors special lectures, film screenings and art exhibitions, recitals of music, and dramatic performances in both city and country areas. Its income is derived from a State Government grant and from students' fees.

The executive officer of the Board is the Director of Adult Education. Activities are organized on a regional basis by organizers based in Hobart, Launceston and three large country centres.

### § 13. Oversea Students in Australian Educational Institutions

The development of closer ties in education between Australia and other countries, and the demand for education in many countries in Asia, Africa and the Pacific has brought about a remarkable growth in the number of oversea students who come to Australia to further their education. Part of the growth and much of the awareness of the facilities available may be attributed directly to the schemes mentioned in § 11, para. 3. Since 1955, when there were about 3,500 oversea students in Australia, the number has increased to about 12,500 in 1963. Some attend institutions of higher education such as universities and technical colleges, and Australian qualifications are receiving increasing acceptance and recognition as students return home on the completion of their courses. Between 1955 and 1963, the numbers of foreign students in institutions of higher education have risen from about 1,500 to 6,600, most of whom came from Asian countries. Australian institutions have shown a readiness to accept oversea students, and in many cases special provisions have been made to suit their needs. Nevertheless, population growth and the demand for education, especially for higher education, within Australia have forced many institutions to restrict the admission of oversea students in common with Australian students.

### § 14. Organizations Associated with Education

1. *Australian Council for Educational Research*.—The Australian Council for Educational Research, a non-governmental body, is engaged on educational research in a wide variety of fields, ranging from tertiary to pre-school education. It conducts surveys and inquiries, makes grants to approved educational investigators, serves as a centre for disseminating educational information, provides training for research workers, and standardizes and distributes educational and psychological tests for use in Australia. Although this council is an autonomous body, the Commonwealth and State governments contribute substantial financial support.

2. *The New Education Fellowship*.—The New Education Fellowship is a world organization of parents, educators, and other citizens interested in the development of new educational practices. It was founded in London in 1915 and spread to Australia at the time of a regional conference held here in 1937. There are now sections in each State. Its Australia-wide journal *New Horizons in Education* is published quarterly. A major conference of the New Education Fellowship was held in Australia in 1962, during which prominent educationists from Australia and overseas met in all States.

3. **Australian College of Education.**—The Australian College of Education was formed in 1959. Its aim is to bring together leading teachers and administrators in every field of education, to raise the standard of the profession of education in Australia, to establish and proclaim fundamental educational values, and to recognize outstanding contributions to educational practice. Chapters of the College have been set up in all States, and several of the addresses and papers delivered at meetings of the College have been issued in published form.

4. **Parent and Citizen Organizations.**—In Australia, where all government schools are administered by central departments, there is limited opportunity for local administration of education. Public interest is expressed through parents' committees or organizations of parents and other citizens interested in supporting their local school. The Education Acts of all States provide for the formation of groups of this type, whose aims are to promote the interest of the school by bringing parents, pupils and teaching staff together, to help provide supplementary teaching aids and recreation materials, to foster the regular attendance of children at school, and to help find accommodation for teachers.

In several States, the general maintenance of school buildings, equipment and grounds is a statutory responsibility of the parent groups, costs being covered by government grants. Lunch canteen services at local schools are maintained by groups in some States.

A notable achievement of the parent groups has been the establishment of school children's insurance schemes, operated through State government insurance offices or private insurance companies. These schemes cover accidents to children which occur between the time of leaving home for school and returning home by the usual direct route.

State-wide councils or federations of parents' groups are associated in a federal body, the Australian Council of School Organizations.

## CULTURAL ACTIVITIES

### § 1. Libraries

1. **General.**—The Munn-Pitt report of 1935 greatly stimulated interest in libraries and librarianship throughout Australia. This is seen in the rapid development of libraries, the passing of legislation in all States to increase library services, and the establishment in 1937 of the Australian Institute of Librarians to improve the standard of librarianship. This body was reconstituted in 1949 as the Library Association of Australia and incorporated by Royal Charter in 1963, and its functions now include the promotion and improvement of libraries and library services. The Association conducts annual examinations for which students are prepared by courses of instruction in all States. Formal library schools exist in the Commonwealth National Library, Canberra, and the Public Libraries at Sydney and Melbourne. In 1960, the first library school to be attached to an Australian University was opened in the University of New South Wales, and the Royal Melbourne Institute of Technology set up a library school in 1963.

2. **Commonwealth.**—(i) *National Library of Australia.* This Library grew directly from the Library of the Commonwealth Parliament established in Melbourne in 1901, the Committee of which soon afterwards announced its intention of developing a library patterned on the Library of Congress at Washington, U.S.A., capable of serving purposes beyond those essential to the Parliament itself, appropriate to a national library and on a national scale. This policy was steadily pursued, so that, in addition to its primary function of serving Parliament, it gradually became a central source of information for the Government and its departments and other agencies, and assumed increasing reference and bibliographical responsibilities in relation to scholarship and research in Australia and abroad. It was also influenced by the basic elements of the national library concept of the older countries of Europe: namely, that a national library is the proper place to collect the national literature systematically and to make it known and available for use, and that it is a place to which scholars may turn for what is most significant in the literature of other countries. For these growing extra-Parliamentary activities, the Parliamentary Library Committee, in 1923, adopted the title of Commonwealth National Library.

A committee appointed to examine the future control and functions of the Commonwealth National Library recommended, in 1957, its establishment as the National Library of Australia, separate from the Parliamentary Library, with wide functions and controlled by a board subject to a Minister; the transfer, as a separate agency to an appropriate department, of its Archives Division, which constituted the Commonwealth's agency for the custody and organization of departmental records of permanent value which need no longer be held within departmental offices; and that the Parliamentary Library be a separate library under separate Parliamentary control. Continuing co-operation, where possible, between the two libraries was also proposed.

Effect was given to these recommendations by the *National Library Act 1960*, which created the National Library of Australia as a body corporate under the control of a Council of nine members, of whom one is a Senator elected by the Senate, one a member of the House of Representatives elected by that House, and seven appointed by the Governor-General. Its functions are:—to maintain and develop a national collection of library material, including a comprehensive collection relating to Australia and the Australian people; to make the national collection available to such persons and institutions in such manner and subject to such conditions as the Council determines with a view to its most advantageous use in the national interest; to make available such other services in relation to library matters and material, including bibliographical services, as the Council thinks fit, particularly for the purposes of the library of the Parliament, the Departments and authorities of the Commonwealth, and the Territories of the Commonwealth; and to co-operate in library matters (including the advancement of library science) with authorities or persons, whether in Australia or elsewhere.

The National Library comprehensively collects and preserves Australian books, periodicals, newspapers, government publications, pictures, prints, manuscripts, maps, moving picture films and sound recordings. It has been assisted in this by the deposit provisions of the *Copyright Act 1912–1950* and has also been enriched by the acquisition of such notable collections as the Petherick collection of 16,500 items in 1911, the Cook manuscripts in 1923, the Cumpston collection on Public Health in Australia in 1936, the Mathews Ornithological collection in 1940, the Nan Kivell collection of 16,000 items of Australian and Pacific interest including original paintings, prints, manuscripts and printed material in 1959, and the Ferguson Sociological collection which is still under transfer. A feature of the Library's Australian work is the copying on microfilm, in association with the Public Library of New South Wales, of all important unique material overseas relating to Australia, including over three million pages in the Public Record Office in London.

The Library maintains a permanent exhibition of selected paintings, prints and other historical material from its collections. This exhibition is displayed in Parliament House, Canberra.

The Library publicizes Australian publications, both at home and abroad, through select lists which include *Australian Books* (annual) and *Australian Public Affairs Information Service* (a monthly subject index with an annual cumulation), and by collections of Australian books maintained by it at all posts at which Australia is officially represented abroad. In London and New York, the National Library maintains and staffs Australian Reference Libraries supervised by its own Liaison Officers in those centres.

In the discharge of its wider bibliographical responsibilities, the Library publishes the *Australian National Bibliography* (monthly with an annual cumulation), which lists books, pamphlets, maps, prints, sheet music, government publications, the first issue of each new periodical or newspaper, and moving picture films produced in or relating to Australia. Commonwealth and State official documents, both monographic and serial, are listed in *Australian Government Publications* (annual). The Library is also building up union catalogues of serials in the social sciences and humanities, and of monographs in Australian libraries.

In 1956, the Australian Bibliographical Centre was established within the National Library to serve as the secretariat of the Australian Advisory Council on Bibliographical Services. The Council, made up of representatives of the National Library, State libraries and library boards, the Commonwealth Scientific and Industrial Research Organization, each of the universities, and the Library Association of Australia, plans the further development and co-ordination of bibliographical services and co-operates with UNESCO and

its committees. The Centre organizes bibliographical projects recommended by the Council, and operates as a centre for bibliographical information in Australia and overseas. It has published a *Union List of Newspapers in Australian Libraries; Part 1: Newspapers published outside Australia* (1959); and *Part 2: Newspapers published in Australia* (1960).

The Library acts as a central library of documentary and educational films, its film collection containing over 6,000 titles, together with Australian historical films and a great number of film strips. It published *Australian Films: a Catalogue of Scientific, Educational and Cultural Films, 1940-58* in 1959 and annual supplements in succeeding years. A revised edition of the *Catalogue of 16-mm. Films*, which lists all films available for loan, was also published in 1960 and has been supplemented by annual accession lists. Special efforts are being made to discover and preserve samples of early Australian film production.

Through its Extension Division, the Library conducts the Canberra Public Library Service for residents of the Australian Capital Territory, to whom 590,000 books were loaned during 1962-63. It also assists in the provision of similar services in the Northern Territory, the Territory of Papua and New Guinea, and Norfolk Island.

The National Library's collections contain approximately 730,000 volumes, 34,000 pictures, prints, drawings and other graphic materials, one million feet of microfilm, 102,000 maps, and nine million feet of moving picture films. Special features of the book collection are its strong holdings of Australiana, materials relating to the Pacific area and east and south-east Asia, the publications of foreign governments and international organizations, and works in the social sciences, particularly in political theory and economics.

(ii) *Patent Office Library.* The Library of the Commonwealth Patent Office, Canberra, contains approximately 10,000 books and a wide variety of periodicals and other literature relating to pure and applied science, industrial technology and the industrial property (patent, trade mark, design and copyright) laws and practice of most countries. Patent specifications of inventions are received from the principal countries of the world; present holdings are more than 9,000,000. Indexes include a microfilm of a classified index to 3,000,000 U.S.A. patents and translations of abstracts of U.S.S.R. patents.

(iii) *The Commonwealth Archives Office.* In 1943, following a report by an Inter-departmental Committee, the Prime Minister directed the formation of a War Archives Committee to arrange for the preservation of war records. This Committee recognized that war archives could not be separated from peace-time archives and in 1946 the name was changed to the Commonwealth Archives Committee. In 1952, the National Library became the sole Archival Authority for the Commonwealth and the Chief Archives Officer became the Executive Officer for the Committee. In March, 1961, in accordance with a recommendation of the National Library Inquiry Committee, the Archives Division of the National Library was re-constituted as the Commonwealth Archives Office within the Prime Minister's Department.

The Archives Office is primarily a central agency for the control of those records created by the Commonwealth Government which are no longer required for frequent use in the day-to-day business of government. This function is carried out through the following three basic activities.

*Control of Destruction.* No Commonwealth records may be destroyed without the concurrence of the Chief Archivist whose responsibility it is to safeguard reference interests other than those of the department which compiled the records. This concurrence is given as far as practicable through continuing disposal authorities which enable Commonwealth departments to destroy certain routine classes of records automatically, but records not covered by such continuing authorities are checked before destruction is authorized.

*Provision of Accommodation.* Any records which are no longer in active use but which are considered, either by the originating department or by the Archives Office, to warrant preservation, either permanently or for a further period, may be transferred to an archives repository. While in archival custody, they are arranged and described so that the best use can be made of them.

*Provision of Information.* Records in the custody of the Archives Office are available for use by the depositing and other departments of the Commonwealth Public Service. The Office also provides departments with a service for the provision of information from the records in its custody.

As a complementary function, the Office also provides a service to persons engaged in academic and other forms of research. The headquarters of the Commonwealth Archives Office is in Canberra, for the time being in the National Library Annexe. There are also branches in Sydney, Melbourne, Brisbane, Adelaide and Perth.

(iv) *Commonwealth Scientific and Industrial Research Organization.* The library holdings of the Organization cover the pure and applied sciences. In addition to the Head Office Library in East Melbourne, each of the Divisions and Sections has a specialized collection covering such subjects as food preservation, forest products, chemistry, physics, animal health and fisheries. The collections are particularly strong in the publications of oversea scientific and technical research institutions, with many of which extensive exchange arrangements have been made.

The Head Office library maintains a union catalogue of the holdings of all C.S.I.R.O. libraries, and is responsible for the following publications:—*Scientific Serials in Australian Libraries*; *Australian Science Index*, an index of articles published in Australian scientific and technical periodicals; and *C.S.I.R.O. Abstracts*, which include abstracts of papers published by C.S.I.R.O. officers, C.S.I.R.O. translations, translations available from other Australian organizations and additions to the British Commonwealth Index of Scientific Translations.

The larger libraries in the Organization have photocopying facilities which, while normally for internal use, will provide a service for the public when a publication is not held elsewhere in Australia.

(v) *The Australian War Memorial Library.* In the War Memorial library are housed the documentary and pictorial records of Australia's fighting services in the 1914–18 and 1939–45 Wars, together with collections covering the war in Korea, 1950–53, and earlier wars in which Australian troops participated—Sudan, 1885; South Africa, 1899–1902; and the Boxer Rebellion in China, 1900–01. Books, periodicals and other records covering contemporary trends and events in the fields of military history and military science are constantly being added.

The printed records section contains approximately 65,000 volumes, a large collection of military maps, newscuttings and newspapers, sound recordings of war leaders, personalities and events, war posters and postage stamps. Many personal collections by distinguished soldiers and historical documents relating to the wars have also been placed in the Memorial's custody for preservation.

Written records comprise correspondence files of headquarters and units of both World Wars, and the original war diaries compiled from day to day by each unit during its service.

The collection of official war photographs covering the 1914–18, 1939–45, and Korean Wars numbers over 250,000, and a collection of official motion picture film depicts Australia at war.

Facilities for public research are not yet fully developed, but requests for information are met where practicable.

(vi) *Other Commonwealth Government Libraries.* Most Commonwealth authorities have specialized collections in their own fields, and in addition draw largely on the National Library.

(vii) *Northern Territory Library Service.* The Northern Territory Library Service maintains four centres in the Territory. At 30th June, 1963, stocks totalled 48,661 volumes which were held at the following centres:—Darwin, 25,901; Alice Springs, 15,421; Tennant Creek, 4,074; Katherine, 3,265.

3. States (Other than University Libraries, for which see pp. 757–60).—(i) *State Public Libraries.* In each of the capital cities, there is a well-equipped public library, the libraries in Melbourne and Sydney especially comparing very favourably with similar institutions elsewhere in the world. The following statement gives the number of volumes in the public library of each capital city at 30th June, 1962. Later figures for some of the libraries are given in the text relating to the respective libraries.



## STATE PUBLIC LIBRARIES, 30th JUNE, 1962

City	Number of volumes in—			Total
	Reference branch	Ordinary lending branch	Country lending branch	
Sydney .. .. .	(a) 625,784	..	(b) 111,473	737,257
Melbourne .. .. .	800,000	130,000	48,000	978,000
Brisbane .. .. .	153,055	..	73,208	226,263
Adelaide .. .. .	206,581	(c) 79,093	152,990	438,664
Perth (d)(g) .. .. .	203,861	(e) 327,134	..	530,995
Hobart .. .. .	90,065	(f) 150,831	145,428	386,324

(a) Includes 179,776 volumes in the Mitchell Library and 19,928 volumes in the Dixon Library.  
 (b) Includes 1,941 volumes in the model school library. (c) Includes 26,824 volumes in the children's branch and 11,953 volumes in the youth lending branch. (d) Figures for Library Board of Western Australia; separate details for Perth are not available.  
 (e) Public libraries and circulation stock. (f) Includes 117,850 volumes in the children's branch. (g) 30th June, 1963.

(ii) *New South Wales.* The Free Library movement in New South Wales, founded for the establishment of a system of public libraries on the basis suggested in the Munn-Pitt Report of 1935, helped to pave the way for the *Library Act* 1939, which was fully proclaimed as from 1st January, 1944. Of the 178 councils which have adopted the Library Act, 163 have put their adoption into effect. During 1963, they spent on their libraries £1,536,174, including £442,859 received in subsidy. There are 205 libraries, of which 58 are in the metropolitan area and 147 in the country. There are also 19 bookmobiles, of which two are in Sydney, eight in the suburbs of Sydney and nine in country municipalities and shires. These libraries contain 2,652,863 volumes.

New South Wales departmental libraries are staffed by officers attached for duty from the State Library, which also provides a central cataloguing service for municipal and shire libraries constituted under the 1939-1959 Act. The State Library maintains an adult education section servicing adult education activities for the universities of Sydney and New England and the Workers' Educational Association.

The Country Circulation Department forwards books on loan to State schools, to municipal and shire libraries and to individual students. During 1962-63, 95,270 books were lent to small State schools, and 3,278 to country libraries, while 49,324 reference works were lent to individual country students and to libraries to satisfy special requests.

The State Library, known as the Public Library of New South Wales, includes a general reference department of 440,525 volumes, together with the Shakespeare Tercentenary Memorial Library, and the Mitchell and Dixon Libraries and Galleries which are mainly devoted to Australian and Pacific material. The Mitchell Library, of more than 60,000 volumes and pamphlets and 300 paintings, was bequeathed to the trustees of the Public Library in 1907 by Mr. D. S. Mitchell, together with an endowment of £70,000. There are now 180,663 volumes in the library, in addition to valuable manuscripts, maps and other material. In 1929, Sir William Dixon gave a collection of historical pictures then valued at £25,000. These were subsequently added to, and at his death in 1952 Sir William bequeathed the whole of his collection of books, manuscripts, pictures and other material, together with an endowment of more than £113,000, mainly for the printing or reprinting of historical documents relating to Australia and the Pacific.

The total number of volumes in the State Library now exceeds 750,000, apart from manuscripts, historical pictures and other material.

The maintenance and control of the ordinary lending branch of the Public Library were transferred in 1908 to the Sydney Municipal Council to become the City of Sydney Public Library.

The State Library, which had previously been the repository for State archives, transferred this responsibility to an Archives Authority in June, 1961. The Authority consists of nine members, one of whom the Trustees of the Public Library have a right to nominate.

Other important libraries in New South Wales are:—Teachers' Colleges, 246,388 volumes; the Sydney Public Library, 224,433; Railway Institute, 168,183; Technical Education Branch, 101,058; Australian Museum, 34,099; Government Transport Institute, 31,038; New South Wales Public School Teachers' Federation Library, 21,500; Workers' Educational Association, 14,000; and the Library at the National Herbarium, 10,250 volumes. At 30th June, 1963, the Parliamentary Library contained 147,249 volumes.

(iii) *Victoria*. Until the establishment of the Free Library Service Board in 1947, the only public library facilities available in Victoria (apart from those of the Public Library and one or two Metropolitan Municipal Libraries) were those offered by about 200 Mechanics' Institute Libraries situated in country areas all over the State. The Board's policy has been to replace these services with modern public libraries controlled by local Municipal Councils and subsidized by the Board. Since the Board's inception, 116 municipalities have established libraries. Of these, 26 are in the city and 90 in the country. An amount of £377,000 was paid to the Councils in library subsidy for the year 1962-63 and £810,000 was expended in municipal library services for the same year. More than 1,500,000 books are available to the communities in which libraries are established.

A feature of the services provided in the country is the number of co-operative or regional library groups now being developed. These services, of which there are 18, comprising a total of 72 councils, consist of groups of councils which pool their financial resources, book-stocks and trained staff, in order to provide more comprehensive, efficient library facilities. Approximately 140 Mechanics' Institute Libraries are still in existence in country areas. In 1962-63, 49 of them shared a grant of £2,000.

The Public Library of Victoria was established in 1856. It is controlled by a board of seven trustees and receives its finance from the State Government. The reference collections now total about 800,000 volumes, and the lending library has another 178,000 volumes. In addition, the library files 2,500 current periodicals and 500 newspapers, in all about 35,000 volumes. Special collections include the J. K. Moir Collection of Australiana, the M. V. Anderson Chess Collection and the Green and Brodie Shipping Collections. The Victorian Historical Collection contains nearly 20,000 pictures, drawings, prints and objects of historical interest. The Archives Division is responsible for the preservation of government records.

(iv) *Queensland*. The Library Board of Queensland was established in 1945 under the provisions of the *Libraries Act* 1943. Its duty is to attain the fullest co-operation and improvement of the library facilities of the State, with the object of placing such facilities on a sound basis for the benefit and educational improvement of the citizens generally. The Board consists of eight members including the State Librarian as *ex officio* member and secretary. A general function of the Board is to ensure that the fullest co-operation exists with the Department of Education, the University of Queensland, local bodies, and other bodies having for their object the encouragement of education, literature and the arts and sciences. A specific function of the board is the control and management of the Public Library of Queensland. Its policy is to build up the main collection of the Library as the State's reference centre.

The Country Extension Service, which is administered as a department of the Public Library, lends books of non-fiction free to adults and children residing outside the metropolitan area and to municipal libraries in areas of low population.

The Oxley Memorial Library, established in 1923, has been administered as a department of the Public Library since 1946, and the collection has been kept separate. It contains books, manuscripts, pamphlets and other graphic material relating to the history and literature of Australia, and of Queensland in particular, and provides facilities for research students in Queensland literature and history.

In 1958, the section of the Libraries Act dealing with the preservation of public records was proclaimed, and in 1959 an Archives Section of the Public Library was instituted and an archivist appointed.

Since 1948, a course in librarianship has been held annually at the Public Library for the purpose of preparing trainees for the examinations of the Library Association of Australia, up to 1961 for its Preliminary Examination, from 1962 for subjects 1-3 of its re-organized

**Registration Examination.** In 1959, a course covering some compulsory subjects of the Association's Registration Examination was inaugurated at the Central Technical College, Brisbane.

The holdings of the Public Library of Queensland and its extension services in 1962-63 were:—main reference collection, 140,121 volumes and 7,688 maps and pamphlets; country extension service, 75,170 volumes; Oxley Memorial Library, 22,123 volumes and 12,664 maps, pamphlets and miscellaneous items.

Local authorities are empowered by the Libraries Act to establish and conduct library services as a function of local government. The Board encourages local authorities to use these powers. In 1962-63, 69 local authorities were conducting 110 library services. The Brisbane City Council has established 12 of these libraries. There were 88 libraries in Queensland free to adults.

To help overcome the problems of large area and sparse population, various local authorities provide library services on a regional basis. By 30th June, 1963, four regional library services had been established:—the South Western (seven shires), the Central Western (eight shires), the North Western (eight shires), and the Central Highlands (five shires), with head-quarters at Charleville, Barcardine, Mt. Isa and Emerald respectively. Other regional services are being planned.

During 1962-63, the Board received a grant of £196,440 from consolidated revenue to finance the activities of the Public Library and to pay subsidies to local bodies of fifty per cent. on the purchase of books and the acquisition or improvement of library buildings and equipment. Subsidies were paid to four regional library service boards, 49 local authorities, 36 schools of arts and five other bodies.

The library of the Parliament of Queensland was established in 1860. At 30th June, 1963, the library held 91,650 books and pamphlets, consisting of official publications and books devoted largely to history, the social sciences, biography and literature.

The *Libraries Act Amendment Act* 1949 provides for the Public Library and the Parliamentary Library each to receive a copy of all books, pamphlets, maps and other printed material published in Queensland.

(v) *South Australia.* In the reference department of the Public Library of South Australia, there are about 213,000 volumes, most of which may be borrowed. Over 3,000 periodicals are filed, and the collection of newspapers includes every newspaper printed in South Australia. There are 42,000 volumes in the lending department available to persons living in the metropolitan area, and the country lending service has 173,000 volumes, of which more than half are suitable for children. The library has an active programme for the publishing of facsimile editions of early Australian texts.

The Research Service specializes in scientific and technical inquiries and supplements the resources of the Public Library by borrowing from other libraries and by obtaining microfilm copies of material not available locally. It has an extensive collection of trade catalogues.

The library of the Parliament of South Australia held approximately 65,000 volumes at 31st December, 1963.

There are thirteen local public libraries in South Australia provided by ten local government authorities. The libraries are subsidized on a £1 for £1 basis by the State Government. The Library Board of South Australia, through the Public Library of South Australia, provides various central services. Book-stocks are pooled in the Public Library of South Australia and are interchanged between the libraries.

At the end of June, 1963, these local public libraries contained 80,000 books. There were 52,000 registered borrowers. In the year 1962-63, 702,000 books were lent.

(vi) *Western Australia.* In 1955, the Library Board of Western Australia was made responsible for all public library services throughout the State to which the State Government contributes funds.

The Board has the following major functions:—to encourage local authorities throughout the State to establish public libraries and to provide as a State subsidy all books and bibliographical services necessary for such libraries when established; to administer the State Library; to advise the Government on all matters relating to libraries; and to provide for the training of librarians.

Local public libraries are subsidized on a £1 for £1 basis, the local authority providing accommodation and staffing, and the Board all books and related services. The Board provides at least one volume per head of the population. All non-fiction books may be made available at any public library throughout the State on request to the Board. All cataloguing is done by the Board. The first library under this scheme was opened in August, 1954. By 30th June, 1963, 63 libraries had been established.

The State Library, established in 1887, is the reference division of the Library Service of Western Australia. In addition to providing the normal facilities of a reference library for the metropolitan area, it extends its service throughout the State through local public libraries. It is divided into four subject departments as follows:—J. S. Batty Library of West Australian History; Library of Business, Science and Technology; Library of Social Sciences, Philosophy and Religion; Library of Literature and the Arts.

The State bibliographical centre is housed at the State Library and there is also a commercial information centre. The State archives are maintained by the State Library and managed by the staff of the Batty Library. The State Library is fully equipped with microfilm and photocopy apparatus.

The book-stock of the Board at 30th June, 1963, was:—lending library services (including books in public libraries), 327,134 volumes; State Library, 203,861 bound volumes.

The University of Western Australia, through its Adult Education Board, manages the Adult Education Library of some 17,000 volumes of general reading and fiction. Books are sent to country readers each month.

There are some 100 special libraries in government departments and industrial firms. Union catalogues of periodicals and books received in the libraries in Western Australia are maintained by the Library Board of Western Australia in the bibliographical centre of the State Library.

(vii) *Tasmania.* The Tasmanian Library Board, constituted in 1944, is responsible for administering the State library headquarters in Hobart, for the extension of library services throughout the State, for the control of State aid to libraries and for the State Archives. The first stage of a new State Library headquarters building in Hobart was completed in 1962. The State Government provided £175,568 towards the cost of library services in 1962-63.

Municipal libraries are assisted with the purchase of books and participate in a book exchange scheme. In 1963, 45 municipalities took part in the service, leaving only four outside the scheme. In Hobart, the Board operates the Hobart Lending Library on behalf of the City Council. Two bookmobiles operate in Hobart and country districts, catering for areas without library premises, for children, old people's homes, etc.

The Board also operates a Reference Library in Hobart from which reference services are available to people throughout the State. There is also a documentary film library and a recorded music library. The Board arranges screenings of documentary films, recitals of recorded music, lectures, library weeks in country centres, puppetry demonstrations, etc.

The Parliamentary Library works in close collaboration with the State Library, which provides a reference officer to serve members during sessions.

4. *University Libraries.*—(i) *General.* These libraries provide material not only for the education of graduates and undergraduates, but also for research workers and practical investigators all over the continent. Much of the material they contain is not available elsewhere, for although in most cases smaller, they are in many directions more highly specialized than the public libraries. They lend to one another and to State and private institutions as well as to individual investigators. Each of them is governed by a librarian, who is responsible as a rule to an executive sub-committee and a committee which is practically co-extensive with the professorial staff.

The following table shows the volumes held, accessions during the year, and expenditure of the Australian university libraries.

## UNIVERSITY LIBRARIES, 1963

University	Volumes	Accessions during year	Expenditure (a)
			£'000
Australian National University .. .. .	304,308	31,080	195
Sydney .. .. .	815,975	54,953	199
New South Wales .. .. .	258,085	36,615	227
New England .. .. .	152,726	22,340	87
Melbourne .. .. .	347,880	24,842	225
Monash .. .. .	120,000	25,000	80
Queensland(b) .. .. .	307,042	34,093	143
Adelaide(b) .. .. .	316,455	27,634	145
Western Australia(b) .. .. .	220,569	13,115	107
Tasmania .. .. .	147,000	11,837	68
<b>Total .. .. .</b>	<b>2,990,040</b>	<b>281,509</b>	<b>1,476</b>

(a) 1962.

(b) Excludes pamphlets.

(ii) *Australian National University.* This library consists of two main collections; the former Australian National University Library, founded in 1948, which serves primarily the Institute of Advanced Studies, and the former Canberra University College library, founded in 1938, which serves primarily the School of General Studies. At the end of 1963, the stock included some 60,000 volumes in oriental languages. The collection serving the Institute of Advanced Studies specializes in the fields of the physical and medical sciences, excluding clinical works. In the social sciences, the library endeavours to provide a good working collection while giving consideration to the holdings of the Commonwealth National Library. It possesses significant collections in anthropology, linguistics, mathematics and mathematical statistics. The collection serving the School of General Studies has been built up to meet the needs primarily of undergraduates studying arts, economics, law, oriental studies and science.

(iii) *University of Sydney.* The library consists of the central collection which is known as the Fisher Library, the Law Library, the Medical Branch Library, the Burkitt Library for pre-clinical medicine, and some fifty-two departmental libraries. The University Library, together with departmental libraries and associated libraries in the University grounds, holds a total of more than one million volumes.

The first books were acquired in 1851, and shortly afterwards the library of Sydney College was added. The collection of Nichol D. Stenhouse was acquired in 1878 as the gift of Thomas Walker. In 1885, Thomas Fisher bequeathed the sum of £30,000, the income from which is used as a book fund. The Fisher Fund was matched in 1961 by establishment of the W. H. and Elizabeth M. Deane Library Fund. Perhaps the finest collection in extent and importance which has been given to the University is that of Sir Charles Nicholson. There have been numerous other benefactions, among which may be mentioned the library of Sir Francis Anderson, the W. H. Deane collection of books and manuscripts and the Dalley-Scarlett music library. In 1961, the University acquired the English literature collection of the late Hugh Macdonald. Sydney University Library has an extensive collection of mediaeval manuscripts and early printed books.

(iv) *University of New South Wales.* The libraries of this University consist of the Central Library and a Bio-medical Library at Kensington. There are also libraries at Newcastle and Wollongong University Colleges. The Broadway campus is serviced by the Sydney Technical College Library, where about 37,000 books from the University's library are placed. Service to the university division at Broken Hill is also provided by the Department of Technical Education. In December, 1963, the university had approximately 270,000 volumes in its libraries and in Department of Technical Education libraries.

(v) *University of New England.* The Library was founded in 1938, when the New England University College was established. Sir William Dixson was its first benefactor. The library is now housed in a three-storied building, air-conditioned and containing all facilities. The library receives about 3,000 current periodical titles annually. The library is able to accommodate 200 readers and 278,000 volumes. The building also houses a bindery, photographic and archives division. A further wing is to be built later to house a library of post-graduate and research volumes which, at the present time, are on the library's main shelves. The library has its own training officer and conducts formal courses in librarianship.

(vi) *University of Melbourne.* Early in 1854, the first allocation for books was made, but the library was housed in temporary quarters until 1959. The W. L. Baillieu Trust made available the first instalments of a £100,000 gift for building purposes, which have been followed by subsequent gifts and substantial grants from the Commonwealth and State Governments, and a new building costing £700,000 was occupied at the beginning of 1959, the first in the University to be designed specifically for library purposes. It provides space for 1,300 readers and 300,000 books. During the academic year, admissions of readers to the building average 8,000 a day. Most of the books are accessible on open shelves, and though the library is intended primarily for reference purposes, borrowing, except of textbooks and certain valuable volumes, is made as easy as possible. The resources of the library are also used extensively on inter-library loan by industries and other organizations throughout Australia. The University Library, including 12 branch libraries in various departments, is administered from the centrally situated Baillieu Library. The large medical branch library is specially rich in periodicals.

(vii) *Monash University.* The library started to acquire books in 1960 and subscribes to some 2,500 journals. It has been decided that the library organization will develop into four large units—the main library, a bio-medical library, a law library, and a library for the physical sciences and technology. The physical sciences and technology library has been named the Hargrave Library after Lawrence Hargrave (1880–1915) and was opened in December, 1962. The main library, catering mainly for the humanities, was occupied in November, 1963.

(viii) *University of Queensland.* The library was founded in 1911. The main library is in its own building in the University at St. Lucia, and there are a considerable number of departmental libraries. All books are open to access and most are available for borrowing. Among the more important possessions of the library are its large holdings of periodicals, its geology collection, and its material relating to the history, development and culture of the countries surrounding the Pacific Ocean.

(ix) *University of Adelaide.* This library bears the title of its original benefactor, Robert Barr Smith, who, with members of his family in and after 1892, gave the university over £50,000 for the library. Although readers have access to all parts of the library, the book collection is in two divisions, a collection of some 25,000 of the most frequently used books being kept in the main reading room, and the remainder, consisting of older or more specialized books, being shelved on the four levels of the extensions. Bound periodicals are shelved in steel stacks under the main reading room. Borrowing facilities are available to all matriculated students, to country students, and to graduates. There are branch libraries for medicine, law and music. The South Australian branches of the Australian Medical Association, the Australian Physiotherapy Association and the Australian Dental Association make annual contributions towards the maintenance of the medical library in return for borrowing privileges for their members. The Waite Agricultural Research Institute has a separately administered library of publications in agriculture.

(x) *University of Western Australia.* The first full-time library staff was appointed in 1927. Provision for a permanent library building was not possible when the University moved to its present site, and space and facilities were inadequate for many years. A new four-storey building was completed at the end of 1963. The building, which is fully air-conditioned, provides seats for over 800 readers and accommodation for over 300,000 volumes, together with facilities for microfilm readers, type-writing booths and photo-copying facilities. The University Library developed very slowly in the early years, but recently has been adding about 12,000 volumes a year to its stock. In addition to the main library, there are a number of departmental libraries of which the more important are engineering, agriculture, pre-clinical and law. There is also a medical library, in accommodation provided by the Royal Perth Hospital, for the use of the medical school.

(xi) *University of Tasmania.* Although this library was founded in 1893, a full-time librarian was appointed for the first time at the end of 1945. Since 1954, a Hobart Union List of Serials has been housed in and kept up to date by the University Library, thus providing a major reference tool for all bibliographic inquiries in the State. The library receives currently about 3,400 periodicals. The University Library also collects private and business archives and it has some important classical manuscripts as well as a collection of early printed books.

5. *Children's Libraries and School Libraries.*—(i) *New South Wales.* Children's libraries are being developed as departments of municipal and shire libraries. The Education Department maintains a school library service for the fostering of State school libraries, which are maintained partly by parents' and citizens' associations and partly by departmental subsidy. Secondary and central schools, and an increasing number of primary schools, have teacher librarians.

(ii) *Victoria.* Under the auspices of the Free Library Service Board, 116 municipal children's libraries have been, or are being, established as part of the library services provided by the councils concerned. All these libraries provide comprehensive modern children's book collections which are constantly being augmented. An annual grant of £5,000, which is additional to the ordinary annual municipal library grant, is provided to assist these libraries. In addition, nine independently controlled children's libraries shared in this grant in 1962.

The Education Department is making provision for the building of library rooms in new schools. Where accommodation is available in existing schools, library furniture is provided free of cost to the schools and the Government subsidizes the purchase of books. In June, 1963, 370 schools had central libraries.

A scheme of circulating libraries for small schools, particularly in remote areas, has been operating for some years. One hundred and sixty-two schools benefited from this scheme in 1963.

The Education Department has a Library Service Officer with a small staff to advise and assist schools in the establishment and organization of libraries. A one-year course for the training of teacher-librarians was established at Melbourne Teachers' College in 1955. Approximately 25 teachers are trained each year.

(iii) *Queensland.* The Library Board of Queensland stresses to local bodies the importance of providing adequate library services for children. There are in Queensland 107 libraries free to children, of which 10 are conducted by the Brisbane City Council. The children's libraries at Rockhampton, Toowoomba, and Townsville are particularly active. Country children who are not catered for locally may borrow from the Country Extension Service which possesses a separate children's collection. The purchase of books for State school libraries in Queensland is financed by school committees and parents' associations, with a subsidy from the Department of Education on a £1 for £1 basis. Trainees at the Teachers' Colleges are instructed in school library organization and management.

(iv) *South Australia.* A children's library of 33,000 volumes is used by school classes and individual children living in the metropolitan area. There is a large collection of historical children's books assembled for the use of research workers. Except for works of reference, all books are available for loan. In August, 1957, a youth lending service was opened for young people from 13 to 18 years of age. It has a stock of 13,000 volumes.

(v) *Western Australia.* The Education Department provides library services and makes library subsidies and grants to schools. Advisory, central cataloguing and central repair and binding services are provided by the Library Services Branch. The Teachers' Colleges provide courses in school library organization and library service.

The Perth Technical College and Technical Schools are equipped with libraries, and an allocation for books is provided annually for each school and college department. A librarian at the College provides central ordering and cataloguing services throughout the Technical Division.

All high schools are provided with a library room and furniture, and trained teacher-librarians are appointed to them. Building plans do not provide for primary school libraries, but a number of the schools have set up central libraries when rooms have become available.

One-teacher and two-teacher schools are served by the Charles Hadley Travelling Library and the Small Schools Fixed Library Schemes. Under the Fixed Library Scheme, grants are made once every three years to each school to provide additional books for the

permanent libraries of reference books. The Hadley library provides recreational reading and operates 360 boxes which are exchanged each school term in over 249 schools. Boxes are sent to small schools, mission schools and special classes. Finance is provided from a government grant and contributions from the participating schools of commission received from the Commonwealth Savings Bank for school savings bank activities.

Children in isolated areas who are unable to attend school are catered for by books sent out by the State Correspondence School's library. The children are kept in touch with the library by means of radio talks and leaflets issued periodically.

(vi) *Tasmania*. The Lady Clark Memorial Children's Libraries, at the State Library, Hobart, aim to serve all children in Tasmania. At 30th June, 1963, 162 children's libraries and depots had been established.

The Education Department provides library quarters in all high schools and in some of the larger primary schools. The purchase of books is financed by parents' associations and by departmental subsidies. Teacher-librarians are appointed in high schools. The Schools Library Service issues loan collections of books to schools and gives advice on the setting up of school libraries.

6. **Special Libraries.**—Before the 1939–45 War, the number of special libraries, apart from those maintained by government departments, was small, but during recent years many manufacturing, commercial, research and other firms, as well as statutory bodies, have found it necessary to establish special libraries to serve their staff. These libraries, which are most numerous in Sydney and Melbourne, are being administered increasingly by trained librarians.

7. **Microfilms.**—The following libraries supply microfilm or photostat copies of material usually at a small charge (the letter "P" signifies photostat supplied and "M" microfilm supplied):—*Australian Capital Territory*—Australian War Memorial (P), National Library of Australia (PM), C.S.I.R.O. (M), Australian National University (M), Patent Office (P); *New South Wales*—Metropolitan Water, Sewerage and Drainage Board (P), Public Library of New South Wales (M), Standards Association of Australia (P), School of Public Health and Tropical Medicine (M), Fisher Library, University of Sydney (PM); *Victoria*—Commonwealth Serum Laboratories (P), Technical Information Section, Munitions Supply Laboratories (PM), Public Library of Victoria (M), Standards Association of Australia (Melbourne Branch) (P), University of Melbourne (PM), C.S.I.R.O. (M); *Queensland*—Public Library (P); *South Australia*—Public Library of South Australia (PM), University of Adelaide (PM), Waite Agricultural Research Institute (P); *Western Australia*—State Library (PM); *Tasmania*—University of Tasmania (PM).

## § 2. Museums

1. **General.**—Museums have been established in all capital cities and in many provincial cities and towns. The most important are maintained by government grants. Others are supported by municipal councils, the Universities, and private organizations or individuals. Many museums have art galleries which are housed in the same building. However, art galleries are described separately in § 3, pages 763–4.

2. **Commonwealth.**—(i) *The Australian War Memorial, Canberra*. The Memorial comprises the national collection of war relics, and the building in which these are preserved. The building was opened in 1941. There is a collection of 4,000 art works, and a museum collection of more than 40,000 war relics, the gathering of which began on the battlefields of the 1914–18 War and was continued during the subsequent wars in which Australian Forces have participated. The collection has been enhanced by gifts of relics from the governments of Great Britain, the sister dominions, and of allied countries, and also by presentations made by ex-servicemen and relatives of those who died. The collection consists of items such as tank, aeroplanes, submarines, field-guns and boats, and the widest possible range of war trophies down to the smallest items, nails, pieces of wire, wristlet watches and the like, each relic dependent for its value on its historical background. The works of art, all by Australian artists, depict battle scenes, individual officers and men, etc., and include oil and water colour paintings, drawings, statuary, bronzes, dioramas and mosaics. There is also a library, which is described in § 1, page 753.

(ii) *The Institute of Anatomy*. The museum of this institution is described in Chapter XVIII. Public Health, pages 692–3.



3. States.—(i) *New South Wales*. The Australian Museum in Sydney, founded in 1836, is the oldest in Australia. It is incorporated under the control of trustees, and receives its finance from the State Government. Expenditure in 1962–63 was £279,532. The museum has very fine collections of Australian fauna, and important anthropological and mineral collections. The museum has a valuable library, which contained 34,099 volumes in 1962. The number of visitors to the institution during 1961–62 was 307,177, with average attendances of 795 on weekdays and 1,139 on Sundays. Courses of evening lectures are delivered and lecturers also visit suburbs and country centres. Gallery demonstrations are also given. Screenings of natural history films were attended by 9,803 persons in 1962–63. Day lectures are given for school children, and 19,021 children attended in 1962–63.

The Museum of Applied Arts and Sciences in Sydney is also financed by the State Government, and has collections illustrating manufacturing processes and natural products. The scientific staff conducts research work on the development of natural resources. There is a library of more than 9,000 volumes. Visitors exceeded 206,000 in 1963 and expenditure in 1962–63 was £81,472. There are branch technological museums at Goulburn, Bathurst and Broken Hill.

Representative collections illustrating the natural wealth of the country are displayed by the Forestry Commission and in the Mining and Geological Museum controlled by the Department of Mines. The Mining Museum prepares collections of specimens for use as teaching aids in country schools. The National Herbarium and Botanical Museum is situated at the Sydney Botanic Gardens.

Three museums at the Sydney University are open to the public; these are the Nicholson Museum of Antiquities, the Macleay Museum of Natural History, and the Haswell Zoological Museum. The University also has a Museum of Morbid Anatomy.

Among historic homes which have been converted to historical museums is Vacluse House, Sydney, the home of W. C. Wentworth.

(ii) *Victoria*. The National Museum of Victoria, Melbourne, was founded in 1854. It is devoted to natural history, geology and ethnology, and there are special Australian collections of birds, butterflies, molluscs and ethnology.

The Institute of Applied Science was founded in 1870 and has been enlarged recently by the addition of three new floors. Exhibits cover applied and economic aspects of all branches of science, with emphasis on recent scientific developments. A planetarium, seating 116, was delivered in 1962.

There is a fine Museum of Botany and Plant Products in the Melbourne Botanic Gardens, and a Geological Museum controlled by the Mines Department. Well-equipped museums of mining and geological specimens have also been established at Schools of Mines in several country towns.

Small museums are associated with art galleries in Castlemaine, Warrnambool, Mildura and Beechworth, in each case conducted by the local council. There are a few private museums in country areas. Several historic homes of the 19th century are also maintained and exhibited to the public.

(iii) *Queensland*. The Queensland Museum, founded in 1855, is the State museum of natural science. It is a Government sub-department and is maintained by the State. The collections comprise extensive exhibited and reference series, mainly in the fields of zoology, geology and ethnology, and some mechanical and historical material is held with a view to future museum development. Lessons supported by film displays are arranged for school children. The museum is now the recognized State depository for valuable material in natural science, and the collections are constantly being augmented. In addition, the Museum contains the outstanding library of the State in the fields of zoology, geology and anthropology. The annual number of visitors is about 200,000. Expenditure during 1961–62 was £42,234 and £44,330 for 1962–63.

There is a Botanical Museum and Herbarium at the Brisbane Botanic Gardens, and the Royal Historical Society of Queensland has an historical museum at Newstead House, Brisbane, which has about 12,000 visitors each year. The University of Queensland has recently established an Anthropology Museum.

(iv) *South Australia*. The South Australian Museum has large collections of most branches of natural history and has especially rich collections of Aboriginal artifacts. In 1962–63, there were at least 200,000 visitors. Total expenditure was £80,035, met from State Government grants and bequest funds.

In addition, there is a Municipal Museum possessing records and mementoes of the State and city, and a Botanical Museum, situated in the Botanic Gardens, with a carpological collection and displays of economic plant products. Some town councils have special museums housing relics from earlier times of their districts (an excellent example can be seen at Lobethal), and several cottages once belonging to early pioneers have been restored as historical museums. These include Adam Lindsay Gordon's Cottage at Port MacDonnell and Captain Charles Sturt's Cottage, Grange.

(v) *Western Australia.* The Western Australian Museum was established in 1895. It is under the statutory management of a board of five members appointed by the State Government, but operates under its own director and staff. Expenditure in 1962-63 was £73,941. It is primarily a museum of natural history, with active departments of vertebrate and invertebrate zoology, palaeontology, entomology, archaeology and anthropology. Principal research interests are in the fauna of Western Australia and the ethnology of the Western Australian Aboriginal.

The Education Department of Western Australia provides a teacher to the Museum who instructs visiting classes and who is in charge of a children's centre during school holidays. Members of the Museum staff also take part in the teaching of undergraduates at the University of Western Australia.

There is also a Geological Museum at the School of Mines, Kalgoorlie.

The "Old Mill" Museum at South Perth, which exhibits historical objects of public interest including the old mill itself, is directed and maintained by a private business firm. A similar institution based on the Old Gaol at Toodyay is run by the local authority. Several other local bodies maintain small historical collections.

(vi) *Tasmania.* There are two main museums in Tasmania—the Tasmanian Museum in Hobart and the Queen Victoria Museum in Launceston. Both museums contain collections of botanical, mineral and miscellaneous exhibits, including valuable material illustrating the life of the now extinct Tasmanian Aboriginal race. Fauna collections include many specimens of birds and marsupial animals not found in other parts of Australia. Art galleries are attached to each museum. State Government grants amounted to £37,000 in 1962-63. The Tasmanian Museum and Art Gallery is controlled by a board, which receives some assistance from the Hobart City Council, in addition to State Government grants. Expenditure in 1962-63 totalled £32,479. The Queen Victoria Museum and Art Gallery is controlled by the Launceston City Council, which met about half the total expenditure of £20,848 in 1962-63.

Several colonial houses have been converted into historical museums and there is also a privately owned museum near Burnie.

### § 3. Art Galleries

1. *New South Wales.*—The National Art Gallery of New South Wales originated in the Academy of Art founded in 1871, and is controlled by the State Government. At the end of 1962, its contents comprised 1,562 oil paintings, 1,033 water colours, 2,750 prints and drawings, 147 sculptures and casts, and 1,466 ceramics, work in metal, and miscellaneous. Since 1895, loan collections of pictures have been exhibited regularly in important country towns. Annual exhibitions include entries for the Archibald, Wynne and Sulman competitions. In 1963, 160 conducted lectures were given to 4,800 school children. The expenditure for 1962-63 was £72,896.

In 1959, a War Memorial Gallery of Fine Art was established at the University of Sydney.

2. *Victoria.*—At 30th June, 1962, the National Gallery in Melbourne contained 1,317 oil paintings, 8,101 water colour drawings, engravings and other prints, and 9,319 objects of statuary, bronzes, ceramics, etc. The gallery is situated in the same building as the museum and public library. Expenditure by the National Gallery in 1961-62 was £125,738 including £44,266 for purchases of works of art. Several bequests were made to the institution by private citizens. There are provincial art galleries at Ballarat, Bendigo, Castlemaine, Geelong, Hamilton, Mildura, Shepparton and Warrnambool, which also display works loaned by the National Gallery.

There are many small private art galleries in Melbourne. While some of these are commercial establishments, others exhibit the works of groups of artists or of individual artists. These works are generally for sale, but the purpose of the galleries is largely cultural. In addition, there is the annual *Herald* outdoor exhibition, an open-air exhibition of paintings and sculpture which is visited by many thousands of people each year.

3. **Queensland.**—The Queensland Art Gallery, maintained by the State Government, was established in 1895. Expenditure totalled £18,116 in 1961–62 and £20,600 in 1962–63. During 1959, the Government passed a new *Queensland Art Gallery Act* reorganizing the art gallery, appointing a new Board of Trustees and granting a site for the building of a new gallery. The collection has been enriched by numerous bequests. In 1959, an anonymous gift of £126,000 was devoted to the purchase of an important collection of modern French paintings. The collection as a whole comprises 777 oils and watercolours, 489 prints and drawings, 72 sculptures, and 205 art objects. During 1962, the first of what is hoped to be a regular series of travelling exhibitions to country districts was organized.

The University of Queensland Fine Arts Committee controls the Darnell Collection, the result of a bequest by John Darnell who died in 1930. Income from the bequest is augmented by grants from the University Senate and is devoted to the purchase of works of art. The collection is exhibited at the University and includes 500 art books, 300 paintings in various media and some sculpture.

Two collections are exhibited at Toowoomba. The Gould collection, which includes paintings, pottery, ceramics, antique furniture and other art works, is displayed at the City Hall. The Sir Lionel Lindsay Art Gallery and Library was donated to the city by William Bolton and contains works of Australian artists and authors.

Other local authorities also maintain art galleries in provincial towns and there are several privately owned galleries.

4. **South Australia.**—The National Gallery in Adelaide originated in an exhibition of pictures in the public library building in 1881. Many bequests made by private citizens have materially assisted its growth. At 30th June, 1963, there were in the gallery 1,978 paintings in oil, water colours and pastels, 111 items of statuary, and large collections of drawings, prints, furniture, ceramics and coins. Special exhibitions are held from time to time. The expenditure during 1962–63 was £73,337. This included payments by the State from loan funds for alterations and additions to buildings amounting to £10,297.

Exhibitions of paintings are held regularly in private art galleries and are usually well-attended. In particular, the Royal South Australian Society of Arts presents five special exhibitions during the year, Spring, Autumn, Associate and Lay Members, Print and Drawing, and the Wholohan Prize Exhibition.

The Hahndorf Art Gallery was established in 1956, and since 1959 has operated in historic premises—the first Lutheran school built in Australia.

5. **Western Australia.**—The Western Australian Art Gallery was established in 1895. Although under the statutory management of a board of five members appointed by the State Government, it functions under its own director and staff. At 30th June, 1963, the collection included 416 oil paintings, 220 water colours, 10 pastels, 1,440 prints and drawings, 1,260 reproductions, 9 miniatures and 32 pieces of sculpture. International and interstate exhibitions are frequently held, and travelling exhibitions are sent to country centres.

There are no major private art galleries, but some municipalities maintain collections.

6. **Tasmania.**—In Tasmania, the Art Gallery in Hobart was opened in 1887. In June, 1963, it contained 257 oil paintings, 202 water colours, 127 black and white, 3 statuary and 159 etchings, engravings, etc.

The Art Gallery in Launceston was opened in 1891. In June, 1963, there were on view 258 oil paintings, 382 water colours, 146 black and white, and 280 miscellaneous exhibits.

Both galleries operate in conjunction with the museums in each city, occupy the same buildings, and are controlled by the museum authorities.

#### § 4. Botanical and Zoological Gardens\*

1. **New South Wales.**—The Sydney Botanic Gardens are situated on the shores of Farm Cove, Sydney Harbour, close to the heart of the city and on the site of the first farm established in 1788 by Governor Phillip. Now occupying 66 acres with extensive lawns and flower beds, they contain a large and varied collection of flowering plants, shrubs and trees as well as hothouses of orchids and ferns.

\* In addition to the zoological gardens referred to, there are numerous privately owned zoos and sanctuaries, many of them at tourist resorts, which maintain collections of Australian flora and fauna. There are also various national parks, forests, reserves, etc. dedicated for public use, which are preserved largely in their natural condition.

The Zoological Gardens at Taronga Park, on the northern side of Sydney Harbour, were opened in 1916. The area is about 70 acres. The natural formation has been retained as far as practicable, with the object of displaying the animals in natural surroundings, and an aquarium has been built within the gardens. In 1962-63, admissions to the grounds were 790,498 and to the aquarium 279,108. The receipts of the zoological department of the Taronga Park Trust amounted to £180,729 in 1962-63, excluding an annual State grant of £3,250, and expenditure amounted to £186,720. Exhibits at 30th June, 1963, comprised 1,089 mammals, 2,559 birds, 120 reptiles, and 1,160 fish.

2. **Victoria.**—The main botanical gardens in the State are the Royal Botanic Gardens, an area of 88 acres situated within one mile of the centre of the City of Melbourne, and containing over 12,000 species of plants, of which there are some 30,000 individual specimens. Many species of native birds breed on islands in lakes within the gardens.

The Zoological Gardens are situated in Royal Park and contain a wide selection of animals, birds and reptiles. Wild life sanctuaries are also maintained at Healesville and North Balwyn and contain specimens of indigenous fauna.

3. **Queensland.**—Botanical gardens have been established in Brisbane and in several other cities. The Brisbane Botanic Gardens were established in 1855 by the Government of New South Wales. In 1925, the Queensland Government transferred them to the Brisbane City Council. They occupy approximately 46 acres on the banks of the Brisbane River in the central city area and are noted for their collections of palms, tropical trees and shrubs, and succulents; they contain over 7,500 plants.

4. **South Australia.**—The Botanic Gardens, begun in 1854, occupy 45 acres planted with many tropical and sub-tropical trees, shrubs and plants.

The Zoological Gardens, opened in 1883, have an area of approximately 19 acres set among lawns and gardens and contain a fine collection of animals, reptiles and birds. There were 303,000 visitors in 1962-63.

5. **Western Australia.**—A botanic garden for the native plants of Western Australia was officially inaugurated in March, 1963, and planting of the garden began in May. The site of 25 acres which has been selected for garden development during the first five years is in King's Park, a reserve of almost 1,000 acres close to the centre of Perth. An arboretum of 35 acres for the collection of native trees was founded in June, 1962. It is now almost fully planted, and nearly all trees native to the southern part of the State are represented.

The Zoological Gardens, which were opened in 1898 at South Perth, have an area of 44 acres and are under the control of the Acclimatisation Committee. Animals, birds and reptiles are exhibited, and sporting and recreational facilities are available to the public. During the year 1962-63, 139,761 adults and 131,028 children visited the zoo.

6. **Tasmania.**—The Hobart Botanical Gardens adjoin Government House on the Queen's Domain. The gardens contain a fine collection of exotic trees and shrubs and are controlled by a Board appointed by the State Government, which supports the gardens by annual grants.

There is no zoo in Tasmania, but a small collection of animals and birds is maintained by the Launceston City Council at the City Park.

7. **Northern Territory.**—The Darwin Botanical Gardens were established in 1873, and were planted with imported exotic plants and trees. The gardens now occupy 80 acres and feature tropical plants of both native and overseas origin. They are controlled by the Darwin City Council.

## § 5. Book Publishing

1. **Australian Book Publishing.**—Some statistics relating to Australian book publishing are compiled by the National Library of Australia as part of its bibliographical responsibilities (see p. 751). Through the deposit provisions of the *Copyright Act* 1912-1950, its overseas collection agents, and its own efforts, the library receives practically all Australian publications although not necessarily in the year of publication. Because the statistics compiled and shown hereunder are classified according to the year of publication, all figures are subject to revision as publications not yet received in the National Library come to hand.

For books published in 1961 and thereafter, the method of counting conforms with international practice. Each title is counted as one unit. The figures cover all non-periodical publications (i.e. those published at irregular intervals or regularly at intervals of

one year or longer) published in Australia. They refer to all publications of five pages or more and include pamphlets, new translations and re-editions. They include government publications, educational textbooks, university theses, etc., but exclude publications not available to the general public, advertising material, publications of transitory interest, off-prints, musical works, children's picture books, maps and charts.

Figures for 1960 and previous years are less comprehensive, excluding most government publications and certain paper-backs.

2. Number of Publications.—The following table shows the number of books, etc., published in Australia and received by the National Library during the years 1959 to 1963. For 1959 and 1960 the figures are on the "old" basis of compilation and exclude most government publications.

**NUMBER OF PUBLICATIONS RECEIVED BY THE NATIONAL LIBRARY:  
AUSTRALIA**

Received by the National Library up to the end of—	Published during—				
	1959	1960	1961	1962	1963
1959 .. .. .	580	..	..	..	..
1960 .. .. .	765	531	..	..	..
1961 .. .. .	814	839	1,840	..	..
1962 .. .. .	873	984	2,848	1,793	..
1963 .. .. .	873	1,039	2,963	2,501	1,416

The next table shows the 1962 and 1963 publications received up to the end of 1963, classified by subject matter.

**NUMBER OF 1962 AND 1963 PUBLICATIONS RECEIVED BY THE NATIONAL LIBRARY, BY SUBJECT(a): AUSTRALIA, TO 1963**

Subject	Published during—	
	1962	1963
Bibliography, libraries, general .. .. .	61	40
Philosophy, psychology .. .. .	12	9
Religion .. .. .	90	47
Social sciences .. .. .	841	453
Philology .. .. .	18	25
Science .. .. .	170	136
Technology, business .. .. .	577	245
Art, amusement .. .. .	99	70
Literature—		
Australian poetry .. .. .	24	27
Australian drama .. .. .	5	3
Australian fiction .. .. .	162	153
Australian essays .. .. .	1	1
Australian humour and miscellany .. .. .	22	5
Criticisms, anthologies, school editions.. .. .	129	35
Other literature .. .. .	32	29
<i>Total, Literature</i> .. .. .	375	253
Travel, biography, history .. .. .	258	138
<b>Grand Total</b> .. .. .	<b>2,501</b>	<b>1,416</b>

(a) The classification is based on the divisions of the Dewey Decimal Classification.

3. **The Commonwealth Literary Fund.**—In 1908, the Commonwealth Government, under Alfred Deakin, first established the Commonwealth Literary Fund. The Fund was entirely a compassionate one devoted to literary pensions for aged or infirm authors, for the families of literary men who died in poverty, and for writers who were unable for financial reasons to continue their activities.

In 1939, in an endeavour to encourage the development of Australian literature and to foster appreciation of it, the Commonwealth Government greatly enlarged the scope of the Fund. The Fund now awards Fellowships each year, assists in the publication of manuscripts of high literary merit, makes annual grants for lectures in Australian literature, and awards pensions to writers who have achieved a nation-wide reputation for their work in the field of creative literature.

The Fellowships are awarded each year to writers who have proved their capacity in the field of creative literature, to enable them to devote their time to working on a literary project they specify. A Fellowship carries a maximum value of £2,000 per annum. The Fund does not seek out people on whom to bestow Fellowships, but considers only those who submit applications.

The Fund also assists in the publication of manuscripts which have outstanding literary merit, but which, in the opinion of publishers, may constitute a commercial risk. This assistance takes the form of a guarantee of assistance to the publisher. The Fund does not itself enter the field of publishing, nor does it make outright grants to authors to enable them to arrange publication.

Since 1940, annual grants for special lectures in Australian literature have been made to all universities. In 1956, the Fund initiated a scheme of lectures to the general public and to schools mainly in country areas, with the co-operation of State adult education authorities and Education Departments. Annual grants are now made to the States for this purpose.

The Fund also assists certain literary magazines of long standing and recognized literary value.

The Fund is administered by a Committee consisting of the Prime Minister (Chairman) the Leader of the Country Party, and the Leader of the Opposition in the House of Representatives. The Committee is advised on all literary matters by an Advisory Board of six persons with literary qualifications.

4. **The Literature Censorship Board.**—In 1937, the Commonwealth Government introduced legislation to provide for a Literature Censorship Board to advise the Minister for Customs and Excise on imported literature. At the same time, an Appeal Censor was appointed to afford appellants an avenue of appeal which did not make expensive court proceedings necessary. The Appeal Censor was replaced by an Appeal Board in 1960.

The Boards were set up to deal with that part of the problem which provides the greatest amount of controversy—restriction on books which have a real place in the field of literature. In practice, no imported publication having literary merit is prohibited without prior reference to the Literature Censorship Board. Should the Minister decide to prohibit the importation of a book on the recommendation of the Board, an appeal against the decision may be made for reference to the Literature Censorship Appeal Board. A decision to prohibit the importation of a book may be challenged through the normal processes of the law.

The Literature Censorship Board consists of a Chairman, a Deputy Chairman and two other members, while the Appeal Board is made up of a Chairman and two other members.

The foregoing refers to imported literature. Control of indigenous matter comes under the jurisdiction of the State Governments.

## § 6. Film Production

1. **Australian Film Production.**—Australia was one of the pioneers in the history of film-making, a short story film, *John Vane, Bushranger*, having been made in 1904, only a year after America's *The Great Train Robbery*, which is generally considered to be the first genuine story-film. It has been claimed that *The Kelly Gang*, made in 1905–6, was the first full-length feature film produced in the world.

Following the outbreak of the 1914-18 War, a series of short patriotic films were produced. In 1917, the first of a successful series of rural comedies was made, featuring a family called the Hayseeds. In the same year, *The Kelly Gang* was remade and the first film version of *For the Term of his Natural Life* appeared. A first film version of C. J. Dennis's *The Sentimental Bloke* was made in 1919.

The year 1920 was notable for a number of productions with an authentic Australian flavour:—*On our Selection*, a first version of *Robbery Under Arms*, another remake of *The Kelly Gang*, and C. J. Dennis's *Ginger Mick*. Production continued at about the same level until the coming of sound in 1928. Altogether, approximately 160 theatrical films were produced by Australian units in the silent period (1900-1930).

Lack of equipment hampered the commencement of production of sound films in Australia, but during the 1930's nearly 60 sound films were produced.

During the 1939-45 War, commercial film production combined with the Commonwealth Government in making films. Since the war, a number of British and American companies have made films in Australia. Altogether, between 1930 and 1960, about 115 feature films were produced in Australia.

**2. The Australian National Film Board.**—The Australian National Film Board was inaugurated in April, 1945, on the recommendation of a Commonwealth Government inter-departmental committee. It was attached, for administrative purposes, to the Department of Information. With the abolition of that Department in March, 1950, administration of the Board was transferred to the News and Information Bureau, Department of the Interior.

In November, 1950, the Board was reconstituted as an advisory body to the Minister for the Interior on matters concerned with the production, acquisition and distribution of films required by Commonwealth departments for use within Australia on important matters of national interest and welfare, such as school and adult education, rehabilitation, social development, international understanding, trade and tourist expansion, and immigration; and for dissemination abroad to expand trade and commerce with other countries, to encourage tourist traffic with Australia, to improve Australia's relations with other countries and, where necessary, to explain Australia's national policies and encourage immigration.

The constitution provides for a membership of eleven, with the Director of the News and Information Bureau, Chairman, and the remainder representative of Commonwealth departments, State Government instrumentalities, and organizations interested in the production, distribution or utilization of films for national publicity.

**3. The Film Division of the News and Information Bureau.**—The first Australian Government organization for the production of motion pictures for national publicity purposes was the Cinema and Photographic Branch of the Department of Commerce, set up in Melbourne in 1920. Early in the 1939-45 War, the newly-established Department of Information was made responsible for the operation of the Cinema Branch and for an Official War Photography Unit. Production and distribution of all films required by Commonwealth departments are now undertaken by the staff of the Film Division, News and Information Bureau, Department of the Interior, or by commercial enterprises under the supervision of officers of the Film Division. Theatrical and television distribution in Australia, and both theatrical and non-theatrical distribution overseas, of all Film Division productions are organized by the News and Information Bureau's home office or its oversea representatives. Non-theatrical distribution in Australia is organized through the National Library, Canberra, in co-operation with State film distribution agencies.

Since 1946, the Film Division has produced 409 films for general exhibition, as well as training and special purpose films. Prints are dispatched to 50 oversea centres, where distribution is arranged by News and Information Bureau officers or other Australian representatives. In Britain, there is regular distribution through more than a thousand theatres and a large non-theatrical and educational series of circuits. By arrangement with the British Broadcasting Corporation, items of topical interest photographed by the Film Division are flown to London for television. In the United States of America, there is wide non-theatrical distribution and considerable use of the films by television networks. An exchange arrangement with the National Film Board of Canada secures extensive distribution in Canada. Selected films have been recorded in French, Dutch, German, Italian, Japanese, Malay, Thai, and Hindustani, Tamil and other Indian dialects.

In addition to films made on the initiative of the News and Information Bureau, the Film Division produces films under the sponsorship of, or with the co-operation of, Commonwealth departments and many other bodies such as the Commonwealth Banking Corporation, the Road Safety Council, the Overseas Telecommunications Commission, the Snowy Mountains Hydro-electric Authority, the Australian Wine Board, the Australian National University, and the Australian Broadcasting Commission.

The Australian motion picture industry co-operates with the Commonwealth, and special films for urgent national appeals are planned, produced and distributed with the assistance of the National Film Council of the motion picture industry and its Film Production Advisory Committee.

**4. Film Censorship.**—(i) *Legislation.* The Commonwealth Government's powers over censorship of films extend only to imported films and imported advertising matter and stem from the Customs Act. Under that Act, the Customs (Cinematograph Films) Regulations provide for the appointment of a Film Censorship Board whose function is to ensure that films and related advertising material coming within certain defined categories are not admitted into Australia. Under those regulations, the Film Censorship Board may pass films in their original form, reject them, or pass them after eliminations have been made. Legislation passed by the State Governments of Victoria, Queensland, Western Australia and Tasmania names the Commonwealth Film Censorship Board as the censorship authority and vests in it the power to classify films as suitable for general exhibition or otherwise. The State Acts give the Commonwealth Board the authority to censor films made in Australia for commercial exhibition and advertising matter made in Australia.

The Censorship organization comprises a Censorship Board of seven persons and an Appeal Censor, the headquarters being in Sydney. Importers have a right of appeal to the Minister against decisions of the Board and the Appeal Censor.

(ii) (a) *Thirty-five mm. Films for Exhibition in Motion Picture Theatres.* In 1963, 1,238 films comprising approximately 5 million feet were censored. This represents approximately 885 hours screening time. Of these films, 405 originated in the United Kingdom, 370 in the United States of America and 463 in other countries. The principal suppliers among the last mentioned were: U.S.S.R., 94; Italy, 60; France and Greece, 56 each; Germany, 27; Poland, 17; and Japan, 15. Included in these figures were 475 full-length feature films which constituted the main theatrical attractions. This was an increase of 35 compared with the imports for 1962. Feature films came from: The United States of America, 143; the United Kingdom, 90; U.S.S.R., 66; Greece, 46; Italy, 41; France, 34; and Germany, 16. Twelve feature films were rejected and cuts were made from 128. There were seven appeals, five against rejection and two against cuts. Five were disallowed and two allowed. Feature films classified as suitable for general exhibition numbered 275, and 200 were not suitable for children. Of the latter, 34 carried the special condition that all advertising should indicate that they were suitable only for adults. These classifications are advisory only and are designed to enable picture-goers and particularly parents to obtain a general idea of the nature of any particular film. In addition to these imported films—134 35 mm. films of 120,714 feet produced in Australia were cleared. These were mainly newsreels and documentaries intended for commercial exhibition or export.

(b) *Sixteen mm. Films.* Excluding those imported for television use, 5,999 16mm. films of approximately 4 million feet were examined. There were no rejections. These were films commercially produced for screening in theatres used by business undertakings for advertising and instructional purposes and for screening in churches, schools and universities, and on home movies.

(c) *Eight mm. and 9.5mm. Films.* Approximately 32,000 feet of these small dimension type films were examined.

(d) *Television Films.* 8,240 films, predominantly 16mm., of approximately 11 million feet, for use on television, were censored. The number of films is not a true indication of volume because many of these were of short duration. In terms of screening time, the films censored for television amounted to approximately 5,000 hours. On a footage basis, the United States of America supplied approximately 80 per cent. of the total imports and the United Kingdom 19 per cent. Seventeen television films were rejected outright and an additional two were classified as unsuitable for televising. Eliminations were made from 1,103. There was one appeal against rejection which was disallowed.



(e) *Foreign Language Films.* Countries other than the United Kingdom and the United States of America supplied 463 of the 35mm. films imported for theatrical exhibition. Of these, 242 were feature films. Generally, the dialogue is in a foreign language with explanatory English captions. A few have an English commentary, and in some cases English "dubbed" dialogue. Of 5,999 16mm. commercial films censored, 1,210 originated from non-English-speaking countries. The chief supplying countries were: Germany, 342; France, 135; Japan, 116; Italy, 67; India, 57; U.S.S.R., 54; Sweden, 44; Switzerland, 40; Malaya, 39; Israel, 32; and China, 32.

(iii) *Export of Films.* The quantity of films exported for the year was approximately 2.5 million feet, consisting mainly of newsreels, advertising films and documentaries. This footage included in many cases several prints of the one film. It also included large quantities of exposed negatives sent overseas for processing.

### § 7. The Arts Council of Australia

Patterned on the Council for the Encouragement of Music and Arts which operated in the United Kingdom during the Second World War, an Australian organization was brought into being in 1943. In 1945, it became The Arts Council of Australia. Originating in New South Wales, Divisions are active now in the Australian Capital Territory, New South Wales, Queensland, South Australia and Tasmania. The centre of activity has been in New South Wales, which has a country branch network of over fifty centres. Rapid development in Queensland has resulted in the formation of over 24 branches in this State. A Federal Council will become effective in 1964.

The Arts Council receives State government grants through the Departments of Education in New South Wales and Queensland. In 1963, for the first time, a substantial contribution was received from a private organization. Some activities of the council are supported financially by non-metropolitan local government bodies and a grant has been offered by the Gulbenkian Foundation for 1964 to help in re-establishment of the Federal Council.

The New South Wales Division is a member of the Adult Education Advisory Board in that State, representing the "live art" section of adult education. The Tasmanian Division is represented on, and works closely with, the Adult Education Board of that State.

In 1950, the New South Wales Division arranged and presented the world première of the ballet *Corroboree* and in 1951, in connexion with the celebrations of the Commonwealth Jubilee, the Federal Council arranged a tour of all States of the ballet, performed by the Victorian National Theatre Ballet Company. Seasons of *Let's Make An Opera* followed later in 1951 at Sydney, Brisbane, and Canberra.

Activities of the Arts Council are directed towards decentralization of the arts for the benefit of country centres and metropolitan and country schools. It is greatly concerned with taking the arts to children as a basic cultural development. Tours of high standard companies in opera, ballet, drama, puppets, etc., are operating throughout the year.

The Young Elizabethan Players Company was formed jointly by the Arts Council and the Australian Elizabethan Theatre Trust in 1958 to take Shakespeare to schools in New South Wales and Queensland, and is still operating.

The Council handles a wide range of art exhibitions, both for city and country areas. Summer schools for drama, painting, pottery, music and other arts are an established annual feature of the work of the New South Wales and Queensland Divisions.

Yearly drama festivals are conducted for the Little Theatre movement. In 1963, the New South Wales Division sponsored the first arts festival for Sydney (North Side Arts Festival), with a wide range of cultural activities concentrated on the north side of Sydney Harbour. It is intended to make the festival a biennial event with the second festival being planned for August, 1965. Local government bodies in six municipalities in the festival area gave active support in the planning of the festival.

### § 8. The Australian Elizabethan Theatre Trust

Inaugurated in 1954 to commemorate the first visit to the Commonwealth of Her Majesty The Queen, the Australian Elizabethan Theatre Trust has since presented drama, opera and ballet throughout the entire Commonwealth. The Trust receives annual grants from the Federal Government, the State Governments and city councils. Its income also includes subscriptions from members and donations from business houses.

In the field of drama it has presented, *inter alia*, the works of Australian playwrights, including plays which were subsequently presented overseas.

The Elizabethan Trust Opera Company has given seasons of opera and has presented overseas guest artists, conductors and producers. The Australian Ballet, which commenced its inaugural season in November, 1962, visited all mainland capitals and New Zealand during 1963 and will present world premiere productions of three commissioned ballets during 1964. This company also features guest appearances by renowned overseas performers. The activities of the Trust in opera and ballet are providing employment for Australian singers, dancers, musicians, designers, choreographers and composers. The Trust has also been associated with commercial managements in the presentation of overseas attractions and large-scale musicals.

Country areas have been visited by Trust companies presenting opera, drama and puppets in association with the Council of Adult Education in Victoria and The Arts Council of Australia in New South Wales. During 1964, three companies of Young Elizabethan Players will again present Shakespeare for schools in five States. To date, almost one million children have attended a performance by these players which for many of them represents their introduction to "live" theatre.

In Victoria, the Trust is associated with the University of Melbourne in the Union Theatre Repertory Company. It is also associated with the University of New South Wales in the Old Tote Theatre Company which had its inaugural season during 1963. During 1963, a season of lunch-hour short plays with a low admission price were begun experimentally in Sydney. Assistance is given to the Perth Playhouse, the Festival of Perth, the National Theatre and Fine Arts Society of Tasmania and other companies. The Trust contributes productions to the biennial Adelaide Festival of Arts.

One of the most important activities undertaken by the Trust is its association with the University of New South Wales and the Australian Broadcasting Commission in the establishment and maintenance of the National Institute of Dramatic Art. This provides a training ground for young Australian actors, producers and technicians.

### SCIENTIFIC RESEARCH

NOTE.—This section outlines first the role and organization of scientific and technological research in Australia and then refers specifically to various organizations, etc., associated with scientific research. Particulars regarding Commonwealth medical research organizations are given in Chapter XVIII. Public Health.

A special article on Science and Technology in Australia, prepared by the Commonwealth Scientific and Industrial Research Organization of Australia, was included in Year Book No. 49 (*see p. 781*).

## § 1. Commonwealth Scientific and Industrial Research Organization

1. General.—By the *Science and Industry Research Act 1949*, the previously existing Commonwealth Council for Scientific and Industrial Research was re-organized under the title of the Commonwealth Scientific and Industrial Research Organization. An account of the organization and work of the former Council, and of the earlier Commonwealth Institute of Science and Industry from which the Council was formed, was given in earlier issues of the Official Year Book. (*See No. 14, p. 1061 and No. 37, p. 1183.*)

2. *Science and Industry Research Act 1949-1959*.—This Act provides for an Executive of the Organization consisting of nine members, to be appointed by the Governor-General, at least five of whom shall be persons possessing scientific qualifications; and an Advisory Council of the Organization, consisting of the members of the Executive, the Chairman of each State Committee constituted under the Act, and such other members as the Advisory Council, with the consent of the Minister, co-opts by reason of their scientific knowledge.

The powers and functions of the Organization are as follows:—(a) to initiate and carry out scientific research in connexion with primary or secondary industries in Australia; (b) to train research workers and to establish industrial research studentships and fellowships; (c) to make grants in aid of pure scientific research; (d) to establish and make grants to industrial research associations in any industry; (e) to test and standardize scientific apparatus and instruments; (f) to collect and disseminate scientific and technical information; (g) to publish scientific and technical reports and periodicals; and (h) to act as a means of liaison between Australia and other countries in matters of scientific research.

3. **Science and Industry Endowment Act 1926-1949.**—Under this Act, the Government established a fund of £100,000, the income from which is used to provide assistance to persons engaged in scientific research and in the training of students in scientific research. Provision is made for gifts or bequests to the fund, which is controlled by a trust consisting of the Executive of the Organization.

4. **Work of the Organization.**—(i) *General.* The activities of the Commonwealth Scientific and Industrial Research Organization have necessitated a widespread and adaptable arrangement of its research laboratories. Centralization has been avoided, in the first place by establishing laboratories in different places in the Commonwealth wherever the necessary facilities, contacts and other suitable conditions could best be found, and secondly by the establishment of a State Committee in each of the six States. These Committees are widely representative of scientific and industrial interests, and advise the Executive or the Advisory Council on general matters and on particular questions of investigation and research.

For about twelve years after its establishment, the work of the previous Council was devoted mainly to the solution of problems affecting the agricultural and pastoral industries. Unlike manufacturing concerns, which often employ their own scientific staffs, the farmers and the pastoralists are dependent on outside help for the solution of their problems which require research. It was a recognition of the greater need of the primary producer which directed the Council's early policy. In 1937, however, the Commonwealth Government decided to extend the activities of the C.S.I.R.O. so as to provide assistance to secondary industries and several laboratories were established for work in that field; it was thus able to render to these industries assistance almost immediately after the outbreak of war.

C.S.I.R.O. has devoted part of its effort to basic research, and has achieved world leadership in certain fields. In applied research, some notable successes have been achieved. Particular attention has been directed to the potentialities of Australian raw materials, and to the improvement of the industrial processes concerned with processing these resources into finished products.

The basis has been provided for the establishment of a flourishing pulp and paper industry based upon indigenous hardwoods as raw material. Wool research, supported by a statutory contribution by the industry, has been able to show the way to notable advances in manufacturing techniques, and, in particular, new moth-proofing and shrink-proofing processes have been developed. Recent outstanding successes include processes for permanently pleating woollen fabrics and for endowing woollen fabrics with "wash-and-wear" properties.

The C.S.I.R.O. Division of Chemical Physics has pioneered the development of methods of chemical analysis based on atomic absorption spectroscopy. The method and apparatus have been patented, and licences to manufacture granted to firms in the U.K., U.S.A., Italy, France and Australia. The atomic absorption method of chemical analysis is now used in more than 70 Australian laboratories engaged in mining, metallurgy, agriculture, medical research, electro-plating, brewing, wine making and oil analysis.

(ii) *Establishments.* For the purpose of carrying out its research work, there are established within the Organization a number of Divisions and Sections. The Divisions, of which there are now thirty-one, comprise the major establishments for which special laboratory buildings have been erected and equipped; the Sections generally include establishments which have not reached a stage of development, so far as the scope and magnitude of their operations are concerned, to justify their designation as Divisions. As the Organization's investigations extend over the whole Commonwealth, and as many of the investigations which are being conducted—particularly those concerned with problems affecting the agricultural and pastoral industries—necessitate experimental work in the field, a number of field stations are established in various parts of Australia.

#### *Divisions.*

- Plant Industry, with main laboratories at Canberra and field stations.
- Entomology, with main laboratories at Canberra and field stations.
- Animal Health (laboratories in Melbourne, Sydney and Brisbane), Animal Genetics (main laboratory in Sydney) and Animal Physiology (main laboratory in Sydney), which together comprise the Animal Research Laboratories.
- Biochemistry and General Nutrition, with main laboratories at Adelaide and field stations.
- Soils, with main laboratories at Adelaide and extensive operations in the field.
- Forest Products, with main laboratories in Melbourne and field experiments.

Food Preservation, with main laboratories at North Ryde (New South Wales), and a subsidiary laboratory in Brisbane.

Fisheries and Oceanography, with main laboratories at Cronulla (New South Wales), and experimental work in coastal waters of Australia.

Mechanical Engineering, with laboratories in Melbourne.

Physics and Applied Physics, comprising the National Standards Laboratory at Sydney.

Radiophysics, with main laboratory at Sydney and Observatory at Parkes, New South Wales.

Physical Chemistry, Chemical Physics, Mineral Chemistry, Applied Mineralogy, Chemical Engineering, and Organic Chemistry, comprising the Chemical Research Laboratories in Melbourne.

Tribophysics, with laboratories in Melbourne.

Building Research, with laboratories in Melbourne.

Mathematical Statistics, with main laboratory in Adelaide.

Meteorological Physics, with main laboratory and field station in Melbourne.

Land Research and Regional Survey, with headquarters in Canberra, and field stations in the Northern Territory and Western Australia.

Protein Chemistry (Melbourne), Textile Industry (Geelong, Victoria) and Textile Physics (Sydney), which together comprise the Wool Research Laboratories.

Coal Research, Sydney.

Tropical Pastures, with main laboratories in Brisbane and field stations.

Dairy Research, Melbourne.

Wildlife Research, with main laboratories at Canberra.

#### *Sections.*

Horticultural Research Sections, Adelaide (South Australia) and Merbein (Victoria).

Irrigation Research Laboratory, Griffith (New South Wales).

Upper Atmosphere, with laboratory at Camden (New South Wales).

Mineragraphic Investigations, Melbourne.

Ore-dressing Investigations, Melbourne and Kalgoorlie.

Fodder Conservation, Melbourne.

Physical Metallurgy, Melbourne.

Soil Mechanics, Melbourne.

Industrial Research Liaison, Melbourne.

Editorial and Publications, Melbourne.

Wheat Research Unit, Sydney.

Sugar Research Unit, Melbourne.

Computing Research Section, Canberra.

An Industrial Research Liaison Section has also been established at Head Office to foster liaison in the secondary and manufacturing fields.

The Organization's Head Office, with administrative and executive staff, is in Melbourne, and associated with it are the Organization's Central Library, Agricultural Research Liaison Section, Industrial Research Liaison Section and Editorial and Publications Section. The funds for the Organization are provided from two main sources, namely, from Commonwealth revenue by parliamentary appropriation, and from industry directly or indirectly by way of contributions and special grants. It has more than 1,600 professional officers in its total staff of 5,400, and has an annual budget of £16 million.

The C.S.I.R.O. maintains liaison offices in London and Washington, in each case as part of the British Commonwealth Scientific Office. These offices keep in close touch with developments throughout Europe and North America, and through them Australia receives advice of significant advances. These offices also play an important role in assisting scientists who are studying in the regions concerned. Numerous overseas studentships are maintained by the C.S.I.R.O. as a means of raising the standard of training among its professional staff.

## § 2. Mount Stromlo Observatory

Mount Stromlo Observatory—since 1957 incorporated into the Australian National University—is the largest observatory in the southern hemisphere. It is in effect the Department of Astronomy of the Australian National University, and its staff members assist in the training of the future astronomers of Australia. In its instrumental resources, it is second only to some of the great observatories of America. Since it is located south of the Equator, it is placed especially advantageously for the conduct of research into

the structure of the Milky Way System and of the Star Clouds of Magellan. The telescopes and auxiliary equipment at the Observatory provide access to parts of the sky that are forever hidden from the view of northern hemisphere astronomers. Mount Stromlo astronomers have therefore a special responsibility to do research on stars and other celestial objects at far southern declinations.

Mount Stromlo itself is a ridge of hills, approximately one mile long, situated at 35° 19' 16" South Latitude and 149° 0' 20" East Longitude, seven miles west of the city of Canberra. Its highest point is about 2,560 feet above sea level, and telescopes can be situated so as to be well screened from the lights of the city.

The first permanent installation on the site was established in 1911, but, because of the war and other circumstances, the development of the Observatory was delayed. It was not until 1925 that regular astronomical work could be undertaken. Since then, the Observatory has developed steadily, and under its third Director, the scientific staff now consists of fifteen astronomers. This does not include twelve scholars and a number of oversea astronomers visiting Mount Stromlo for periods of a year or so. With technical, clerical and maintenance personnel, the total staff amounts to about 65 persons.

Mount Stromlo Observatory possesses eight mounted telescopes with apertures ranging from five inches to 74 inches. The 74-inch reflector is of the largest size of telescope in the southern hemisphere. There are also special telescopes for the Time Service, and the University of Uppsala, Sweden, has a 26-inch Schmidt telescope on Mount Stromlo.

The principal fields of research at Mount Stromlo are as follows.

Studies of the structure and dynamics of the Milky Way system.

Investigation of the Large and Small Magellanic Clouds.

Studies of the physical properties of the interstellar medium of gas and dust, and its relation to the spiral structure of our galaxy.

Studies of the physics of the stars of the southern hemisphere by spectrographic means and by photoelectric techniques.

Maintenance of the National Time Service leading to studies of the variable rotation of the earth and polar motion.

Published accounts of the researches have a world-wide distribution.

The Observatory is at present engaged in a major expansion of equipment and staff. A permanent Field Station is nearing completion on Siding Spring Mountain (Latitude 31° 16' South; Longitude 148° 41' East; altitude, 3,820 feet) near Coonabarabran, New South Wales. This is an area having less cloud than Mount Stromlo. The principal instrument is a modern 40-inch reflector, alongside of which is a 16-inch telescope. Both telescopes were built in the United States and are now in operation. Other sites are being examined for the future development of astronomy in Australia.

At certain times, Mount Stromlo is open for inspection by members of the public when arrangements can be made so that the scientific work of the Observatory is not interrupted. A more detailed description of the Observatory's work is given in Official Year Book No. 46, pages 1142-4.

### § 3. Australian Atomic Energy Commission

1. **Establishment and Functions of the Commission.**—In November, 1952, a Commission of three members was appointed to control the Commonwealth's activities in relation to uranium and atomic energy, and in April, 1953, upon the enactment of the *Atomic Energy Act 1953*, the Commission was established as a statutory authority, with powers and functions as defined in the Act. Under amending legislation, the number of Commissioners was increased to five in April, 1958. The Commission is a corporate and autonomous body, controlling its own service. It functions under the direction of the Minister for National Development.

The functions of the Commission fall under two main headings. Firstly, it is responsible for undertaking and encouraging the search for and mining of uranium, and is empowered to co-operate with the appropriate authorities of the States in connexion with these and related matters. Secondly, it is authorized to develop the practical uses of atomic energy by constructing and operating plant for this purpose, carrying out research and generally fostering the advancement of atomic energy technology.

2. **Uranium Prospecting and Mining.**—Uranium prospecting and mining in the Territories of the Commonwealth are freely open to private enterprise, subject to the *Atomic Energy Act 1953* and the Ordinances of the Territories. In the past, the Bureau of Mineral Resources, Geology and Geophysics, of the Department of National Development has carried out, on behalf of the Commission, widespread aerial and ground surveys aimed at ascertaining the uranium resources of the Territories and delineating areas in which further search for uranium by private prospectors was considered worthwhile. Although rewards are no longer paid for discoveries of uranium, tax concessions are still allowed in respect of income earned from uranium mining. The Bureau of Mineral Resources provides prospectors and mining companies in the Territories with a wide range of technical and advisory services.

The development of the uranium resources of the States is governed by the legislation and policies of the States. Commonwealth assistance, in the form of aerial, geological and geophysical services, is available to the States, and State Mines Departments inspect uranium prospects and test samples submitted by prospectors.

Interest in the search for deposits of uranium has, however, declined in recent years because of world-wide over-supply.

Uranium oxide was produced in Australia from ore deposits at Rum Jungle and South Alligator River, in the Northern Territory, and Mary Kathleen in Queensland. The Rum Jungle deposits were originally worked under arrangements between the Commonwealth and the Combined Development Agency, a joint procurement organization of the United States and United Kingdom Governments. Since 1953, mining and treatment operations have been conducted for the Commonwealth by a mining company. The treatment plant was commissioned in September, 1954, and the total production from that date to the 6th January, 1963, was sold to the Agency for defence purposes. As a result of sustained exploration in the area, a major new ore body—Rum Jungle Creek South—was discovered. This ore body was mined during the period April, 1961, to January, 1963. The Commonwealth Government has decided that treatment operations will continue at Rum Jungle, using ore stockpiled from the Rum Jungle Creek South mine. Apart from being successful financially, operations at Rum Jungle have made a significant contribution to the development of the Northern Territory. The Government decided therefore that the profits would be re-invested in the Northern Territory. The oxide produced will be available for sale at competitive prices. Exploration is continuing to determine whether or not further ore bodies exist in the area. A recently discovered copper deposit is now under investigation for mining and treatment at Rum Jungle.

Uranium deposits at Radium Hill in South Australia were worked by the State Government, which built an ore concentration plant on the field and a plant for the treatment of the concentrates at Port Pirie. Production of uranium oxide began in 1955, the output being sold to the Combined Development Agency. Operations ceased at the end of 1961, when the contract expired.

The Mary Kathleen ore body in the Mount Isa-Cloncurry district in Queensland has proved to contain Australia's largest reserve of uranium ore. A mine and treatment plant which cost over £10 million were established in the area by a large mining company. Production from the plant was sold to the United Kingdom Atomic Energy Authority for the British nuclear power programme under arrangements approved by the Commonwealth Government. Operations ceased late in 1963 on completion of the operating company's sales contract. The mine, treatment plant, and township have been placed on a care and maintenance basis. Two other companies in the South Alligator region in the Northern Territory also had contracts with the Authority for the British nuclear power programme. These contracts were for relatively small tonnage and one has now been completed. Both companies began production in 1959.

3. **Research.**—The Commission's Lucas Heights Establishment is the major Australian centre for atomic energy research and information. It has a programme of research in the development of nuclear power, the utilization of radio-isotopes, and in other associated fields, directed towards the long-term development of the resources of the country.

The major research effort of the Lucas Heights establishment is the evaluation of a high-temperature gas-cooled reactor system in which the fuel is dispersed in the moderator. This is an advanced reactor concept which is considered to have considerable promise in the long term in relation to the present generation of power reactors now operating or under development overseas.

For various reasons, including the avoidance of duplication of effort, the Commission decided to investigate the feasibility of using beryllium metal or beryllium oxide as the moderator, and carbon dioxide as the coolant. Much work has been done on the metal system but effort is now being concentrated on the oxide or ceramic system, as applied to a specific reactor concept, namely a pebble-bed core cooled with carbon dioxide.

With all-ceramic fuel, higher operating temperatures can be achieved. This permits a reduction in the size and cost of heat exchangers and associated civil works and an improvement in steam conditions and overall efficiency.

The development of a new power reactor concept to a commercially economic stage generally takes 15 to 20 years and involves considerable expense. Since a number of different types of reactors have already been developed to a commercial stage, a new concept faces strong competition, and its development can in general be justified only if it offers promise of some long-term advantages. The beryllium oxide moderated all-ceramic fuel reactor holds such promise.

Provided certain design problems can be satisfactorily solved, a dispersed fuel beryllium oxide based high-temperature gas-cooled reactor should yield lower plant and equipment costs than most other gas-cooled systems. The use of a diffusion fuel capable of a high burnup gives promise of low fuel cycle costs.

The maximum gas temperature will be limited by the ability of materials used in parts of the heat exchangers and for duct work to withstand it. Nevertheless it should be possible to achieve steam conditions equal to those likely to be used in any future conventional plants. At present, using available steels which are economically practicable, the maximum temperature of the carbon dioxide coolant would appear to be 750° C., a considerable advance on British gas-cooled stations of current design. There is no obvious reason why this temperature should not be raised as better structural materials are developed. Then gas-turbines or other plant could be used as topping sets, as has been proposed for future development in the conventional power field.

Thus there is plenty of scope for development, and the general concept is unlikely to become prematurely obsolete.

The Commission is also seeking to extend the use of radioisotopes in Australia in scientific research and development, in the treatment of disease, in raising production and lowering costs in agriculture and in manufacturing industry. New applications are being continually devised. In Australia, these new processes are being used only in a small fraction of the possible fields. The use of isotopes is fostered by providing an advisory service which is a ready source of information on established uses, and by investigation of other projected applications. Radioisotopes, including short-lived isotopes which cannot be economically imported, are being produced in the high flux research reactor HIFAR, and some are being exported.

Research and development work on technical and scientific applications of radiation is also being carried out. The possibilities of radiation for such purposes as industrial sterilization, food preservation, and the control of insect pests are being investigated. Scientists at Lucas Heights are also studying the biological effects and questions of health and safety involved in the use of radioactive materials.

Lucas Heights is a centre of specialized equipment and information. In addition to the research reactor HIFAR, used for testing materials and producing radioisotopes, there is much other equipment unique in Australia. All these facilities are available to universities and other institutions under suitable conditions. In these endeavours, the Atomic Energy Commission is working in close co-operation with the British Atomic Energy Authority, under arrangements which give Australia access to results of British research on peaceful atomic energy uses. Results of research in Australia are in like manner available to Britain. Work in Australia, though constituting a self-contained programme, is co-ordinated with the British programme to avoid overlapping of research objectives and duplication of investigations. Australia also has bilateral arrangements with the United States and Canada, and is taking part in the promotion of the peaceful uses of atomic energy through the International Atomic Energy Agency. For the year 1962-63 the Commission placed £50,000 worth of research contracts within Australian universities on matters related to the research programme at Lucas Heights.

The Australian Institute of Nuclear Science and Engineering comprises the Australian Atomic Energy Commission and all Australian universities. One important field of atomic energy research in Australian universities to which the Institute makes substantial contributions is in the field of thermonuclear reactions.

#### § 4. The Standards Association of Australia

The Standards Association of Australia is the national standardizing organization of Australia, and issues Australian standard specifications for materials and codes of practice. Its functions are linked with those of the National Association of Testing Authorities, in that whereas the Standards Association establishes and publishes standards, the Association of Testing Authorities works to ensure that the certified testing laboratories maintain their level of competence.

The Standards Association was established in July, 1929, by the amalgamation of the Australian Commonwealth Engineering Standards Association and the Australian Commonwealth Association of Simplified Practice. It is an independent body in close touch with modern industrial requirements and has the full recognition and support of the Commonwealth and State governments and industry. It was incorporated by Royal Charter in 1950.

The sole executive authority of the Association is vested in the Council, on which industry is fully represented, together with official representatives of the Commonwealth and State governments and their technical departments, and of scientific, professional and commercial organizations. Voluntary assistance is rendered in the drafting of specifications and codes by several thousand individuals who are experts in their particular fields, and are organized into some hundreds of committees. These committees are grouped under broad industry headings including civil engineering and building construction, mechanical engineering, electrical engineering, chemicals, timber, transportation, aircraft materials, ferrous and non-ferrous metallurgy, plastics, textiles, mining, ceramics, medical and dental materials, domestic economy, agriculture and dairying, safety, packaging, and water supply and sewerage.

These committees are composed of nominated representatives of manufacturing, distributing and purchasing organizations, and of scientific and other expert authorities in the particular field of the project being dealt with. The operations of these committees are co-ordinated and supervised by committees broadly representative of the whole industry within which the respective projects are included.

The specifications of the Association provide a suitable standard of performance, quality, and dimension, and an equitable basis for tendering. They help to eliminate redundant qualities and sizes. They enable purchasers to obtain their requirements with greater assurance of satisfaction, with more rapid delivery and without the necessity of drafting individual specifications. The Association publishes standards of many kinds for the benefit of industry and commerce. It creates its own standards and endorses also certain British standards for Australian use with or without modification. So far it has issued about 1,000 standard specifications. It has nearly 500 more projects in hand.

The underlying principles covering the preparation of the specifications and codes are that they shall be in accordance with the needs of industry; that the common interests of producer and consumer be maintained; that periodical revision should keep the work abreast with progress; and that standardization be arrived at by general consent without coercion.

Organizations, companies, firms and individuals interested in the work of the Association are eligible for subscription membership. Members are entitled to free copies of the publications of the Association and to the use of the library and its Special Information Service. Bibliographical research is undertaken for committees, members of the Association, and industry in general. Many hundreds of inquiries are answered each year.

The Association has international affiliations, and the standards of all British and foreign countries are filed in the library and are accessible to members. It is a member, representing Australia, of the International Organization for Standardization (ISO). The Association also administers the Australian National Committee of the International Electrotechnical Commission.

The Association is also the Australian agent of the British Standards Institution, and all British standards may be purchased from headquarters and branch offices in the various States.



### § 5. The National Association of Testing Authorities

The National Association of Testing Authorities organizes testing facilities throughout Australia to serve private and governmental needs. Laboratories may register voluntarily in respect of tests within their competence, and the Association ensures the maintenance of their standards of testing. Certificates of tests issued in the name of the Association by the registered laboratories are generally accepted by governmental, industrial and commercial interests.

The National Association of Testing Authorities is the recognized organization for the co-ordination of testing facilities. It is an independent body whose objective is the organization of a comprehensive testing service to meet the needs of government, industry and commerce by registration, on a voluntary basis, of testing laboratories throughout Australia. The technical work of the Association is performed by Registration Advisory Committees, each composed of experts in the field of testing entrusted to it. Members of the committees are appointed solely on the basis of specialist qualification and experience.

Laboratories may be registered for the performance of specified tests within such fields as metrology, mechanical testing, electrical testing, heat and temperature measurement, chemical testing, biological testing, industrial radiography and crack detection, photometry, and acoustic and vibration measurement.

In 1963, there were 405 laboratories registered with the Association, which had a further 105 applications for registration before it. Membership of the Association is open to all laboratories which conform to the standards of staff and laboratory practice required by the Association.

Laboratories registered by the Association are entitled to endorse test documents in the name of the Association. The Association reassesses its registered laboratories from time to time, and investigates discrepancies in results between the different laboratories.

### § 6. Scientific Societies

1. *Royal Societies.*—The following table contains the latest available statistical information regarding the Royal Society in each State, the headquarters of which are in the capital cities.

ROYAL SOCIETIES, DECEMBER, 1963

Particulars	Sydney	Mel- bourne	Bris- bane	Ade- laide	Perth	Hobart	Can- berra
Year of charter . . . . .	1866	1859	1884	1880	1913	1844	1930
Number of members . . . . .	370	415	287	210	220	616	192
Volumes of transactions issued . . . . .	97	(a) 950	73	86	49	97	..
Number of books in library . . . . .	35,000	25,000	62,840	22,000	6,000	34,300	..
Societies on exchange list . . . . .	390	335	290	307	225	316	..

(a) Volumes of proceedings.

2. *Australian Academy of Science.*—The Australian Academy of Science is the national institution representing science in Australia. Constituted by Royal Charter presented personally by Her Majesty, Queen Elizabeth II, in Canberra on 16th February, 1954, the Academy promotes scientific knowledge and research, maintains standards of scientific endeavour and achievement in the natural sciences in Australia, and recognizes outstanding contributions to the advancement of science.

The Academy represents Australian science and scientists at the national and international level, organizes meetings of scientists, holds symposia, and arranges for visits of scientists from other countries to Australia.

In its functions, the Australian Academy is comparable with the Royal Society of London and national academies of science of many other countries. Its 106 Fellows (designated F.A.A.) are eminent in some branch of the physical or biological sciences in Australia, occupying professional positions in universities, the Commonwealth Scientific and Industrial Research Organization, other research organizations, and industry. A very few places are reserved for Fellows who have rendered conspicuous service in the cause of science.

No more than six new Fellows are elected in any one year. His Royal Highness, Prince Philip, Duke of Edinburgh, was admitted as a Royal Fellow during his visit to Canberra on 20th November, 1962.

The Australian Academy contributed substantially to the work of the International Geophysical Year and has developed plans for Australian participation in the International Year of the Quiet Sun, from April, 1964, to December, 1965, and the International Biological Programme.

Representation is provided at the General Assemblies of the International Scientific Unions and similar bodies relating to astronomy, geophysics, geology, physics, crystallography, mathematics, biochemistry, physiology, geography, biological sciences, chemistry, Antarctic research, space research and oceanic research.

On certain national scientific projects and matters with scientific implications, the Commonwealth Government has sought the Academy's advice.

As the Australian Academy of Science is too young a body to be financially self-sufficient, the Commonwealth Government makes annual grants of general purpose funds without affecting the autonomy of the Academy. These grants, together with substantial private benefactions, enable the Academy to continue its work. Research fellowships provided by industry are administered.

The Academy's £250,000 copper-domed circular conference centre was opened in 1959. It was paid for by donations from companies and individuals.

The Academy is managed by an elected council comprising a President, Treasurer, two secretaries, and eight ordinary members who are drawn equally from the physical sciences and biological sciences. Chief administrative officer is the Executive Secretary, who is not a Fellow.

3. **The Australian and New Zealand Association for the Advancement of Science.**—This association was founded in 1887. Its headquarters are at Science House, Gloucester Street, Sydney, and congresses are held at intervals of approximately eighteen months in the various States and in the Dominion of New Zealand. The latest congress was held in Canberra in January, 1964; and the 38th Congress is to be held in Hobart in August, 1965.

4. **Other Scientific Societies.**—The Linnean Society of New South Wales, with headquarters in Sydney, was founded in 1874. Sir William Macleay, who died in 1891, during his lifetime and by his will endowed the Society to the amount of £67,000, which has been increased by investment to approximately £100,000. The Society offers annually to graduates of the University of Sydney, who are members of the Society and resident in New South Wales, research fellowships (Linnean Macleay Fellowships) in various branches of natural history. One fellowship was awarded for 1964. The library has some 19,000 volumes. Eighty-eight volumes of proceedings have been issued, and the Society exchanges with about 300 kindred institutions and universities throughout the world. The membership at the end of 1963 was 279.

The British Astronomical Society has a branch in Sydney, and in each of the States there is a branch of the Australian Medical Association.

There are over 200 other learned societies devoted to the study of particular sciences. Some of these, including the Royal Australian Chemical Institute and the Institute of Engineers, Australia, are qualifying bodies, admission to which is by qualification only. Others, such as the Institute of Food Technologists, are open to any interested person. Some societies, such as the Australian Biochemical Society, have annual symposia of a very high standard. A great many of these bodies publish appropriate journals.

## STATE GOVERNMENT EXPENDITURE ON EDUCATION, ETC.

*Estimates of the expenditure by each State Government on education and related items are shown in the following tables.*

(i) *Expenditure from Revenue and Special Funds.* Details shown below relate to net expenditure from Consolidated Revenue and the following special funds: Opera House Account, Maintenance and Repairs to Schools and Police Buildings Account and the Joint Coal Board Welfare Fund (New South Wales); Forestry Fund (Victoria); and Lotteries Commission Fund (Western Australia). Details exclude expenditure from the Commonwealth university grants, and expenditure on debt charges, payroll tax and superannuation

payments. The cost of medical and dental inspection of school children is also excluded, as this service is considered to be more appropriately classified under public health. For these reasons, the figures do not represent total current government expenditure on education in each State. Furthermore, because of differences in organization and accounting methods, the information shown is not on exactly the same basis for all States, and consequently comparisons of State expenditures are approximate only.

**STATE NET EXPENDITURE ON EDUCATION, ETC. (a) FROM REVENUE AND SPECIAL FUNDS**

(£'000)

Year	New South Wales	Victoria	Queensland	South Australia	Western Australia	Tasmania	Total
1957-58 ..	40,022	28,640	12,094	9,156	8,819	4,276	103,007
1958-59 ..	44,624	31,256	13,624	10,812	9,217	4,636	114,169
1959-60 ..	50,286	35,429	14,789	12,363	10,019	5,300	128,186
1960-61 ..	58,135	40,193	16,947	14,127	11,378	5,756	146,536
1961-62 ..	62,987	44,632	18,008	16,267	12,508	6,361	160,763

(a) Includes expenditure on administration, transport of school children, teacher training, primary, secondary, technical, agricultural and university education; and expenditure on libraries, museums, etc.

(ii) *State Loan Fund Expenditure on Educational Buildings.* Details in the following table show gross Loan Fund expenditure in each State on educational buildings.

**STATE GROSS LOAN FUND EXPENDITURE ON EDUCATIONAL BUILDINGS**

(£'000)

Year	New South Wales	Victoria	Queensland	South Australia	Western Australia	Tasmania	Total
1957-58 ..	9,234	7,858	2,068	2,662	1,656	1,247	24,725
1958-59 ..	11,620	9,039	3,021	3,489	1,782	2,000	30,951
1959-60 ..	15,194	11,305	3,400	3,997	2,111	1,775	37,782
1960-61 ..	15,749	12,750	3,539	4,836	2,734	2,009	41,617
1961-62 ..	16,178	14,160	3,417	5,944	2,907	1,885	44,491

## CHAPTER XX

### LOCAL GOVERNMENT

**NOTE.**—This chapter includes, in addition to information on the operation of local government authorities, information on the operation of certain semi-governmental authorities. The latter information is not comprehensive for this type of authority, and is included partly because of the association of the functions performed with those of local government authorities, and partly for convenience in preparation. Particulars of the activities of other semi-governmental authorities, e.g. transport, electricity and gas, and banking undertakings, for which only some financial statistics are given in this chapter, are included in the chapters relevant to those subjects.

#### § 1. Introduction

**1. Local Government Authorities.**—In each State of the Commonwealth, there exists a system of local government whose powers and responsibilities are in general similar, and cover such matters as the construction and maintenance of roads, streets and bridges, water, sewerage and drainage systems, and health and sanitary services, the supervision of building, and the administration of regulations relating to items such as weights and measures, slaughtering, the registration of dogs, etc. In addition to these obligatory functions, there are also many which may be performed by a local government authority either with or without the consent of the ratepayers or the Governor-in-Council. These include transport facilities, electricity, gas, and other business undertakings, hospitals, charitable institutions, recreation grounds, parks, baths, libraries, museums, etc.

The system is based on the principle of a grant of specific powers by the State legislatures to the local authorities, their autonomy, however, being more or less limited by the provision for general supervision by a department of the central government or by the Governor-in-Council. Otherwise, within the scope of the Acts under which they are constituted or which they have to administer, they are responsible only to the ratepayers.

While the broad pattern of local government throughout the States of Australia is similar, the range of activities, election of officers, methods of valuation and rating powers, etc., differ considerably.

The areas over which local government bodies exercise general control, numbering 899, are known in New South Wales as cities, municipalities and shires; in Victoria as cities, towns, boroughs and shires; in Queensland as cities, towns and shires; in South Australia as cities, corporate towns and district council areas; in Western Australia as cities, towns and shires; and in Tasmania as cities and municipalities. In New South Wales, some local government authorities in an area have combined to provide services such as electricity, water, sewerage and drainage—e.g. the county councils. Within shires, there are also some municipal units known as urban areas. Apart from the more thinly populated parts of New South Wales and South Australia, and the Commonwealth Territories (except for the City of Darwin), practically the whole of Australia comes within local government jurisdiction.

The financial statistics in § 2 following are classified under the headings of Ordinary Services and Business Undertakings. The former covers the obligatory and general functions referred to above. Business Undertakings include public utilities such as water supply, sewerage, electricity, gas, transport and hydraulic power undertakings, and other miscellaneous works such as abattoirs, quarries, ice works, cinemas, etc.

**2. Semi-governmental Authorities.**—In addition to local government authorities, a large number of authorities have been set up to control specific activities, which are often identical with some of those performed by either, or both, of the other classes of public authority—central government and local government—and a complete picture of any field of activity for a State or Australia as a whole cannot be obtained without reference to each class operating in that particular field. These semi-governmental authorities differ primarily from local government authorities in that their operations are restricted to the specific activity for which they were constituted—e.g. roads and bridges, water and sewerage, electricity and irrigation, harbours, or tramways, etc.—i.e. each dispenses a specific service throughout an area as distinct from the general services of the local authority.

In §§ 3 to 7, which deal with debt, roads and bridges, water supply and sewerage, harbours, and fire brigades, particulars are included of the more important of these authorities which operate within the range covered by this chapter.

3. **Roads, Bridges, etc.**—The construction and maintenance of roads, bridges and ferries are generally part of the functions of local authorities, but in each State there exists a central road authority or a government department whose duties relate to the construction, reconstruction and maintenance of "main" and "developmental" roads, the distribution of funds to local bodies, and the supervision and co-ordination of road construction and policy throughout the State. Owing to difficulty in obtaining complete particulars of receipts and expenditure of the various local governing bodies in respect of roads under their control, the details of receipts and expenditure given in § 4 are those of central governments only, relating either to the supervisory board or commission in the State or to direct activities of a department. However, estimates of the aggregate net expenditure of all public authorities concerned with roads and bridges in Australia are given in paragraph 10 of that section. In § 2, some information is given of the revenue and expenditure of local government authorities in respect of roads.

4. **Water Supply and Sewerage.**—In the cities of Sydney and Melbourne, the control of water supply and sewerage is in the hands of special boards, while in Adelaide and Perth these services are under the direct supervision of government departments. In most of the other cities and towns, the municipal councils or, in some cases, water trusts, are the controlling bodies, which either construct the works out of their own resources or take them over after they have been constructed by the government.

5. **Harbours.**—The majority of the harbours in Australia are managed by boards, the members of which are either elected by persons interested, or appointed by the government. In some instances, however, they are directly controlled by the government.

6. **Fire Brigades.**—In all the States, the management of fire brigades is undertaken by boards. These boards usually comprise members elected by the councils of municipalities and insurance companies within the districts placed under their jurisdiction, and one or more members appointed by the government. Occasionally, volunteer or country fire brigades are represented.

## § 2. Local Government Authorities

1. **New South Wales.**—For purposes of local government, the whole of the Eastern and Central land divisions and a small portion of the sparsely populated Western division have been divided into cities, municipalities (most principal towns) and shires (mainly large rural areas, some of which include important towns). At the end of 1962, the area incorporated was 272,000 square miles, or nearly nine-tenths of the total area of the State.

All local government authorities in the State are subject to the general provisions of the Local Government Act.

Municipalities and shires may combine to form county councils for the establishment and conduct of services of joint benefit, e.g. electricity, water, sewerage. At 31st December, 1962, there were 57 county councils, including the Sydney County Council.

2. **Victoria.**—Local government is established throughout the State, the various divisions being termed cities, towns, boroughs or shires. The only unincorporated areas are French Island (41,600 acres) in Westernport Bay, Lady Julia Percy Island (652 acres) off Port Fairy, Bass Strait Islands (966 acres), part of Gippsland Lakes (81,920 acres), and Tower Hill (1,460 acres) adjacent to the Borough of Koroit. Melbourne and Geelong were incorporated under special statutes prior to the establishment of a general system of local government, but are now subject to several provisions of the Local Government Act.

3. **Queensland.**—The whole of the State (except certain islands along the coast, the Dawson Valley Irrigation Area and the Somerset Dam Area) is incorporated into cities, towns and shires under the *Local Authorities Act 1902* and its amendments.

4. **South Australia.**—The settled portion of South Australia is incorporated, being mostly under municipal corporations in the larger cities and towns, and district councils in the agricultural areas.

5. **Western Australia.**—Local government is established throughout the State, the divisions being cities, towns and shires.

6. Tasmania.—The whole State is divided into municipal districts, Hobart and Launceston being incorporated as cities under separate Acts.

7. Area, Population, Dwellings and Value of Ratable Property.—The area, population, dwellings and value of ratable property in the incorporated areas of each State are shown for the year 1961-62 in the following table. The valuations relate to ratable property only and exclude government and other non-ratable property, whose value in the aggregate is considerable. In this table, particulars of dwellings are in accordance with the definition used in the 1961 Census, and are compiled from information collected on the Census Schedules. For the purpose of the Census, a dwelling was defined as any habitation occupied by a household group living together as a domestic unit, whether comprising the whole or only part of a building. The term has, therefore, a very wide reference and includes, in addition to houses and flats, a great variety of dwellings ranging from a single-roomed shack to a multi-roomed hotel or institution. Unoccupied dwellings include vacant dwellings available for sale and renting, "week-end" and holiday dwellings, and other dwellings temporarily unoccupied on the night of the Census. Dwellings being built are not included.

LOCAL GOVERNMENT AUTHORITIES: AREA, POPULATION, DWELLINGS AND VALUE OF RATABLE PROPERTY, 1961-62

Location	Number	Area '000 acres	Popula- tion '000	Dwellings		Value of ratable property		
				Occu- pied	Unoccu- pied	Unim- proved capital value	Im- proved capital value	Annual value
				No. (a)	No. (a)	£'000	£'000	£'000
<b>NEW SOUTH WALES(b)</b>								
Metropolitan—								
Capital city .. ..	1	7	171	48,599	2,311	182,186	498,477	27,100
Other .. .. .	34	702	2,087	570,916	22,825	875,252	2,671,565	157,835
Outside metropolitan area ..	190	173,648	1,705	441,537	47,267	617,082	n.a.	n.a.
Total .. .. .	225	174,357	3,963	1,061,052	72,403	1,674,520	n.a.	n.a.
<b>VICTORIA(c)</b>								
Metropolitan—								
Capital city .. ..	1	8	76	18,971	740	n.a.	305,294	15,265
Other .. .. .	43	715	1,882	505,637	16,093	n.a.	1,820,229	91,804
Outside metropolitan area(d)	164	55,387	1,024	264,769	30,469	n.a.	1,248,602	62,995
Total .. .. .	208	56,110	2,982	789,377	47,302	n.a.	3,374,125	170,064
<b>QUEENSLAND(e)</b>								
Capital city .. ..	1	246	606	160,588	5,441	71,755	n.a.	n.a.
Other(f) .. .. .	130	425,980	930	236,845	28,544	254,369	n.a.	n.a.
Total .. .. .	131	426,226	1,536	397,433	33,985	326,124	n.a.	n.a.
<b>SOUTH AUSTRALIA(e)</b>								
Metropolitan—								
Capital city .. ..	1	4	22	5,846	437	60,639	131,000	6,527
Other .. .. .	20	100	574	158,054	5,157	n.a.	509,000	25,436
Outside metropolitan area ..	121	36,858	379	95,205	11,208	n.a.	467,000	23,367
Total .. .. .	142	36,962	975	259,105	16,802	n.a.	1,107,000	55,330
<b>WESTERN AUSTRALIA(e)</b>								
Metropolitan—								
Capital city .. ..	1	16	94	26,845	1,001	2,279	n.a.	6,071
Other .. .. .	17	107	337	88,003	2,686	45,754	n.a.	3,245
Outside metropolitan area ..	126	624,466	320	79,469	9,939	71,398	n.a.	1,797
Total .. .. .	144	624,589	751	194,317	13,626	119,431	n.a.	11,113

NOTE.—See next page for footnotes.

LOCAL GOVERNMENT AUTHORITIES: AREA, POPULATION, DWELLINGS  
AND VALUE OF RATABLE PROPERTY, 1961-62—*continued*

Location	Number	Area '000 acres	Popula- tion '000	Dwellings		Value of ratable property		
				Occu- pied No. (a)	Unoccu- pied No. (a)	Unim- proved capital value £'000	Im- proved capital value £'000	Annual value £'000
<b>TASMANIA(e)</b>								
Metropolitan—								
Capital city .. ..	1	18	54	15,281	507	22,386	68,124	4,561
Other .. ..	2	99	62	14,483	795	10,784	45,332	2,485
Outside metropolitan area ..	46	16,661	240	61,494	7,280	63,592	224,824	14,398
<i>Total</i> .. ..	49	16,778	356	91,258	8,582	96,762	338,280	21,444

(a) Particulars of dwellings as at Census 30th June, 1961. (b) Year ended 31st December, 1961.  
(c) Year ended 30th September, 1962. (d) Excludes Yallourn Works Area under the jurisdiction of the State Electricity Commission. (e) Year ended 30th June, 1962. (f) Includes City of Redcliffe and that part of Pine Rivers Shire within the Metropolitan Area of Brisbane but outside the Brisbane City Area.

8. *Finances.*—(i) *General.* The following tables show the latest available financial statistics for local government authorities. The figures relate to the year 1961-62 except for New South Wales, where they relate to the year 1961. For further detail on local government finances, see *State, Territories and Local Government Authorities Finance and Government Securities*, Bulletin No. 1, 1961-62 and 1962-63, issued by this Bureau.

(ii) *Ordinary Services.* In the returns of revenue and expenditure for 1961-62 in the following tables, the proceeds from loans and expenditure thereof have been excluded. The financial operations of business undertakings controlled by the various local government authorities are given in the next paragraph. The profits resulting from the working of these undertakings, where taken into general revenue, have been included.

LOCAL GOVERNMENT AUTHORITIES: ORDINARY SERVICES—REVENUE AND  
EXPENDITURE, 1961-62

Particulars	N.S.W. (a)	Vic. (b)	Q'land (c)	S. Aust. (c)	W. Aust. (c)	Tas. (c)	Total
Number of local government authorities .. ..	225	208	131	142	144	49	899

REVENUE (EXCLUDING LOAN RECEIPTS) (£'000)

Taxation—							
Rates (net) .. ..	44,034	26,193	15,914	7,443	4,117	2,635	100,336
Penalties .. ..	400	112	..	..	..	..	512
Licences .. ..	782	230	170	88	67	32	1,369
<i>Total</i> .. ..	45,216	26,535	16,084	7,531	4,184	2,667	102,217
Public works and services—							
Sanitary and garbage services ..	4,287	1,745	2,760	55	450	223	9,520
Council properties	3,625	(d) 4,900	740	566	978	330	11,139
Street construction .. ..	2,609	2,121	..	1,573	452	18	6,773
Other .. ..	3,676	928	271	144	176	161	5,356
<i>Total</i> .. ..	14,197	9,694	3,771	2,338	2,056	732	32,788
Government grants—							
Roads .. ..	14,156	245	3,068	(e) 3,249	1,615	597	22,930
Other .. ..	1,650	1,528	403	114	1,026	72	4,793
<i>Total</i> .. ..	15,806	1,773	3,471	3,363	2,641	669	27,723
Profits from business undertakings .. ..	..	368	..	..	..	..	368
Fees and fines .. ..	..	298	..	..	49	..	347
All other .. ..	..	363	(f) 5,144	97	1,606	135	7,345
<i>Total Revenue</i> .. ..	75,219	39,031	28,470	13,329	10,536	4,203	170,788

NOTE.—See next page for footnotes.

LOCAL GOVERNMENT AUTHORITIES: ORDINARY SERVICES—REVENUE AND EXPENDITURE, 1961-62—continued

Particulars	N.S.W. (a)	Vic. (b)	Q'land (c)	S. Aust. (e)	W. Aust. (c)	Tas. (c)	Total
<b>EXPENDITURE (EXCLUDING LOAN EXPENDITURE) (£'000)</b>							
General administration ..	4,719	5,437	2,664	1,145	978	455	15,398
Debt services (excluding business undertakings)—							
Interest ..	2,585	1,903	2,402	371	615	289	8,165
Redemption ..	4,716	2,360	3,433	713	997	324	12,543
Exchange ..	20	..	116	..	..	..	136
Other ..	..	56	42	..	..	..	98
<b>Total Debt, etc. ..</b>	<b>7,321</b>	<b>4,319</b>	<b>5,993</b>	<b>1,084</b>	<b>1,612</b>	<b>613</b>	<b>20,942</b>
Public works and services—							
Roads, streets and bridges ..	35,348	13,164	8,132	8,430	3,314	1,810	70,198
Health administration ..	2,011	421		249	215	88	
Sanitary and garbage services ..	5,617	3,879	3,072	436	494	132	16,614
Street lighting ..	1,551	805	422	288	144	119	3,329
Council properties ..	10,447	(g) 7,137	3,270	1,166	2,537	589	25,146
Other ..	2,950	1,003	198	186	619	21	4,977
<b>Total ..</b>	<b>57,924</b>	<b>26,409</b>	<b>15,094</b>	<b>10,755</b>	<b>7,323</b>	<b>2,759</b>	<b>120,264</b>
Grants—							
Fire brigades ..	433	619	193	134	116	50	1,545
Hospitals and ambulances ..	249	97	..	239	7	..	
Other charities ..	(h) 1,924	(i) 1,684	659	42	44	68	5,023
Other ..	..	..	..	..	..	..	..
<b>Total ..</b>	<b>2,606</b>	<b>2,400</b>	<b>852</b>	<b>425</b>	<b>167</b>	<b>118</b>	<b>6,568</b>
All other ..	2,394	506	(j) 3,443	..	301	136	6,780
<b>Total Expenditure</b>	<b>74,964</b>	<b>39,071</b>	<b>28,046</b>	<b>13,409</b>	<b>10,381</b>	<b>4,081</b>	<b>169,952</b>

(a) Figures for New South Wales relate to the year ended 31st December, 1961, and are on an income and expenditure basis as distinct from those of other States which are on a cash basis. (b) Year ended 30th September, 1962. (c) Year ended 30th June, 1962. (d) Includes £2,420,000 plant hire. (e) Includes £1,871,000 reimbursement from Highways Department. (f) Includes the following reimbursements: £1,717,000 from Main Roads Department, £459,000 from other State Government Departments and £1,219,000 from other sources. (g) Includes £957,000 plant and equipment. (h) To Main Roads Department. (i) Includes £834,000 to Country Roads Board. (j) Includes expenditure on work done for re-imbursement: for Main Roads Department £1,739,000; for other State Government Departments £475,000; other £1,128,000.

LOCAL GOVERNMENT AUTHORITIES: ORDINARY SERVICES—REVENUE AND EXPENDITURE (£'000)

Year	N.S.W.(a)	Vic.(b)	Q'land(c)	S. Aust.(c)	W. Aust.	Tas.(c)	Total
<b>REVENUE (EXCLUDING LOAN RECEIPTS)</b>							
1958 ..	52,440	26,742	21,654	9,313	(d) 7,966	2,848	120,963
1959 ..	55,946	29,456	23,618	9,977	(d) 8,544	3,147	130,688
1960 ..	61,024	32,864	25,593	10,667	(d) 9,437	3,404	142,989
1961 ..	67,624	35,836	26,698	11,890	(d) 10,495	3,799	156,342
1962 ..	75,219	39,031	28,470	13,329	(c) 10,536	4,203	170,788
<b>EXPENDITURE (EXCLUDING LOAN EXPENDITURE)</b>							
1958 ..	50,510	27,210	20,870	9,115	(d) 7,751	2,828	118,284
1959 ..	54,024	29,332	23,184	10,024	(d) 8,343	3,149	128,056
1960 ..	58,511	32,295	25,631	10,898	(d) 9,364	3,410	140,109
1961 ..	67,962	36,413	27,217	12,463	(d) 10,582	3,836	158,473
1962 ..	74,964	39,071	28,046	13,409	(c) 10,381	4,081	169,952

(a) Years ended previous 31st December. (b) Years ended 30th September. (c) Years ended 30th June. (d) Municipalities—years ended 31st October; Road Districts—years ended 30th June.

(iii) *Business Undertakings.* The tables hereunder show, for 1961-62, particulars of the revenue and expenditure, other than loan, of business undertakings under the control of local government authorities. These particulars are not included in the foregoing tables.



LOCAL GOVERNMENT AUTHORITIES: BUSINESS UNDERTAKINGS—REVENUE  
AND EXPENDITURE, 1961-62  
(£'000)

Particulars	N.S.W. (a)	Vic. (b)	Q'land (c)	S. Aust. (c)	W. Aust. (c)	Tas. (c)	Total
REVENUE (EXCLUDING LOAN RECEIPTS)							
Water supply and sewerage—							
Rates .. .. .	3,454	424	2,200	..	..	1,208	7,286
Charges for services and sales of products ..	983	..	2,502	3	12	216	3,716
Other (including grants) ..	(d) 941	13	442	..	..	218	1,614
<i>Total</i> .. .. .	<i>5,378</i>	<i>437</i>	<i>5,144</i>	<i>3</i>	<i>12</i>	<i>1,642</i>	<i>12,676</i>
Electricity and gas—							
Rates .. .. .	524	..	6	..	..	..	530
Charges for services and sales of products ..	75,080	16,025	8,091	540	722	..	100,458
Other (including grants) ..	2,382	249	203	18	..	..	2,852
<i>Total</i> .. .. .	<i>77,986</i>	<i>16,274</i>	<i>8,300</i>	<i>558</i>	<i>722</i>	<i>..</i>	<i>103,840</i>
Railways, tramways and omnibuses—							
Charges for services and sales of products ..	..	..	3,916	..	..	..	3,916
Other (including grants) ..	..	..	136	..	..	..	136
<i>Total</i> .. .. .	<i>..</i>	<i>..</i>	<i>4,052</i>	<i>..</i>	<i>..</i>	<i>..</i>	<i>4,052</i>
Other—	(e)	(f)	(g)	(h)	(i)	(j)	
Rates .. .. .	13	..	11	..	..	..	24
Charges for services and sales of products ..	4,228	982	349	92	34	204	5,889
Other (including grants) ..	139	19	3	3	..	..	164
<i>Total</i> .. .. .	<i>4,380</i>	<i>1,001</i>	<i>363</i>	<i>95</i>	<i>34</i>	<i>204</i>	<i>6,077</i>
<b>Grand Total</b> .. .. .	<b>87,744</b>	<b>17,712</b>	<b>17,859</b>	<b>656</b>	<b>768</b>	<b>1,846</b>	<b>126,585</b>

EXPENDITURE (EXCLUDING LOAN EXPENDITURE)							
Water supply and sewerage—							
Working expenses ..	2,322	348	2,341	3	4	814	5,832
Depreciation .. .. .	(k) 115	19	..	..	..	..	—96
Debt charges .. .. .	1,999	59	2,163	..	13	764	4,998
Other (including transfers to general revenue and construction) ..	..	34	536	..	..	49	619
<i>Total</i> .. .. .	<i>4,206</i>	<i>460</i>	<i>5,040</i>	<i>3</i>	<i>17</i>	<i>1,627</i>	<i>11,353</i>
Electricity and gas—							
Working expenses ..	65,652	14,883	4,564	469	518	..	86,086
Depreciation .. .. .	(k) 1,321	478	..	..	70	..	1,869
Debt charges .. .. .	8,641	547	2,545	49	73	..	11,855
Other (including transfers to general revenue and construction) ..	..	358	816	26	..	..	1,200
<i>Total</i> .. .. .	<i>75,614</i>	<i>16,266</i>	<i>7,925</i>	<i>544</i>	<i>661</i>	<i>..</i>	<i>101,010</i>
Railways, tramways and omnibuses—							
Working expenses ..	..	..	3,937	..	..	..	3,937
Debt charges .. .. .	..	..	345	..	..	..	345
Other (including transfers to general revenue and construction) ..	..	..	118	..	..	..	118
<i>Total</i> .. .. .	<i>..</i>	<i>..</i>	<i>4,400</i>	<i>..</i>	<i>..</i>	<i>..</i>	<i>4,400</i>
Other—	(e)	(f)	(g)	(h)	(i)	(j)	
Working expenses ..	3,944	756	164	99	32	158	5,153
Depreciation .. .. .	29	37	..	..	..	..	66
Debt charges .. .. .	168	126	35	..	1	23	353
Other (including transfers to general revenue and construction) ..	..	31	162	2	..	1	196
<i>Total</i> .. .. .	<i>4,141</i>	<i>950</i>	<i>361</i>	<i>101</i>	<i>33</i>	<i>182</i>	<i>5,768</i>
<b>Grand Total</b> .. .. .	<b>83,961</b>	<b>17,676</b>	<b>17,726</b>	<b>648</b>	<b>711</b>	<b>1,809</b>	<b>122,531</b>

(a) Year ended 31st December, 1961. (b) Year ended 30th September, 1962. (c) Year ended 30th June, 1962. (d) Includes Government grant, £628,000, for part of cost of new works borne by Government. (e) Abattoirs. (f) Abattoirs, hydraulic power undertakings, quarries, iceworks and reinforced concrete pipe and culvert works. (g) Off-street car parking, municipal markets, amusement parks, hotels, and cinemas. (h) Quarries, hospitals and cinemas. (i) Quarries and abattoirs. (j) Abattoirs. (k) Net balance after deducting charge for debt redemption. The full amount of charge for debt redemption is included under debt charges.

NOTE.—Minus sign (—) indicates an excess of credits.

The next table shows the revenue and expenditure, other than loan, of local government business undertakings for the years 1957-58 to 1961-62.

**LOCAL GOVERNMENT AUTHORITIES: BUSINESS UNDERTAKINGS—REVENUE AND EXPENDITURE**  
(£'000)

Year	N.S.W.(a)	Victoria(b)	Q'land(c)	S. Aust.(c)	W. Aust.	Tas.(c)	Total
REVENUE (EXCLUDING LOAN RECEIPTS)							
1958 ..	61,526	13,021	13,175	548	(d) 702	1,151	90,123
1959 ..	66,378	15,242	14,113	563	(d) 771	1,272	98,339
1960 ..	72,790	16,505	15,329	601	(d) 896	1,487	107,608
1961 ..	80,276	16,884	16,182	628	(d) 865	1,635	116,470
1962 ..	87,744	17,712	17,859	656	(c) 768	1,846	126,585
EXPENDITURE (EXCLUDING LOAN EXPENDITURE)							
1958 ..	58,007	12,541	13,533	561	(d) 704	1,123	86,469
1959 ..	63,777	14,815	14,296	556	(d) 747	1,269	95,460
1960 ..	69,628	16,202	15,481	625	(d) 885	1,471	104,292
1961 ..	77,585	16,732	17,317	621	(d) 869	1,626	114,750
1962 ..	83,961	17,676	17,726	648	(c) 711	1,809	122,531

(a) Years ended previous 31st December. (b) Years ended 30th September. (c) Years ended 30th June. (d) Municipalities—years ended 31st October; Road Districts—years ended 30th June.

(iv) *Loan Expenditure.* The tables below show particulars for 1961-62 of loan expenditure on works connected with the ordinary services and the business undertakings of local government authorities.

**LOCAL GOVERNMENT AUTHORITIES: LOAN EXPENDITURE, 1961-62**  
(£'000)

Particulars	N.S.W.	Vic.	Q'land	S. Aust.	W. Aust.	Tas.	Total
ORDINARY SERVICES							
Roads, bridges, streets, footpaths, drainage and sewerage .. .. .	3,803	2,871	8,767	1,275	843	815	18,374
Council properties .. .. .	(a) 2,813	(a) 1,311	} (a) 2,180	{ 229	(a) 1,201	(a) 300	} 10,567
Parks, gardens and recreational reserves .. .. .	725	806					
Other .. .. .	(b) 582	472	379	5	111	29	1,578
<b>Total .. .. .</b>	<b>7,923</b>	<b>5,460</b>	<b>11,326</b>	<b>1,677</b>	<b>2,746</b>	<b>1,387</b>	<b>30,519</b>
BUSINESS UNDERTAKINGS							
Water supply .. .. .	2,553	116	3,966	..	..	868	7,503
Sewerage .. .. .	1,104	..	..	..	..	559	1,663
Electricity and gas .. .. .	9,982	1,530	3,350	22	155	..	15,039
Railways, tramways and omnibuses .. .. .	..	..	177	..	..	..	177
Abattoirs .. .. .	247	148	..	..	..	15	410
Other .. .. .	..	8	74	..	..	..	82
<b>Total .. .. .</b>	<b>13,886</b>	<b>1,802</b>	<b>7,567</b>	<b>22</b>	<b>155</b>	<b>1,442</b>	<b>24,874</b>
<b>Grand Total .. .. .</b>	<b>21,809</b>	<b>7,262</b>	<b>18,893</b>	<b>1,699</b>	<b>2,901</b>	<b>2,829</b>	<b>55,393</b>

(a) Includes plant. (b) Includes advances for homes, £135,000.

NOTE.—For years to which particulars relate, see following table.

The following table shows the loan expenditure on works connected with local government ordinary services and business undertakings during the years 1957-58 to 1961-62.

**LOCAL GOVERNMENT AUTHORITIES: LOAN EXPENDITURE**  
(£'000)

Year	N.S.W.(a)	Victoria(b)	Q'land(c)	S. Aust.(c)	W. Aust.	Tas.(c)	Total
<b>ORDINARY SERVICES</b>							
1958 ..	5,644	4,215	5,673	1,077	(d) 1,580	455	18,644
1959 ..	5,941	4,313	6,225	1,313	(d) 2,093	812	20,697
1960 ..	7,001	4,733	8,480	1,157	(d) 1,819	1,109	24,299
1961 ..	7,595	5,179	11,407	1,790	(d) 2,272	1,276	29,519
1962 ..	7,923	5,460	11,326	1,677	(c) 2,746	1,387	30,519
<b>BUSINESS UNDERTAKINGS</b>							
1958 ..	11,024	1,796	5,022	99	(d) 159	1,163	19,263
1959 ..	11,645	1,505	6,464	54	(d) 144	958	20,770
1960 ..	12,776	1,319	6,304	58	(d) 78	1,226	21,761
1961 ..	15,149	1,368	7,574	42	(d) 137	1,354	25,624
1962 ..	13,886	1,802	7,567	22	(c) 155	1,442	24,874

(a) Years ended previous 31st December. (b) Years ended 30th September. (c) Years ended 30th June. (d) Municipalities—years ended 31st October; Road Districts—years ended 30th June.

### § 3. Local Government and Semi-Governmental Authorities' Debt

1. **General.**—Statistics of local government and semi-governmental debt for 1957-58 to 1961-62 are given in the following paragraph. The information covers all local government authorities and those semi-governmental authorities responsible for the provision of the following services.

*New South Wales.* Water Supply, Sewerage and Drainage, Electricity Supply, Fire Brigades, and Banking. County Councils are included among these authorities.

*Victoria.* Water Supply and Sewerage, Irrigation and Drainage, Harbours, Tramways, Electricity and Gas Supply, Fire Brigades, Marketing (Buying and Selling), Industry Assistance, Grain Elevators, Housing, and Miscellaneous.

*Queensland.* Water Supply and Sewerage, Irrigation and Drainage, Harbours, Electricity Supply, Fire Brigades, University, Hospitals and Ambulances, Marketing (Buying and Selling and Agency), and Industry Assistance.

*South Australia.* Irrigation and Drainage, Tramways, Electricity Supply, Fire Brigades, Hospitals and Ambulances, Marketing (Agency), Industry Assistance, Banking, Housing, and Miscellaneous.

*Western Australia.* Water Supply and Sewerage, Irrigation and Drainage, Harbours, Transport, Electricity Supply, Fire Brigades, Hospitals and Ambulances, Marketing (Agency), Housing, University of Western Australia, and Miscellaneous.

*Tasmania.* Harbours, Electricity Supply, Fire Brigades, Transport, Housing, and Water Supply.

A detailed list of the authorities included is shown in *State, Territories and Local Government Authorities Finance and Government Securities*, Bulletin No. 1, 1961-62 and 1962-63.

2. **Local Government and Semi-Governmental Debt.**—The following table provides a summary of new money loan raisings, provisions for debt redemption, debt outstanding and interest payable by local government and semi-governmental authorities for the year 1961-62. For greater detail, see *State, Territories and Local Government Authorities Finance and Government Securities*.

LOCAL GOVERNMENT AND SEMI-GOVERNMENTAL AUTHORITIES: NEW MONEY LOAN RAISINGS, REDEMPTION, DEBT AND INTEREST PAYABLE, 1961-62

(£'000)

Particulars	N.S.W.	Vic.	Q'land	S. Aust.	W. Aust.	Tas.	Total
<b>LOCAL GOVERNMENT AUTHORITIES</b>							
New money loan raisings—							
From government ..	10	261	969	433	20	245	1,938
From public ..	13,402	9,446	14,804	1,789	3,190	2,834	45,465
Total ..	13,412	9,707	15,773	2,222	3,210	3,079	47,403
Funds provided for redemption—							
Government loans ..	102	102	881	413	32	39	1,569
Loans due to public ..	5,720	3,188	4,272	312	1,174	651	15,317
Total ..	5,822	3,290	5,153	725	1,206	690	16,886
Accumulated sinking fund balance ..	5,625	3,274	9,004	..	91	281	18,275
Debt—							
Due to government ..	2,022	3,203	14,639	1,727	255	1,058	22,904
Due to banks (net overdraft) ..	188	473	..	..	32	..	693
Due to public creditor(a) ..	86,969	51,063	110,715	7,922	15,217	17,032	288,918
Total(a) ..	89,179	54,739	125,354	9,649	15,504	18,090	312,515
Maturing overseas(a)(b) ..	2,265	..	3,057	..	..	..	5,322
Annual interest payable(a) ..	n.a.	2,833	6,212	462	827	955	n.a.
<b>SEMI-GOVERNMENTAL AND OTHER PUBLIC AUTHORITIES</b>							
New money loan raisings—							
From government ..	16,059	20,831	411	10,438	3,292	8,301	59,332
From public ..	26,244	45,601	9,921	5,066	2,952	1,582	91,366
Total ..	42,303	66,432	10,332	15,504	6,244	9,883	150,698
Funds provided for redemption—							
Government loans ..	2,748	2,040	484	1,544	775	843	8,434
Loans due to public ..	8,180	5,335	4,457	61	1,302	435	19,770
Total ..	10,928	7,375	4,941	1,605	2,077	1,278	28,204
Accumulated sinking fund balance ..	36,927	14,671	7,780	1,425	1,843	878	63,524
Debt—							
Due to government ..	201,412	239,314	20,609	134,649	48,344	99,343	743,671
Due to banks (net overdraft) ..	4,283	1,373	82	15	91	..	5,844
Due to public creditor(a) ..	309,729	517,766	87,424	41,457	22,369	17,403	996,148
Total(a) ..	515,424	758,453	108,115	176,121	70,804	116,746	1,745,663
Maturing overseas(a)(b) ..	6,250	5,383	..	..	..	..	11,633
Annual interest payable(a) ..	n.a.	36,326	5,577	7,914	3,396	5,251	n.a.

(a) Includes debt or interest payable in London and New York. Debt in London is payable in £ sterling which have been converted at the I.M.F. rate of £Stg.100 to £A.125; New York debt is payable in U.S. dollars which have been converted at the I.M.F. rate of \$2.24 to £A.1. (b) Included in debt figures above.

In the following tables, debt includes all liabilities for which arrangements have been made for repayment over a period of one year or more, and net overdrafts. Interest capitalized and amounts due for the capital cost of assets or for services rendered

which are to be repaid over a period of one year or more are included. Current liabilities, such as interest accrued (but not capitalized), trade creditors, amounts held in trust and other debts which are to be repaid in less than one year are not included. Net overdraft is the gross overdraft of all funds less all bank credit balances (including fixed deposits) which do not form part of a sinking fund to repay a loan. New loans raised during the year include new loan liabilities incurred during the year, loans raised from the public to repay indebtedness to the Government, and interest capitalized. Loans raised and redeemed within the year, increases in overdrafts, and loans raised for conversion or redemption of existing debt are excluded. Funds provided for redemption include instalments of principal repaid and amounts credited to sinking funds established for the purpose of repaying the debt on maturity. Amounts provided for redemption from loans raised for that purpose are excluded.

In the following table, a summary is given of new money loan raisings, provisions for the redemption of debt and debt outstanding of local and semi-governmental authorities for the years 1957-58 to 1961-62.

**LOCAL GOVERNMENT AND SEMI-GOVERNMENTAL AUTHORITIES,  
AUSTRALIA: NEW MONEY LOAN RAISINGS, REDEMPTION AND DEBT  
(£'000)**

Particulars	1957-58	1958-59	1959-60	1960-61	1961-62
<b>LOCAL GOVERNMENT AUTHORITIES</b>					
New money loan raisings—					
From government .. .. .	1,775	1,993	2,610	3,082	1,938
From public .. .. .	27,445	29,662	34,080	35,617	45,465
Total .. .. .	29,220	31,655	36,690	38,699	47,403
Funds provided for redemption—					
Government loans .. .. .	1,578	1,491	1,534	1,599	1,569
Loans due to public .. .. .	9,120	11,403	13,192	14,139	15,317
Total .. .. .	10,698	12,894	14,726	15,738	16,886
Accumulated sinking fund balance	13,710	14,106	15,316	16,605	18,275
Debt—					
Due to government .. .. .	17,922	18,805	19,819	21,314	22,904
Due to banks (net overdraft) .. .. .	448	686	465	525	693
Due to public creditor(a) .. .. .	197,243	213,496	235,387	257,420	288,918
Total(a) .. .. .	215,613	232,987	255,671	279,259	312,515
Maturing overseas(a)(b) .. .. .	6,320	6,140	5,962	5,501	5,322
<b>SEMI-GOVERNMENTAL AND OTHER PUBLIC AUTHORITIES</b>					
New money loan raisings—					
From government .. .. .	56,948	54,242	54,525	59,092	59,332
From public .. .. .	73,924	73,689	86,961	72,732	91,366
Total .. .. .	130,872	127,931	141,486	131,824	150,698
Funds provided for redemption—					
Government loans .. .. .	6,829	8,484	7,281	8,035	8,434
Loans due to public .. .. .	15,041	12,934	16,053	18,078	19,770
Total .. .. .	21,870	21,418	23,334	26,113	28,204
Accumulated sinking fund balance	35,500	41,882	49,447	57,557	63,524
Debt—					
Due to government .. .. .	542,817	592,436	639,983	692,582	743,671
Due to banks (net overdraft) .. .. .	5,900	6,410	4,415	6,093	5,844
Due to public creditor(a) .. .. .	697,910	764,944	851,208	915,154	996,148
Total(a) .. .. .	1,246,627	1,363,790	1,495,606	1,613,829	1,745,663
Maturing overseas(a)(b) .. .. .	11,673	11,663	11,555	11,643	11,633

(a) See footnote (a) page 789.

(b) Included in debt figures above.

## § 4. Roads and Bridges

1. **Commonwealth Government Grants.**—The following table shows the allocation to the States under the several Commonwealth Aid Roads Acts for road construction, maintenance, repair and other works connected with transport for each of the years 1958–59 to 1962–63, and to the Commonwealth for expenditure on the construction and maintenance of strategic roads and for the promotion of road safety practices for the year 1958–59. After 1st July, 1959, when the *Commonwealth Aid Roads Act 1959* came into operation, the Commonwealth made separate provision for expenditure on strategic roads and the promotion of road safety practices. See also Chapter XXII. Public Finance, and Finance bulletins.

## ROAD CONSTRUCTION, MAINTENANCE, ETC.: GRANTS UNDER THE COMMONWEALTH AID ROADS ACTS

(£'000)

Year ended 30th June—	N.S.W.	Vic.	Q'land	S. Aust.	W. Aust.	Tas.	C'wealth (a)	Total
1959 ..	9,930	6,543	6,890	4,056	6,967	1,813	1,000	37,199
1960 ..	12,172	8,660	8,021	4,922	7,964	2,184	..	43,923
1961 ..	12,870	9,184	8,428	5,128	8,090	2,300	..	46,000
1962 ..	13,811	10,080	9,093	5,752	8,764	2,500	..	50,000
1963 ..	14,940	10,877	9,796	6,200	9,487	2,700	..	54,000

(a) Prior to 1959–60, allocations under the *Commonwealth Aid Roads Act 1954–1956* for expenditure on the construction and maintenance of strategic roads and the promotion of road safety practice.

2. **New South Wales.**—(i) *General.* A central road authority, known as the Main Roads Board, was created by legislation in 1925 for the purpose of providing improved and uniform standards of construction, reconstruction and maintenance of the principal roads of the State and to administer government subsidies for works on those roads. In 1932, the Main Roads administration was reorganized as a separate department under the control of a Commissioner. The activities of the Department of Main Roads include works on main, developmental and tourist roads throughout the State, all roads in the unincorporated portion of the Western Division, and certain associated works, principally bridges and vehicular ferries, constructed from government funds. The Department of Main Roads co-operates with the municipal and shire councils in the work of constructing and maintaining the main roads system.

Public roads, except those within the City of Sydney, may be proclaimed as main roads on the recommendation of the Commissioner for Main Roads, who takes into consideration the representations made by the councils concerned, availability of funds for construction and maintenance purposes, and the value of the roads as connecting links between centres of population or business. The classes of main roads are (i) the State highways, which form the principal avenues of road communication throughout the State and connect with similar avenues in other States; (ii) trunk roads, which, with the State highways, form the framework of a general system of intercommunication throughout the State; (iii) ordinary main roads, which provide a network of roads connecting towns and important centres of population with the State highways and trunk roads and with each other. In addition to the main roads, there are also (i) secondary roads (in the County of Cumberland), which carry a substantial volume of through traffic and thereby relieve neighbouring main roads of traffic, (ii) developmental roads, which help to develop country districts, and (iii) tourist roads, which serve to make accessible areas or districts used by tourists.

In the County of Cumberland, which for the purposes of the Main Roads Act is deemed to include the City of Blue Mountains and small sections of other councils' areas on the boundary of the County of Cumberland, the full cost of road and bridge construction is paid from the funds of the Department of Main Roads. The Councils contribute towards the cost at the rate of ¼d. in the £ on the unimproved value of ratable property. The rate payable in respect of lands used principally for primary production is one-half the rate levied on other lands. In country districts, the Department meets the full cost of road and bridge works on State highways, the full cost of bridge works and three-quarters of the cost

of road works on trunk roads, and three-quarters of the cost of bridge works and two-thirds of the cost of road works on ordinary main roads. The cost of constructing developmental roads and works is borne in full by the Department of Main Roads, but local Councils are required to maintain them in a satisfactory condition. The Department of Main Roads meets half the cost of works on secondary roads and on tourist roads.

(ii) *Length of Roads.* (a) *Proclaimed Roads.* The total length of proclaimed roads in New South Wales at 30th June, 1963, was 25,523 miles classified as:—State highways, 6,532 miles; trunk roads, 4,116 miles; ordinary main roads, 11,633 miles; secondary roads, 115 miles; developmental roads, 3,057 miles; and tourist roads, 70 miles.

The length of main roads maintained by the Department of Main Roads at 30th June, 1963, was 5,586 miles (25 per cent.), while the length maintained by Councils was 16,695 miles (75 per cent.). These figures exclude secondary, developmental and tourist roads, and unclassified roads in the Western Division of the State. In the area outside the County of Cumberland (the metropolis and adjoining areas), the proportions of main roads maintained by the Department and Councils respectively were:—State highways, 68 per cent., 32 per cent.; and trunk and ordinary main roads, 5 per cent., 95 per cent. Unclassified roads in the Western Division of the State, totalling 1,030 miles, were maintained by the Department, while developmental roads, totalling 3,057 miles, were maintained by Councils. In the County of Cumberland, the proportions of main roads maintained by the Department and Councils respectively were:—State highways, 99 per cent., 1 per cent.; and ordinary main roads, 54 per cent., 46 per cent. Secondary roads totalling 115 miles were maintained by Councils. The 70 miles of tourist roads throughout the State were maintained by Councils.

(b) *Surface of Roads.* In 1963, the total length of all roads in New South Wales was estimated at 131,140 miles. The lengths of roads, according to their surface, were as follows:—bitumen or concrete, 23,468 miles; gravel or stone, 45,513 miles; formed only, 28,660 miles; cleared only, 33,499 miles.

(iii) *Main Roads Department.* (a) *General.* Progress has continued with the implementation of the Department's plan for main roads development in the County of Cumberland. Most of the Department's proposals have been incorporated in the County of Cumberland Planning Scheme approved by Parliament under the *Local Government (Amendment) Act 1951*.

The Department's proposals for the development of the main roads system in Newcastle and the surrounding districts have been largely incorporated in the Northumberland County District Planning Scheme, and some sections of the system have been constructed.

With some modifications, the Department's proposals for the planning of the main roads in the Wollongong-Port Kembla district have been incorporated in the planning scheme prepared by the Illawarra Planning Authority.

During 1962-63, 47 new bridges were constructed. In addition, 29 concrete box culverts each having a waterway width of 20 feet or more were completed. Major bridge works under construction included steel and/or concrete bridges over the Richmond River at Wardell on the Pacific Highway (length 736 feet); over the Richmond River at Ballina Street, Lismore, on the Bruxner Highway (length, 688 feet); over the Clyde River at Nelligen (length, 827 feet); over the Hunter River at Maitland (Belmore Bridge, length, 643 feet); over the Parramatta River at Gladesville (length, 1,900 feet); over the Lane Cove River connecting Hunter's Hill and Lane Cove (length, 749 feet); over the Darling River at Tilpa (length, 407 feet); over the George's River at Taren Point (length, 1,662 feet); over the south arm of the Hunter River at Tourle Street, Newcastle (length 978 feet); and over Salt Pan Creek connecting Peakhurst and Padstow (length 600 feet). Also under construction was an overpass (627 feet long) at Huntley's Point, Gladesville.

(b) *Revenue and Expenditure.* The funds of the Department of Main Roads are derived principally from motor vehicle taxation, charges on heavy commercial goods vehicles under the *Road Maintenance (Contribution) Act 1958*, grants under Commonwealth Aid Roads Acts (see para. 1, p. 791 and Chapter XXII. Public Finance), other grants from the State or Commonwealth Governments, and proceeds of a levy on municipal and shire councils in the County of Cumberland in accordance with the *Main Roads Act 1924-1960*. The State Government also makes repayable advances for Main Roads Department works.

Revenue and expenditure for the five years 1958-59 to 1962-63 are shown below.

**DEPARTMENT OF MAIN ROADS, NEW SOUTH WALES:  
REVENUE AND EXPENDITURE  
(£)**

Particulars	1958-59	1959-60	1960-61	1961-62	1962-63
<b>REVENUE(a)</b>					
Motor vehicle taxation, registration and licence fees .. .. .	10,727,126	11,850,477	12,432,316	12,683,234	15,163,302
Commonwealth Aid Roads Act .. .. .	6,926,549	7,719,608	8,239,061	8,936,462	9,539,785
State and Commonwealth grants .. .. .	357,500	638,750	375,000	704,000	237,400
Contributions by other departments and bodies .. .. .	240,412	360,978	382,689	237,572	171,010
Councils' contributions .. .. .	1,384,927	1,649,122	1,858,878	2,269,553	2,367,351
Other .. .. .	46,204	83,179	154,816	160,759	138,361
<b>Total</b> .. .. .	<b>19,682,718</b>	<b>22,302,114</b>	<b>23,442,760</b>	<b>24,991,580</b>	<b>27,617,209</b>
<b>EXPENDITURE(b)</b>					
Roads and bridges—					
Construction .. .. .	10,508,109	13,883,723	17,731,562	18,936,979	18,999,757
Maintenance .. .. .	5,908,649	6,352,014	6,137,466	6,343,148	6,330,559
Administration .. .. .	705,745	824,203	912,675	1,128,740	1,315,814
Interest, exchange, etc., on debt .. .. .	190,789	202,439	227,238	252,649	282,872
Other(c) .. .. .	212,895	351,394	542,127	531,783	620,891
<b>Total</b> .. .. .	<b>17,526,187</b>	<b>21,613,773</b>	<b>25,551,068</b>	<b>27,193,299</b>	<b>27,549,893</b>

(a) Excludes repayable advances by the State Government (£800,000 in 1959-60, £575,000 in 1960-61, £635,000 in 1961-62, and £890,000 in 1962-63), and transfers from Sydney Harbour Bridge Account for Expressway construction (£100,000 in 1958-59, £362,000 in 1959-60, £768,000 in 1960-61, £1,822,000 in 1961-62, and £2,081,000 in 1962-63). Expenditure from these amounts is fully reflected in Expenditure.

(b) Excludes debt redemption (£42,717 in 1958-59, £45,981 in 1959-60, £48,816 in 1960-61, £53,075 in 1961-62, and £57,088 in 1962-63) and repayment of government advances (£298,073 in 1958-59, £400,000 in 1960-61, and £60,000 in 1962-63).

(c) Mainly purchase of assets not subject to annual depreciation charge. The purchase of other assets is omitted here because the depreciation charge for them is reflected each year in "Roads and Bridges".

The figures shown above represent the aggregate revenue and expenditure of five funds—the County of Cumberland Main Roads General and Special Purposes Funds, the Country Main Roads General and Special Purposes Funds, and the Developmental Roads Fund.

(c) *Sydney Harbour Bridge.* The Sydney Harbour Bridge was opened for traffic on 19th March, 1932. The main span is 1,650 feet and clearance for shipping 170 feet from high water level. The deck, 160 feet wide, carries a roadway of eight traffic lanes and two railway tracks, and there is also a footway on each side. The capital cost of the bridge and associated roadways to 30th June, 1963, was £11,786,864, but this amount will be reduced slightly on completion of the disposal of the remaining surplus resumed property. The portion met from repayable loan funds, over £10,100,000, is repayable from toll income. Income for 1962-63 amounted to £1,933,000, including road tolls, £1,692,000, railway passenger tolls, £139,000, and omnibus passenger tolls, £15,000. Expenditure amounted to £1,085,000, including interest, exchange, floatation expenses, etc., £426,660, sinking fund, £140,330, maintenance, £278,528. The accumulated surpluses of the Bridge Account have been used to finance conversion of tram tracks to roadway and construction of city expressways. From 1958-59 to 1962-63 a total of £920,379 was expended on tram track conversion and £5,133,000 on city expressways. The account showed a deficiency of £852,917 at 30th June, 1963. During 1962-63, 33,153,166 road vehicles (excluding omnibuses and exempt vehicles), 25,136,000 rail travellers and 14,040,000 omnibus travellers crossed the bridge, contributing respectively 91 per cent., 8 per cent., and 1 per cent. of the total toll revenue.

3. *Victoria.*—(i) *General.* With the object of improving the main roads of the State, the Country Roads Board was established by legislation passed in 1912. The principal duties of the Board are to determine which roads should be declared in the various classifications; to supervise the construction, reconstruction and maintenance of these roads; to inquire into the State's resources in road materials and the most effective methods of road construction and maintenance; and to recommend deviations in existing roads or the construction of new roads in order to facilitate communications or to improve the conditions of traffic.



(ii) *Length of Roads.* (a) *Declared Roads.* The total length of roads in Victoria declared by the Country Roads Board at 30th June, 1963, was 14,525 miles, classified as follows:—State highways, 4,474 miles; main roads, 9,118 miles; by-pass roads, 28 miles; tourist roads, 444 miles; forest roads, 461 miles. The length of the surface sealed (bitumen or concrete) included in the foregoing mileage was 11,817 miles or 81 per cent. of the total.

(b) *Surface of Roads.* It is estimated that, in addition to the 14,525 miles of classified roads, there were approximately 87,000 miles of unclassified roads at 30th June, 1963. The latest detailed estimate of the length of roads and streets in Victoria (as at 30th September, 1963) provides the following information:—bitumen or concrete, 23,721 miles; gravel or stone, 31,501 miles; formed only, 21,319 miles; cleared only, 23,540 miles; total, 100,081 miles.

(iii) *Country Roads Board.* (a) *General.* During 1962–63, 1,801 miles of declared roads under the Board's control were treated with bitumen. In addition, 845 miles of undeclared roads, for which the Board contributed funds, were similarly treated. The total length of bitumen treatment carried out in 1962–63 was 2,744 miles (including 98 miles for other authorities). Of the work on the roads under the Board's control in 1962–63, 651 miles related to State highways and by-pass roads.

During 1962–63, 197 bridge projects of an estimated total value of £2,126,000 were initiated. Of these, 128, estimated to cost £833,000, were under municipal supervision.

(b) *Receipts and Payments.* The funds of the Country Roads Board are derived principally from motor registration fees, two-thirds of all money received by way of owners' certificates, one half of drivers' licence fees, fines, payments by the Commonwealth Government under the Commonwealth Aid Roads Acts, road charges under the Commercial Goods Vehicles Act and repayments by municipalities. In addition, loans have been authorized from time to time under the Country Roads Acts for permanent works on main and developmental roads, State highways, tourists' roads and forest roads, while the State Government has provided, free of repayment, loan moneys for restoration of flood and bush fire damage. During the year ended 30th June, 1963, loan receipts and payments each amounted to £301,000. The total loan expenditure to 30th June, 1963, was £15,749,087. This figure does not include loan expenditure from the Developmental Roads Loan Account, a fund which was created for the purpose of constructing and maintaining subsidiary or developmental roads. Loan money raised on this account was exhausted at 30th June, 1937, the total expenditure at that date being £6,425,758.

### COUNTRY ROADS BOARD, VICTORIA: RECEIPTS AND PAYMENTS

(£)

Particulars	1958–59	1959–60	1960–61	1961–62	1962–63
<b>RECEIPTS</b>					
Motor vehicle registration fees(a) ..	8,340,079	8,941,256	9,282,073	9,529,594	10,289,728
Drivers' licence fees(a) ..	284,994	452,324	256,673	259,890	318,653
Drivers' licence testing fees ..	..	..	38,969	76,901	74,537
Municipalities' payments ..	685,773	723,803	788,663	777,667	881,920
Commonwealth Aid Roads Acts(b) ..	6,870,975	8,460,574	8,983,776	9,877,696	10,675,566
Loans from State Government ..	75,834	160,000	283,000	683,000	301,000
Commonwealth-State contribution for restoration of flood damage ..	53,171	5,124	966	..	..
Road charges Commercial Goods Vehicles Act ..	1,873,424	2,117,494	2,254,421	2,262,417	2,459,557
Other ..	30,263	43,994	50,223	(c)575,704	83,757
<b>Total ..</b>	<b>18,214,513</b>	<b>20,904,569</b>	<b>21,938,764</b>	<b>24,042,869</b>	<b>25,084,718</b>

NOTE.—See next page for footnotes.

COUNTRY ROADS BOARD, VICTORIA: RECEIPTS AND PAYMENTS—*continued*  
(£)

Particulars	1958-59	1959-60	1960-61	1961-62	1962-63
PAYMENTS					
Construction and maintenance of roads and bridges—					
State highways .. .. .	5,357,732	5,852,042	6,880,998	6,836,437	6,605,006
Main roads .. .. .	5,536,431	6,259,203	5,919,265	7,426,610	6,747,848
By-pass roads .. .. .	28,579	266,880	1,096,742	682,635	431,434
Tourist roads .. .. .	453,877	551,088	600,132	572,755	469,350
Forest roads .. .. .	190,652	192,060	275,365	295,101	276,261
Unclassified roads .. .. .	3,371,433	3,974,049	4,228,144	5,193,213	4,834,154
Other .. .. .	82,899	124,589	88,612	69,295	69,317
Plant purchase .. .. .	712,974	1,028,042	708,141	174,694	915,985
Interest, debt redemption, etc. .. .. .	862,583	875,034	888,244	927,527	965,301
Office building, Kew—capital cost .. .. .	..	452,275	528,123	19,554	270,833
Statutory payment to Tourists' Resorts Fund .. .. .	144,770	151,737	187,872	191,554	197,328
Administration and other .. .. .	1,004,542	1,221,756	1,177,903	1,651,472	1,906,301
<b>Total .. .. .</b>	<b>17,746,472</b>	<b>20,948,755</b>	<b>22,579,541</b>	<b>24,040,847</b>	<b>23,689,118</b>

(a) After costs of collection. Since 1950, one half of the drivers' licence fees has been credited to the funds of the Country Roads Board while the remaining half has been credited to the Municipalities Assistance Fund. (b) Excludes portion of Commonwealth Aid Roads Acts advances drawn by the Public Works Department for expenditure on wharfs, jetties, etc.. (c) Includes £500,000 Special Grant from Commonwealth Government.

(iv) *Melbourne and Metropolitan Board of Works.* Since assuming responsibility for carrying-out planning scheme proposals relating to metropolitan highways and bridges, a tentative £20,000,000 construction programme of urgent highway works throughout the metropolitan area of Melbourne has been adopted and is being progressively implemented by the Board of Works. Expenditure on these projects up to 30th June, 1963, was £2,986,392.

(v) *Level Crossings.* In 1954-55, the Level Crossings Fund was created under the *Country Roads and Level Crossings Funds' Act 1954* to finance (a) the elimination of level crossings or the provision of alternative routes to enable road traffic to avoid level crossings; (b) the provision of lights, signs, and lighting at, and the improvement of approaches to, level crossings; and (c) generally, the reduction of danger at level crossings. The Act provides for the payment into the Fund of one-third of all moneys received by way of additional motor registration fees (owner's certificates) and money provided under any other Act. The amount available for expenditure in 1962-63 was £353,763, consisting entirely of receipts from owners' certificates. Expenditure from the Fund amounted to £264,555, of which £231,336 was incurred by the Railways Department and £33,219 by the Country Roads Board, leaving a balance carried forward of £89,208.

4. Queensland.—(i) *General.* Under the *Main Roads Act 1920*, a Main Roads Board was constituted, consisting of three members appointed by the Governor-in-Council. In 1925, the Board was abolished and its powers conferred upon a single Commissioner. The Main Roads Commission was constituted a Department under the name of the Department of Main Roads in February, 1951, with the Commissioner of Main Roads as its permanent head. The duties of the Commissioner are to carry out surveys and investigations necessary to determine State highways, main, developmental, secondary, mining access, farmers' and tourist roads, and tourist tracks; and the responsibility for building and maintaining these declared roads is largely that of the Commissioner. Roads of purely local importance are constructed and maintained by local authorities. In many cases, construction is financed by the State Government by means of Treasury loans. Other roads may be built by the Public Estate Improvement Branch of the Lands Department in order to open up areas of previously inaccessible or undeveloped country.

(ii) *Length of Roads.* (a) *Declared Roads.* The total length of declared roads in Queensland at 30th June, 1963, was 24,120 miles; comprising State highways, 6,262 miles; main roads, 5,130 miles; developmental roads, 4,263 miles; and secondary roads, 8,465 miles. By the amendments to the Main Roads Acts published in the Government Gazette of 6th April, 1959, mining access, farmers' and tourists roads became secondary roads, and the provisions relating to the declaration of tourist tracks were repealed.

(b) *Surface of Roads.* The total length of roads and streets in Queensland at 30th June, 1963 was:—bitumen or concrete, 11,935 miles; gravel or stone, 19,232 miles; formed only, 40,498 miles; cleared only, 46,617 miles; total, 118,282 miles.

(iii) *Department of Main Roads.* (a) *General.* During 1961–62, the Department completed 1,108 miles of roads, including new construction and stage construction. Bridges of all types to a length of 5,783 linear feet were constructed, bringing the total constructed by the Department at 30th June, 1962, to 222,585 feet. In addition, at 30th June, 1962, 6,952 feet were under construction.

(b) *Receipts and Payments.* The funds of the Department of Main Roads are obtained chiefly from motor vehicle registration and collections, fees, etc. under the Transport Acts, contributions under the Commonwealth Aid Roads Acts, and loans, grants and advances from the State Government. The total receipts and payments during each of the years 1957–58 to 1961–62 are shown below.

DEPARTMENT OF MAIN ROADS, QUEENSLAND: RECEIPTS AND PAYMENTS  
(£)

Particulars	1957–58	1958–59	1959–60	1960–61	1961–62
<b>RECEIPTS</b>					
Motor vehicle registration, Transport Acts collections, fees, etc. . .	4,797,882	5,036,414	5,404,547	5,568,994	5,813,480
Loans from State Government . .	125,000	621,865	..	..	909,939
Grants, advances, refunds, etc. from State Government . .	47,414	241,861	325,755	357,942	909,012
Commonwealth Aid Roads and Works Acts . .	7,020,237	7,353,215	7,912,040	8,268,742	9,601,704
Maintenance repayments—local authorities . .	611,124	648,882	707,813	723,187	746,796
Hire, rent, sales of plant, etc. . .	945,525	1,126,739	1,250,205	1,219,599	1,285,370
Other . .	479,362	548,287	601,415	523,413	608,554
<b>Total . . . . .</b>	<b>14,026,544</b>	<b>15,577,263</b>	<b>16,201,775</b>	<b>16,661,877</b>	<b>19,874,855</b>
<b>PAYMENTS</b>					
Permanent road works and surveys (a)	8,027,715	8,680,460	11,380,919	10,826,353	13,185,284
Maintenance of roads . .	2,556,029	2,790,004	2,890,698	2,456,530	2,878,765
Plant, machinery, buildings, etc. (including plant maintenance) . .	1,239,085	1,000,793	1,345,167	1,394,807	1,519,674
Loans—Interest . .	208,498	198,098	156,542	107,490	84,058
Redemption . .	256,287	330,561	329,722	318,288	321,978
Administration and other . .	1,061,891	1,157,569	1,270,686	1,521,589	1,787,477
<b>Total . . . . .</b>	<b>13,349,505</b>	<b>14,157,485</b>	<b>17,373,734</b>	<b>16,625,057</b>	<b>19,777,236</b>

(a) Includes grants to local authorities for road purposes.

5. South Australia.—(i) *General.* The Highways and Local Government Department is administered by the Commissioner of Highways, who is empowered, subject to the approval of the Minister of Roads, to undertake the construction, maintenance and protection of the principal roads of the State, allocate grants to councils for roadworks and supervise the expenditure of these grants, and assist Councils to purchase road-making plant and to defray the cost of roadworks. In addition, the Commissioner advises Councils on technical questions concerning the construction, maintenance or repair of roads.

(ii) *Source of Funds.* Funds of the Department are derived mainly from the Highways Fund, into which are paid the proceeds from motor vehicle registration and drivers' licences (less cost of collection), appropriations from loan funds, repayments of advances made to Councils and contributions by the Municipal Tramways Trust, and from contributions under the Commonwealth Aid Roads Acts.

(iii) *Length of Roads.* In South Australia, there are only two classifications of roads. These are main roads proclaimed under the provisions of the Highways Act and all other roads, commonly designated district roads. At 30th June, 1963, there were 8,156 miles of proclaimed main roads and 79,160 miles of district roads, totalling 87,316 miles. Lengths of road classified by surface were as follows:—bitumen or concrete, 6,402 miles; gravel or stone, 12,457 miles; formed only, 10,380 miles; cleared only, 58,077 miles.

Decreases since last year in the lengths of proclaimed main roads and "formed only" roads have been caused by the reclassification of portions of these roads. The figure of 79,160 miles of district roads includes approximately 24,500 miles of tracks outside local government areas, including tracks on leasehold properties, not previously included in road mileage figures.

(iv) *State Highways and Local Government Department, Receipts and Payments.* The following table shows particulars of receipts and payments, during the years 1958-59 to 1962-63, of funds controlled by the Highways and local Government Department.

**HIGHWAYS AND LOCAL GOVERNMENT DEPARTMENT, SOUTH AUSTRALIA:  
RECEIPTS AND PAYMENTS**

(£)

Particulars	1958-59	1959-60	1960-61	1961-62	1962-63
<b>RECEIPTS</b>					
Motor vehicles registration, licences, fees ..	3,748,763	3,942,087	4,111,494	4,293,105	4,537,011
Commonwealth Aid Roads Acts ..	4,361,892	4,923,122	5,128,065	5,752,281	6,200,066
Loans from State Government ..	..	85,000	90,000	200,000	290,000
Other(a) .. .. .	443,577	445,484	449,333	533,812	582,788
<b>Total .. .. .</b>	<b>8,554,232</b>	<b>9,395,693</b>	<b>9,778,892</b>	<b>10,779,198</b>	<b>11,609,865</b>
<b>PAYMENTS</b>					
Construction and reconstruction of roads and bridges(b) .. .. .	5,096,450	6,113,227	6,465,892	7,307,955	7,678,880
Maintenance(a)(b) .. .. .	2,174,320	2,183,012	2,095,253	2,337,218	2,487,972
Recoups to Consolidated Revenue Fund—interest, debt redemption and exchange .. .. .	205,361	213,631	215,539	227,041	242,766
Advances to local and semi-governmental authorities .. .. .	464,723	301,929	702,718	420,157	580,879
Stores, plant, machinery, suspense accounts, etc.(c)	514,886	439,732	495,036	406,868	-71,974
<b>Total .. .. .</b>	<b>8,455,740</b>	<b>9,251,531</b>	<b>9,974,438</b>	<b>10,699,239</b>	<b>10,918,523</b>

(a) Includes reimbursement works for Commonwealth Government. (b) Includes administration expenses. (c) Represents gross repayments less recoveries by charges to works on account of depreciation and materials used.

The total expenditure, both revenue and loan, by State and local governments on roads, streets and bridges in South Australia during the years 1958-59 to 1961-62 was, respectively, £10,556,000, £12,277,000, £13,517,646, and £14,370,714.

6. Western Australia.—(i) *General.* Work connected with road construction and maintenance and associated projects in Western Australia is undertaken by the State Government, through the Main Roads Department, and by local government authorities throughout the State.

Under the provisions of the Main Roads Act, the Main Roads Department was established in 1930 to replace the Main Roads Board originally constituted as a central road authority in 1926. The Department operates under the *Main Roads Act, 1930–1961*, and is administered by a Commissioner of Main Roads responsible to the Minister for Works. The Act makes provision for public roads in the categories of main roads, controlled-access roads and developmental roads. An additional category, that of important secondary roads, is used by the Department in determining its works programme.

Main roads are those which provide communication between a large producing area, either actual or potential, and its market or nearest port or railway station, between two or more such areas, between large centres of population, or between the capital city and a large producing area or a large centre of population. Controlled-access roads do not permit direct access from abutting property and may be entered and departed from only at certain selected road connexions located at points which are considered to serve best the traffic for which the controlled-access roads were designed. Developmental roads are those which serve to initiate or increase the development of an area. Important secondary roads are those which, though originally classified as developmental, have come to be used consistently by through traffic and therefore warrant a special allocation of funds by the Main Roads Department. The Act provides that, on the recommendation of the Commissioner, any road may be proclaimed a main road and any main road may cease to be a main road.

The construction and maintenance of main roads and controlled-access roads are the responsibility of the Main Roads Department. The Department also makes substantial financial provision for the construction and maintenance of important secondary roads and for the construction of developmental roads.

Within its own district, each local government authority is responsible for the provision and upkeep of roads other than those provided by the Main Roads Department. In addition, the local authority is required by the Main Roads Act to maintain any developmental road situated in its district.

(ii) *Length and Surface of Roads.* (a) *General.* The total length of roads and streets in Western Australia at 30th June, 1963, was made up as follows:—bitumen or concrete, 10,582 miles; gravel or stone, 21,137 miles; formed only, 43,112 miles; natural state (cleared only), 28,586 miles; total, 103,417 miles.

(b) *Roads under Main Roads Act.* The total length of constructed roads for which financial provision was made by the Main Roads Department, at 30th June, 1963, was:—main roads, 3,471 miles, including 5 miles of controlled-access roads; important secondary roads, 7,647 miles; and developmental roads, 24,412 miles. In addition, there were 71 miles gazetted as controlled-access roadway as yet not constructed.

(iii) *Main Roads Department.* (a) *General.* During the year 1962–63 the activities of the Department included clearing, 2,219 miles; forming, 3,174 miles; gravelling, 1,896 miles; reconditioning, 6,092 miles; and stabilizing, 247 miles. In addition, 1,667 miles were primed and sealed (including widening) and 24 bridges constructed.

(b) *Receipts and Payments.* The funds of the Main Roads Department are derived principally from allocations made under the *Commonwealth Aid Roads Act 1959*. In addition, financial assistance was given by the Commonwealth Government to the extent of £500,000 in 1961–62 and £700,000 in 1962–63 for the improvement of roads used for the transport of beef cattle in the Kimberley District. Legislation during 1962 provided for an extension of this special assistance for a total of five years, involving in all £3,450,000, subject to the expenditure by the State of the same amount on such projects during this period. Other sources of income include one-half of the net amount of traffic fees collected in the Metropolitan Traffic Area and an allocation of Department of Transport funds. (Outside the Metropolitan Traffic Area, motor vehicle licence fees are collected and retained by the local authorities.) Receipts and payments for the years 1958–59 to 1962–63 are shown in the following table.

**MAIN ROADS DEPARTMENT, WESTERN AUSTRALIA:  
RECEIPTS AND PAYMENTS**

(£)

Particulars	1958-59	1959-60	1960-61	1961-62	1962-63
<b>RECEIPTS</b>					
Motor vehicle registration, licences, fees, etc. ..	488,386	539,459	486,948	486,948	486,948
Central Trust Fund(a) .. .. .	..	351,604	707,569	1,060,511	1,399,567
Commonwealth Aid Roads Acts .. .. .	7,555,565	7,687,130	7,428,808	7,752,996	8,128,436
Commonwealth Aid Roads Acts—matching grants(a) ..	..	351,591	703,533	1,051,647	1,405,521
Western Australia Grant (Beef Cattle Roads) Act ..	..	..	..	500,000	700,000
Commonwealth-State Grant to restoration of flood-damaged roads .. .. .	..	..	..	320,000	..
Recoups from other authorities .. .. .	152,754	183,106	217,196	246,920	370,003
Other .. .. .	5,254	4,777	3,179	5,331	6,789
<b>Total .. .. .</b>	<b>8,201,959</b>	<b>9,117,667</b>	<b>9,547,233</b>	<b>11,424,353</b>	<b>12,497,264</b>

(b)

<b>PAYMENTS</b>					
Construction and reconstruction of roads and bridges(c) .. .. .	5,763,882	6,434,690	5,447,028	6,469,990	7,266,896
Maintenance of roads and bridges(c) .. .. .	570,054	910,846	974,053	1,086,042	1,007,705
Grants to local authorities, etc. .. .. .	1,078,395	1,182,255	1,263,722	1,436,651	1,272,822
Payments to local authorities from Central Road Trust Fund and Commonwealth matching grants ..	..	..	403,799	724,873	946,233
Transfer to State Consolidated Revenue .. .. .	70,000	70,000	70,000	70,000	70,000
Plant, machinery, etc. .. .. .	222,864	160,749	368,760	240,141	485,261
Other(c) .. .. .	288,608	221,817	243,896	387,522	437,796
<b>Total .. .. .</b>	<b>7,993,803</b>	<b>8,980,357</b>	<b>8,771,258</b>	<b>10,415,219</b>	<b>11,486,713</b>

(a) Includes amounts to be distributed to metropolitan and country local authorities early in the following year. (b) Excludes £700,000 advance from State Treasury. (c) Includes administration and expenditure on hire and maintenance of road construction plant, etc., and on purchase of materials.

7. Tasmania.—(i) *General.* Under the *Road Construction (Transfer of Functions) Act 1951*, which came into operation on 1st July, 1951, the control of the construction and maintenance of roads and certain road making plant was vested in the Minister for Lands and Works. Works authorized by the Minister in respect of roads classified as State highways, tourist, and developmental roads are constructed by the Department of Public Works and financed from the State Highways Trust Fund, into which are paid the proceeds from Commonwealth Aid Roads grants, motor vehicle registration fees and taxes, licence fees for drivers and public transport, and other moneys made available by Parliament. In addition, provision was made under the *Road Construction (Transfer of Functions) Act* for certain works authorized by the Transport Commission to be carried out and constructed by the Department. The expenditure by the Public Works Department during 1962-63 on the construction and maintenance of roads, tracks and bridges amounted to £6,199,000, of which £3,933,000 was charged to road funds, £30,000 to revenue, £1,937,000 to loan and £299,000 to other funds. Except in special cases, municipal councils bear the cost of maintaining country roads and a proportion of the cost of main and secondary roads.

(ii) *Length of Roads.* (a) *Classified Roads.* The mileages of classified roads in Tasmania at 30th June, 1963, were as follows:—State highways, 1,171 miles; main roads, 662 miles; secondary roads, 196 miles; tourist roads, 46 miles; and other roads, 138 miles. The total length of State roads in Tasmania was 2,213 miles and the length of all other roads, 9,827 miles. The mileages of sealed roads, and their proportions to the respective totals were:—State highways, 799 miles (68 per cent.); main roads, 393 miles (59 per cent.); and other roads, 74 miles (19 per cent.). The total length of sealed State roads was 1,266 miles (57 per cent.). The total length of non-State sealed roads was 994 miles (10 per cent.). The total length of all sealed roads in the State was 2,260 miles (19 per cent.).

(b) *Surface of Roads.* The length of all roads in Tasmania, including those with surfaces of lower grade, at 30th June, 1963, was as follows:—bitumen or concrete, 2,260 miles; gravel or stone, 8,292 miles; formed only and cleared only, 1,488 miles; total, 12,040 miles.

(iii) *Receipts and Payments—Combined Road Funds.* The table below shows particulars of the receipts and payments of the combined Road Funds for the years 1958–59 to 1962–63.

## ROAD FUNDS, TASMANIA: RECEIPTS AND PAYMENTS

(£)

Particulars	1958–59	1959–60	1960–61	1961–62	1962–63
RECEIPTS					
Motor vehicle taxation and registration, licences, fees, fines, etc. ..	1,049,463	1,112,674	1,162,869	1,254,327	1,416,371
Commonwealth Aid Roads and Works Acts .. .. .	1,948,491	2,183,461	2,299,992	2,500,008	2,700,000
Recoups from local authorities, etc. ..	9,641	9,384	8,555	8,515	9,538
State Loan Fund .. .. .	705,630	1,168,558	2,461,289	2,062,319	1,927,128
Hire of plant .. .. .	1,181,032	1,273,535	1,393,102	1,452,402	1,474,373
Other .. .. .	89,219	107,803	376,795	(a)496,033	(a)341,174
<b>Total .. .. .</b>	<b>4,983,476</b>	<b>5,855,415</b>	<b>7,702,602</b>	<b>7,773,604</b>	<b>7,868,584</b>
PAYMENTS					
Construction and reconstruction of roads and bridges .. .. .	2,571,412	3,052,787	4,565,047	4,591,019	4,900,631
Maintenance .. .. .	1,190,902	1,325,329	1,306,922	1,258,856	1,283,598
Other works connected with transport .. .. .	14,659	18,028	36,162	19,001	22,836
Grants to local authorities, etc. ..	9,657	9,195	14,265	(b)117,461	(b) 25,157
Purchase, hire and maintenance of plant .. .. .	1,232,912	1,388,877	1,528,885	1,459,697	1,535,092
Other .. .. .	61,427	313,189	365,194	85,881	73,482
<b>Total .. .. .</b>	<b>5,080,969</b>	<b>6,107,405</b>	<b>7,816,475</b>	<b>7,531,915</b>	<b>7,840,796</b>

(a) Includes Commonwealth Employment Stimulation Grant (£366,956 in 1961–62, and £253,777 in 1962–63). (b) Include grants under Commonwealth Employment Stimulation Grant (£103,456 in 1961–62, and £11,130 in 1962–63).

8. *Northern Territory.*—Information relating to the length of roads in the Northern Territory may be found in Chapter V. Territories, of this Year Book (*see* p. 102).

9. *Summary of Roads used for General Traffic.*—(i) *Proclaimed or Declared Roads.* The table hereunder is a summary of the roads proclaimed or declared under the Acts of the several States relative to the operations of the central road authorities, and shows the lengths of various classes proclaimed or declared as at 30th June, 1963. The central road authority in each State assumes responsibility under the Act for the whole, or a proportion, of the cost of construction and/or maintenance of these roads, the extent varying from State to State and with the class and locality of the roads. Before proclamation of a main road, consideration is given, in general, to the following points:—availability of funds; whether the road is, or will be, within one of several classes of main trunk routes; whether the district is, or will be, sufficiently served by railways. Provision is also made in some States for the declaration of roads other than main roads. The absence of a particular class in any State does not necessarily imply that there are no roads within that State that might be so classified; the classes are restricted only to roads proclaimed or declared under the Acts. A further point to make is that, through various causes, e.g. insufficiency of funds, man-power or materials, etc., construction or maintenance may not keep pace with gazettals of mileages, and, therefore, the condition of a road may not match its status.

PROCLAIMED OR DECLARED ROADS: LENGTHS, 30th JUNE, 1963  
(Miles)

Class of road	N.S.W.	Vic.	Q'land	S. Aust.	W. Aust.	Tas.	Total
State highways .. .. .	6,532	4,474	6,262	} 8,156	3,471	} 1,171	} 60,725
Trunk roads .. .. .	4,116	} 9,118	5,130				
Ordinary main roads .. .. .	11,633						
<b>Total Main Roads .. .. .</b>	<b>22,281</b>	<b>13,592</b>	<b>11,392</b>	<b>8,156</b>	<b>3,471</b>	<b>1,833</b>	<b>60,725</b>
Secondary roads .. .. .	(a) 115	..	(b) 8,465	..	7,647	196	16,423
Developmental roads .. .. .	3,057	..	4,263	..	c 24,412	..	31,732
Tourist roads .. .. .	70	444	..	..	..	46	560
Other roads .. .. .	..	(d) 489	..	..	71	(e) 138	698
<b>Total Other Roads .. .. .</b>	<b>3,242</b>	<b>933</b>	<b>12,728</b>	<b>..</b>	<b>32,130</b>	<b>380</b>	<b>49,413</b>
<b>Grand Total .. .. .</b>	<b>25,523</b>	<b>14,525</b>	<b>24,120</b>	<b>8,156</b>	<b>35,601</b>	<b>2,213</b>	<b>110,138</b>

(a) Metropolitan only.

(b) Includes mining access roads, farmers' roads and tourist tracks.

(c) Maintenance of these roads is the responsibility of the several local authorities.

(d) Forest roads and by-pass roads.

(e) Subsidized roads.

(ii) *Surface of Roads.* The following table represents an attempt to classify all the roads used for general traffic in Australia, at the latest dates available, according to States and Territories and to certain broad surface groups. The figures in the table for the States are obtained from the Deputy Commonwealth Statistician in each State, and are derived mainly from local government sources.

ALL ROADS USED FOR GENERAL TRAFFIC: LENGTHS, 30th JUNE, 1963  
(Miles)

Surface of roads	N.S.W.	Vic.(a)	Q'land	S. Aust.	W. Aust.	Tas.	N. Terr.	A.C.T.	Total
Bitumen or concrete ..	23,468	23,721	11,935	6,402	10,582	2,260	1,429	352	80,149
Gravel, crushed stone or other improved surface ..	45,513	31,501	19,232	12,457	21,137	8,292	901	177	139,210
Formed only ..	28,660	21,319	40,498	10,380	43,112	} 1,488	{ 1,418	86	} 344,206
Cleared only ..	33,499	23,540	46,617	58,077	28,586				
<b>Total ..</b>	<b>131,140</b>	<b>100,081</b>	<b>118,282</b>	<b>87,316</b>	<b>103,417</b>	<b>12,040</b>	<b>10,674</b>	<b>615</b>	<b>563,565</b>

(a) 30th September, 1963.

10. *Aggregate Net Expenditure on Roads and Bridges in Australia.*—In most States, there are three classes of authorities concerned with roads and bridges, the State Government, the central road authority and numerous local government bodies. The Commonwealth Government, in addition to the grants it makes to the States for road purposes, is concerned with roads in the Northern Territory and the Australian Capital Territory and roads of access to Commonwealth property in the various States. Some information relating to Commonwealth grants to the States for road purposes and particulars of the expenditure on roads and bridges by local government bodies and the central road authorities are given in preceding sections of this chapter.



Most of these authorities may expend money directly on road construction or indirectly by means of grants and payments to other authorities. These indirect payments, if included in an aggregate, would duplicate expenditure; this, together with the fact that some authorities are unable to supply separate information concerning their road expenditure, makes it difficult to compile precise statistics of aggregate expenditure on roads and bridges.

The information in the following table, which is partly estimated and which excludes the main indirect payments, provides an approximate measure of the aggregate net expenditure by all public authorities on roads and bridges in Australia during each of the years ended 30th June, 1959 to 1963. The figures cover expenditure from revenue and loan funds on the construction, reconstruction and maintenance of roads and bridges, and direct administration but not debt charges. Because of the difficulties associated with the indirect payments mentioned above, it is not possible to give separate net details for each authority.

**PUBLIC AUTHORITY NET EXPENDITURE ON ROADS AND BRIDGES**  
(£ million)

Year	N.S.W.	Victoria	Q'land	S. Aust.	W. Aust.	Tasmania	Northern Territory and A.C.T.	Aust.
1958-59 ..	38	29	18	11	9	5	2	112
1959-60 ..	42	34	23	12	11	6	2	130
1960-61 ..	50	37	24	13	10	8	3	145
1961-62 ..	52	39	24	14	12	8	4	153
1962-63 ..	53	36	27	17	12	9	5	159

### § 5. Water Supply, Sewerage and Drainage

NOTE.—The information in this section relates primarily to the metropolitan areas and provincial cities and towns. For information on water supply and irrigation in rural areas see Chapter VIII. Water Conservation and Irrigation.

1. New South Wales.—(i) *General.* The two largest domestic water supply and sewerage systems are controlled by statutory boards, each consisting of a president and a vice-president appointed by the State Government, and five members elected by local councils. These are (a) the Metropolitan Water, Sewerage and Drainage Board, which administers the systems in the County of Cumberland, i.e. in Sydney and in the surrounding districts, and, in addition, has jurisdiction over territory extending along the South Coast beyond Wollongong to Lake Illawarra and Shellharbour, and (b) the Hunter District Water Board serving the Newcastle-Maitland-Cessnock areas. At Broken Hill, a similar board includes two representatives of the mining companies. Other systems, apart from irrigation projects and water storage systems administered by the State Government, are controlled by county, municipal or shire councils.

(ii) *Water Supply—to 30th June, 1963.* (a) *Metropolitan.* The storage reservoirs of the metropolitan system, with a combined available capacity of 577,122 million gallons, drain catchment areas of 3,856 square miles (Warragamba, 3,480 square miles, Upper Nepean, 347 square miles, and Woronora, 29 square miles). The development of a water supply system on the Warragamba River was completed with the official opening of the Warragamba Dam in October, 1960. This dam, constructed in concrete, has a storage capacity of 452,505 million gallons. Its safe net draught is estimated to be 285 million gallons a day. A hydro-electric power station at the dam generated 306 million kWh in 1962-63. At 30th June, 1963, there were 161 service reservoirs in use with a combined capacity of 632 million gallons. Rating for water for 1962-63 was 10d. in the £1 of assessed annual value and the charge for water measured by meters 2s. 9d. per 1,000 gallons.

(b) *Hunter District.* The water supply is drawn principally from two sources:—the Chichester Reservoir, with a storage capacity of about 5,000 million gallons and draining a catchment of 76 square miles, and the Tomago Sandbeds, which extend northerly along the coast towards Port Stephens. Two other sources of supply are being developed. Service reservoirs and tanks distributed throughout the Water Supply District have a total storage capacity of 117 million gallons. Water rating for 1962–63 was 1s. 5½d. in the £1 on assessed annual value for occupied properties and 1s. 2½d. in the £1 for unoccupied properties. The price of water to domestic and industrial consumers is 2s. 9d. per 1,000 gallons.

(c) *Water Supplied, etc.* The following tables show, for the Metropolitan and Hunter District systems, the number of properties, the estimated population supplied, and other details.

## WATER SUPPLY, METROPOLITAN(a): SERVICES

Year	Improved properties for which water mains available	Estimated population supplied	Average daily consumption	Total consumption for the year	Average daily consumption		Length of mains	Number of meters
					Per property	Per head of estimated population		
		'000	Mill. gals.	Mill. gals.	Gallons	Gallons	Miles	
1958–59 ..	579,900	2,212	198.9	72,624	348	91.3	6,246	362,130
1959–60 ..	598,893	2,264	200.9	73,529	335	88.7	6,450	382,180
1960–61 ..	620,944	2,341	219.1	79,988	353	93.6	6,664	411,731
1961–62 ..	634,139	2,481	220.7	80,556	348	89.0	6,945	430,588
1962–63 ..	653,674	2,544	233.6	85,282	357	91.8	7,173	438,585

(a) County of Cumberland, City of Greater Wollongong and Shellharbour Municipality.

## WATER SUPPLY, HUNTER DISTRICT(a): SERVICES

Year	Properties supplied	Estimated population supplied	Average daily consumption	Total consumption for year	Average daily consumption		Length of mains
					Per property	Per head of estimated population	
			Mill. gals.	Mill. gals.	Gallons	Gallons	Miles
1958–59 ..	81,398	274,881	28.2	10,281	346	102.5	1,439
1959–60 ..	84,437	285,346	28.6	10,474	339	100.3	1,460
1960–61 ..	86,032	290,530	29.7	10,854	346	102.4	1,483
1961–62 ..	87,792	296,502	31.7	11,555	361	106.8	1,512
1962–63 ..	89,283	301,580	36.6	13,352	410	121.3	1,551

(a) Newcastle, Maitland and Cessnock areas.

(iii) *Sewerage and Drainage—*to 30th June, 1963. (a) *Metropolitan.* Sydney and suburbs are served by three major sewerage systems and seven minor systems, consisting of six outfalls discharging directly into the Pacific Ocean and four treatment works. In addition, seven centres outside the metropolitan area (Camden, Campbelltown, St. Mary's, Port Kembla, Richmond, Warragamba township and Wollongong) are served by local treatment works.

Stormwater drainage channels under the control of the Metropolitan Water, Sewerage and Drainage Board at 30th June, 1963, were 179 miles long. Sewerage rating for 1962–63 was 9½d. in the £1 of assessed annual value, and drainage rating 1½d. in the £1.

(b) *Hunter District.* The main sewerage system serves the City of Newcastle and discharges into the Pacific Ocean at Merewether Gulf. There are also local treatment works at Maitland, Cessnock and some of the outlying districts.

Sewerage rates for 1962–63 were 1s. 0½d. in the £1 of assessed annual value of occupied lands and 9½d. in the £1 for unoccupied lands, and drainage rates (on certain areas served) 1½d. in the £1.

(c) *Particulars of Services.* The following table gives, for the Metropolitan system, details of sewerage services and stormwater drains.

**SEWERAGE AND DRAINAGE, METROPOLITAN(a): SERVICES**

At 30th June—				Improved properties for which sewerage available	Estimated population served	Lengths of sewers	Length of stormwater channels
					'000	Miles	Miles
1959..	..	..	..	379,069	1,520	3,791	180
1960..	..	..	..	395,869	1,560	4,021	180
1961..	..	..	..	412,034	1,620	4,231	180
1962..	..	..	..	426,333	1,710	4,489	178
1963..	..	..	..	451,997	1,780	4,763	179

(a) County of Cumberland, City of Greater Wollongong and Shellharbour Municipality.

At 30th June, 1963, 63,707 premises had been connected to the Hunter District Water Board's sewerage system (Newcastle-Maitland-Cessnock areas). The total length of sewers under the Board's control was 897 miles, and the length of drains was 50 miles.

(iv) *Finances, Metropolitan and Hunter District Systems.* The following table shows the debt, revenue and expenditure of the Metropolitan Water, Sewerage and Drainage Board and the Hunter District Water Board for each of the services of water supply, sewerage and drainage during 1962-63, and for the three services combined for the years 1958-59 to 1961-62.

**WATER SUPPLY, SEWERAGE AND DRAINAGE, METROPOLITAN AND HUNTER DISTRICT: FINANCES**

(£)

Year	Capital debt at 30th June	Revenue	Expenditure			Total	Surplus
			Working expenses (a)	Interest and exchange	Debt redemption		

**METROPOLITAN(b)**

1962-63—							
Water ..	123,942,126	13,827,446	6,094,307	5,591,781	2,133,043	13,819,131	8,315
Sewerage ..	62,259,124	7,855,953	4,076,395	2,754,871	1,020,719	7,851,985	3,968
Drainage ..	1,686,960	411,910	314,160	72,225	23,524	409,909	2,001
<b>Total, 1962-63</b>	<b>187,888,210</b>	<b>22,095,309</b>	<b>10,484,862</b>	<b>8,418,877</b>	<b>3,177,286</b>	<b>22,081,025</b>	<b>14,284</b>
1961-62	170,185,819	19,825,616	9,350,043	7,445,872	3,013,495	19,809,410	16,206
1960-61	155,122,228	17,247,400	8,094,170	6,572,955	2,568,320	17,235,445	11,955
1959-60	140,992,864	15,662,131	7,739,582	5,721,738	2,194,286	15,655,606	6,525
1958-59	127,090,931	14,243,408	7,219,250	5,107,248	1,904,612	14,231,110	12,298

**HUNTER DISTRICT(c)**

1962-63—							
Water ..	22,753,399	1,984,218	836,426	900,967	244,535	1,981,928	2,290
Sewerage ..	6,928,707	860,612	442,936	301,664	114,091	858,691	1,921
Drainage ..	283,450	61,547	40,629	13,010	2,574	56,213	5,334
<b>Total, 1962-63</b>	<b>29,965,556</b>	<b>2,906,377</b>	<b>1,319,991</b>	<b>1,215,641</b>	<b>361,200</b>	<b>2,896,832</b>	<b>9,545</b>
1961-62	27,703,757	2,733,148	1,395,429	1,050,626	264,504	2,710,559	22,589
1960-61	25,336,784	2,378,860	1,265,923	866,746	236,432	2,369,101	9,759
1959-60	22,638,498	2,287,793	1,197,373	738,436	343,128	2,278,937	8,856
1958-59	20,053,737	2,133,500	1,179,652	671,151	246,480	2,097,283	36,217

(a) Includes provision for renewals, long service leave, etc. (b) County of Cumberland, City of Greater Wollongong, Shellharbour Municipality. (c) Newcastle-Maitland-Cessnock areas.

(v) *Country Water Supply and Sewerage Systems.* (a) *Local Government.* At 31st December, 1961, country water supply services were conducted or under construction by 51 municipalities, 82 shires and 5 county councils, and country sewerage services by 50 municipalities and 36 shires. The capital indebtedness of these schemes was £31,987,129 at 31st December, 1961, namely, £21,787,982 for water and £10,199,147 for sewerage. Debt of the municipalities amounted to £17,151,590, shires to £10,388,381 and county councils to £4,447,158. Government advances amounting to £470,813 are included in these figures. Aggregate income and expenditure amounted to £5,377,746 and £4,205,997, respectively, in 1961.

(b) *Other.* The water supply and sewerage services for Broken Hill are operated by a statutory board, the Broken Hill Water Board. Its capital indebtedness at 31st December, 1962, was £3,482,459. In 1962, income (excluding subsidies, State Government, £86,510 and mining companies, £257,472) amounted to £280,452 and expenditure (excluding debt redemption, £207,969) amounted to £413,560.

The following country water supply systems—South-West Tablelands, Junee and Fish River—are administered by the Department of Public Works. These supply water in bulk to municipalities and shires, the Railways Department, and other large consumers. Only a small quantity is sold direct to private consumers. The capital indebtedness of these systems was £6,950,274 at 31st December, 1962.

The Mulwala Water Supply and Sewerage Service was constructed as an urgent war-time work for the Commonwealth, and the Bethungra Water Supply System is administered by the Department of Public Works in conjunction with the Junee supply.

2. *Victoria.*—(i) *Melbourne and Metropolitan Board of Works.* (a) *General.* The Board consists of a Chairman and 51 Commissioners elected to represent the municipalities which lie wholly or partly within the metropolitan area. The Chairman is elected by the Commissioners for a four-year term. The principal functions of the Board are:—to control and manage the metropolitan water supply system; to provide the metropolitan area with an efficient main and general sewerage system; to deal with main drains and main drainage works; to control and manage the rivers, creeks and watercourses within the metropolitan area, and to carry out the functions of a permanent planning authority.

(b) *Water Supply.* There are six storage reservoirs serving the metropolitan area—Yan Yean, 7,233 million gallons (available for consumption, 6,649 million gallons); Toorourong, 60 million gallons; Maroondah, 6,289 million gallons (4,870 million gallons); O'Shannassy, 930 million gallons; Silvan, 8,853 million gallons (8,823 million gallons); and Upper Yarra, 45,400 million gallons (44,120 million gallons); total 68,765 million gallons (65,452 million gallons). Service reservoirs number 37, with a total capacity of 366 million gallons.

The water rate levied by the Board in 1962–63 was 8d. in the £1 on the net annual value of the properties served. The charge for water consumed in excess of the quantity which, at 2s. 0d. per 1,000 gallons, would equal the assessed water rates on each property, was 2s. 0d. per 1,000 gallons. The following table shows particulars of Melbourne metropolitan water supply services for the years 1958–59 to 1962–63.

WATER SUPPLY, MELBOURNE: SERVICES

Year	Number of houses supplied	Estimated population supplied	Average daily consumption	Total consumption for the year	Average daily consumption		Length of aqueducts, etc., mains and reticulation	Number of meters
					Per house	Per head of estimated population		
		'000	Mill. gals.	Mill. gals.	Gallons	Gallons	Miles	
1958–59 ..	483,410	1,740	134.0	48,917	277	77.0	4,942	344,702
1959–60 ..	496,841	1,789	145.3	53,169	292	81.2	5,109	366,905
1960–61 ..	510,078	1,836	152.9	55,822	300	83.3	5,245	392,396
1961–62 ..	519,216	1,869	157.6	57,521	304	84.3	5,477	422,318
1962–63 ..	547,123	1,981	151.3	55,225	277	76.4	5,622	460,866

(c) *Sewerage and Drainage.* Particulars of sewerage and drainage services for 1958-59 to 1962-63 are shown below. The rate levied in 1962-63 in respect of sewerage was 1s. 2d. in the £1 on the net annual value of the property served. The drainage rate was 2d. in the £1.

## SEWERAGE AND DRAINAGE, MELBOURNE: SERVICES

Year	Number of houses for which sewers are provided	Estimated population for which sewers are provided	Average daily pumping	Total sewage pumped for the year	Average daily pumping		Length of sewers, etc.	Length of main drains
					Per house	Per head of estimated population		
		'000	Mill. gals.	Mill. gals.	Gallons	Gallons	Miles	Miles
1958-59 ..	378,738	1,292	78.7	28,716	207.8	60.9	3,350	176
1959-60 ..	384,844	1,308	83.2	30,459	216.2	63.6	3,458	181
1960-61 ..	395,109	1,331	88.1	32,159	223.0	66.2	3,550	193
1961-62 ..	399,890	1,361	83.0	30,308	207.6	61.0	3,665	198
1962-63 ..	422,899	1,402	84.9	30,997	200.8	60.6	3,769	205

The metropolitan sewerage system consists of the main system (serving an area of 87,947 acres) and five subsidiary systems—the Sunshine system (serving an area of 2,354 acres), the Laverton system (serving an area of 108 acres), the Kew system (serving an area of 112 acres), the South-eastern system (serving an area of 3,500 acres in Cheltenham, Parkdale, Mentone and Mordialloc), and the Maribyrnong system (serving an area of 167 acres). The Metropolitan Sewage Farm, 26,809 acres in extent and situated about 24 miles south-west of Melbourne beyond the township of Werribee, serves to purify and dispose of approximately 98 per cent. of the sewage flow of the metropolis before its discharge into Port Philip Bay. The total capital cost (less depreciation) of the farm to 30th June, 1963, was £4,356,172. Revenue during 1962-63 amounted to £213,326, cost of sewage disposal to £260,022, trading expenses to £135,085, interest to £226,974, and net cost of sewerage purification to £408,755. These financial particulars are included in the sewerage items of the summary below.

(d) *Finances.* The following table provides for the year 1962-63 a summary of the financial operations of the water supply, sewerage and drainage services conducted by the Melbourne and Metropolitan Board of Works, and of the combined services for the years 1958-59 to 1961-62.

## MELBOURNE AND METROPOLITAN BOARD OF WORKS: FINANCES

(£ )

Service, etc.	Capital cost of works and buildings at 30th June(a)	Revenue	Expenditure				Surplus(+) or deficit(-)
			Working expenses	Interest and exchange	Debt redemption	Total	
Water .. ..	60,726,938	5,573,383	1,785,455	2,989,039	..	4,774,494	+ 798,889
Sewerage ..	53,370,250	5,304,334	1,484,282	2,568,321	..	4,052,603	+ 1,251,731
Drainage ..	10,052,727	836,748	596,217	362,835	..	959,052	- 122,304
General(b) ..	5,064,084	..	1,168,193	..	747,000	1,915,193	- 1,915,193
<b>Total, 1962-63</b>	<b>129,213,999</b>	<b>11,714,465</b>	<b>5,034,147</b>	<b>5,920,195</b>	<b>747,000</b>	<b>11,701,342</b>	<b>+ 13,123</b>
1961-62	117,506,987	10,699,852	4,822,173	5,276,272	594,622	10,693,067	+ 6,785
1960-61	106,667,945	9,157,740	4,021,508	4,724,808	530,679	9,276,995	- 119,255
1959-60	98,098,322	8,463,843	3,845,137	4,221,253	526,802	8,593,192	- 129,349
1958-59	88,466,516	7,564,879	3,471,915	3,681,159	402,969	7,556,043	+ 8,836

(a) Total loan indebtedness—1962-63, £121,371,928.

(b) Statutory and general expenditure not distributed over services.

(ii) *State Rivers and Water Supply Commission. (a) General.* Water supply and conservation throughout Victoria (except for the area controlled by the Melbourne and Metropolitan Board of Works) is the responsibility of the State Rivers and Water Supply Commission. The events leading to the establishment of the Commission, and its works in the spheres of irrigation, domestic and stock water supply to farms, drainage, flood protection and river improvement, have already been described in Chapter VIII.; this section is therefore confined to the Commission's functions in connexion with urban water supply and sewerage.

(b) *Water Supply.* At 30th June, 1963, the Commission provided a reticulated water supply from its own works to 136 cities and towns having a combined population of 200,000 persons.

The principal systems operated by the Commission serve part of the Mornington Peninsula—Dandenong area (about 93,000 people supplied); Bendigo, Castlemaine, etc. (56,000); and about 8,000 people in the Western District. In addition, 10,000 persons in a number of towns in the Bellarine Peninsula receive supply through a Commission-operated distributary system from headworks controlled by the Geelong Waterworks and Sewerage Trust. The Bendigo-Castlemaine supply also provides for the irrigation of 11,000 acres as well as urban requirements in the area.

Outside these areas, the Commission supplies mainly small towns in the north of the State, in areas where it also supplies farms with water for irrigation or domestic and stock purposes.

Capital expenditure by the Commission on urban water supply at 30th June, 1963, was divided between the several systems as follows:—Mornington Peninsula, £9,200,000; Bendigo-Castlemaine, £4,300,000; Bellarine Peninsula, £975,000; Otway System (Western District), £975,000; other, £1,850,000; total, £17,300,000.

In addition to the towns supplied by the Commission, there are approximately 550,000 people in 202 cities and towns throughout the State who get a reticulated water supply from works operated by local authorities.

All these authorities operate under the supervision of the State Rivers and Water Supply Commission, largely because the Government subsidizes their capital expenditure. Most new works are financed from Government loan funds, but in recent years the Geelong Trust and some other local authorities borrowed money privately. In most cases, the local authority controls both headworks and distribution system, but a few large towns—serving about 50,000 people—draw their water from the State Rivers and Water Supply Commission and are concerned only with reticulation of the water. Together, therefore, the Commission and local authorities supply 338 urban centres containing more than 750,000 people. Very few towns of any importance are now without reticulated water supply.

The following table presents the financial position in respect of town water supply at 30th June, 1963.

**TOWN WATER SUPPLY, VICTORIA: CAPITAL LIABILITY, 30TH JUNE, 1963**  
(£'000)

Particulars	Water supply provided by—		
	Local authorities	State Rivers and Water Supply Commission	Total
Government advances .. .. .	23,475	17,300	40,775
Less redemption .. .. .	1,675	175	1,850
<i>Government Advances Outstanding</i> ..	<i>21,800</i>	<i>17,125</i>	<i>38,925</i>
Borne by State .. .. .	4,775	8,975	13,750
Borne locally .. .. .	17,025	8,150	25,175

In addition, about £8,250,000 has been borrowed locally, the Geelong Waterworks and Sewerage Trust having an outstanding liability of £7,089,000 at 30th June, 1963.

The proportion of loan capital borne by the State is much higher in the case of Commission undertakings than for towns supplied by local authorities. This is because most Commission undertakings have been developmental in nature. Besides meeting interest on capital borne by it, the State pays the difference between three per cent. and the actual rate paid on practically all the capital carried locally. The total annual subsidy on country town water supply is currently about £1,250,000.

(c) *Sewerage.* With the exception of the town of Eildon whose sewerage system is controlled directly by the State Rivers and Water Supply Commission, the construction and management of sewerage works in Victoria's country cities and towns are the responsibility of local authorities supervised by the Commission. Except for the Geelong Waterworks and Sewerage Trust and the Latrobe Valley Water and Sewerage Board which have special Acts dealing with their activities, all sewerage authorities operate under the *Sewerage Districts Acts*.

At 30th June, 1963, there were 54 cities and towns with sewerage systems in operation. These contained about 512,000 persons, approximately a third of the total number of residents outside the metropolitan area.

Expenditure on sewerage in Victorian country towns at 30th June, 1963, was approximately £22,220,000, of which some £18,000,000 had been advanced by private lenders. The annual State subsidy on country sewerage in Victoria is currently about £300,000, provided mainly in the form of subsidies on interest rates paid along the same lines as for town water supply. Comparatively little capital is borne directly by the State.

(iii) *Geelong Waterworks and Sewerage Trust.* (a) *General.* The Geelong Waterworks and Sewerage Trust was constituted in 1908 and reconstituted under the *Geelong Waterworks and Sewerage Act* in 1910. It was further reconstituted in September, 1950, to include a government nominee (Chairman), and provision was made for a commissioner to be elected by the ratepayers of the Shire of Corio, making a total of seven commissioners. The amount of loan money which may be raised is limited to £12,000,000 for water supply undertakings, and £5,000,000 for sewerage undertakings. The population supplied is estimated by the Trust at 101,657 persons. This and other general information relates to 30th June, 1963.

(b) *Water Supply.* The Trust operates two systems for gathering and storing water, the water in both systems being brought over fifty miles to Geelong. There are seven storage reservoirs and eleven service basins whose total storage capacity is 8,623 million gallons. The length of water mains and reticulation is 534.5 miles. The total expenditure on water supply to 30th June, 1963, was £6,225,537. General fund expenditure for 1962-63 comprised £147,405 for working expenses and £384,666 for interest, redemption and reserves, while revenue amounted to £548,298. The sinking fund appropriations at June, 1963, amounted to £340,758. The replacement and contingencies reserve amounted to £369,866. There is a water rate of 1s. 7d. in the £1 (with minima of 10s. for vacant land and £1 for tenements) on the net annual value of ratable properties.

(c) *Sewerage Works.* The sewerage scheme consists of a main outfall sewer to the ocean and 277 miles of main and reticulation sewers. The sewerage area is 11,851 acres, and the number of buildings connected within the sewered areas is 22,625. The total expenditure on sewerage works to 30th June, 1963, was £2,551,982. The revenue in 1962-63 amounted to £276,998, and the general fund expenditure comprised £102,946 on working expenses and £169,504 on interest, redemption and reserves. Sinking fund appropriations at June, 1963, were £208,805. Replacement and contingencies reserve amounted to £389,843. A general rate of 1s. 4d. in the £1 is levied on the net annual value of ratable properties.

(iv) *The Ballarat Water Commissioners and the Ballarat Sewerage Authority.* (a) *General.* The body known as the Ballarat Water Commissioners was constituted on 1st July, 1880, and the Ballarat Sewerage Authority on 30th November, 1920. The members of the Water Commissioners constitute the Sewerage Authority. The Commissioners number nine, three (one of whom is chairman) being appointed by the Government, four being elected by the Council of the City of Ballarat, one being elected by the Councils of the Borough of Sebastopol and the Shires of Buninyong and Grenville and one being elected by the Councils of the Shires of Bungaree and Ballarat. General and financial information given herein relates to the year ended 31st December, 1963.

(b) *Water Supply.* The water supply district comprises an area of about 65 square miles, containing a population of about 59,000. The total storage capacity of the seven reservoirs is 5,606 million gallons and the catchment area is 24,182 acres.

The capital cost on construction of the waterworks was £2,776,073 to 31st December, 1963. The liabilities amounted to £1,719,110 at 31st December, 1963, including loans due to the Government totalling £1,587,516. The revenue for the year 1963 was £188,854. Working expenses during 1963 amounted to £103,264 and interest and other charges to £85,001. A water rate of 1s. 0d. in the £1 on the net annual valuation is levied, with a minimum charge of £1 10s. per annum on any ratable property.

(c) *Sewerage.* The Ballarat sewerage district comprises the City of Ballarat and parts of the Shires of Ballarat, Bungaree and Grenville and the Borough of Sebastopol. There are more than 173 miles of sewers. The capital cost of sewerage construction works to 31st December, 1963, was £1,805,960. Two hundred and thirty-two sewerage areas had been declared as at 31st December, 1963. Assessments in the sewerage district numbered 19,727, while those in sewerage areas numbered 15,777. There were 13,358 buildings connected.

The scheme is financed by debenture-issue loans from various financial institutions. The liabilities on account of loans secured for construction at 31st December, 1963, amounted to £1,643,358; redemption payments at that date totalled £355,216. House connexions financed by the Authority numbered 3,955. Revenue during 1963 amounted to £173,359, and expenditure, which included £106,942 for interest and redemption, was £172,319.

A sewerage rate of 1s. 4d. in the £1 on the net annual valuation is levied, with a minimum charge of £3 on any ratable property.

(v) *Latrobe Valley Water and Sewerage Board.* (a) *General.* The Latrobe Valley Water and Sewerage Board was constituted on 1st July, 1954. The Board consists of seven members, namely:—two Government nominees (one of whom is Manager and also Board Chairman), three members elected by water supply, sewerage and river improvement authorities within the Latrobe Valley, and one representative each of the State Electricity Commission of Victoria and the Gas and Fuel Corporation of Victoria.

(b) *Water Supply.* The Board is empowered to construct water supply works within the Latrobe Valley, but at present its main construction activities are confined to the central industrialized areas, particularly around the towns of Morwell and Traralgon. With the completion of the Moondarra reservoir and pipeline, construction activities during 1962–63 showed a marked decrease, capital expenditure totalling £384,583 compared with £1,045,000 in 1961–62. The capital cost of construction of the waterworks was £4,784,510 to 30th June, 1963. Liabilities amounted to £5,297,889, including loans due to the Government totalling £5,121,272. Revenue for the year was £278,620. Working expenses during 1962–63 amounted to £51,592 and interest (including capitalized interest) and other charges to £160,370. The Board does not strike a rate, but supplies consumers, including local water supply authorities, by measure. The quantity supplied during the year ended 30th June, 1963, was 11,352 million gallons.

(c) *Sewerage.* The sewerage system consists of a main outfall sewer, about 52 miles in length. Wastes conveyed consist mainly of industrial wastes, such as paper wastes and gasification wastes, together with small quantities of domestic sewage. The capital cost of the sewerage construction works to 30th June, 1963, was £2,545,881. Liabilities amounted to £2,953,044, including loans due to the Government totalling £2,642,296. Revenue in 1962–63 was £116,033 and expenditure comprised £38,816 working expenses and £76,281 interest and other charges. No sewerage rate is levied, but a charge is made by measure for wastes both from industries and public authorities.

(vi) *Other Sewerage Authorities.* At 30th June, 1963, 71 other sewerage authorities had been constituted under the provisions of the *Sewerage Districts Acts* and systems were in operation in 50 districts.



3. Queensland.—(i) *Brisbane City Council—to 30th June, 1963.* (a) *General.* This organization conducts the water supply and sewerage systems of the City of Brisbane, and also supplies, in bulk, the whole of the water used by the City of Ipswich and the major portion of that used by the City of Redcliffe. Redcliffe also supplements its supply from that of the Pine Rivers Shire Council.

(b) *Water Supply.* Water storage facilities comprise the following (available capacities are shown in parentheses):—Somerset Reservoir, 200,000 million gallons (55,000 million gallons); Lake Manchester, 5,806 million gallons (5,720 million gallons); Brisbane River, 543 million gallons (484 million gallons); Pure Water Reservoir, Holt's Hill, 8.3 million gallons (8.3 million gallons); Enoggera Reservoir, 1,000 million gallons (600 million gallons); Gold Creek Reservoir, 407 million gallons (400 million gallons). There are 17 service reservoirs with a capacity of approximately 41 million gallons. The Somerset reservoir is a dual purpose project with a designed total holding capacity of 200,000 million gallons, 55,000 million gallons to be for water storage and 145,000 million gallons for flood mitigation. Water rating for the year ended 30th June, 1963, was 4½d. in the £1 on the unimproved valuation of all ratable land, with a minimum charge of £8 for the year for each assessment. The following table is a summary of operations of the complete Brisbane City Council system (Brisbane, Ipswich and Redcliffe) for the years 1958–59 to 1962–63.

#### WATER SUPPLY, BRISBANE(a): SERVICES

Year	Services connected	Estimated population supplied	Average daily consumption	Total consumption for the year	Average daily consumption		Length of trunk and reticulation mains
					Per service	Per head of estimated population	
			Mill. gals.	Mill. gals.	Gallons	Gallons	Miles
1958–59	163,336	594,124	41.4	15,127	254	69.7	2,059
1959–60	168,687	615,293	44.3	16,214	272	73.1	2,137
1960–61	171,820	626,470	46.8	17,100	273	74.8	2,196
1961–62	178,279	649,970	45.3	16,538	254	69.7	2,284
1962–63	182,804	665,479	48.3	17,644	264	72.6	2,378

(a) Includes Ipswich and Redcliffe.

(c) *Sewerage.* The sewage treatment works is situated at Luggage Point at the entrance to the Brisbane River. Sewerage rating for the year ended 30th June, 1963, was 3½d. in the £1 on the unimproved valuation of each portion of land with a minimum charge of £8 10s. for the year. The following table is a summary of operations of the Brisbane sewerage scheme for the years 1958–59 to 1962–63.

#### SEWERAGE, BRISBANE: SERVICES

Year	Premises connected	Estimated population served	Total sewage pumped for the year	Length of main, branch, reticulation, etc., sewers
			Mill. gals.	Miles
1958–59	58,616	216,879	6,043	757
1959–60	58,942	218,185	5,626	803
1960–61	62,781	232,290	5,222	853
1961–62	67,407	249,406	5,808	906
1962–63	71,754	265,490	6,673	944

(d) *Finances.* The following table shows particulars of the finances of the water supply and sewerage undertakings of the Brisbane City Council for the years 1958-59 to 1962-63.

## WATER SUPPLY AND SEWERAGE, BRISBANE: FINANCES

(£ )

Service and year	Gross capital cost to 30th June	Revenue	Expenditure			Surplus (+) or deficit (-)
			Working expenses	Interest, redemption, etc., charges	Total (a)	
<b>Water supply—</b>						
1958-59 ..	14,688,559	1,786,978	907,186	629,422	1,736,230	+ 50,748
1959-60 ..	16,369,241	2,149,216	984,213	793,263	2,115,298	+ 33,918
1960-61 ..	18,437,170	2,315,102	1,044,524	879,712	2,308,682	+ 6,420
1961-62 ..	19,995,220	2,481,687	1,129,904	974,898	2,381,291	+ 100,396
1962-63 ..	21,529,419	2,824,839	1,167,228	1,084,244	2,608,922	+ 215,917
<b>Sewerage—</b>						
1958-59 ..	14,434,390	807,399	254,445	444,562	806,862	+ 537
1959-60 ..	15,556,266	907,148	252,211	460,896	839,761	+ 67,387
1960-61 ..	16,837,552	982,345	282,035	489,597	964,578	+ 17,767
1961-62 ..	17,953,552	1,035,872	296,234	564,903	1,045,578	- 9,706
1962-63 ..	19,926,939	1,262,379	296,083	651,779	1,167,970	+ 94,409

(a) Total, including other expenditure.

(ii) *Country Towns.* (a) *Water Supply.* In addition to the City of Brisbane, there were at 30th June, 1962, 168 cities and towns in Queensland provided with water supply systems controlled by municipal and shire councils.

(b) *Sewerage Systems.* At 30th June, 1962, there were 30 cities or towns in addition to Brisbane with sewerage systems, and sewerage schemes were in course of construction at 11 other cities or towns.

(c) *Finances.* The receipts (other than loan and loan subsidy) of water undertakings controlled by the cities and towns referred to above amounted to £2,682,494 in 1961-62. Expenditure amounted to £2,658,318, including £1,155,261 for debt charges. In addition, expenditure from loans and loan subsidy amounted to £2,530,569. Finances of sewerage undertakings are incorporated in council general funds and are not available separately.

4. *South Australia.*—(i) *General.* The water supply and sewerage systems in this State were constructed mainly, and are maintained, by the Engineering and Water Supply Department, under the control of the Minister of Works. Works controlled by the Department are the Adelaide, Barossa, Beetaloo, Bundaleer, Moorook, Tod River, Warren, Yorke Peninsula and other country water districts systems, the Morgan-Whyalla water supply system, the metropolitan and country sewerage systems, the Metropolitan Flood Waters Scheme and works on the River Murray constructed under the River Murray Waters Agreement. Several water supply schemes on the Murray River are operated by the Department of Lands in conjunction with its irrigation works, and supplies to Woomera and Leigh Creek coalfield are controlled by the operating authorities. The following tables show particulars of metropolitan and country waterworks combined.

## WATERWORKS, SOUTH AUSTRALIA: SERVICES

Year	Assessments(a)		Area of districts supplied (a)	Capacity of reservoirs, tanks, etc.	Length of mains	Number of meters
	Number	Annual value				
		£	Acres	Mill. gals.	Miles	
1958-59.. ..	269,825	28,361,294	13,003,305	33,954	8,537	197,914
1959-60.. ..	289,235	31,617,930	13,037,312	33,957	9,016	213,024
1960-61.. ..	319,108	40,593,447	13,118,635	35,405	9,292	232,072
1961-62.. ..	338,636	42,702,029	13,153,869	45,106	9,634	247,972
1962-63.. ..	357,342	46,368,327	13,286,817	45,062	9,996	262,571

(a) Excludes Morgan-Whyalla Water Supply—water sold by measure.

## WATERWORKS, SOUTH AUSTRALIA: FINANCES

(£)

Year	Invested capital to 30th June	Revenue	Expenditure			Deficit
			Working expenses (a)	Interest	Total	
1958-59.. ..	54,301,234	3,106,348	2,768,406	1,933,850	4,702,256	1,595,908
1959-60.. ..	59,636,914	3,386,221	3,391,892	2,205,764	5,597,656	2,211,435
1960-61.. ..	65,183,386	4,284,394	3,188,385	2,373,567	5,561,952	1,277,558
1961-62.. ..	73,115,312	4,532,577	4,194,970	2,694,196	6,889,166	2,356,589
1962-63.. ..	80,908,668	4,951,534	3,987,673	3,197,520	7,185,193	2,233,659

(a) Includes debt redemption.

(ii) *Adelaide Waterworks.* At 30th June, 1963, the Adelaide waterworks supplied a district of 215,093 acres. The capacity of reservoirs and storage tanks was 24,211 million gallons and there were 2,729 miles of mains. Water is also drawn from the 11,300 million gallon reservoir at South Para in the Barossa Water District.

The Mannum-Adelaide pipeline conveys water from the River Murray to Adelaide at a rate of up to 66 million gallons a day. Water is delivered to the River Torrens or, by further pumping, to the River Onkaparinga. With further development, the main will operate as a closed system connected to the metropolitan reticulation. The pipeline supplements the Warren system and other country areas.

## ADELAIDE WATERWORKS: FINANCES

(£)

Year	Invested capital to 30th June	Revenue	Expenditure			Surplus (+) or Deficit (-)
			Working expenses (a)	Interest	Total	
1958-59.. ..	28,719,570	2,101,768	1,437,861	1,032,464	2,470,325	- 368,557
1959-60.. ..	32,074,743	2,311,402	1,919,538	1,136,373	3,055,911	- 744,509
1960-61.. ..	35,078,981	2,958,675	1,731,561	1,218,096	2,949,657	+ 9,018
1961-62.. ..	38,627,084	3,151,125	2,377,181	1,368,822	3,746,003	- 594,878
1962-63.. ..	41,730,576	3,436,759	2,071,396	1,689,793	3,761,189	- 324,430

(a) Includes debt redemption.

(iii) *Adelaide Metropolitan Sewerage.* The Adelaide metropolitan sewerage system, comprising the Adelaide, Glenelg, Port Adelaide and Salisbury-Elizabeth areas of 153 square miles in all, includes a sewage farm, and treatment works at Glenelg and Port Adelaide. Construction of a large treatment works at Bolivar is in progress to supersede the sewage farm and carry the increased load due to metropolitan expansion. Financial and other particulars for 1958-59 to 1962-63 are shown hereunder.

## ADELAIDE METROPOLITAN SEWERAGE: SUMMARY

Year	Length of sewers	Number of connexions	Invested capital to 30th June	Revenue	Expenditure			Surplus
					Working expenses (a)	Interest	Total	
	miles		£	£	£	£	£	£
1958-59 ..	1,444	154,636	10,437,696	1,471,067	685,104	349,312	1,034,416	436,651
1959-60 ..	1,471	160,407	11,305,495	1,576,769	676,660	401,009	1,077,669	499,100
1960-61 ..	(b) 1,598	173,753	13,376,362	2,060,534	887,921	479,011	1,366,932	693,602
1961-62 ..	(b) 1,659	179,918	14,544,885	2,211,011	913,724	524,376	1,438,100	772,911
1962-63 ..	(b) 1,714	186,143	16,755,220	2,344,706	1,001,053	575,617	1,576,670	768,036

(a) Includes debt redemption. (b) Includes sewers in the Salisbury-Elizabeth area (93 miles in 1960-61, 115 miles in 1961-62 and 127 miles in 1962-63).

(iv) *Country Sewerage Schemes.* Sewerage schemes are operating at Port Lincoln, Naracoorte, Nangwarry, Mount Burr, Myponga and Angaston. At Port Lincoln the sewers discharge to an ocean outfall, and treatment works are used on the other systems. There are 75 miles of sewers and 2,528 connexions in the country systems. A sewerage scheme for Mount Gambier is under construction.

(v) *Country Water Supply.* Water districts systems at 30th June, 1963, comprised an area of 13,072,000 acres. Supply came from reservoirs having a total capacity of 20,851 million gallons, from the River Murray, and from underground sources.

Apart from local supplies, water from the River Murray comes from branches of the Mannum-Adelaide main and from the Morgan-Whyalla main.

The principal areas of underground supplies are in the south-east of the State, where water from the Murray Basin can be had at moderate depths or from lakes, and from sand beds on Eyre Peninsula. In the year 1962-63, supplies made to Mount Gambier, Naracoorte and other towns amounted to 944 million gallons, and the Uley-Wanilla, Lincoln and Poldia Basins contributed 1,132 million gallons to the Tod River Water District.

## COUNTRY WATERWORKS, SOUTH AUSTRALIA: FINANCES

(£ )

Year	Invested capital to 30th June	Revenue	Expenditure			Deficit
			Working expenses (a)	Interest	Total	
1958-59 ..	25,581,664	1,004,580	1,330,545	901,386	2,231,931	1,227,351
1959-60 ..	27,562,171	1,074,819	1,472,354	1,069,391	2,541,745	1,466,926
1960-61 ..	30,104,405	1,325,719	1,456,824	1,155,471	2,612,295	1,286,576
1961-62 ..	34,488,228	1,381,452	1,817,789	1,325,374	3,143,163	1,761,711
1962-63 ..	39,178,092	1,514,775	1,916,277	1,507,727	3,424,004	1,909,229

(a) Includes debt redemption.

(vi) *Morgan-Whyalla Water Supply Scheme.* This scheme, which has 223 miles of main, was officially opened on 31st March, 1944, the capital invested to 30th June, 1961, being £2,687,707. Particulars of the scheme, where applicable, are included in the tables of the combined waterworks in (i) above. Apart from supplying Whyalla, the main has been used to allow expansion of reservoir supplies in the northern agricultural area of the State, and to meet new demands caused by industrial growth at Whyalla, duplication of the main is under way. During 1962-63, water used from the scheme amounted to 3,192 million gallons. Revenue was £559,068, working expenses £372,599, interest charges £210,717, and deficit £24,248.

5. Western Australia.—(i) *General.* The water supply, sewerage and drainage systems of Western Australia are principally under the management of two State Government Departments, namely, the Metropolitan Water Supply, Sewerage and Drainage Department, having as its territory the metropolitan area centred on Perth and extending to Kwinana and Serpentine in the south, Sorrento in the north and Swan View on the east, and the Public Works Department, which controls the Goldfields and Agricultural Water Supply and the Great Southern Towns Water Supply as well as supplies, from local sources, to 79 country towns not included in these schemes. Both Departments are administered under the portfolio of the Minister for Works and Water Supplies. (See also Chapter VIII. Water Conservation and Irrigation, of this Year Book, p. 260.)

(ii) *Metropolitan Water Supply, Sewerage and Drainage. (a) General.* The sources of the metropolitan water supply are the Serpentine Dam, the Canning Dam, the Serpentine Pipehead Dam, the Churchman Brook Dam, the Victoria Reservoir and the Wungong Brook Diversion Weir. The supply from these sources is supplemented as necessary from a number of artesian bores and from a pipeline link with Mundaring Weir. The largest reservoir, the Serpentine Dam, has a capacity of 39,000 million gallons. There are three treatment works included in the Department's sewerage system. The largest of these, Subiaco treatment works, services Perth and suburbs.

(b) *Water Supply.* The following table shows particulars of water supply services for 1958-59 to 1962-63.

#### METROPOLITAN WATER SUPPLY, WESTERN AUSTRALIA: SERVICES

Year	Number of services (a)	Estimated population supplied (a)	Average daily consumption	Total consumption for year	Average daily consumption		Length of mains	Number of meters
					Per service (b)	Per head of estimated population (b)		
			Mill. gals.	Mill. gals.	Gallons	Gallons	Miles	
1958-59 ..	125,761	417,770	49.5	18,061	399	120.2	1,991	92,495
1959-60 ..	129,956	431,600	(c) 33.7	(c) 12,335	(c) 263	(c) 79.5	2,072	97,002
1960-61 ..	133,647	446,000	49.3	18,015	374	112.3	2,137	103,969
1961-62 ..	137,960	460,730	50.6	18,492	373	111.6	2,179	116,610
1962-63 ..	142,246	469,000	47.1	17,214	336	100.5	2,278	123,364

(a) Figures relate to 30th June.  
restrictions in force for 180 days.

(b) Calculated from averages for the year.

(c) Water

Water rating for 1962-63 was 1s. in the £1 on annual valuation on land used for residential purposes and 1s. 6d. in the £1 on annual valuation on land not so used.

(c) *Sewerage and Main Drainage.* Some particulars of the metropolitan sewerage and main drainage services for 1958-59 to 1962-63 are shown on the next page.

METROPOLITAN SEWERAGE AND MAIN DRAINAGE, WESTERN AUSTRALIA: SERVICES

Year	Houses connected	Estimated population served	Length of sewers	Length of main drains
			Miles	Miles
1958-59 .. .. .	64,944	257,500	714	67
1959-60 .. .. .	65,781	260,600	719	69
1960-61 .. .. .	66,664	264,000	724	72
1961-62 .. .. .	67,378	239,110	736	77
1962-63 .. .. .	68,223	240,700	751	81

Sewerage rating for 1962-63 was 1s. 9d. in the £1 on annual valuation, while metropolitan main drainage rating was 4d. in the £1.

(d) *Finances.* The following table shows particulars of the finances of the Western Australian Metropolitan Water Supply, Sewerage and Drainage Department.

METROPOLITAN WATER SUPPLY, SEWERAGE AND MAIN DRAINAGE, WESTERN AUSTRALIA: FINANCES

(£)

Service and year	Capital cost to 30th June	Revenue	Expenditure			Surplus (+) or deficit (-)
			Working expenses	Interest and debt redemption	Total	
<b>Water supply—</b>						
1958-59 ..	17,123,762	1,338,917	634,427	744,624	1,379,051	- 40,134
1959-60 ..	18,715,358	1,206,823	671,009	794,160	1,465,169	- 258,346
1960-61 ..	20,256,673	1,730,433	839,876	879,902	1,719,778	+ 10,655
1961-62 ..	22,156,248	1,803,303	772,501	988,140	1,760,641	+ 42,662
1962-63 ..	24,244,492	1,852,414	752,497	1,087,635	1,840,132	+ 12,282
<b>Sewerage—</b>						
1958-59 ..	6,453,517	735,244	401,175	310,450	711,625	+ 23,619
1959-60 ..	6,915,604	772,012	420,391	319,817	740,208	+ 31,804
1960-61 ..	7,643,368	934,190	505,425	361,706	867,131	+ 67,059
1961-62 ..	8,301,678	938,372	525,136	446,718	971,854	- 33,482
1962-63 ..	9,059,279	1,130,598	550,885	509,364	1,060,249	+ 70,349
<b>Main drainage—</b>						
1958-59 ..	1,350,083	88,846	40,684	55,090	95,774	- 6,928
1959-60 ..	1,616,772	93,013	48,867	69,831	118,698	- 25,685
1960-61 ..	1,771,641	113,805	49,970	78,822	128,792	- 14,987
1961-62 ..	1,974,787	120,190	63,075	90,251	153,326	- 33,136
1962-63 ..	2,191,431	148,215	75,362	99,929	175,291	- 27,076

(iii) *Country Water Supplies.* Information concerning country water supplies is included in Chapter VIII. Water Conservation and Irrigation, of this Year Book (see p. 260).

6. Tasmania.—(i) *Waterworks.* At the end of 1962-63 there were 96 municipally operated waterworks in Tasmania. The capacity of the reservoirs was 2,225 million gallons, the estimated population served was 281,000 and the number of properties served was 88,900. A regional scheme is operated as a State concern, supplying bulk water to the Municipalities of George Town, Lilydale and St. Leonards. In addition, this same scheme supplies water direct to industry situated near the Tamar River.

The overall control of water supply in the greater Hobart area, comprising the Municipalities of Hobart, Clarence, Glenorchy and Kingborough, is now vested in the Metropolitan Water Board, but the Municipalities retain primary responsibility for

reticulation. The Board has undertaken the construction of a new bulk supply, with an ultimate daily capacity of 20 million gallons, at an estimated cost of £2,500,000. This will be completed before the end of 1963.

(ii) *Sewerage.* At the end of 1962-63, there were 21 municipal sewerage schemes in operation in Tasmania. They served an estimated population of 190,000 and the number of tenements served was 51,000.

7. Northern Territory.—Information relating to water supply in the Northern Territory may be found in Chapter VIII. Water Conservation and Irrigation (*see pp. 262-4*).

8. Australian Capital Territory.—The water supply, sewerage and drainage systems in the Australian Capital Territory are under the control of the Commonwealth Department of Works. The sources of the water supply are:—Cotter Dam (capacity 967 million gallons) and Bendora Dam (2,360 million gallons). Six pumps are capable of pumping approximately 20 million gallons daily.

The total population served in the Australian Capital Territory, which during 1962-63 consumed 3,078 million gallons of water was 72,750. In addition, the Canberra water supply system supplied 251 million gallons of water to Queanbeyan, New South Wales.

The total number of water meters at 30th June, 1963, was 15,690 and the total length of water lines was 307 miles.

The sewerage system for Canberra and suburbs consists of a treatment works and 243 miles of sewerage line (30th June, 1963). There were also 231 miles of stormwater lines.

## § 6. Harbour Boards and Trusts

NOTE.—The number and net tonnage of vessels which entered the major ports in each State during the years 1961-62 and 1962-63 are shown in Chapter XV. Transport and Communication (*see p. 562*). Particulars of oversea and interstate cargo discharged and shipped during 1962-63 are shown on page 564 of the same chapter.

1. New South Wales.—(i) *Maritime Services Board of New South Wales.* (a) *General.* The Maritime Services Board of New South Wales is a corporate body of seven Commissioners comprising three full-time members and four part-time members representing shipping and other maritime interests. The Board was constituted on 1st February, 1936, under the *Maritime Services Act, 1935*, to co-ordinate the port and navigation services of the State, which had previously been administered by the Sydney Harbour Trust and by the State Department of Navigation.

The Board exercises general control over intra-state shipping, including the survey and certification of vessels, the licensing of harbour craft, and the examination and issue of certificates to officers. It is responsible for the provision of pilotage services, lights, beacons, buoys and other port facilities, imposes and collects rates and charges on goods and vessels, and is vested with the general control and management of the navigable waters and ports within the State.

At the ports of Sydney, Newcastle, and Botany Bay, the Board is also responsible for the provision of adequate wharfage and channels, and carries out all construction, maintenance and dredging work. At other ports of New South Wales, such work is undertaken by the Department of Public Works.

(b) *Finances.* The implementation of the *Maritime Services (Amendment) Act 1960*, as from 1st May, 1961, resulted in some marked changes in the Board's accounting system. The amendment to the Act provided for a new fund known as the Maritime Services Board Fund to be established to replace the Sydney Harbour Trust Fund. All revenue earned by the Board at the ports of Sydney, Newcastle and Botany Bay, with the exception of that earned from pilotage and navigational services, is now credited to the Maritime Services Board Fund, and all revenue expenditure incurred at the three ports is drawn from that Fund.

The following table shows particulars of the finances of the Board in respect of the ports of Sydney, Newcastle and Botany Bay.

**MARITIME SERVICES BOARD FUND: FINANCES OF THE PORTS OF SYDNEY, NEWCASTLE AND BOTANY BAY**

(£)

Year	Revenue				Expenditure			Surplus
	Wharfage and transhipment rates	Tonnage rates and berthing charges	Other charges	Total	Administration and maintenance	Interest, debt redemption, exchange, etc.	Total (a)	
1960-61	3,130,441	631,432	927,729	4,689,602	2,565,141	2,081,110	4,646,251	43,351
1961-62	4,654,234	699,557	1,292,632	6,646,423	3,756,694	2,857,210	6,613,904	32,519
1962-63	4,846,617	790,676	1,218,885	6,856,178	3,771,424	3,028,183	6,799,607	56,571

(a) Excludes capital expenditure but includes transfer to the Renewals Fund Reserve Account (£1,025,000 in 1960-61, £1,375,000 in 1961-62, and £1,545,500 in 1962-63).

(c) *Port of Sydney.* The entrance to Sydney Harbour, the principal port of New South Wales, is nearly a mile wide, and the depth of its navigable channel is not less than 80 feet. Between the entrance, known as "The Heads", and the Harbour proper, a distance of four miles, there are two separate channels, each 700 feet wide, the Western Channel not less than 42 feet deep (low water ordinary spring tide) and the Eastern Channel 41 feet deep. The foreshores, which have been reduced by reclamations, are 152 miles in length, and the total area of the port is 13,600 acres, or 21 square miles, of which about one-half has a depth of 30 feet or more at low water ordinary spring tide. The mean range of tides is 3 feet 6 inches.

The wharves are situated close to the business centre of the city, about four or five miles from the Heads. At present, there are two dolphin berths each 550 feet long, and 96 effective commercial cargo berths with a total length of 46,007 feet controlled by the Board. Accommodation for harbour craft amounts to 2,820 feet, while the length of other berths, including oil and private wharves, totals 28,851 feet. Depth of water at wharves is up to 40 feet. Special facilities for the storage and handling of products such as wheat, wool, coal, etc., are provided, and modern plant has been installed for replenishing ships' bunkers with oil or coal.

Docking facilities are available for the largest vessel afloat. The Captain Cook Graving Dock ranks among the largest graving docks in the world, being 1,139 feet by 147 feet 7½ inches with a depth of 45 feet 2 inches over the sill at high water. There are also several smaller dry docks and floating docks in the port.

(d) *Port of Newcastle.* As from 1st May, 1961, the Maritime Services Board of New South Wales became the single authority for the port of Newcastle. This was brought about by the implementation of the *Maritime Services (Amendment) Act 1960*, which resulted in the Board's jurisdiction being extended to include the operation of the coal loading equipment formerly vested in the Department of Railways and the dredging, together with the maintenance and construction of wharves and other port facilities, which had been the responsibility of the Department of Public Works.

An Advisory Committee consisting of eight members, appointed by the Governor, assists the Board in matters associated with the operation of the port. It is primarily a coal-loading port, and the proximity to the coal fields has led to the establishment of important industries, including iron and steel works, in the district. Facilities are available for the shipment of wool, wheat and frozen meat, and a wharf is available for timber.

The area used by shipping is about 570 acres, excluding the entrance to the harbour and the inner basin, which together cover an area of 162 acres. The width of the harbour at the entrance is 1,200 feet, and the navigable channel, with a depth of 25 feet 6 inches at low water, is 350 feet wide. Wharfage accommodation amounts to approximately 15,000 feet, including about 2,600 feet of privately owned wharfage. There are also several dolphin berths available for tie-up purposes. A floating dock of 15,000 tons capacity is available at the port.



(e) *Botany Bay.* The Maritime Services Board of New South Wales is the administrative and controlling authority. The port is primarily a discharging centre for the oil refinery at Kurnell, near Sydney, and two berths are available as well as tanker mooring buoys. The entrance to the Bay is approximately  $1\frac{1}{4}$  miles wide, with a minimum depth of about 36 feet in the dredged swinging basin.

(f) *Port Kembla.* As from 3rd May, 1948, the Maritime Services Board assumed the administration and navigational control of Port Kembla, which had previously been administered by the New South Wales Department of Public Works. The Department, however, continues to be the constructing authority in respect of works, dredging and maintenance. An Advisory Committee consisting of eight members, appointed by the Governor, has been formed to assist the Board in the operation of the port. It has an area of approximately 340 acres, with depths ranging from 20 to 50 feet (low water ordinary spring tide), and wharfage accommodation totalling 8,000 feet has been provided for large ocean-going vessels. No cargo sheds are available, as the nature of trade at the port does not call for the provision of sheltered storage accommodation at the berths. It is the port of the southern coalfields and for the expanding industrial area in and about Wollongong. The developmental programme for Port Kembla includes the construction of an inner harbour to provide wharfage for the steelworks in addition to a modern fast-loading coal berth and general cargo berths.

The first stage of the inner harbour basin was opened to shipping on 28th November, 1960. Present accommodation is 1,175 feet of wharfage, with 36 feet (low water ordinary spring tide) of water alongside. Width in the entrance to the inner harbour basin is 400 feet.

(g) *Other Ports.* In addition to the ports of Sydney, Newcastle, Port Kembla and Botany Bay, the Board controls 29 outports along the coastline of 609 miles. The shipping trade of these outports is relatively small.

(ii) *Port Charges.* The port charges payable in respect of shipping and ships' cargoes in New South Wales are imposed by the Commonwealth Government in terms of the Lighthouses Act and the Navigation Act, and by the State authorities under the Navigation Act of New South Wales, the Harbour and Tonnage Rates Act, and the Sydney Harbour Trust Act. Since 1st February, 1936, the State enactments have been administered by the Maritime Services Board. The gross collections by the State authorities amounted to £9,076,243 in 1962-63. This figure includes the revenue for the ports of Sydney, Newcastle and Botany Bay (see table on p. 817) and State navigation service collections, £2,220,065 (1962-63). Commonwealth Government revenue from light dues and navigation receipts for the whole of Australia amounted to £862,120 in 1962-63.

2. *Victoria.*—(i) *Melbourne Harbor Trust.* (a) *General.* Information regarding the origin and constitution of this Trust, which controls the port of Melbourne, appears in Official Year Book No. 12, pages 970-2. The port of Melbourne comes under the control of the Melbourne Harbor Trust-Commissioners, an independent autonomous statutory organization, with a full-time Chairman and five part-time Commissioners with specialized knowledge of the requirements of exporters, primary producers, shipowners, importers and all aspects of port labour. The area of water and land under the control of the Trust is  $10\frac{1}{2}$  square miles, with sheds available for cargo in transit totalling 25,505 feet in length and covering an area of 46½ acres.

Two of the largest transit sheds on the Australian coast are now in operation at Appleton Dock. The sheds are 600 feet long by 150 feet wide, with a cargo stacking area of 81,000 square feet. The berths are used for the general cargo trade and have both rail and crane facilities, and modern amenities for port workers. The total length of wharves, piers and jetties in the port is 61,550 feet, covering an area of  $58\frac{1}{2}$  acres with 58,466 feet of effective berthing space.

The only major construction work commenced during 1962 was the first stage of a £1,780,000 five-stage project to rebuild and modernize the first four berths in the Victorian Dock system.

The depth of water (low water ordinary spring tide) from the main channels to the principal wharves is 31 to 39 feet.

(b) *Finances.* The following table shows particulars of the financial operations of the Trust.

MELBOURNE HARBOR TRUST: FINANCES

(£)

Year	Gross loan indebtedness at 31st December	Revenue		Expenditure				Surplus (+) or deficit (-)
		Wharfage and tonnage rates	Total	Administration and maintenance	Interest, debt redemption, exchange, etc.	Depreciation, renewals and insurance account	Total (a)	
1958 ..	12,907,279	2,043,848	3,020,913	1,310,119	603,899	631,988	2,958,686	+ 62,227
1959 ..	13,833,011	2,100,924	3,292,329	1,634,513	766,909	376,397	3,201,943	+ 90,386
1960 ..	14,199,060	2,492,139	3,948,187	1,962,110	766,532	641,175	3,872,264	+ 75,923
1961 ..	14,240,702	2,303,586	3,791,495	2,246,657	910,713	203,909	3,826,008	- 34,513
1962 ..	14,875,017	2,441,432	3,978,831	2,095,470	893,765	484,292	3,965,845	+ 12,986

(a) Includes statutory payments to Consolidated Revenue and Geelong Harbour Trust (£412,680 in 1958, £424,124 in 1959, £502,447 in 1960, £464,729 in 1961, and £492,318 in 1962). Excludes capital expenditure (£1,658,589 in 1958, £1,458,499 in 1959, £1,280,529 in 1960, £1,348,846 in 1961, and £1,309,072 in 1962).

(ii) *Geelong Harbor Trust.* The Geelong Harbor Trust, constituted in 1905, is under the control of three Commissioners appointed from time to time by the Governor-in-Council. One of these, the chairman, is on a full time basis.

At the end of 1962, there were 19 effective berths in the port, plus two berths at the Commonwealth Explosives Pier, Pt. Wilson, owned and operated by the Commonwealth. Three major wharf projects are in course of planning, the first of which is expected to be under construction early in 1963. Eight berths have a depth of 36 feet at low water, while all other berths, except Yarra Pier, 29 feet, and Commonwealth Explosives Pier, Pt. Wilson, 30 feet, have a depth of 32 feet at low water.

Revenue for the year 1962 was £1,289,378 and expenditure from revenue totalled £745,204. At 31st December, 1962, the value of the Trust's fixed assets was £8,778,321 and loans outstanding amounted to £3,067,407.

(iii) *Portland Harbour Trust.* Construction of an all weather deep-sea port of three berths with a low water depth of 36 feet was completed to operational standards in 1960. A new oil tanker berth was brought into commission during 1963, from which petroleum products will be pumped to bulk terminals at North Portland.

Operating revenue for the year ended 30th June, 1962, was £101,798 and revenue expenditure was £101,647. The value of the Trust's fixed assets, less depreciation, was £6,785,329 at 30th June, 1962, and loans and advances outstanding amounted to £6,943,869.

3. Queensland.—(i) *General.* The ports of Queensland, except Brisbane and certain minor ports, are administered by Harbour Boards with members representing the towns and districts served by the ports. Brisbane and the minor ports are controlled by the State Treasury through the Department of Harbours and Marine, which supervises the engineering activities of the other ports.

(ii) *Brisbane.* Brisbane accommodates comfortably, in its dredged and improved river, the largest vessels in the Australian trade. The main centres for shipping, although further downstream than formerly because of the increasing size of vessels, are still within easy access of the city. Adequate dry-docking facilities are available. The finances of Brisbane Harbour for the years 1957-58 to 1961-62 are shown below.

**BRISBANE HARBOUR: FINANCES**  
(£'000)

Year	Loan indebtedness at 30th June	Receipts		Payments	
		Harbour dues	Total	Working expenses(a)	Total
1957-58 .. ..	3,042	696	938	731	944
1958-59 .. ..	2,702	709	1,097	664	883
1959-60 .. ..	2,512	772	1,059	731	953
1960-61 .. ..	2,813	763	1,164	679	901
1961-62 .. ..	2,716	742	1,084	628	849

(a) Excludes interest and redemption included in total.

In addition to Brisbane harbour, the Department of Harbours and Marine also controls the Brisbane Dry Dock, the Cairncross Dock, and nine smaller harbours not administered by harbour boards.

(iii) *Harbour Boards.* Harbour boards control the ports of Bowen, Bundaberg, Cairns, Gladstone, Mackay, Rockhampton and Townsville. Finances for each port for the year ended 30th June, 1962, are shown below, together with a summary for the years ended 30th June, 1958 to 1962.

**HARBOUR BOARDS, QUEENSLAND: FINANCES**  
(£)

Harbour board	Loan indebtedness at 30th June	Revenue		Expenditure (excluding loan)		Surplus(+) or deficit(-)
		Wharfage and harbour dues	Total	Working expenses	Total (including interest and redemption)(a)	
Bowen .. ..	270,576	7,941	49,635	13,770	58,916	- 9,281
Bundaberg .. ..	2,747,467	136,627	267,131	7,489	266,276	+ 855
Cairns .. ..	229,425	192,160	289,630	148,471	222,678	+ 66,952
Gladstone .. ..	859,418	70,889	117,344	17,860	73,306	+ 44,038
Mackay .. ..	1,300,320	229,403	494,607	110,483	386,721	+ 107,886
Rockhampton .. ..	781,908	32,697	47,078	17,404	61,111	- 14,033
Townsville .. ..	3,643,838	271,935	519,883	183,154	555,139	- 35,256
<b>Total, 1961-62 .. ..</b>	<b>9,840,952</b>	<b>941,652</b>	<b>1,785,308</b>	<b>498,631</b>	<b>1,624,147</b>	<b>+ 161,161</b>
1960-61 .. ..	9,395,347	862,187	1,683,169	547,390	1,625,273	+ 57,896
1959-60 .. ..	8,430,437	908,911	1,807,041	561,425	1,526,770	+ 280,271
1958-59 .. ..	7,099,197	898,822	1,602,409	602,391	1,696,390	- 93,981
1957-58 .. ..	5,435,172	775,436	1,226,581	603,081	1,190,356	+ 36,225

(a) Includes expenditure on capital works from accumulated revenue.

4. *South Australia.*—The *South Australian Harbors Board.* All South Australian harbours are controlled by the South Australian Harbors Board, which consists of three Commissioners appointed by the Governor for a period of five years and eligible for re-appointment. The Board is responsible to the Minister of Marine for the discharge of its duties and functions. The most important ports are the five deep sea ports of Port Adelaide,

Port Pirie, Wallaroo, Port Lincoln and Thevenard. At a few ports, the wharves or jetties are privately controlled, the principal of these being at Whyalla, Ardrossan and Rapid Bay, all of which are controlled by the Broken Hill Pty. Co. Ltd. Port Augusta is controlled by the Commonwealth Railways on behalf of the Commonwealth Government. Maximum depths of water (low water) at the wharves of the main ports range from 24 feet at Port Pirie to 35 feet at Port Adelaide (Outer Harbour). The following table shows the finances of the Board for 1958-59 to 1962-63.

## THE SOUTH AUSTRALIAN HARBORS BOARD: FINANCES

(£ )

Year	Capital at 30th June (a)	Revenue	Expenditure from revenue			Surplus
			Working expenses	Interest	Total	
1958-59.. ..	15,325,443	2,156,669	1,464,006	550,364	2,014,370	142,299
1959-60.. ..	16,324,529	2,314,999	1,574,774	612,711	2,187,485	127,514
1960-61.. ..	17,432,015	2,714,743	1,684,618	658,269	2,342,887	371,856
1961-62.. ..	18,555,851	2,576,697	1,676,407	701,032	2,377,439	199,258
1962-63.. ..	19,483,967	2,548,777	1,672,186	765,725	2,437,911	110,866

(a) State Treasurer's funds and reserve employed.

5. *Western Australia.*—(i) *Fremantle Harbour Trust.* The Port of Fremantle is operated and controlled by the Fremantle Harbour Trust, a body corporate administered by a Board of five Commissioners appointed triennially by the Governor. The port covers an extensive water area of some 180 square miles and comprises an inner and an outer harbour. The inner harbour includes 18 deep water land-backed berths, providing more than 690,000 sq. ft. of covered storage space and 11,148 feet of wharf berth accommodation. All inner harbour berths are dredged to a depth of 36 feet. The outer harbour includes three main anchorages, Gage Roads, Owen Anchorage and Cockburn Sound. Deep water jetties, including the oil refinery jetties in Cockburn Sound, are available in the outer harbour. Ocean going deep draft ships enter the Sound by means of channels dredged through Success and Parmelia Banks to a low water depth of 38 feet and a bottom width of 500 feet. In the outer harbour there are three tanker berths, each with a low water depth of 44 feet, at the Kwinana oil refinery, and one berth at the nearby steelworks jetty with a low water depth of 30 feet. There are also special berths for the off-loading of cattle and the handling of high explosives.

Gross earnings for the year 1962-63 amounted to £3,109,082, working expenses to £2,506,994, interest charges to £320,525, debt redemption to £84,429, and renewals fund to £2,000. Special loan redemptions were £274,681, and net capital totalled £8,198,637.

(ii) *Albany Harbour Board.* The Albany Harbour is controlled by a board of five members appointed by the Government. The depth of water in the entrance channel is 33 feet, at one arm of the jetty 31 feet and at the other arm 33 feet. In the approaches to wharf berths, the depth is 33 feet. Wharf accommodation consists of 1,115 feet, and in addition the Deepwater Jetty has 2,500 feet of accommodation. Gross earnings for the year 1962-63 amounted to £146,562, working expenses £75,659, interest and sinking fund charges, £99,464, and amounts debited to loan capital account, £1,906,170.

(iii) *Bunbury Harbour Board.* The Bunbury Harbour is controlled by a board of five members appointed by the Government. The depth of water in the harbour is 30 feet and berthing accommodation is 3,700 feet. Gross earnings for the year 1962-63 amounted to £162,260, working expenses £56,800, interest and sinking fund charges £110,325, and amounts debited to loan capital account, £2,631,118.

(iv) *Other Ports.* The following ports are controlled by the State Government Harbour and Light Department:—Broome, Busselton, Carnarvon, Derby, Esperance, Geraldton Onslow, Point Samson, Port Hedland, Wyndham and Yampi. The port of Esperance was under the control of the Railways Commission until 22nd January, 1962.

6. Tasmania.—There are eight marine boards and one harbour trust in Tasmania. The marine boards control the ports of Hobart, Launceston, Stanley (Circular Head), Burnie and Wynyard (Table Cape), Devonport and Ulverstone, Strahan, Currie (King Island), and Whitemark (Flinders Island), and the harbour trust controls the port of Smithton. Aggregate receipts of revenue accounts of all these authorities during the year 1962–63 were £1,857,362, and expenditures £1,446,219, including loan charges £469,704. All amounts referred to in this section exclude transfers between accounts of the same authority.

The total receipts of the Hobart Marine Board on revenue account during 1962–63 were £637,130, and total expenditure on revenue account was £498,959, of which £122,732 was spent on loan charges. Launceston Marine Board receipts on revenue account during 1962–63 amounted to £431,066, and expenditure on revenue account was £422,399, of which £73,913 was spent on loan charges. Devonport Marine Board (which is now responsible for running the facilities formerly provided by the former Ulverstone Harbour Trust) had receipts of £354,309 on revenue accounts and spent £249,927 on revenue account, including £125,891 on loan charges (these figures include the accounts in respect of Ulverstone Harbour Trust for the whole fiscal year including the period 1st June, 1962, to 31st December, 1963, prior to its incorporation with the Marine Board). The total receipts on revenue account for Burnie Marine Board were £381,601 and expenditure on revenue account items totalled £219,745, of which loan charges accounted for £134,207.

The total loan indebtedness of all marine boards and the harbour trust at 30th June, 1963, amounted to £6,335,538. Of this sum, £1,383,842 was in respect of Hobart (including Port Huon), £841,765 in respect of Launceston, £2,524,842 in respect of Burnie, and £1,464,023 in respect of Devonport (including Ulverstone). The total of new loans raised during 1962–63 by the harbour trust and all the marine boards was £1,083,300, of which Hobart raised £250,000, Burnie £573,800 and Devonport £150,000.

Hobart, Launceston, Burnie and Devonport are the principal ports of Tasmania. In addition to their interstate and intra-state traffic, there is also considerable overseas shipping. Depths of water at wharves vary, in general, between 16 and 34 feet (low water ordinary spring tide), but at Hobart there is a depth of water of from 30 to 52 feet.

## § 7. Fire Brigades

1. New South Wales.—A Board of Fire Commissioners, consisting of five members, one appointed by the State Government (President) and one each representing insurance companies, local government authorities, volunteer firemen, and permanent firemen, operates under the *Fire Brigades Act, 1909–1958*, and 157 fire districts had been constituted at the end of 1963. The cost of maintenance of fire brigades is borne in proportions of local councils and the Government each one-eighth, and the insurance companies three-quarters. The Board's borrowing power is limited to £1,000,000.

At 31st December, 1963, the authorized strength of the Fire Brigade throughout the fire districts of New South Wales was 417 officers and 1,262 permanent and 2,669 volunteer firemen. Corresponding figures for the Sydney Fire District were 342, 1,116 and 285. The revenue for the year 1963 was £3,605,600, made up as follows:—from the Government, £446,596; municipal and shires, £446,596; fire insurance companies and firms, £2,679,577; and from other sources, £32,831. The disbursements for the year were £3,540,268. The Board of Fire Commissioners provides the fire protection services for Canberra, in the Australian Capital Territory, and the cost of these services is reimbursed by the Commonwealth Government.

Under the *Bush Fires Act, 1949–1963*, a Bush Fire Fighting Fund exists from which finance is provided for the prevention and fighting of bush fires. Contributions to the Fund by the Government, councils and insurance companies are in the proportion of one quarter, one quarter and one-half, respectively. At 30th June, 1963, Volunteer Brigades equipped by means of this fund numbered 2,500 with an active membership of about 100,000 persons. The approved expenditure from the Fund for equipment, up to 30th June, 1964, amounted to £2,424,201.

2. *Victoria.*—(i) *General.* In Victoria, fire brigades are controlled by the Metropolitan Fire Brigades Board consisting of ten members, including an employees' representative, and the Country Fire Authority also consisting of ten members.

(ii) *Metropolitan Fire Brigades Board.* The Metropolitan Fire Brigades Board receives contributions from the municipalities and the insurance companies in the proportion of one-third and two-thirds respectively. On 30th June, 1963, the Board had under its control 45 stations, 1,055 permanent staff, 227 special service and clerical, etc., staff, and 13 part-time firemen. The total receipts for 1962–63 were £2,106,501, comprising contributions, £1,770,014, receipts for services, £211,903, and interest and sundries, £124,584. The expenditure was £2,288,660.

(iii) *Country Fire Authority.* This authority is responsible for the prevention and suppression of fires in the "country area of Victoria", which embraces the whole of the State outside the metropolitan fire district, excluding State forests and certain crown lands. The country area has been divided into 24 fire control regions, three of which (Ballarat, Bendigo and Geelong) are wholly urban and the remainder mixed urban and rural. The Country Fire Authority receives contributions in the proportion of two-thirds from insurance companies and one-third from the Treasury. At 30th June, 1963, the *Country Fire Authority Act* applied to 209 insurance companies, and 206 urban and 1,041 rural fire brigades. The effective registered strength of the brigades was 107,581 members.

Income for the year 1962–63 amounted to £767,932. Total expenditure other than loan amounted to £674,327.

3. *Queensland.*—(i) *General.* Fire Districts are constituted under the Acts of 1920–1956. For each district, there must be a Fire Brigades Board consisting of seven members, and the cost of maintenance of each brigade is proportioned as follows:—Treasury one-seventh, insurance companies five-sevenths, and local authorities one-seventh. The insurance companies' contribution is paid to the State Government and thence to fire brigades.

(ii) *Fire Brigade Boards.* At 30th June, 1962, there were 80 Fire Brigade Boards. The total number of stations was 146 and full-time staff numbered 863, including 25 administrative, 185 officers and 653 firemen. Volunteers numbered 77. Part-time staff numbered 1,104, including 78 administrative, 111 officers, and 915 firemen. The total revenue for the year 1961–62 was £1,400,993, received mainly from the following sources:—Government £192,455, local authorities £192,455, insurance companies £946,525. Loan receipts (Government and other) were £247,052. The total expenditure for the year was £1,391,170, the chief items being salaries and wages £1,030,057, and interest and redemption of loans £110,392.

4. *South Australia.*—The *Fire Brigades Act, 1936–1958* provides for a board of five members, and the expenses and maintenance of brigades are defrayed in the proportion of two-ninths by the Treasury, five-ninths by insurance companies, and two-ninths by the municipalities concerned. When the Treasury proportion exceeds £10,000, the excess is borne five-sevenths by insurance companies and two-sevenths by the municipalities. At 30th June, 1963, there were altogether 36 fire brigade stations, of which 12 were metropolitan and 24 country.

The strength of the permanent staff at 31st December, 1963, was 409, including 278 officers and men, 97 country auxiliary firemen and 34 other employees (including maintenance workers). The total revenue for the year 1962–63 was £559,571, including contributions of £469,792 made up as follows:—insurance companies £282,539, Treasury £74,044 and municipalities £113,209. The treasury contribution includes an additional grant of £61,244.

5. *Western Australia.*—By the provisions of the *Fire Brigades Act, 1942–1961*, certain local government areas and parts of local government areas are constituted fire districts under the control of the Western Australian Fire Brigades Board. There were 45 fire districts at 30th September, 1963. The contribution to the Board is made in the proportion of two-ninths from the Government, two-ninths from local government authorities, and five-ninths from insurance companies. The number of local government authorities and insurance companies who contributed numbered 64 and 170 respectively. The brigades, throughout the State, controlled by the Western Australian Fire Brigades Board at 30th September, 1963, numbered 63, with a staff of 1,423, including 279 permanent officers and firemen and 1,144 volunteer brigade officers and firemen. The revenue for the year ended 30th September, 1963, was £622,042 and the expenditure £620,895.

Under the *Bush Fires Act, 1954-1958*, a Bush Fires Board, consisting of 13 members, 6 of whom are nominated by the Country Shire Councils Association, was set up to advise the Minister for Lands on bush fire control. The Act also provides for the registration of bush fire control officers, who numbered 1,783 at 30th June, 1963, and the establishment of bush fire brigades, 818 at 30th June, 1963. Many individual brigades are large organizations with numerous self-contained sections.

6. Tasmania.—The *Fire Brigades Act 1945* provided for the creation of the Fire Brigades Commission of Tasmania to co-ordinate the activities of existing fire brigade boards, while leaving the responsibility for individual control and management with the boards. The Commission consists of two persons nominated by the Minister, one person elected by the City or Municipal Councils representatives and three persons elected by the insurance representatives of the Fire Brigades Boards. Contributions towards the cost of operations are on the basis of one quarter each from the Treasury and the municipalities and one half from the insurance companies concerned. The cost for the year 1962-63 amounted to £212,454. There were, at 30th June, 1963, 23 boards controlling 37 stations, and their aggregate staffs numbered 562, including 109 permanent officers, 371 part-time firemen, including officers, and 82 volunteers.

## CHAPTER XXI

### PRIVATE FINANCE

NOTE.—Further information on the subjects dealt with in this chapter is contained in the annual bulletins *Banking and Currency* and *Insurance and Other Private Finance* published by this Bureau. Current information is contained in the *Quarterly Summary of Australian Statistics*, the *Monthly Review of Business Statistics*, the *Digest of Current Economic Statistics* (monthly), and the monthly mimeographed statements *Australian Banking Statistics* (bulletin and preliminary statement), *Australian Savings Bank Statistics* (bulletin and preliminary statement) and *Australian Life Insurance Statistics* (bulletin). The annual mimeographed bulletin *Australian Fire, Marine and General Insurance Statistics* contains the most recent information available on this subject. Other relevant mimeographed statements are:—*Instalment Credit for Retail Sales*; *Unit Trusts, Land Trusts, and Mutual Funds*; *New Capital Raisings by Companies in Australia*; and *Capital and Maintenance Expenditure by Private Business in Australia* (quarterly); *Oversea Investment: Australia* (annual); *Survey of Private Pension and Retiring Allowance Schemes, 1961–62*; and *Survey of Selected Large Private Pension Funds, 1962–63*. Preliminary monthly statements *Instalment Credit for Retail Sales* and preliminary estimates of *New Capital Raisings* and of *Oversea Investment* are issued also.

### CURRENCY

#### § 1. General

1. **Decimal Currency.**—The Decimal Currency Committee was appointed by the Commonwealth Government in February, 1959, to investigate the advantages and disadvantages of a decimal currency, and, if a decimal currency was favoured, the unit of account and denominations of subsidiary currency most appropriate for Australia, the method of introduction, and the cost involved. The Committee presented its report in August, 1960, and the Summary of Conclusions and Recommendations contained therein appears in Year Book No. 49, pages 835–7.

In July, 1961, the Commonwealth Government confirmed its support of decimal currency systems and in April, 1963, announced that a system of decimal currency was to be introduced into Australia at the earliest practicable date. February, 1966, was given as the tentative change-over date, subject to confirmation that all the necessary arrangements could be completed by that date so that the currency reform could be introduced with the minimum amount of inconvenience. The Government emphasized that the tentative target of February, 1966, would depend to a large extent upon the completion on schedule of the new National Mint in Canberra, since it would be essential to have an adequate supply of the new decimal coins available for distribution to the public at the change-over date. The new mint was expected to be completed late in 1964, and this would allow full production of new coins for at least one year before February, 1966, supplemented if possible by assistance from the existing Melbourne and Perth Mints. The Melbourne and Perth Mints would, however, be primarily concerned with the production of the present coins, which would probably remain in circulation until late in 1967.

The new system would be based on a major unit equal to the present ten shillings. The minor unit of the new system would be one hundredth part of the major unit, and would thus be equal in value to 1.2d. in the existing coinage system. No fractions of the minor unit would be introduced.

The Government also announced that it would pay reasonable compensation to owners of a large proportion of monetary machines which would require conversion in order to be used under the new decimal system. While the general principles on which the compensation would be paid had already been determined, a vast number of points of detail would have to be negotiated with the machine companies concerned, and this would be one of the principal duties of a statutory authority which would be established to plan and administer preparations for the change-over. The appointment of a Decimal Currency Board of seven members to supervise certain important aspects of the arrangements for the change-over to the decimal currency system was announced on 4th June, 1963.



On 5th June, 1963, the Government announced that the major unit in the new Australian decimal currency system was to be called the "Royal". However, on 18th September, 1963, it was announced that the Government had revised its earlier decision and that the new major unit would be the "Dollar" and not the "Royal", and that the dollar and cent would be the only units with specified names. The dollar will be a banknote and will consist of 100 "units" each equivalent in value to 1.2d. under the present £ s. d. system.

On 20th December, 1963, the Government published the following details of the dimensions and composition of the proposed new decimal coins to be introduced in February, 1966.

Coin	Diameter	Weight	Composition
	inches	grains	per cent.
<b>Silver—</b>			
50 cents (5s.) .. .. .	1.240	200	$\left\{ \begin{array}{l} 80 \text{ silver} \\ 20 \text{ copper} \end{array} \right.$
<b>Cupro-nickel—</b>			
20 cents (2s.) .. .. .	1.122	174.6	$\left\{ \begin{array}{l} 75 \text{ copper} \\ 25 \text{ nickel} \end{array} \right.$
10 cents (1s.) .. .. .	0.929	87.3	
5 cents (6d.) .. .. .	0.764	43.6	
<b>Bronze—</b>			
2 cents (2.4d.) .. .. .	0.850	80	$\left\{ \begin{array}{l} 97 \text{ copper} \\ 2\frac{1}{2} \text{ zinc} \\ \frac{1}{4} \text{ tin} \end{array} \right.$
1 cent (1.2d.) .. .. .	0.690	40	

2. **The Present Australian Monetary System.**—The Australian monetary system is based on the British system, of which the unit is the pound (£) divided into 20 shillings (s.) each of 12 pence (d.). When the Australian currency was introduced in 1909, the Australian pound was specified as equivalent to 123.27447 grains of gold  $\frac{11}{12}$ ths fine or 113.002 grains of fine gold and, until the depression in 1930, was identical with the pound sterling. There was a gradual depreciation of the Australian pound in terms of sterling from the beginning of 1930 until 3rd December, 1931, when it was stabilized at the rate of £125 Australian = £100 sterling. This relationship has been maintained until the present time. Following the depreciation, no action was taken to define the value of the Australian pound in terms of gold until 5th August, 1947, when the Australian Government advised the International Monetary Fund, in terms of the membership agreement, that the par value of the Australian pound was 2.86507 grammes (44.2148 grains) of fine gold. From 18th September, 1949, this was reduced to 1.99062 grammes (30.720 grains) of fine gold.

When the Commonwealth was established in 1901, the currency in Australia consisted of United Kingdom gold, silver and bronze coins, notes issued by the banks, and Queensland Treasury notes. Queensland Treasury notes were in circulation in Queensland only, having superseded bank notes in that State after the 1893 crisis. Under the Commonwealth Constitution, the control of currency, coinage and legal tender and the issue of paper money was vested in the Commonwealth. The Commonwealth assumed these powers by enacting the *Coinage Act 1909* and the *Australian Notes Act 1910*.

Australian notes are legal tender in Australia for any amount. Australian silver coins are legal tender for any amount not exceeding forty shillings and Australian bronze coins are legal tender for any amount not exceeding one shilling.

## § 2. Coinage

1. **Coins in Circulation.**—Brief historical notes relating to the Australian coinage are given in Official Year Book No. 37, pages 557 and 558. For weight, metal, composition, etc., of Australian coins in circulation see Official Year Book No. 39, page 697.

The silver coins issued prior to July, 1947, have a millesimal fineness of 925 (thirty-seven fortieths silver and three fortieths copper) and those issued since 1st July, 1947 (dated 1946 and later), have a millesimal fineness of 500 (one-half silver and one-half other metals).

From 1910 to 1916, Australian coins were minted in England by the Royal Mint, London, and the Mint, Birmingham Ltd., and in 1916, 1917 and 1918 by the Indian Mints. The minting of Australian coins was undertaken by the Australian Mints in 1916, and coins have been minted at the Melbourne branch of the Royal Mint from 1916 to the present time, at the Sydney branch from 1919 until that Mint closed in 1926, and at the Perth branch in 1922 and from 1940 to the present time.

During the 1939-45 War, the two Australian mints were unable to meet the demand for Australian coins, and some coins were minted in the United States of America and India. In 1951-52 and 1952-53, some coins were minted at the Royal Mint, London, to meet the heavy demand for coins. Details of Australian coins obtained from each mint to 30th June, 1963, are as follows:—Melbourne, £56,091,000; Perth, £2,037,000; Sydney, £488,000; United Kingdom Mints, £3,016,000; United States Mints, £6,000,000; Indian Mints, £169,000; total, £67,801,000.

2. *Net Issues of Australian Coins.*—The net issues of Australian silver and bronze coin from 1910 to 30th June, 1963, were:—Crown (5s.), £276,000; Florin (2s.), £22,753,000; Shilling (1s.), £10,469,000; Sixpence (6d.), £6,735,000; Threepence (3d.), £7,141,000; total silver coin, £47,433,000; Penny (1d.), £2,835,000; Half-penny (2d.), £822,000; total bronze coin, £3,657,000. Except in the total, no allowance has been made for £59,000 worth of damaged silver coin, for which denominations are not available, withdrawn since 1910.

3. *Profits on Coinage of Silver and Bronze.*—Australian silver and bronze coins are token coins and, as the face value of the coins is greater than the value of the bullion they contain, a profit is made from their issue. This profit forms part of the Commonwealth Consolidated Revenue. In the following table, details are given of the value of coins issued, the cost of bullion, the cost of minting and sundry expenses connected with the issue, and the profits made on the issue of coins during the years 1958-59 to 1962-63.

**AUSTRALIAN SILVER AND BRONZE COINS: PROFITS FROM ISSUE**  
(£)

Year	Face value of coin issued (a)	Cost of bullion	Gross profit	Cost of minting and sundry charges	Net profit
<b>SILVER COIN</b>					
1958-59 .. ..	1,304,682	933,065	371,617	139,948	231,669
1959-60 .. ..	2,157,682	1,505,128	652,554	182,558	469,996
1960-61 .. ..	2,262,622	1,591,878	670,744	258,002	412,742
1961-62 .. ..	3,672,543	2,658,758	1,013,785	267,921	745,864
1962-63 .. ..	2,757,600	2,268,179	489,421	262,753	226,668
<b>BRONZE COIN</b>					
1958-59 .. ..	78,906	61,786	17,120	100,252	- 83,132
1959-60 .. ..	121,354	87,422	33,932	88,988	- 55,056
1960-61 .. ..	145,125	110,101	35,024	126,598	- 91,574
1961-62 .. ..	143,289	101,810	41,479	197,939	- 156,460
1962-63 .. ..	170,105	120,860	49,245	170,039	- 120,794
<b>TOTAL</b>					
1958-59 .. ..	1,383,588	994,851	388,737	240,200	148,537
1959-60 .. ..	2,279,036	1,592,550	686,486	271,546	414,940
1960-61 .. ..	2,407,747	1,701,979	705,768	384,600	321,168
1961-62 .. ..	3,815,832	2,760,568	1,055,264	465,860	589,404
1962-63 .. ..	2,927,705	2,389,039	538,666	432,792	105,874

(a) Includes selected and proof pieces.

NOTE.—Minus sign (-) denotes a loss.

4. *Australian Mints.*—(i) *General.* Soon after the discovery of gold in Australia a branch of the Royal Mint was established in Sydney. The formal opening took place on 14th May, 1855. The Melbourne branch was opened on 12th June, 1872, and the Perth Branch on 20th June, 1899. The States of New South Wales, Victoria and Western Australia provided an annual endowment in return for which the mint receipts were paid to the respective State Treasuries. Owing to losses incurred in its operations, the Sydney branch was closed at the end of 1926.

Since their establishment, the Australian branches of the Royal Mint have been primarily concerned with the refining of gold, minting of Imperial gold coins and the production of bars and ingots of gold bullion for export. The minting of Imperial gold coins was discontinued in September, 1931. In 1916, the Melbourne branch took over the minting of Australian silver and bronze coins from the Royal Mint, London. Australian coins were also minted at the Sydney Mint from 1919 to 1926 and at the Perth Mint in 1922 and from 1940 to the present time. The Melbourne branch has also minted token coins for the Territory of New Guinea and for New Zealand.

A new mint, the Australian National Mint, is being built in Canberra. It is expected to be completed by the end of 1964, and will then be engaged in the production of coins of the new decimal currency (see §1, p. 825).

(ii) *Gold Receipts and Issues.* (a) *Receipts.* The receipts of gold at Australian mints during 1962 and 1963 amounted to 981,592 and 909,993 fine ounces respectively (Melbourne, 114,838 and 110,960 fine ounces respectively, Perth, 866,754 and 799,033 fine ounces respectively).

(b) *Issues.* The Australian mints issue gold bullion for the use of local manufacturers (jewellers, dentists, etc.) and for export. Since September, 1931, when the United Kingdom departed from the gold standard, the minting and issue of gold coins by Australian mints has ceased. Australian exports of gold are mainly in the form of 400-oz. ingots, but in earlier years a considerable amount of gold was shipped to India in 10-oz. bars. Since early in the 1939-45 War, all gold has been acquired by the Reserve Bank, and the export and use of gold have been subject to regulation by the Commonwealth Government. From December, 1951, export of a proportion of newly-mined gold for sale on premium markets overseas was permitted. The issues from Australian mints during 1962 and 1963 amounted to 982,143 and 910,377 fine ounces respectively (Melbourne, 115,045 and 111,035 fine ounces respectively, Perth, 867,098 and 799,342 fine ounces respectively).

5. *Price of Gold.*—The following table shows the average prices of gold, the average values of the sovereign's gold content in London, and the sovereign's Reserve Bank buying price in Australia for the years 1958-59 to 1962-63. The average price of gold in Australia is based on the Reserve Bank's buying price for gold lodged with the mints.

PRICE OF GOLD: LONDON AND AUSTRALIA

Period	London		Australia		
	Average price per fine oz.	Average value of sovereign's gold content	Average price per fine oz.	Sovereign	
				Reserve Bank buying price	Equivalent to a premium on mint par value of—
	£Stg. s. d.	£Stg. s. d.	£A. s. d.	£A. s. d.	%
1958-59.. ..	12 9 11	2 18 10	15 12 6	3 12 6	267.8
1959-60.. ..	12 10 3	2 18 11	15 12 6	3 12 6	267.8
1960-61.. ..	12 11 9	2 19 3	15 12 6	3 12 6	267.8
1961-62.. ..	12 10 1	2 18 10	15 12 6	3 12 6	267.8
1962-63.. ..	12 10 6	2 19 0	15 12 6	3 12 6	267.8

In December, 1951, arrangements were made whereby producers could sell a proportion of newly-mined gold for industrial purposes on overseas premium markets. Under these arrangements, gold is acquired by the Reserve Bank in the usual manner and sold, at the Bank's buying price, to an association representing gold producers participating in the scheme. The association pays the Bank's handling charges and the costs of preparation of the gold and makes arrangements for export and sale. The gold can be sold only against payment in United States dollars. Profits earned by the association after meeting administrative expenses are distributed to members in proportion to the quantity of gold delivered to the Reserve Bank. Until August, 1952, when permission was given for the export of fine gold, gold exported under this arrangement was not to exceed a fineness of 22 carats ( $\frac{11}{16}$ ths).

The average prices per fine ounce in Australian currency (f.o.b.) obtained for gold exported under this scheme for each month during 1962-63 for which there were sales were:—August, September, April and June, £15 13s. 1d.; October, £15 13s. 3d.; November, £15 13s. 5d.; December, £15 12s. 10d.; March, £15 12s. 10½d.; May, £15 13s. 2d.

## § 3. Notes

1. *General*.—Brief historical notes relating to the circulation and issue of notes in Australia are given in Official Year Book No. 37, pages 561 and 562. The issue of notes intended for circulation as money other than by the Reserve Bank of Australia is prohibited.

2. *The Australian Note Issue*.—(i) *General*. Notes in circulation in Australia are issued by the Reserve Bank through the Note Issue Department. The Bank is authorized to issue Australian notes in denominations of 5s., 10s., £1, £5, £10 and any multiple of £10. The Reserve Bank is not required to hold a specific reserve in gold against the note issue, but the assets of the Note Issue Department must be held or invested in gold, on deposit with any bank, or in securities of the Government of the United Kingdom, the Commonwealth, or a State. Under the *Reserve Bank Act 1959*, the profits of the Note Issue Department are paid to the Commonwealth.

Australian notes are legal tender to any amount within Australia and have been issued in denominations of 10s., £1, £5, £10, £20, £50, £100 and £1,000. Notes of denominations higher than £10, however, have not been issued to the public since 1945.

(ii) *Australian Notes in Circulation*. Particulars of the average values of notes in circulation for the years 1958–59 to 1962–63 are given in the following table.

**AUSTRALIAN NOTE ISSUE**  
(£'000)

Denomination	Average of monthly statements(a) for year—				
	1958–59	1959–60	1960–61	1961–62	1962–63
10s. .. .. .	11,507	11,919	12,236	12,526	13,088
£1 .. .. .	68,919	69,638	69,983	69,298	70,259
£5 .. .. .	177,931	186,144	192,789	192,392	197,196
£10 .. .. .	139,205	146,393	152,302	153,613	157,878
£20 .. .. .	3	3	2	2	2
£50 .. .. .	37	34	32	30	30
£100 .. .. .	42	38	37	36	34
£1,000 .. .. .	634	2,330	2,856	3,511	3,110
<i>Held by Banks</i> .. .. .	46,777	53,084	57,111	59,695	62,480
<i>Held by Public</i> .. .. .	351,501	363,415	373,126	371,713	379,117
<b>Total</b> .. .. .	<b>398,278</b>	<b>416,499</b>	<b>430,237</b>	<b>431,408</b>	<b>441,597</b>

(a) Last Wednesday in month.

(iii) *Reserve Bank—Note Issue Department*. The following statement shows particulars of liabilities and assets of the Note Issue Department of the Reserve Bank as at 30th June, 1962 and 1963.

**RESERVE BANK OF AUSTRALIA: NOTE ISSUE DEPARTMENT—**  
**LIABILITIES AND ASSETS, 30th JUNE**  
(£'000)

Liabilities	1962	1963	Assets	1962	1963
Notes on issue(a) ..	424,223	430,155	Gold and balances held abroad (including money at short call)	221,360	250,024
Special reserve—			Other overseas securities .. .. .	14,995	15,946
Premium on gold sold .. .. .	4,755	4,755	Government securities (including Commonwealth treasury bills)	202,963	179,353
Other liabilities(a) ..	10,389	10,456	Other assets .. .. .	49	43
<b>Total</b> .. .. .	<b>439,367</b>	<b>445,366</b>	<b>Total</b> .. .. .	<b>439,367</b>	<b>445,366</b>

(a) Notes of a denomination not exceeding one pound which have been on issue for more than 20 years, and notes of a denomination exceeding one pound which have been on issue for more than 40 years are not included in the item Notes on issue but are included in the item Other liabilities.

In 1962–63, the net profits of the Note Issue Department amounted to £12,780,000 and were paid to the Commonwealth of Australia.

## BANKING

## § 1. Cheque-Paying Banks

1. **Royal Commission on Monetary and Banking Systems.**—A Royal Commission was appointed by the Commonwealth Government in November, 1935, to inquire into the monetary and banking systems in operation in Australia and to report whether any, and if so what, alterations were desirable in the interests of the people of Australia as a whole, and the manner in which any such alterations should be effected. The Commission presented its report on 15th July, 1937, and a summary of the recommendations appears in Official Year Book No. 31, page 1010.

2. **Banking Legislation.**—(i) *Commonwealth Legislation.* Under Section 51 of the Commonwealth Constitution, the Commonwealth Parliament has power to legislate with respect to "Banking, other than State banking; also State banking extending beyond the limits of the State concerned, the incorporation of banks, and the issue of paper money." The principal Commonwealth Acts at present in force relating to banking are—

- (a) The *Reserve Bank Act 1959*, which provides for the constitution and management of the Reserve Bank of Australia and the management of the Australian note issue;
- (b) The *Commonwealth Banks Act 1959–1961*, which provides for the constitution and management of the Commonwealth Banking Corporation, Commonwealth Trading Bank of Australia, Commonwealth Savings Bank of Australia and Commonwealth Development Bank of Australia; and
- (c) The *Banking Act 1959*, which provides for the regulation of banking and for the protection of the currency and the public credit of the Commonwealth.

The *Banking Act 1959*, which replaced the *Banking Act 1945–1953*, was assented to on 23rd April, 1959, and came into operation on 14th January, 1960. It applies to all banks, except State banks trading in their own State, operating in Australia or the Territories of the Commonwealth. The objects of the Act are:—(a) to provide a legal framework uniform throughout Australia for regulating the banking system; (b) to safeguard depositors of the banks from loss; (c) to provide for the co-ordination of banking policy under the direction of the Reserve Bank; (d) to control the volume of credit in circulation and bank interest rates; (e) to mobilize and to provide machinery for the control of the foreign exchange and gold resources of the Australian economy. A summary of the main provisions of the Act is given in Official Year Book No. 46, pages 759 and 760.

(ii) *State Legislation.* State banking legislation relates to the incorporation of banks and the constitution and management of State banks. The Acts under which the various banks are incorporated differ. While some of the older banks were incorporated by special Act or Charter, e.g. the Bank of New South Wales by Act of Council 1817, the Bank of Adelaide by Act of the South Australian Parliament, and the Bank of New Zealand by Act of the General Assembly of New Zealand, most of the banks are incorporated under a Companies Act of the States or the United Kingdom. This is also the case with those banks which were reconstructed after the crisis of 1893. State banks, constituted under State Acts, transacting general banking business, are The Rural Bank of New South Wales, the State Bank of South Australia and The Rural and Industries Bank of Western Australia.

3. **Presentation of Banking Statistics.**—Because of the different purposes they serve in the Australian financial system, Australian banks have been divided for statistical purposes into the following five groups and a separate series is presented for each.

- (a) *The Reserve Bank of Australia.* Formerly the Commonwealth Bank, this bank is the Central Bank. It also provides special banking facilities through the Rural Credits Department. Statistics of the Central Banking Business (including the Note Issue Department) and of the Rural Credits Department are presented in separate series.
- (b) *The Commonwealth Development Bank of Australia.* This bank, which commenced operations on 14th January, 1960, under the control of the Commonwealth Banking Corporation, was formed basically from an amalgamation of the Mortgage Bank and Industrial Finance Departments of the Commonwealth Bank. Its prime purpose is to assist in the development of worth-while enterprises in the field of both primary and secondary industries which would otherwise be unable to obtain the necessary finance on reasonable and suitable terms and conditions.

- (c) *The Commonwealth Trading Bank of Australia.* This bank commenced operations on 3rd December, 1953. On that date, under the provisions of the *Commonwealth Bank Act 1953*, it took over the business of the General Banking Division of the Commonwealth Bank. On 14th January, 1960, under the provisions of the *Commonwealth Banks Act 1959*, it came under the control of the Commonwealth Banking Corporation.
- (d) *Private Trading Banks.* This group was formerly known as the Nine Trading Banks, but the number of banks included has been reduced to seven by amalgamations. With the Commonwealth Trading Bank, these banks provide the major part of the general banking facilities in Australia. The banks included in this group are—the Australia and New Zealand Bank Ltd. (an amalgamation of the Bank of Australasia Ltd. and the Union Bank of Australia Ltd.), The Bank of Adelaide, the Bank of New South Wales, The Commercial Bank of Australia Ltd., The Commercial Banking Company of Sydney Ltd., The English, Scottish and Australian Bank Ltd. and The National Bank of Australasia Ltd. (which has absorbed The Queensland National Bank Ltd. and The Ballarat Banking Co. Ltd.).
- (e) *Other Banks.* This group consists of (i) three State Government Banks—The Rural Bank of New South Wales, the State Bank of South Australia and The Rural and Industries Bank of Western Australia, (ii) one joint stock bank—The Brisbane Permanent Building and Banking Co. Ltd., which has specialized business in one district only, and (iii) branches of three oversea banks—the Bank of New Zealand, Comptoir National d'Escompte de Paris and the Bank of China, which transact limited business in Australia and are mainly concerned with financing trade, etc., between Australia and oversea countries.

In addition to the series mentioned above, a series for all cheque-paying banks is presented. This series covers the Commonwealth Trading Bank, the Private Trading Banks, and the other cheque-paying banks included in the fifth group.

Unless otherwise stated, the statistics presented are averages of weekly returns. Averages of liabilities and assets are the averages of the liabilities and assets of the banks on the weekly balance days during the period concerned. Averages of bank clearings and debits to customers' accounts are the averages of transactions for weeks ended on the balance days during the period.

4. *Banks Transacting Business in Australia.*—(i) *Number of Branches.* At 30th June, 1963, the 15 banks operating in Australia transacted all classes of banking business at 4,118 branches and 1,661 agencies. The Commonwealth Trading Bank and the Private Trading Banks have branches throughout Australia. The Rural Bank of New South Wales, the State Bank of South Australia, and The Rural and Industries Bank of Western Australia, being State Government banks, have branches only in their respective States. The Brisbane Permanent Building and Banking Co. Ltd. transacts business only in Brisbane. The remaining three banks are branches of oversea banks.

**CHEQUE-PAYING BANKS: NUMBER OF BRANCHES(a) AT 30th JUNE, 1963**

Banks	New South Wales	Victoria	Q'land	South Aust.	West. Aust.	Tasmania	Nor. Terr.	Aust. Cap. Terr.	Australia
Commonwealth Trading Bank of Australia ..	327	111	94	37	54	15	2	3	643
Private Trading Banks ..	1,074	976	527	318	251	80	9	15	3,250
Other cheque-paying banks	145	2	1	35	42	..	..	..	225
<b>All cheque-paying banks—</b>									
Metropolitan areas ..	668	583	172	167	149	25	..	..	1,764
Elsewhere ..	878	506	450	223	198	70	11	18	2,354
<b>Total .. ..</b>	<b>1,546</b>	<b>1,089</b>	<b>622</b>	<b>390</b>	<b>347</b>	<b>95</b>	<b>11</b>	<b>18</b>	<b>4,118</b>

(a) Includes head offices. Excludes 1,661 agencies.

(ii) *Capital Resources, Profits and Dividends.* The paid-up capital of cheque-paying banks (excluding the three oversea banks, the Bank of New Zealand, the Bank of China and the Comptoir National d'Escompte de Paris), together with their reserve funds, their profits and the amount of their last dividends, are shown in the following table. The information relates to the balance-sheet last preceding 31st October, 1963. All amounts are expressed in Australian currency.

**CHEQUE-PAYING BANKS(a): CAPITAL RESOURCES, PROFITS AND DIVIDENDS, 1963**

(£'000)

Bank	Paid-up capital (b)	Reserve funds	Balance of profit and loss account (c)	Total shareholders' funds (d)	Net profit for year (e)	Net dividends (f)
Commonwealth Trading Bank of Australia ..	7,429	4,697	..	12,126	1,064	..
Private Trading Banks—						
Australia and New Zealand Bank Ltd. ..	17,570	13,974	2,443	33,987	1,505	1,199
The Bank of Adelaide .. .. .	(g) 1,750	2,000	247	3,997	223	175
Bank of New South Wales .. .. .	21,950	15,750	2,146	39,846	3,324	2,195
The Commercial Bank of Australia Ltd. ..	6,223	4,000	769	10,992	683	495
The Commercial Banking Co. of Sydney Ltd.	8,500	7,014	822	16,336	925	808
The English, Scottish and Australian Bank Ltd.	6,275	4,079	697	11,051	568	346
The National Bank of Australasia Ltd. ..	h 10,089	7,500	1,622	19,211	1,142	958
The Queensland National Bank Ltd. (in vol. liq.) (i) .. .. .	..	..	30	30	..	..
<i>Total, Private Trading Banks</i> ..	<i>79,786</i>	<i>59,014</i>	<i>8,776</i>	<i>147,576</i>	<i>9,434</i>	<i>6,176</i>
Other Cheque-paying Banks—						
The Brisbane Permanent Building and Banking Co. Ltd. .. .. .	1,000	375	94	1,469	114	80
The Rural Bank of New South Wales .. ..	12,400	13,324	..	25,724	210	..
State Bank of South Australia .. .. .	18,073	2,134	..	20,207	225	..
The Rural and Industries Bank of Western Australia .. .. .	9,425	615	..	10,040	91	..
<i>Total, Other Cheque-paying Banks</i> ..	<i>40,898</i>	<i>16,448</i>	<i>94</i>	<i>57,440</i>	<i>640</i>	<i>80</i>
<b>Grand Total</b> .. .. .	<b>120,684</b>	<b>75,462</b>	<b>8,870</b>	<b>205,016</b>	<b>10,074</b>	<b>6,256</b>

(a) At various balance sheet dates during 1963. (b) For the Commonwealth Trading Bank, the amount shown in this column is the amount specified as capital in the *Commonwealth Banks Act 1959*. For the State Bank of South Australia and The Rural and Industries Bank of Western Australia, the amounts shown in this column are capital funds provided by the respective State Governments. Capital of The Rural Bank of New South Wales consists of Inscribed Stock and Debentures issued by the bank for capital purposes. (c) Includes dividends declared but not paid at date of balance-sheet. (d) For the Commonwealth Trading Bank and the State banks, the amount shown in this column is total capital and reserves. (See footnote (b).) (e) For the State Government banks, the net profit is the profit after writing off bank premises and payment of interest on capital. For the other banks, the net profit is the profit before writing off bank premises. (f) Dividends paid and payable out of profits earned during 1962-63. (g) Reserve liability of shareholders, £1,750,000. (h) Uncalled capital £2,700,000. (i) This Bank was in process of liquidation consequent upon the amalgamation of its business with the National Bank of Australasia Ltd.

5. The Reserve Bank of Australia.—(i) *General.* The Reserve Bank of Australia, established under the *Reserve Bank Act 1959*, which came into operation on 14th January, 1960, continued in existence the body corporate known as the Commonwealth Bank of Australia. An account of the progress and development of that bank is given in earlier issues of the Official Year Book (see No. 37, pp. 570 to 572, and No. 45, pp. 735 to 737).

The general functions of the Reserve Bank are set out in Section 10 of the *Reserve Bank Act 1959*, which states:—

“ It is the duty of the Board, within the limits of its powers, to ensure that the monetary and banking policy of the Bank is directed to the greatest advantage of the people of Australia and that the powers of the Bank under this Act, the *Banking Act 1959*, and regulations under that Act are exercised in such a manner as, in the opinion of the Board, will best contribute to,

- (a) the stability of the currency of Australia;
- (b) the maintenance of full employment in Australia; and
- (c) the economic prosperity and welfare of the people of Australia.”

In addition to its functions as a Central Bank, the bank controls the Australian note issue through a Note Issue Department, provides special banking facilities through the Rural Credits Department, and acts as banker to the Commonwealth and some of the States.

Prior to its reconstitution as the Reserve Bank, the Commonwealth Bank also provided general banking facilities through a General Banking Division up to 3rd December, 1953, when that business was taken over by the Commonwealth Trading Bank, and special banking facilities through the Mortgage Bank and Industrial Finance Departments. In addition, the Board of the Commonwealth Bank was responsible for the policy and administration of the Commonwealth Trading Bank and Commonwealth Savings Bank. On 14th January, 1960, on its reconstitution as the Reserve Bank, the Mortgage Bank and Industrial Finance Departments were amalgamated to form the Commonwealth Development Bank, and that institution, together with the Commonwealth Trading Bank and the Commonwealth Savings Bank, was placed under the control of the Commonwealth Banking Corporation, an organization established under the *Commonwealth Banks Act 1959* and entirely separate from the Reserve Bank.

(ii) *Management.* The Commonwealth Bank was managed between 1911 and 1924 by a Governor, from 1924 to August, 1945, by a Board of Directors, from August, 1945, to August, 1951, by a Governor, assisted by an Advisory Council, and since August, 1951, by a Board of Directors.

Under the provisions of the *Reserve Bank Act 1959*, the policy of the Reserve Bank is determined by a Board consisting of the Governor (Chairman), the Deputy Governor, the Secretary to the Treasury, and seven other members appointed by the Governor-General. The Bank is managed by the Governor, who acts in accordance with the policy of the Board and with any directions of the Board. The Bank is required to inform the Government of the monetary and banking policy of the Board. In the event of a disagreement between the Government and the Board as to whether the monetary and banking policy of the Bank is directed to the greatest advantage of the people of Australia, the Governor-General, acting with the advice of the Executive Council, may determine the policy to be adopted by the Bank.

(iii) *Central Banking Business.* Under the powers it possessed under the *Commonwealth Bank Act 1911-1943* and under its war-time powers under the National Security Regulations, the Commonwealth Bank gradually assumed the functions of a Central Bank. Part III. of the *Commonwealth Bank Act 1945* formally constituted the Bank as a Central Bank and granted the necessary powers to carry on the business of a Central Bank, and these powers were carried through into the present Act constituting the Reserve Bank. Under the provisions of the *Reserve Bank Act 1959*, the capital for the Central Banking Business is the capital of the Commonwealth Bank for Central Banking purposes immediately prior to 14th January, 1960, and such other sums as are transferred from the Reserve Bank Reserve Fund. The profits of the Bank are distributed as follows: (a) such sums as the Treasurer, after consultation with the Bank, determines shall be placed to the credit of the Reserve Bank Reserve Fund and (b) the remainder shall be paid to the Commonwealth.

(iv) *Note Issue Department.* The Note Issue Department, established in 1920 when the control of the Australian note issue was transferred from the Commonwealth Treasury to the Commonwealth Bank, was maintained in the same form under the *Reserve Bank Act 1959*. The Reserve Bank may, through this Department, issue, re-issue and cancel Australian notes. Under the *Reserve Bank Act 1959*, the profits of the Note Issue Department are paid to the Commonwealth.



(v) *Rural Credits Department.* The Rural Credits Department, established in 1925 for the purpose of making short-term credit available for the orderly marketing of primary produce, was continued in the same form under the *Reserve Bank Act 1959*. The Reserve Bank may, through this Department, make advances upon the security of primary produce placed under the legal control of the bank, or other security associated with the production or marketing of primary produce, to co-operative associations or marketing boards formed under the laws of the Commonwealth or a State or Territory of the Commonwealth or other bodies specified by proclamation. The period of the advance shall not exceed one year. Under the provisions of the *Reserve Bank Act 1959*, the capital of the Rural Credits Department is the capital of the Rural Credits Department of the Commonwealth Bank immediately prior to 14th January, 1960, and £2,000,000 provided by the Reserve Bank. The profits of the Rural Credits Department are dealt with as follows: (a) one half shall be placed to the credit of the Rural Credits Department Reserve Fund and (b) one half shall be placed to the credit of the Rural Credits Development Fund.

(vi) *Liabilities and Assets—All Departments.* Liabilities and assets of each Department of the Reserve Bank at 30th June, 1963, are shown in the following table.

RESERVE BANK OF AUSTRALIA: LIABILITIES AND ASSETS, 30th JUNE, 1963  
(£'000)

Particulars	Central Banking Business	Note Issue Department	Rural Credits Department	Total(a)
<b>LIABILITIES</b>				
Capital .. .. .	4,000	..	4,714	8,714
Reserve funds .. .. .	21,777	..	2,160	23,942
Special reserve—premium on gold sold .. .. .	..	4,755	..	4,755
Development fund .. .. .	..	..	268	268
Notes on issue .. .. .	..	430,155	..	430,155
Deposits, bills payable and other liabilities—				
Statutory reserve deposit accounts of trading banks..	2,2608	..	..	222,608
Other deposits of trading banks .. .. .	51,463	..	..	51,463
Deposits of savings banks .. .. .	185,027	..	..	185,027
Deposits of oversea institutions .. .. .	12,759	..	..	12,759
Other (including provision for contingencies) ..	153,225	10,456	98,136	(a)169,180
<b>Total .. .. .</b>	<b>650,859</b>	<b>445,366</b>	<b>105,283</b>	<b>a1,108,871</b>
<b>ASSETS</b>				
Gold and balances held abroad (including money at short call and treasury bills) .. .. .	296,328	250,024	..	546,352
Other oversea securities .. .. .	17,761	15,946	..	33,707
Australian notes and coin and cash balances ..	6,997	..	..	6,997
Australian Government securities (including treasury bills) .. .. .	215,819	179,353	..	395,172
Cheques and bills of other banks .. .. .	2,244	..	..	2,244
Loans, advances, bills discounted, and other assets (after deducting debts considered bad or doubtful) ..	97,824	..	105,283	(a)110,200
Bank premises at cost less amounts written off ..	5,022	..	..	5,022
Bills receivable and remittances in transit .. ..	4,894	..	..	4,894
All other assets .. .. .	3,970	43	..	(a) 4,283
<b>Total .. .. .</b>	<b>650,859</b>	<b>445,366</b>	<b>105,283</b>	<b>a1,108,871</b>

(a) Inter-departmental accounts totalling £92,637,000 have been offset in the combined figures.

(vii) *Profits.* Net profits of the various Departments of the Reserve Bank for the years ended 30th June, 1959 to 1963, were as follows.

**RESERVE BANK OF AUSTRALIA(a): NET PROFITS**  
(£'000)

Year	Central Banking Business	Note Issue Department	Rural Credits Department	Mortgage Bank Department (b)	Industrial Finance Department (b)	Total
1958-59 .. .. .	4,200	10,935	227	123	512	15,997
1959-60 .. .. .	5,381	10,516	322	..	..	16,219
1960-61 .. .. .	6,705	12,930	434	..	..	20,069
1961-62 .. .. .	6,673	15,751	469	..	..	22,893
1962-63 .. .. .	3,351	12,781	444	..	..	16,576

(a) Prior to 14th January, 1960, Commonwealth Bank of Australia. (b) On 14th January, 1960, amalgamated to form Commonwealth Development Bank.

The distribution of these profits for the years ended 30th June, 1959 to 1963, is given in the following table.

**RESERVE BANK OF AUSTRALIA(a): DISTRIBUTION OF PROFITS**  
(£'000)

To—	1958-59	1959-60	1960-61	1961-62	1962-63
National Debt Sinking Fund ..	2,100	..	..	..	..
Commonwealth of Australia ..	10,935	13,206	16,283	20,238	14,456
Reserve Bank Reserve Fund ..	2,100	2,691	3,352	2,186	1,676
Rural Credits Department—					
Reserve Fund .. .. .	114	161	217	235	222
Development Fund .. ..	113	161	217	234	222
Mortgage Bank Department(b)—					
Reserve Fund .. .. .	123	..	..	..	..
Industrial Finance Department(b)—					
Reserve Fund .. .. .	512	..	..	..	..
<b>Total .. .. .</b>	<b>15,997</b>	<b>16,219</b>	<b>20,069</b>	<b>22,893</b>	<b>16,576</b>

(a) Prior to 14th January, 1960, Commonwealth Bank of Australia. (b) On 14th January, 1960, amalgamated to form Commonwealth Development Bank.

(viii) *Central Banking Business—Average Liabilities and Assets.* The average liabilities and assets of the Central Banking Business and Note Issue Department of the Reserve Bank for the years 1958-59 to 1962-63 are shown in the two tables which follow.

**RESERVE BANK OF AUSTRALIA(a): CENTRAL BANKING BUSINESS**  
**(INCLUDING NOTE ISSUE DEPARTMENT)—AVERAGE LIABILITIES**  
(£'000)

Year	Capital and reserve funds	Australian notes on issue	Statutory reserve deposit accounts of Trading Banks	Other deposits of Trading Banks	Other liabilities	Total liabilities
1958-59 .. .. .	26,437	396,019	259,863	24,189	232,866	939,376
1959-60 .. .. .	25,029	413,592	280,786	19,580	246,368	985,355
1960-61 .. .. .	22,790	427,710	294,409	18,478	268,417	1,031,804
1961-62 .. .. .	26,000	427,503	217,733	31,454	332,986	1,035,676
1962-63 .. .. .	28,513	438,262	212,254	59,512	306,793	1,045,334

(a) Prior to 14th January, 1960, Commonwealth Bank of Australia.

**RESERVE BANK OF AUSTRALIA(a): CENTRAL BANKING BUSINESS  
(INCLUDING NOTE ISSUE DEPARTMENT)—AVERAGE ASSETS  
(£'000)**

Year	Gold and foreign exchange	Australian notes and coin	Cheques and bills of other banks	Australian Government securities (including Treasury bills and Treasury notes)	Bills receivable and remittances in transit	Loans, advances and all other assets	Total assets
1958-59 .. ..	450,228	2,182	4,094	428,341	4,707	49,824	939,376
1959-60 .. ..	479,855	3,566	3,084	435,858	4,014	58,978	985,355
1960-61 .. ..	404,145	6,280	1,956	531,405	5,750	82,268	1,031,804
1961-62 .. ..	526,059	7,985	1,790	429,590	6,270	63,982	1,035,676
1962-63 .. ..	547,829	9,118	1,930	414,518	7,658	64,281	1,045,334

(a) Prior to 14th January, 1960, Commonwealth Bank of Australia.

(ix) *Rural Credits Department—Average Liabilities and Assets within Australia.* The following table shows the average liabilities and assets (excluding capital and contingencies) of the Rural Credits Department of the Reserve Bank within Australia for the years 1958-59 to 1962-63.

**RESERVE BANK OF AUSTRALIA(a): RURAL CREDITS DEPARTMENT—  
AVERAGE LIABILITIES AND ASSETS WITHIN AUSTRALIA  
(£'000)**

Year	Total liabilities	Loans advances, etc.	Other assets	Total assets
1958-59 .. ..	40,272	46,732	282	47,014
1959-60 .. ..	54,542	62,605	217	62,822
1960-61 .. ..	62,332	72,356	54	72,410
1961-62 .. ..	57,606	68,479	46	68,525
1962-63 .. ..	55,540	66,681	524	67,205

(a) Prior to 14th January, 1960, Commonwealth Bank of Australia.

6. The Commonwealth Banking Corporation.—(i) *General.* The Commonwealth Banking Corporation was established under the *Commonwealth Banks Act 1959* and came into being on the 14th January, 1960. The Corporation is the controlling body for the Commonwealth Trading Bank, Commonwealth Savings Bank and Commonwealth Development Bank. The general functions of the corporation are set out in Section 9 of the *Commonwealth Banks Act 1959* which states:

“ It is the duty of the Board, within the limits of its powers, to ensure that the policy of the Trading Bank, of the Savings Bank and of the Development Bank are directed to the greatest advantage of the people of Australia and have due regard to the stability and balanced development of the Australian economy.”

Under the *Banking Act 1959*, the Corporation and its constituent banks are subject to the same central banking controls as are the private trading banks.

(ii) *Management.* The Board of the Corporation consists of the Managing Director of the Corporation, the Deputy Managing Director, the Secretary to the Treasury and eight other members appointed by the Governor-General of whom one is Chairman and another Deputy Chairman. In addition, there is an Executive Committee of the Board for each of the three separate banks. These Executive Committees are appointed by the Treasurer, after consultation with the Board, and are charged with taking such action as is necessary to ensure that effect is given by the respective banks to the policies laid down for them and to any directions given by the Board in relation to their affairs. Under the Board, the Corporation is managed by the Managing Director and the Deputy Managing Director. Each of the three constituent banks of the Corporation has its own statutory functions and responsibilities and its separate identity within the framework of the Corporation. Each bank is managed by a General Manager under the Managing Director of the Corporation.

In paras. 7 and 8 following, details are given of the assets and liabilities of the Commonwealth Development Bank and the Commonwealth Trading Bank. Details for the Commonwealth Savings Bank are shown in § 2 of this division, pages 856-8.

7. Commonwealth Development Bank of Australia.—(i) *General.* The Commonwealth Development Bank of Australia was established by the *Commonwealth Banks Act 1959* and commenced operations on 14th January, 1960. It was formed basically from an amalgamation of the Mortgage Bank and Industrial Finance Departments of the Commonwealth Bank. Under the Act, the Bank is authorized to provide assistance for the development of worthwhile enterprises in the fields of primary and secondary industries which would otherwise be unable to obtain the necessary finance on reasonable and suitable terms and conditions. The Commonwealth Development Bank is managed by a General Manager under the Managing Director of the Commonwealth Banking Corporation, and its policy is determined by the Board of that Corporation. The capital of the Development Bank consists of the capital of the Mortgage Bank and Industrial Finance Departments of the Commonwealth Bank immediately prior to 14th January, 1960, £5,000,000 provided by the Reserve Bank, £10,000,000 provided by the Commonwealth Government in the 1961–62 Budget and £5,000,000 in the 1963–64 Budget, and such other sums as are provided from the Commonwealth Development Bank Reserve Fund. The net profits of the Bank are paid to the Commonwealth Development Bank Reserve Fund.

(ii) *Liabilities and Assets.* The liabilities and assets of the Commonwealth Development Bank at 30th June, 1963, are shown in the following table.

**COMMONWEALTH DEVELOPMENT BANK OF AUSTRALIA:  
LIABILITIES AND ASSETS, 30th JUNE, 1963  
(£'000)**

Liabilities	1963	Assets	1963
Capital .. .. .	25,857	Coin, bullion, notes and cash at bankers .. .. .	401
Commonwealth Development Bank reserve fund .. .. .	7,448	Australian public securities—	
Balances due to other banks .. .. .	14,085	Commonwealth and States—	
Deposits, bills payable and all other liabilities (including amounts provided for contingencies) .. .. .	10,091	Treasury bills .. .. .	993
		Other securities .. .. .	1,650
		Other securities .. .. .	217
		Loans to authorized dealers in the short-term money market .. .. .	200
		Cheques and bills of other banks and balances with and due from other banks .. .. .	415
		Loans, advances and bills discounted (after deducting provisions for debts considered bad or doubtful) .. .. .	53,451
		All other assets .. .. .	154
<b>Total .. .. .</b>	<b>57,481</b>	<b>Total .. .. .</b>	<b>57,481</b>

(iii) *Average Liabilities and Assets within Australia.* The average liabilities and assets (excluding capital and contingencies) of the Commonwealth Development Bank within Australia for the years 1958–59 to 1962–63 are shown in the following table.

**COMMONWEALTH DEVELOPMENT BANK OF AUSTRALIA(a): AVERAGE  
LIABILITIES AND ASSETS WITHIN AUSTRALIA  
(£'000)**

Year	Total liabilities	Loans, advances, etc.		Australian Government securities (including Treasury bills)	Other assets	Total assets
		Hire purchase	Other			
1958–59 .. .. .	18,731	17,365	15,075	4,949	985	38,374
1959–60 .. .. .	18,339	17,830	15,934	6,784	1,057	41,605
1960–61 .. .. .	17,954	18,951	17,535	7,407	1,134	45,027
1961–62 .. .. .	17,512	19,944	24,362	2,955	1,235	48,496
1962–63 .. .. .	17,073	20,738	30,850	4,074	1,191	56,853

(a) Prior to 14th January, 1960, Industrial Finance and Mortgage Bank Departments of the Commonwealth Bank of Australia.

(iv) *Profits.* The net profit of the Commonwealth Development Bank for the year ended 30th June, 1963, was £890,675. The net profit was appropriated to the Commonwealth Development Bank Reserve Fund.

8. **The Commonwealth Trading Bank of Australia.**—(i) *General.* The Commonwealth Trading Bank of Australia was established by the *Commonwealth Bank Act 1953* and on 3rd December, 1953, took over the business of the General Banking Division of the Commonwealth Bank. It was managed by a General Manager under the Governor of the Commonwealth Bank and its policy was determined by the Board of that Bank. Under the provisions of the *Commonwealth Banks Act 1959*, which came into operation on 14th January, 1960, the Commonwealth Trading Bank was maintained in the same form but was placed under the control of the Commonwealth Banking Corporation. The Commonwealth Trading Bank is managed by a General Manager under the Managing Director of the Commonwealth Banking Corporation. The capital of the Commonwealth Trading Bank is the capital of the Commonwealth Trading Bank immediately prior to 14th January, 1960, £2,000,000 provided by the Reserve Bank, and such other sums as are transferred from the Commonwealth Trading Bank Reserve Fund. Under the Act, the Bank is liable for income taxes. The net profits of the Bank, after provision for taxation, are divided as follows:— (a) one-half shall be placed to the credit of the Commonwealth Trading Bank Reserve Fund and (b) one-half shall be paid to the Commonwealth.

(ii) *Liabilities and Assets.* The liabilities and assets of the Commonwealth Trading Bank at 30th June, 1963, are shown in the following table.

**COMMONWEALTH TRADING BANK OF AUSTRALIA: LIABILITIES AND ASSETS, 30th JUNE, 1963**  
(£'000)

Liabilities	1963	Assets	1963
Capital .. .. .	7,429	Coin, bullion, notes and cash at bankers .. .. .	15,054
Reserve Fund .. .. .	4,697	Money at short call overseas .. .. .	4,250
Balances due to other banks .. .. .	937	Australian public securities—	
Deposits, bills payable and other liabilities (including provision for contingencies) .. .. .	409,331	Commonwealth and States—	
		Treasury bills .. .. .	996
		Other securities .. .. .	71,573
		Local and semi-governmental authorities .. .. .	4,271
		Other public securities .. .. .	323
		Other securities .. .. .	2,272
		Loans to authorized dealers in the short-term money market .. .. .	4,870
		Statutory reserve deposit account with Reserve Bank .. .. .	36,593
		Cheques and bills of other banks and balances with and due from other banks .. .. .	20,076
		Loans, advances and bills discounted (after deducting provisions for debts considered bad or doubtful) .. .. .	179,927
		Bank premises .. .. .	3,843
		Bills receivable and remittances in transit .. .. .	75,349
		All other assets .. .. .	2,997
<b>Total .. .. .</b>	<b>422,394</b>	<b>Total .. .. .</b>	<b>422,394</b>

(iii) *Average Liabilities and Assets within Australia.* The average liabilities and assets within Australia of the Commonwealth Trading Bank (excluding capital and contingencies) for the years 1958–59 to 1962–63 are shown in the following table.

COMMONWEALTH TRADING BANK OF AUSTRALIA: AVERAGE LIABILITIES  
WITHIN AUSTRALIA(a)  
(£'000)

Year	Deposits			Balances due to other banks	Bills payable and all other liabilities to the public	Total liabilities
	Not bearing interest	Bearing interest	Total			
1958-59 .. .. .	159,071	67,705	226,776	417	21,623	248,816
1959-60 .. .. .	181,055	73,382	254,437	743	14,461	269,641
1960-61 .. .. .	183,857	87,299	271,156	1,080	2,589	274,825
1961-62 .. .. .	183,690	113,519	297,209	941	2,695	300,845
1962-63 .. .. .	191,318	121,031	312,349	800	3,259	316,408

(a) Includes Territories of Papua and New Guinea.

COMMONWEALTH TRADING BANK OF AUSTRALIA: AVERAGE ASSETS  
WITHIN AUSTRALIA(a)  
(£'000)

Year	Cash and cash balances	Commonwealth and State government securities		Other securities	Loans to authorized dealers in short-term money market	Statutory reserve deposit account with Reserve Bank (c)	Balances with other banks (d)	Loans (e), advances and bills discounted	All other assets (f)	Total assets
		Treasury bills and Treasury notes (b)	Other							
1958-59 ..	11,307	4,137	56,677	2,416	1,388	36,450	1,590	122,499	9,161	245,625
1959-60 ..	11,719	3,043	60,189	2,353	2,556	41,429	3,606	133,735	9,211	267,843
1960-61 ..	10,518	1,592	54,007	2,406	4,640	45,835	5,595	147,566	8,812	280,971
1961-62 ..	10,842	2,195	84,455	2,347	2,947	35,704	7,557	149,711	11,216	306,974
1962-63 ..	10,990	2,978	77,981	2,261	4,078	34,725	14,468	165,698	12,485	325,664

(a) Includes Territories of Papua and New Guinea. (b) Prior to July, 1962, seasonal securities. (c) Prior to 14th January, 1960, special account with Commonwealth Bank. (d) Includes notes, cheques and bills of other banks. (e) Excludes loans to authorized dealers in short-term money market. (f) Includes local government and semi-governmental securities.

(iv) *Profits.* The net profits (after writing off bank premises, £131,390 in 1962 and £146,580 in 1963) of the Commonwealth Trading Bank for the years ended 30th June, 1962 and 1963, were £726,418 and £917,820 respectively. These net profits were distributed one half to the Commonwealth and one half to the Commonwealth Trading Bank Reserve Fund.

9. *Private Trading Banks—Average Liabilities and Assets in Australia.*—The average liabilities and assets within Australia (excluding capital and contingencies) of the Private Trading Banks (see p. 831 for list of banks) for the years 1958-59 to 1962-63 are shown in the following tables.

14. Classification of Bank Deposits within Australia—Commonwealth Trading Bank of Australia and Private Trading Banks (Major Trading Banks).—A classification of bank deposits (excluding deposits of Commonwealth and State Governments) of the Commonwealth and Private Trading Banks for June, 1960, to July, 1963, is given in the following table. The classification is similar to that used for advances (for details see page 843).

**COMMONWEALTH TRADING BANK OF AUSTRALIA AND PRIVATE TRADING BANKS (MAJOR TRADING BANKS): CLASSIFICATION OF DEPOSITS(a) WITHIN AUSTRALIA(b): AMOUNT AND PROPORTION OF EACH CLASS TO TOTAL**

Classification	June(c)—		July(c)—					
	1960		1961		1962		1963	
	Amount (£mill.)	Per cent.	Amount (£mill.)	Per cent.	Amount (£mill.)	Per cent.	Amount (£mill.)	Per cent.

**RESIDENT DEPOSITORS**

Business deposits classified according to main industry of depositor—									
Agriculture, grazing, dairying .. ..	344.3	20.8	327.6	20.2	332.6	18.9	356.5	19.2	
Manufacturing .. ..	147.7	8.9	120.8	7.4	130.0	7.4	127.3	6.9	
Transport, storage and communication .. ..	32.2	2.0	29.7	1.8	30.1	1.7	30.2	1.6	
Finance .. ..	130.3	7.9	123.8	7.6	139.2	7.9	139.6	7.6	
Commerce .. ..	160.7	9.7	142.0	8.7	158.5	9.0	163.1	8.8	
Building and construction .. ..	45.5	2.7	48.3	3.0	52.2	3.0	51.7	2.8	
Other businesses .. ..	197.8	11.9	185.0	11.4	203.5	11.6	214.9	11.6	
Unclassified .. ..	13.7	0.8	13.5	0.8	15.0	0.8	18.8	1.0	
<i>Companies(d) .. ..</i>	<i>383.7</i>	<i>23.2</i>	<i>337.2</i>	<i>20.7</i>	<i>405.5</i>	<i>23.0</i>	<i>404.7</i>	<i>21.9</i>	
<i>Other(d) .. ..</i>	<i>688.5</i>	<i>41.5</i>	<i>653.5</i>	<i>40.2</i>	<i>655.6</i>	<i>37.3</i>	<i>697.4</i>	<i>37.6</i>	
<i>Total .. ..</i>	<i>1,072.2</i>	<i>64.7</i>	<i>990.7</i>	<i>60.9</i>	<i>1,061.1</i>	<i>60.3</i>	<i>1,102.1</i>	<i>59.5</i>	
Deposits of public authorities .. ..	74.6	4.5	81.8	5.0	97.3	5.6	110.6	6.0	
Personal deposits .. ..	450.9	27.2	481.4	29.6	518.8	29.5	550.9	29.7	
Deposits of non-profit organizations .. ..	48.6	2.9	59.0	3.7	67.2	3.8	72.3	3.9	
<i>Total, Resident Depositors .. ..</i>	<i>1,646.3</i>	<i>99.3</i>	<i>1,612.9</i>	<i>99.2</i>	<i>1,744.4</i>	<i>99.2</i>	<i>1,835.9</i>	<i>99.1</i>	

**NON-RESIDENT DEPOSITORS**

<i>Total, Non-resident Depositors .. ..</i>	<i>10.9</i>	<i>0.7</i>	<i>12.8</i>	<i>0.8</i>	<i>14.7</i>	<i>0.8</i>	<i>15.8</i>	<i>0.9</i>
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**TOTAL—ALL DEPOSITORS**

<b>Grand Total .. ..</b>	<b>1,657.2</b>	<b>100.0</b>	<b>1,625.7</b>	<b>100.0</b>	<b>1,759.1</b>	<b>100.0</b>	<b>1,851.7</b>	<b>100.0</b>
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(a) Excludes deposits of Commonwealth and State Governments. (b) Includes Territories of Papua and New Guinea. (c) Information for July, 1961, to 1963, was compiled uniformly by all banks as at the second Wednesday of these months. Information for earlier periods was not compiled at a uniform point of time but at various dates centring around the end of the month shown. (d) The combined deposits of these two groups are distributed over the industries above.

**COMMONWEALTH TRADING BANK OF AUSTRALIA: AVERAGE LIABILITIES WITHIN AUSTRALIA(a)**

(£'000)

Year	Deposits			Balances due to other banks	Bills payable and all other liabilities to the public	Total liabilities
	Not bearing interest	Bearing interest	Total			
1958-59 .. .. .	159,071	67,705	226,776	417	21,623	248,816
1959-60 .. .. .	181,055	73,382	254,437	743	14,461	269,641
1960-61 .. .. .	183,857	87,299	271,156	1,080	2,589	274,825
1961-62 .. .. .	183,690	113,519	297,209	941	2,695	300,845
1962-63 .. .. .	191,318	121,031	312,349	800	3,259	316,408

(a) Includes Territories of Papua and New Guinea.

**COMMONWEALTH TRADING BANK OF AUSTRALIA: AVERAGE ASSETS WITHIN AUSTRALIA(a)**

(£'000)

Year	Cash and cash balances	Commonwealth and State government securities		Other securities	Loans to authorized dealers in short-term money market	Statutory reserve deposit account with Reserve Bank (c)	Balances with other banks (d)	Loans (e), advances and bills discounted	All other assets (f)	Total assets
		Treasury bills and Treasury notes (b)	Other							
1958-59 .. .. .	11,307	4,137	56,677	2,416	1,388	36,450	1,590	122,499	9,161	245,625
1959-60 .. .. .	11,719	3,043	60,189	2,355	2,556	41,429	3,606	133,735	9,211	267,843
1960-61 .. .. .	10,518	1,592	54,007	2,406	4,640	45,835	5,595	147,566	8,812	280,971
1961-62 .. .. .	10,842	2,195	84,455	2,347	2,947	35,704	7,557	149,711	11,216	306,974
1962-63 .. .. .	10,990	2,978	77,981	2,261	4,078	34,725	14,468	165,698	12,485	325,664

(a) Includes Territories of Papua and New Guinea. (b) Prior to July, 1962, seasonal securities. (c) Prior to 14th January, 1960, special account with Commonwealth Bank. (d) Includes notes, cheques and bills of other banks. (e) Excludes loans to authorized dealers in short-term money market. (f) Includes local government and semi-governmental securities.

(iv) *Profits.* The net profits (after writing off bank premises, £131,390 in 1962 and £146,580 in 1963) of the Commonwealth Trading Bank for the years ended 30th June, 1962 and 1963, were £726,418 and £917,820 respectively. These net profits were distributed one half to the Commonwealth and one half to the Commonwealth Trading Bank Reserve Fund.

9. *Private Trading Banks—Average Liabilities and Assets in Australia.*—The average liabilities and assets within Australia (excluding capital and contingencies) of the Private Trading Banks (see p. 831 for list of banks) for the years 1958-59 to 1962-63 are shown in the following tables.



PRIVATE TRADING BANKS: AVERAGE LIABILITIES WITHIN AUSTRALIA(a)  
(£'000)

Year	Deposits			Balances due to other banks	Bills payable and all other liabilities to the public	Total liabilities
	Not bearing interest	Bearing interest	Total			
1958-59 .. .. .	1,007,798	368,514	1,376,312	4,121	20,658	1,401,091
1959-60 .. .. .	1,067,592	385,554	1,453,146	4,804	24,008	1,481,958
1960-61 .. .. .	1,035,292	422,193	1,457,485	21,752	28,414	1,507,651
1961-62 .. .. .	989,717	519,649	1,509,366	7,457	28,394	1,545,217
1962-63 .. .. .	1,002,405	589,453	1,591,858	8,613	31,904	1,632,375

(a) Includes Territories of Papua and New Guinea.

PRIVATE TRADING BANKS: AVERAGE ASSETS WITHIN AUSTRALIA(a)  
(£'000)

Year	Cash and cash balances	Commonwealth and State government securities		Other securities	Loans to authorized dealers in short-term money market	Statutory reserve deposit account with Reserve Bank (c)	Balances with other banks (d)	Loans (e), advances and bills discounted	All other assets (f)	Total assets
		Treasury bills and Treasury notes (b)	Other							
1958-59 .. .. .	58,263	38,309	193,546	15,702	6,613	222,809	18,794	807,028	66,257	1,427,321
1959-60 .. .. .	57,731	24,407	236,890	16,484	21,757	238,774	23,195	818,308	69,064	1,506,610
1960-61 .. .. .	61,913	20,733	174,422	19,149	18,971	248,038	25,890	902,465	75,567	1,547,148
1961-62 .. .. .	61,007	32,336	285,648	20,247	27,991	181,558	34,205	852,477	72,077	1,567,546
1962-63 .. .. .	58,413	31,315	296,390	23,819	27,899	177,079	62,555	894,871	72,835	1,645,176

(a) Includes Territories of Papua and New Guinea. (b) Prior to July, 1962, seasonal securities. (c) Prior to 14th January, 1960, Special Account with Commonwealth Bank. (d) Includes notes, cheques and bills of other banks. (e) Excludes loans to authorized dealers in short-term money market. (f) Includes local government and semi-governmental securities.

10. Other Cheque-paying Banks—Average Liabilities and Assets within Australia.—The average liabilities and assets within Australia (excluding capital and contingencies) of Other Cheque-paying Banks (see p. 831 for list of these banks) for the years 1958-59 to 1962-63 are shown in the following tables.

OTHER CHEQUE-PAYING BANKS: AVERAGE LIABILITIES WITHIN AUSTRALIA  
(£'000)

Year	Deposits			Balances due to other banks	Bills payable and all other liabilities to the public(a)	Total liabilities
	Not bearing interest	Bearing interest	Total			
1958-59 .. .. .	40,189	24,694	64,883	1,055	22,962	88,900
1959-60 .. .. .	44,901	27,969	72,870	921	23,838	97,629
1960-61 .. .. .	45,790	35,105	80,895	1,381	25,624	107,900
1961-62 .. .. .	47,109	42,932	90,041	1,766	31,374	123,181
1962-63 .. .. .	51,296	50,584	101,880	1,658	40,553	144,091

(a) Includes inscribed stock and debentures, Rural Bank of New South Wales and State Bank of South Australia.

**OTHER CHEQUE-PAYING BANKS: AVERAGE ASSETS WITHIN AUSTRALIA (£'000)**

Year	Cash and cash balances	Commonwealth and State government securities		Other securities	Loans to authorized dealers in short-term money market	Statutory reserve deposit account with Reserve Bank (b)	Balances with other banks (c)	Loans(d), advances and bills discounted	All other assets (e)(f)	Total assets
		Treasury bills and Treasury notes (a)	Other							
1958-59 ..	3,615	824	14,400	3,588	1,223	606	2,920	85,819	7,417	120,412
1959-60 ..	2,970	858	16,952	3,570	6,375	584	2,380	88,546	7,968	130,203
1960-61 ..	2,703	733	18,776	4,507	7,035	537	1,971	94,507	9,012	139,781
1961-62 ..	5,597	404	21,947	3,719	2,347	471	2,427	105,900	9,366	152,178
1962-63 ..	5,399	1,777	22,496	3,957	2,247	450	2,652	122,064	9,975	171,017

(a) Prior to July, 1962, seasonal securities. (b) Prior to 14th January, 1960, special account with Commonwealth Bank. (c) Includes notes, cheques and bills of other banks. (d) Excludes loans to authorized dealers in short-term money market. (e) Includes local government and semi-governmental securities. (f) Includes The Rural and Industries Bank of Western Australia and State Bank of South Australia accounts with State Treasuries.

11. All Cheque-paying Banks.—(i) *Average Liabilities and Assets within Australia.* Particulars of the average liabilities and assets within Australia (excluding capital and contingencies) of all cheque-paying banks in Australia (see p. 831 for list of banks) for the years 1958-59 to 1962-63 are shown in the following tables.

**ALL CHEQUE-PAYING BANKS: AVERAGE LIABILITIES WITHIN AUSTRALIA(a) (£'000)**

Year	Deposits			Balances due to other banks	Bills payable and all other liabilities to the public	Total liabilities
	Not bearing interest	Bearing interest	Total			
1958-59 ..	1,207,058	460,913	1,667,971	5,593	65,243	1,738,807
1959-60 ..	1,293,548	486,905	1,780,453	6,468	62,307	1,849,228
1960-61 ..	1,264,939	544,597	1,809,536	24,213	56,627	1,890,376
1961-62 ..	1,220,516	676,100	1,896,616	10,164	62,463	1,969,243
1962-63 ..	1,245,019	761,068	2,006,087	11,071	75,716	2,092,874

(a) Includes Territories of Papua and New Guinea.

**ALL CHEQUE-PAYING BANKS: AVERAGE ASSETS WITHIN AUSTRALIA(a) (£'000)**

Year	Cash and cash balances	Commonwealth and State government securities		Other securities	Loans to authorized dealers in short-term money market	Statutory reserve deposit account with Reserve Bank (c)	Balances with other banks (d)	Loans (e), advances and bills discounted	All other assets (f)	Total assets
		Treasury bills and Treasury notes. (b)	Other							
1958-59 ..	73,185	43,270	264,623	21,706	9,224	259,865	23,304	1,015,346	82,835	1,793,358
1959-60 ..	72,420	28,308	314,031	22,409	30,688	280,787	29,181	1,040,589	86,243	1,904,656
1960-61 ..	75,134	23,058	247,205	26,062	30,646	294,410	33,456	1,144,538	93,391	1,967,900
1961-62 ..	77,444	34,935	392,050	26,313	33,285	217,733	44,189	1,108,088	92,659	2,026,698
1962-63 ..	74,802	36,070	396,867	30,637	34,224	212,254	79,675	1,182,633	95,295	2,141,857

(a) Includes Territories of Papua and New Guinea. (b) Prior to July, 1962, seasonal securities. (c) Prior to 14th January, 1960, special account with Commonwealth Bank. (d) Includes notes, cheques and bills of other banks. (e) Excludes loans to authorized dealers in short-term money market. (f) Includes local government and semi-governmental securities.

(ii) *Ratios of Assets and Liabilities to Total Deposits.* The following table shows, for all cheque-paying banks, the ratios of selected assets and liabilities to total deposits for the years 1958-59 to 1962-63. The ratios are based on the average liabilities and assets for the years shown.

**ALL CHEQUE-PAYING BANKS: RATIOS OF SELECTED AVERAGE ASSETS AND LIABILITIES TO AVERAGE TOTAL DEPOSITS<sup>(a)</sup>**  
(Per cent.)

Year	Cash and cash balances <sup>(b)</sup>	Commonwealth and State government securities		Statutory reserve deposit account with Reserve Bank	Loans <sup>(d)</sup> , advances and bills discounted	Deposits not bearing interest
		Treasury bills and Treasury notes <sup>(c)</sup>	Other			
1958-59..	4.4	2.6	15.9	15.6	60.9	72.4
1959-60..	4.1	1.6	17.6	15.8	58.5	72.7
1960-61..	4.1	1.3	13.7	16.3	63.3	69.9
1961-62..	4.1	1.8	20.7	11.5	58.4	64.4
1962-63..	3.7	1.8	19.8	10.6	59.0	62.1

(a) Based on deposits and assets within Australia and excludes London Funds. (b) Coin, bullion, Australian notes and cash with Reserve Bank on current account. (c) Prior to July, 1962, seasonal securities. (d) Excludes loans to authorized dealers in short-term money market.

(iii) *Proportion of Non-Interest Bearing to Total Deposits.* The following table shows, for each State, the proportion of non-interest bearing deposits to total deposits with all cheque-paying banks for each of the years 1958-59 to 1962-63. The ratios are based on the average deposits for the years shown.

**ALL CHEQUE-PAYING BANKS: PROPORTION OF NON-INTEREST BEARING DEPOSITS TO TOTAL DEPOSITS**  
(Per cent.)

Year	N.S.W.	Vic.	Q'land	S. Aust.	W. Aust.	Tas.	N.T.	A.C.T.	Aust. <sup>(a)</sup>
1958-59	73.0	72.1	74.2	65.4	72.5	75.8	78.7	77.6	72.4
1959-60	73.0	72.4	74.5	66.6	73.3	76.7	78.3	78.2	72.7
1960-61	70.0	69.6	70.9	65.5	71.7	74.9	75.6	75.2	69.9
1961-62	64.5	63.9	64.1	60.9	67.4	68.2	71.7	73.7	64.4
1962-63	62.3	61.5	61.3	59.4	65.6	66.5	67.8	71.2	62.1

(a) Includes Territories of Papua and New Guinea.

(iv) *Ratio of Advances to Total Deposits.* The ratio of advances to total deposits for each State for the years 1958-59 to 1962-63 is shown in the following table. The ratios are based on the averages of deposits and advances for the years shown.

**ALL CHEQUE-PAYING BANKS: RATIO OF ADVANCES TO TOTAL DEPOSITS**  
(Per cent.)

Year	N.S.W.	Vic.	Q'land	S. Aust.	W. Aust.	Tas.	N.T.	A.C.T.	Aust. <sup>(a)</sup>
1958-59	67.7	50.9	65.3	47.5	81.6	61.8	41.0	30.5	60.9
1959-60	64.3	49.1	62.6	50.4	74.0	60.1	39.5	33.0	58.5
1960-61	67.2	36.8	66.0	58.5	76.9	63.2	35.2	31.2	63.3
1961-62	63.1	51.4	61.2	55.0	66.5	62.5	31.0	25.1	58.4
1962-63	63.0	51.1	60.3	61.6	69.8	63.9	29.0	29.2	59.0

a) Includes Territories of Papua and New Guinea.

12. Commonwealth and Private Trading Banks (Major Trading Banks).—(i) *Selected Average Assets and Liabilities within Australia.* In the following tables, particulars of selected average assets and liabilities of the Commonwealth and Private Trading Banks are shown for each of the years 1958–59 to 1962–63.

**COMMONWEALTH AND PRIVATE TRADING BANKS (MAJOR TRADING BANKS):  
SELECTED AVERAGE ASSETS AND LIABILITIES WITHIN AUSTRALIA(a)**

Year	Cash and cash balances	Commonwealth and State government securities		Statutory reserve deposit account with Reserve Bank	Advances	Total deposits	
		Treasury bills and Treasury notes(b)	Other			Not bearing interest	Bearing interest
1958–59 .. ..	69,570	42,446	250,223	259,259	929,527	1,166,869	436,219
1959–60 .. ..	69,450	27,450	297,079	280,203	952,043	1,248,647	458,936
1960–61 .. ..	72,431	22,325	228,429	293,873	1,050,031	1,219,149	509,492
1961–62 .. ..	71,849	34,531	370,103	217,262	1,002,188	1,173,407	633,168
1962–63 .. ..	69,403	34,293	374,371	211,804	1,060,569	1,193,723	710,484

(a) Includes Territories of Papua and New Guinea.

(b) Prior to July, 1962, seasonal securities.

(ii) *Ratios of Selected Assets within Australia to Total Deposits.* In the table below, ratios of selected assets to total deposits are given for each of the years 1958–59 to 1962–63.

**COMMONWEALTH AND PRIVATE TRADING BANKS (MAJOR TRADING BANKS):  
RATIOS OF SELECTED ASSETS WITHIN AUSTRALIA(a) TO TOTAL DEPOSITS(b)  
(Per cent.)**

Year	Cash and cash balances (c)	Commonwealth and State government securities		Statutory reserve deposit account with Reserve Bank	Advances	Total deposits	
		Treasury bills and Treasury notes(d)	Other			Not bearing interest	Bearing interest
1958–59 .. ..	4.3	2.7	15.6	16.2	58.0	72.8	27.2
1959–60 .. ..	4.1	1.6	17.4	16.4	55.8	73.1	26.9
1960–61 .. ..	4.2	1.3	13.2	17.0	60.7	70.5	29.5
1961–62 .. ..	4.0	1.9	20.5	12.0	55.5	65.0	35.0
1962–63 .. ..	3.6	1.8	19.7	11.1	55.7	62.7	37.3

(a) Includes Territories of Papua and New Guinea. (b) Based on averages of assets and liabilities for the years shown. (c) Coin, bullion, notes and cash with Reserve Bank on current account. (d) Prior to July, 1962, seasonal securities.

13. Classification of Advances within Australia—Commonwealth Trading Bank of Australia and Private Trading Banks (Major Trading Banks).—(i) *States, July, 1963.* A classification of bank advances of the Commonwealth and Private Trading Banks outstanding at 10th July, 1963, is shown in the following table.

Resident borrowers cover institutions (including branches of overseas institutions) engaged in business in Australia and persons permanently residing in Australia. Non-resident borrowers cover all other persons and institutions incorporated abroad, which, though represented, do not carry on business in Australia. Advances to resident borrowers have been classified as business advances, advances to public authorities, personal advances and advances to non-profit organizations. Business advances have been further classified to the main industry of the borrower and include advances to partnerships, companies and other institutions engaged in business in Australia, advances to persons actively engaged in business on their own behalf if the advance is mainly for business purposes, advances to mutual, co-operative and benefit societies which distribute their profits or surpluses (if any) to members by way of dividends, rebates on charges for goods and services, or increased benefits. Advances to public authorities cover advances to local and semi-governmental authorities including separately constituted government business undertakings but not the Commonwealth or State Governments. Personal advances cover advances to persons for purposes other than carrying on a business. Advances to non-profit organizations cover advances to organizations which are not carried on for the purpose of making a profit or gain to individual members, any income of the organization being used for the purposes of the organization or for the benefit of the community.

**COMMONWEALTH TRADING BANK OF AUSTRALIA AND PRIVATE TRADING BANKS (MAJOR TRADING BANKS): CLASSIFICATION OF ADVANCES WITHIN AUSTRALIA(a), 10th JULY, 1963**

Classification	N.S.W. (b) (£'000)	Vic. (£'000)	Qld (a) (£'000)	S.A. (c) (£'000)	W.A. (£'000)	Tas. (£'000)	Australia (a) (£'000)	Proportion of total (Per cent.)	Term loan component (£'000)
<b>RESIDENT BORROWERS</b>									
Business advances classified according to main industry of borrower—									
Agriculture, dairying and grazing ..	91,575	48,339	61,369	18,481	22,038	5,633	247,435	22.1	10,890
Manufacturing ..	87,844	88,480	21,315	9,236	4,931	5,887	217,693	19.5	9,609
Transport, storage and communication ..	5,629	4,939	2,457	942	1,361	706	16,034	1.4	679
Finance—									
Building and housing societies ..	10,600	10,315	867	280	111	130	22,303	2.0	..
Other ..	16,581	9,974	3,000	1,931	1,180	1,620	34,286	3.1	62
Total, Finance ..	27,181	20,289	3,867	2,211	1,291	1,750	56,589	5.1	62
Commerce—									
Retail trade ..	42,969	33,755	18,345	8,199	7,136	4,619	115,023	10.3	824
Wholesale trade(d) ..	56,478	32,571	6,718	7,847	6,015	1,480	111,109	9.9	1,691
Total, Commerce ..	99,447	66,326	25,063	16,046	13,151	6,099	226,132	20.2	2,513
Building and construction ..	13,341	9,368	4,777	2,139	2,055	1,236	32,916	2.9	227
Other business ..	37,143	25,819	17,269	4,830	5,553	1,939	92,553	8.3	2,549
Unclassified ..	2,809	2,592	789	2,292	585	232	9,299	0.9	61
Companies(e) ..	225,105	175,612	45,357	30,256	15,841	13,458	505,629	45.2	16,503
Other(f) ..	139,864	90,540	91,549	25,921	35,124	10,024	393,022	35.2	10,087
Total ..	364,969	266,152	136,906	56,177	50,965	23,482	898,651	80.4	26,592
Advances to public authorities(j) ..	3,077	3,486	608	274	332	121	7,898	0.7	..
Personal advances—									
Building or purchasing own home (individuals) ..	48,260	24,373	13,889	5,461	7,339	1,970	101,292	9.0	..
All other (including personal loans) ..	37,303	24,645	11,806	4,990	5,814	2,020	86,578	7.8	70
Total ..	85,563	49,018	25,695	10,451	13,153	3,990	187,870	16.8	70
Advances to non-profit organizations ..	10,880	5,259	3,867	916	1,574	569	23,065	2.1	73
Total Advances to Resident Borrowers ..	464,489	323,915	167,076	67,818	66,024	28,162	1,117,484	100.0	26,735

**NON-RESIDENT BORROWERS**

Advances to Non-resident Borrowers ..	135	119	14	28	10	1	307	..	..
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**TOTAL ADVANCES TO RESIDENT AND NON-RESIDENT BORROWERS**

Grand Total ..	464,624	324,034	167,090	67,846	66,034	28,163	1,117,791	100.0	26,735
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(a) Includes Territories of Papua and New Guinea. (b) Includes Australian Capital Territory. (c) Includes Northern Territory. (d) Includes temporary advances to woolbuyers. (e) The combined advances for these two groups are distributed over the industries above. (f) Includes local government and semi-governmental bodies.

(ii) *Australia, June, 1960, to July, 1963.* The following table provides a classification of advances within Australia (including Territories of Papua and New Guinea) for June, 1960, to July, 1963.

COMMONWEALTH TRADING BANK OF AUSTRALIA AND PRIVATE TRADING BANKS (MAJOR TRADING BANKS): CLASSIFICATION OF ADVANCES WITHIN AUSTRALIA(a): AMOUNT AND PROPORTION OF EACH CLASS TO TOTAL

Classification	June(b)—		July(b)—					
	1960		1961		1962		1963	
	Amount (£'000)	Per cent.	Amount (£'000)	Per cent.	Amount (£'000)	Per cent.	Amount (£'000)	Per cent.
<b>RESIDENT BORROWERS</b>								
Business advances classified according to main industry of borrower—								
Agriculture, dairying and grazing ..	236,782	22.5	225,283	21.7	239,601	22.5	247,435	22.1
Manufacturing ..	213,274	20.2	228,120	22.0	209,454	19.7	217,693	19.5
Transport, storage and communication ..	16,523	1.6	14,338	1.4	13,975	1.3	16,034	1.4
Finance—								
Building and housing societies ..	24,852	2.4	25,816	2.5	23,400	2.2	27,303	2.0
Other ..	40,142	3.8	46,391	4.4	42,617	4.0	34,286	3.1
<i>Total, Finance</i> ..	<i>64,994</i>	<i>6.2</i>	<i>72,207</i>	<i>6.9</i>	<i>66,017</i>	<i>6.2</i>	<i>56,589</i>	<i>5.1</i>
Commerce—								
Retail trade ..	108,982	10.4	107,448	10.3	111,376	10.4	115,023	10.3
Wholesale trade(c) ..	102,521	9.7	109,938	10.6	105,222	9.9	111,109	9.9
<i>Total, Commerce</i> ..	<i>211,503</i>	<i>20.1</i>	<i>217,386</i>	<i>20.9</i>	<i>216,598</i>	<i>20.3</i>	<i>226,132</i>	<i>20.2</i>
Building and construction ..	29,283	2.7	25,252	2.4	30,594	2.8	32,916	2.9
Other businesses ..	74,652	7.1	72,104	6.9	77,733	7.3	92,553	8.3
Unclassified ..	5,126	0.5	5,692	0.6	8,448	0.8	9,299	0.9
<i>Companies(d)</i> ..	<i>458,813</i>	<i>43.5</i>	<i>505,128</i>	<i>48.6</i>	<i>481,888</i>	<i>45.2</i>	<i>505,629</i>	<i>45.2</i>
<i>Other(d)</i> ..	<i>393,324</i>	<i>37.4</i>	<i>355,254</i>	<i>34.2</i>	<i>380,532</i>	<i>35.7</i>	<i>393,022</i>	<i>35.2</i>
<i>Total</i> ..	<i>852,137</i>	<i>80.9</i>	<i>860,382</i>	<i>82.8</i>	<i>862,420</i>	<i>80.9</i>	<i>898,651</i>	<i>80.4</i>
Advances to public authorities(e) ..	12,764	1.2	14,066	1.3	12,623	1.2	7,898	0.7
Personal advances classified according to main purpose of advance—								
Building or purchasing own home (individuals) ..	97,935	9.3	85,061	8.2	95,373	8.9	101,292	9.0
All other (including personal loans) ..	72,211	6.9	60,010	5.8	74,258	7.0	86,578	7.8
<i>Total</i> ..	<i>170,146</i>	<i>16.2</i>	<i>145,071</i>	<i>14.0</i>	<i>169,631</i>	<i>15.9</i>	<i>187,870</i>	<i>16.8</i>
Advances to non-profit organizations ..	18,507	1.7	19,287	1.9	20,935	2.0	23,065	2.1
<i>Total Advances to Resident Borrowers</i> ..	<i>1,053,554</i>	<i>100.0</i>	<i>1,038,806</i>	<i>100.0</i>	<i>1,065,609</i>	<i>100.0</i>	<i>1,117,484</i>	<i>100.0</i>
<b>NON-RESIDENT BORROWERS</b>								
<i>Advances to Non-resident Borrowers</i> ..	239	..	287	..	274	..	307	..
<b>TOTAL ADVANCES TO RESIDENT AND NON-RESIDENT BORROWERS</b>								
<b>Grand Total</b> ..	<b>1,053,793</b>	<b>100.0</b>	<b>1,039,093</b>	<b>100.0</b>	<b>1,065,883</b>	<b>100.0</b>	<b>1,117,791</b>	<b>100.0</b>

(a) Includes Territories of Papua and New Guinea. (b) Information for July, 1961, to 1963, was compiled uniformly by all banks as at the second Wednesday of these months. Information for earlier periods was not compiled at a uniform point of time but at various dates centring around the end of the month shown. (c) Includes temporary advances to wool-buyers. (d) The combined advances for these two groups are distributed over the industries above. (e) Includes local government and semi-governmental bodies.

14. Classification of Bank Deposits within Australia—Commonwealth Trading Bank of Australia and Private Trading Banks (Major Trading Banks).—A classification of bank deposits (excluding deposits of Commonwealth and State Governments) of the Commonwealth and Private Trading Banks for June, 1960, to July, 1963, is given in the following table. The classification is similar to that used for advances (for details see page 843).

**COMMONWEALTH TRADING BANK OF AUSTRALIA AND PRIVATE TRADING BANKS (MAJOR TRADING BANKS): CLASSIFICATION OF DEPOSITS(a) WITHIN AUSTRALIA(b): AMOUNT AND PROPORTION OF EACH CLASS TO TOTAL**

Classification	June(c)—		July(c)—					
	1960		1961		1962		1963	
	Amount (£mill.)	Per cent.	Amount (£mill.)	Per cent.	Amount (£mill.)	Per cent.	Amount (£mill.)	Per cent.

**RESIDENT DEPOSITORS**

Business deposits classified according to main industry of depositor—									
Agriculture, grazing, dairying ..	344.3	20.8	327.6	20.2	332.6	18.9	356.5	19.2	
Manufacturing ..	147.7	8.9	120.8	7.4	130.0	7.4	127.3	6.9	
Transport, storage and communication ..	32.2	2.0	29.7	1.8	30.1	1.7	30.2	1.6	
Finance ..	130.3	7.9	123.8	7.6	139.2	7.9	139.6	7.6	
Commerce ..	160.7	9.7	142.0	8.7	158.5	9.0	163.1	8.8	
Building and construction ..	45.5	2.7	48.3	3.0	52.2	3.0	51.7	2.8	
Other businesses ..	197.8	11.9	185.0	11.4	203.5	11.6	214.9	11.6	
Unclassified ..	13.7	0.8	13.5	0.8	15.0	0.8	18.8	1.0	
Companies(d) ..	383.7	23.2	337.2	20.7	405.5	23.0	404.7	21.9	
Other(d) ..	688.5	41.5	653.5	40.2	655.6	37.3	697.4	37.6	
<b>Total ..</b>	<b>1,072.2</b>	<b>64.7</b>	<b>990.7</b>	<b>60.9</b>	<b>1,061.1</b>	<b>60.3</b>	<b>1,102.1</b>	<b>59.5</b>	
Deposits of public authorities ..	74.6	4.5	81.8	5.0	97.3	5.6	110.6	6.0	
Personal deposits ..	450.9	27.2	481.4	29.6	518.8	29.5	550.9	29.7	
Deposits of non-profit organizations ..	48.6	2.9	59.0	3.7	67.2	3.8	72.3	3.9	
<b>Total, Resident Depositors ..</b>	<b>1,646.3</b>	<b>99.3</b>	<b>1,612.9</b>	<b>99.2</b>	<b>1,744.4</b>	<b>99.2</b>	<b>1,835.9</b>	<b>99.1</b>	

**NON-RESIDENT DEPOSITORS**

<b>Total, Non-resident Depositors ..</b>	<b>10.9</b>	<b>0.7</b>	<b>12.8</b>	<b>0.8</b>	<b>14.7</b>	<b>0.8</b>	<b>15.8</b>	<b>0.9</b>	
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**TOTAL—ALL DEPOSITORS**

<b>Grand Total ..</b>	<b>1,657.2</b>	<b>100.0</b>	<b>1,625.7</b>	<b>100.0</b>	<b>1,759.1</b>	<b>100.0</b>	<b>1,851.7</b>	<b>100.0</b>	
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(a) Excludes deposits of Commonwealth and State Governments. (b) Includes Territories of Papua and New Guinea. (c) Information for July, 1961, to 1963, was compiled uniformly by all banks as at the second Wednesday of these months. Information for earlier periods was not compiled at a uniform point of time but at various dates centring around the end of the month shown. (d) The combined deposits of these two groups are distributed over the industries above.

**DESIGNS FOR AUSTRALIAN DECIMAL COINS**

The following three pages (848-850) show the designs of the new coins which will be introduced in Australia when the decimal currency system comes into operation in February, 1966:—

Page 848 shows the effigy of Her Majesty the Queen which forms the obverse side of the new coins.

Page 849 shows the reverse side of the new coins.

Page 850 shows the actual size of the new coins and contains notes on designs and characteristics of the new coins.

Photographs by courtesy of Australian News  
and Information Bureau.







# DESIGNS FOR AUSTRALIAN DECIMAL COINS



OBVERSE DESIGN FOR ALL COINS  
(Mr. Arnold Machin, R.A. of London designed the Queen's effigy)

REVERSE DESIGNS. (Designer Mr. Stuart Devlin of Melbourne, who also prepared the lettering on the obverse inscription)

<i>Notes on designs and characteristics of new coins</i>	<i>Composition</i>	<i>Diameter (inches)</i>	<i>Weight (grains)</i>
Fifty-cents .. .. .	80% Silver 20% Copper	1.240	200
Twenty-cents .. .. .	Cupro-nickel (75% copper and 25% nickel)	1.122	174.6
Ten-cents .. .. .		0.929	87.3
Five-cents .. .. .		0.764	43.6
Two-cents .. .. .	97% copper 3% zinc and tin	0.850	80
One-cent .. .. .		0.690	40

*Reverse design*

The Australian Coat-of-Arms, which is supported by the kangaroo and the emu. The kangaroo is Australia's biggest marsupial, and one or other of the species are found in every part of the Continent; the doe, which can be four or five feet tall, gives birth to a "joey" which is only an inch or so long, and which completes its development in its mother's pouch. The emu is the second largest bird in the world—only the ostrich is bigger; before pushed back by settlement, the emu ranged all over Australia; the male bird incubates the eggs and takes care of the chickens when they hatch.

The platypus is one of the only two egg-laying mammals (the other is the echidna) and is found in the rivers and creeks of the Eastern side of the Continent; it is about the same size as the echidna and has webbed feet and rich short fur; it swims with the skill and dash of a seal.

The lyrebird on the 10-cent is the male of the species as it appears when dancing and singing, with its magnificent tail expanded and thrown forward over its head; it is a famous mimic; it is about the size of a pheasant, and inhabits dense damp forests from Southern Queensland to Victoria.

The echidna or spiny ant-eater is Australia's other egg-layer which suckles its young; like the hedgehog, it depends on its spines for protection, and rolls up into a tight ball when frightened; it is about 18 inches long and thrives in every part of Australia. A related species is found in New Guinea.

The frilled lizard is found only in the tropical north of Australia; it grows to about three feet in length—most of it tail; it is harmless but when cornered it presents a gaping hissing mouth in the middle of its brightly-coloured neck frill.

The feather-tail glider is the smallest of our gliding marsupials and glides by means of membranes along its sides; it is strictly nocturnal and is quite common in the forests of Eastern Australia; one of its bush nicknames—the "flying mouse"—gives an idea of its size.

The twenty-cent, ten-cent and five-cent coins will have the same weight and almost exactly the same diameter as the present florin, shilling and sixpence. The fifty-cent coin will be slightly larger than a penny (which has a diameter of 1.215 inches and a weight of 145.8 grains). The two-cent coin will have a diameter midway between those of the shilling (ten-cents) and sixpence (five-cents) and the one-cent coin a diameter between those of the sixpence and the threepence (which has a diameter of 0.635 inches and a weight of 21.8 grains).

(NOTE: The photograph above depicting the obverse design is an enlargement to 50-cent size of a photograph of an actual one-cent coin. The photographs of the reverse designs are at actual coin size and were taken from plaster models prepared by the designer.)

15. Advances and Fixed Deposits classified by Rate of Interest—Commonwealth Trading Bank of Australia and Private Trading Banks (Major Trading Banks).—(i) *Classification of Advances by Rate of Interest.* The following table shows the proportions of total advances at each rate of interest at the end of June, 1960, to June, 1963.

**COMMONWEALTH TRADING BANK OF AUSTRALIA AND PRIVATE TRADING BANKS (MAJOR TRADING BANKS): ADVANCES, BY RATE OF INTEREST<sup>(a)</sup>**

*Source:* Reserve Bank of Australia  
(Proportion at Each Rate to Total—Per cent.)

Interest rate per annum	At end of—			
	June, 1960	June, 1961	June, 1962	June, 1963
5 per cent. and less .. .. .	13.6	10.3	10.8	11.7
More than 5 per cent. but less than 5½ per cent. ..	19.1	9.1	9.8	10.9
5½ per cent. .. .. .	28.6	6.8	6.3	7.9
More than 5½ per cent. but less than 6 per cent. ..	12.0	9.9	9.1	10.6
6 per cent. .. .. .	26.7	19.6	17.9	22.3
More than 6 per cent. but less than 6½ per cent. ..	..	5.2	4.7	7.6
6½ per cent. .. .. .	..	17.4	18.0	29.0
More than 6½ per cent. but less than 7 per cent. ..	..	3.7	3.4	..
7 per cent. .. .. .	..	18.0	20.0	..
<b>Total .. .. .</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>

(a) Excludes term loans.

NOTE.—Up to 16th November, 1960, the maximum rate chargeable on advances, except advances against wool shipped from Australia, was 6 per cent. per annum, with the average rate of interest on all advances not exceeding 5½ per cent. per annum. On 17th November, 1960, the maximum rate chargeable on advances was increased to 7 per cent., but the average rate of interest on all advances was not to exceed 6 per cent. The maximum average rate requirement was discontinued on 13th April, 1962. The maximum rate chargeable on advances was reduced from 7 per cent. per annum to 6½ per cent. per annum on 1st April, 1963.

(ii) *Classification of Fixed Deposits by Rate of Interest.* The following table shows the proportions of total fixed deposits at each rate of interest at the end of June, 1961, to June, 1963.

**COMMONWEALTH TRADING BANK OF AUSTRALIA AND PRIVATE TRADING BANKS (MAJOR TRADING BANKS): FIXED DEPOSITS<sup>(a)</sup>, BY RATE OF INTEREST**

*Source:* Reserve Bank of Australia  
(Proportion at each Rate to Total—Per cent.)

Interest rate per annum	At end of—		
	June, 1961	June, 1962	June, 1963
2½ .. .. .	2.2	..	..
3½ .. .. .	..	..	17.6
3½ .. .. .	34.2	7.2	20.5
3½ .. .. .	..	17.1	4.0
4 .. .. .	21.6	26.5	57.9
4½ .. .. .	..	47.9	..
4½ .. .. .	42.0	1.3	..
<b>Total .. .. .</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>

(a) Excludes Commonwealth and State Government fixed deposits.

16. **New and Increased Lending Commitments and Overdraft Limits—Commonwealth and Private Trading Banks (Major Trading Banks).**—Particulars of new and increased lending commitments and overdraft limits of the Commonwealth and Private Trading Banks are shown hereunder.

This series has been compiled from information supplied by the major trading banks as at the second Wednesday of each month. Prior to July, 1962, the series covered all new and increased lending commitments, entered into by banks, which required the approval of a formal limit on a customer's overdraft account. Commitments in respect of temporary advances to woolbuyers and in respect of term loans were excluded. As from July, 1962, the series has been extended to include new commitments in respect of the term lending arrangements established in mid-April, 1962. The figures represent gross new lending commitments of banks and do not take account of cancellations and reductions of existing limits. Figures for cancellations and reductions of existing limits can be obtained from this series (after deducting term loan component and adjusting the weekly averages to a monthly basis) in conjunction with that of overdraft limits shown in the following table. However, these derived figures should be regarded as an approximation only, since there are unavoidable differences in the basis of compilation of the two series.

**COMMONWEALTH TRADING BANK OF AUSTRALIA AND PRIVATE TRADING BANKS (MAJOR TRADING BANKS): NEW AND INCREASED LENDING COMMITMENTS AND OVERDRAFT LIMITS**

Source: Reserve Bank of Australia

(£ million)

New and increased lending commitments			Overdraft limits <sup>(a)</sup>	
For period ending second Wednesday of—	Weekly average		At second Wednesday of—	Total outstanding
	Aggregate	Term loan component		
1962—			1962—	
January .. ..	8.6	..	January .. ..	1,651.4
February .. ..	9.4	..	February .. ..	1,665.2
March .. ..	12.5	..	March .. ..	1,682.5
April .. ..	12.9	..	April .. ..	1,701.1
May .. ..	10.2	n.a.	May .. ..	1,713.7
June .. ..	9.5	n.a.	June .. ..	1,721.9
July .. ..	10.2	0.8	July .. ..	1,732.8
August .. ..	11.3	0.5	August .. ..	1,744.3
September .. ..	9.9	1.0	September .. ..	1,752.1
October .. ..	9.9	1.0	October .. ..	1,752.9
November .. ..	10.8	0.7	November .. ..	1,766.5
December .. ..	11.6	1.0	December .. ..	1,770.9
1963—			1963—	
January .. ..	8.4	0.7	January .. ..	1,762.7
February .. ..	9.3	1.0	February .. ..	1,767.3
March .. ..	13.2	1.8	March .. ..	1,783.2
April .. ..	13.7	1.8	April .. ..	1,793.6
May .. ..	10.0	0.4	May .. ..	1,798.0
June .. ..	11.2	0.6	June .. ..	1,812.2
July .. ..	13.6	1.0	July .. ..	1,821.4
August .. ..	10.8	1.0	August .. ..	1,833.7
September .. ..	11.3	0.7	September .. ..	1,845.2
October .. ..	12.0	0.7	October .. ..	1,861.2
November .. ..	10.4	0.5	November .. ..	1,873.7
December .. ..	10.8	0.7	December .. ..	1,881.2

(a) Excludes limits in respect of temporary advances to woolbuyers and term loans.

17. **Interest on Deposits: Rates—Cheque-paying Banks.**—Particulars of interest rates since 1952 for fixed deposits are shown in the following table.

**BANK FIXED DEPOSIT RATES: AUSTRALIA**  
(Per cent. per annum)

Date from which operative	Deposits for—			
	Three months	Six months	Twelve months	Twenty-four months
29th July, 1952 .. .. .	1	1½	1½	(a) 1½
1st January, 1955 .. .. .	1½	1½	1½	2
15th March, 1956 .. .. .	2½	2½	2½	3
4th December, 1956 .. .. .	2½	2½	2½	3½
17th November, 1960 .. .. .	4(b)		4½	(c)
1st July, 1961 .. .. .	4(b)		4½	(c)
13th April, 1962 .. .. .	3½(b)		4	(c)
1st April, 1963 .. .. .	3½(b)		3½(d)	(d)

(a) On first £10,000; rate on amounts in excess of £10,000 was 1½ per cent. (b) Three months but less than twelve months. (c) The maximum period for fixed deposits was 12 months. (d) From 10th September, 1962, banks were permitted to accept fixed deposits for periods up to 15 months at 3½ per cent.

18. Clearing House Returns—Average Weekly Clearings.—The average weekly clearings in each capital city for the years 1958–59 to 1962–63 are shown in the following table.

**BANK CLEARINGS(a): AVERAGE WEEKLY CLEARINGS**  
(£'000)

Year	Sydney	Melbourne	Brisbane	Adelaide	Perth	Hobart	Total
1958–59 ..	135,387	128,870	27,227	25,299	15,786	4,893	337,462
1959–60 ..	167,858	156,625	34,202	30,461	19,579	6,062	414,787
1960–61 ..	190,929	172,942	40,263	35,773	23,255	7,122	470,284
1961–62 ..	200,293	194,352	41,190	39,209	24,709	7,101	506,854
1962–63 ..	223,991	217,516	49,051	45,749	27,703	8,078	572,088

(a) Excludes transactions connected with the issue and redemption of Treasury Bills.

19. Debits to Customers' Accounts—Cheque-paying Banks.—Statistics of debits to customers' accounts have been collected since September, 1945. Generally, they represent the total of all cheques drawn by the customers of the banks. In the following table, the average weekly debits to customers' accounts of all cheque-paying banks (including the Rural Credits Department of the Reserve Bank and the Commonwealth Development Bank) are shown for each State for the years 1958–59 to 1962–63. In this table, debits to accounts of Australian Governments in capital cities are excluded, as they are subject to abnormal influences and are not uniform for each State.

**CHEQUE-PAYING BANKS: AVERAGE WEEKLY DEBITS TO CUSTOMERS' ACCOUNTS**

(Excluding debits to Commonwealth and State government accounts in capital cities)  
(£'000)

Year	N.S.W.	Vic.	Q'land	S. Aust.	W. Aust.	Tas.	N.T.	A.C.T.	Aust.
1958–59 ..	248,904	224,729	70,253	46,180	30,731	13,830	799	1,979	637,405
1959–60 ..	296,295	264,561	79,172	53,374	34,852	15,483	942	2,678	747,357
1960–61 ..	322,466	282,936	81,901	58,011	37,839	16,236	1,020	3,363	803,772
1961–62 ..	326,995	295,018	82,181	58,088	40,178	16,040	1,105	3,951	823,556
1962–63 ..	356,556	325,271	92,569	65,803	44,118	17,534	1,250	5,086	908,187

20. Rates of Exchange.—(i) *Oversea Exchange Rates.* In the following table, the par of exchange (based on par values agreed with the International Monetary Fund) and average telegraphic transfer selling rates of exchange for Sydney on a number of oversea countries are shown. Generally, the averages, which are averages of daily quotations, are based on rates quoted by the Commonwealth Trading Bank. Where these were not available, rates used by the Department of Customs and Excise in converting import values to £A for purposes of calculating customs duty are shown.

**OVERSEA EXCHANGE RATES: PAR OF EXCHANGE AND AVERAGE TELEGRAPHIC  
TRANSFER SELLING RATES FOR SYDNEY ON OVERSEA COUNTRIES**

Country	Basis of quotation	Par of exchange (a)	Selling rate, 1962-63	Country	Basis of quotation	Par of exchange (a)	Selling rate, 1962-63
Belgium ..	Francs to £A.1 ..	112.000	110.470	Netherlands ..	Guilders to £A.1	8.109	7.996
Canada ..	Dollars to £A.1 ..	2.422	2.403	New Zealand ..	£A. to £NZ.100 ..	124.147	124.538
Ceylon ..	Pence A. to Rupee	22.500	22.797	Norway ..	Kroner to £A.1 ..	16.000	15.850
Denmark ..	Kroner to £A.1 ..	15.472	15.340	Pakistan ..	Pence A. to Rupee	22.500	22.719
Fiji ..	£A. to £F.100 ..	112.613	113.000	Portugal ..	Escudos to £A.1	64.400	63.870
Finland ..	Markkas to £A.1	(b)7.168	7.180	Singapore ..	Pence A. to Dollar	35.000	35.361
France ..	New Francs to £A.1	11.059	10.891	South Africa ..	Rands to £A.1	1.600	1.590
French Oceania	Francs to £A.1 ..	201.073	196.000	Sweden ..	Kronor to £A.1 ..	11.588	11.483
Germany, Fed.	Deutsche Marks to			Switzerland ..	Francs to £A.1 ..	(d)	9.616
Rep. of ..	£A.1 ..	8.960	8.878	United Arab			
Hong Kong ..	Pence A. to Dollar	18.750	18.855	Republic ..	£E. to £A.1 ..	0.780	0.781
India ..	Pence A. to Rupee	22.500	22.719	United Kingdom	£A. to £Stg.100	125.000	125.500
Indonesia ..	Rupiahs to £A.1	(c)	100.060	United States of			
Italy ..	Lire to £A.1 ..	1,400	1,378	America ..	Dollars to £A.1 ..	2.240	2.230A
Japan ..	Yen to £A.1 ..	806.399	798.500	U.S.S.R. ..	Roubles to £A.1	(d)	2.008

(a) As at 30th June, 1963, established under International Monetary Fund Agreement. (b) On 1st January, 1963, the Markka was revalued on basis of 1 new Markka = 100 old Markkas. (c) No par value established. (d) Not a member of International Monetary Fund.

(ii) *Trading Bank Charges* As from October, 1962, the trading banks instituted a system of charges on current accounts, and abolished the interstate exchange rates obtaining prior to this date. Details of interstate exchange rates prior to October, 1962, may be found in Official Year Book No. 48, page 785.

Charges on current account comprise a basic maintenance fee, a ledger activity fee and a cheque collection fee, each calculated on a quarterly basis and debited as a composite item to accounts four times a year. Details of these charges are shown below.

**Quarterly Charge.**

(a) *Basic maintenance current account fee, 5s. quarterly (non-rebatable).*

(b) *Ledger activity fee.* Up to ½ folio (20 entries), 2s. 6d.; over ½ folio to 1 folio, 7s. 6d.; over 1 folio to 2 folios, £1; over 2 folios to 3 folios, £2 5s.; over 3 folios to 4 folios, £3 10s.; over 4 folios to 5 folios, £4 15s.; over 5 folios to 6 folios, £6; over 6 folios to 7 folios, £7; over 7 folios to 15 folios, £7 plus 17s. 6d. per folio or part thereof exceeding 7; over 15 folios to 35 folios, £14 plus 15s. per folio or part thereof exceeding 15; over 35 folios, £29 plus 10s. per folio or part thereof exceeding 35. Rebates will be allowed for minimum quarterly credit balances as follows:—£300, 1 free folio; £600, 2 free folios; £1,000, 3 free folios; £1,600, 4 free folios; £2,500, 5 free folios; thereafter 1 additional free folio for each £500 minimum credit balance. Where rebates are applicable, the number of free folios will be deducted before the activity fee is calculated.

(c) *Collection fee on cheques, etc., deposited.* Up to 20 cheques per quarter, free; 21 to 100, 5s. plus 2s. 6d. per ten cheques or part thereof exceeding 20; 101 to 500, £1 5s. plus 12s. 6d. per each 50 or part thereof exceeding 100; 501 to 1,000, £6 5s. plus £1 5s. for each 100 or part thereof exceeding 500; 1,001 to 10,000, £12 10s. plus £6 per each 500 or part thereof exceeding 1,000; 10,001 to 50,000, £120 plus £7 10s. per each 1,000 or part thereof exceeding 10,000; 50,001 to 100,000, £425 plus £25 per each 5,000 or part thereof exceeding 50,000; 100,001 to 150,000, £675 plus £40 per each 10,000 or part thereof exceeding 100,000; over 150,000, £875 plus £30 per each 20,000 or part thereof exceeding 150,000.

## § 2. Savings Banks

1. **General.**—For information as to the origin of savings banks in Australia and the facilities currently available, see Official Year Book No. 46, page 779 and earlier issues.

During 1962-63, a new savings bank, the Commercial Savings Bank of Australia Ltd., was established. This bank is associated with and operates from the same premises as the existing private trading bank. Savings banks operating at 30th June, 1963, were—the Commonwealth Savings Bank and the Australian and New Zealand Savings Bank Ltd. (in all

States and Territories within and without Australia), the Bank of Adelaide Savings Bank Ltd. (all States except Tasmania), the Commercial Savings Bank of Australia Ltd. and the E.S. and A. Savings Bank Ltd. (in all States and Territories within Australia), the C.B.C. Savings Bank Ltd. (in all States and in the Australian Capital Territory), The State Savings Bank of Victoria, The Savings Bank of South Australia, The Rural and Industries Bank of Western Australia, and the two trustee banks, The Hobart Savings Bank and Launceston Bank for Savings.

All savings banks, including trustee savings banks, but not State savings banks, are subject to the *Banking Act* 1959. Details of this Act and the special provisions applying to savings banks are given in Official Year Book No. 46, pages 759–60.

2. **Commonwealth Savings Bank of Australia.**—The Commonwealth Savings Bank of Australia was established as a separate institution on 9th June, 1928, having functioned previously as a department of the Commonwealth Bank (for particulars of the origin of the Savings Bank Department and the extension of its services see Year Book No. 46, page 782, and earlier issues). It has since then operated independently, publishing its own balance-sheets and profit and loss accounts. The *Commonwealth Bank Act* 1927, which provided for the establishment of the Commonwealth Savings Bank as a separate institution, provided for a Commission of three members to manage the savings bank. This Commission was never appointed, and the *Commonwealth Bank Act* 1945 placed the control of the Commonwealth Savings Bank under the Governor of the Commonwealth Bank. Under the provisions of the *Commonwealth Banks Act* 1959, which came into operation on 14th January, 1960, the Commonwealth Savings Bank was maintained in the same form, but was placed under the control of the Commonwealth Banking Corporation (see also para. 6, p. 836).

3. **State, Trustee and Private Savings Banks.**—(i) *State.* State savings banks at present operating (with date of establishment shown in parentheses) are: The State Savings Bank of Victoria (1841); The Savings Bank of South Australia (1848); The Rural and Industries Bank of Western Australia (1956).

(ii) *Trustee.* Two trustee savings banks, The Hobart Savings Bank and Launceston Bank for Savings, operate within Tasmania. These banks commenced business in 1845 and 1835 respectively.

(iii) *Private.* The Bank of New South Wales Savings Bank Ltd. and the Australia and New Zealand Savings Bank Ltd. commenced business on 19th January, 1956, the C.B.C. Savings Bank Ltd. on 16th July, 1956, the National Bank Savings Bank Ltd. on 29th September, 1961, the E.S. and A. Savings Bank Ltd. and the Bank of Adelaide Savings Bank Ltd. on 31st May, 1962, and The Commercial Savings Bank of Australia Ltd. on 25th July, 1962.

4. **Branches and Agencies.**—The number of branches and agencies in Australia of the various savings banks at 30th June, 1963, are given in the following table.

**ALL SAVINGS BANKS: NUMBER OF BRANCHES AND AGENCIES AT 30th JUNE, 1963**

Bank	Branches	Agencies
Commonwealth Savings Bank .. .. .	825	7,594
Australia and New Zealand Savings Bank Ltd. .. .. .	517	669
The Bank of Adelaide Savings Bank Ltd. .. .. .	85	90
Bank of New South Wales Savings Bank Ltd. .. .. .	788	2,985
The Commercial Savings Bank of Australia Ltd. .. .. .	440	279
C.B.C. Savings Bank Ltd. .. .. .	411	91
E.S. & A. Savings Bank Ltd. .. .. .	371	123
The National Bank Savings Bank Ltd. .. .. .	638	296
The State Savings Bank of Victoria .. .. .	433	669
The Savings Bank of South Australia .. .. .	117	720
The Rural and Industries Bank of Western Australia .. .. .	42	238
Launceston Bank for Savings .. .. .	22	46
The Hobart Savings Bank .. .. .	20	23
<b>Total .. .. .</b>	<b>4,709</b>	<b>13,823</b>



5. **Balance-Sheets.**—Liabilities and assets of individual savings banks at balance dates in 1963 and for all savings banks in 1962 are shown in the following tables. The information for the Commonwealth Savings Bank, the trustee savings banks and the private savings banks has been obtained from the annual returns lodged with the Commonwealth Statistician under section 53 of the *Banking Act* 1959, whereas that for State savings banks has been compiled from information published in their annual reports.

## SAVINGS BANKS: LIABILITIES(a)

(£'000)

Bank	Paid-up capital	Reserve funds (used in the business of the bank)	Balance of profit and loss account	Total shareholders' funds	Depositors' balances	Balances due to other banks	Bills payable and all other liabilities including provisions for contingencies	Total liabilities
<b>1963—</b>								
Commonwealth Savings Bank of Australia ..	..	12,464	..	b 12,464	939,118	766	29,934	982,282
State Savings Banks—								
The State Savings Bank of Victoria(c) ..	..	11,296	388	b 11,684	356,843	..	17,103	385,630
The Savings Bank of South Australia ..	..	9,546	171	b 9,717	139,960	719	77	150,473
<i>Total, State Savings Banks .. ..</i>	..	20,842	559	b 21,401	496,803	719	17,180	536,103
Trustee Savings Banks—								
The Hobart Savings Bank	..	825	58	b 883	17,505	2	73	18,463
Launceston Bank for Savings .. ..	..	870	53	b 923	14,551	3	102	15,579
<i>Total, Trustee Savings Banks .. ..</i>	..	1,695	111	b 1,806	32,056	5	175	34,042
Private Savings Banks—								
Australia and New Zealand Savings Bank Ltd.	2,008	1,116	234	3,358	121,250	..	3,942	128,550
The Bank of Adelaide Savings Bank Ltd. ..	500	25	7	532	4,960	..	67	5,559
Bank of New South Wales Savings Bank Ltd. ..	2,500	1,750	440	4,690	245,848	..	6,349	256,887
Commercial Savings Bank of Australia Ltd. ..	1,000	..	48	1,048	20,957	..	189	22,194
C.B.C. Savings Bank Ltd.	1,000	625	87	1,712	70,588	..	1,366	73,666
E.S. & A. Savings Bank Ltd. ..	500	100	33	633	28,184	..	294	29,111
The National Bank Savings Bank Ltd. ..	1,000	..	118	1,118	42,532	..	555	44,205
<i>Total, Private Savings Banks .. ..</i>	8,508	3,616	967	13,091	534,319	..	12,762	560,172
<b>Grand Total, 1963 ..</b>	8,508	38,617	1,637	48,762	2,002,296	1,490	60,051	2,112,599
„ „ 1962 ..	6,508	35,722	1,169	d 43,566	1,767,874	1,152	52,857	1,865,449

(a) At various balance-sheet dates during 1963 and 1962—see table on p. 859. (b) Total reserve funds. (c) Includes Crédit Foncier Department. (d) Includes £167,000 final dividends proposed.

## SAVINGS BANKS: ASSETS(a)

(£'000)

Bank	Coin, bullion and notes	Deposits with Reserve Bank	Deposits in Australia with trading banks	Money at short call overseas	Australian public securities			Other public securities
					Commonwealth and States		Local and semi-governmental authorities	
					Treasury bills and Treasury notes(b)	Other securities		
1963—								
Commonwealth Savings Bank of Australia	1,376	106,930	12,836	..	1,455	528,203	114,851	618
State Savings Banks— The State Savings Bank of Victoria(c)	1,937	19,667	21,090	..	..	105,533	117,670	..
The Savings Bank of South Australia ..	(d)	(d)	16,138	..	..	57,573	28,966	..
<i>Total, State Savings Banks ..</i>	<i>1,937</i>	<i>19,667</i>	<i>37,228</i>	<i>..</i>	<i>..</i>	<i>163,106</i>	<i>146,636</i>	<i>..</i>
Trustee Savings Banks— The Hobart Savings Bank ..	51	100	1,273	..	..	3,122	8,159	..
Launceston Bank for Savings ..	30	74	1,362	..	..	4,022	4,490	..
<i>Total, Trustee Savings Banks..</i>	<i>81</i>	<i>174</i>	<i>2,635</i>	<i>..</i>	<i>..</i>	<i>7,144</i>	<i>12,649</i>	<i>..</i>
Private Savings Banks— Australia and New Zealand Savings Bank Ltd. ...	..	12,125	3,395	..	..	43,320	42,112	182
The Bank of Adelaide Savings Bank Ltd.	..	525	89	..	..	2,274	952	..
Bank of New South Wales Savings Bank Ltd. ...	1,000	26,000	3,947	..	..	96,950	65,552	612
Commercial Savings Bank of Australia Ltd. ...	..	2,200	339	..	..	11,689	5,099	..
C.B.C. Savings Bank Ltd. ...	..	7,065	1,550	..	200	36,871	14,238	..
E.S. & A. Savings Bank Ltd. ...	4	2,940	1,497	..	..	12,016	7,651	..
The National Bank Savings Bank Ltd.	..	4,400	1,124	..	..	18,383	14,314	..
<i>Total, Private Savings Banks..</i>	<i>1,004</i>	<i>55,255</i>	<i>11,941</i>	<i>..</i>	<i>200</i>	<i>221,503</i>	<i>149,918</i>	<i>794</i>
<b>Grand Total, 1963</b>	<b>4,398</b>	<b>182,026</b>	<b>64,640</b>	<b>..</b>	<b>1,655</b>	<b>919,956</b>	<b>424,054</b>	<b>1,412</b>
“ “ 1962	4,370	156,410	62,531	..	1,700	841,275	363,102	1,572

Table continued on next page.

(a) For dates of balance-sheets see table on p. 859. (b) For banks with balance dates prior to July, 1962, Treasury bills and seasonal securities. (c) Includes Crédit Foncier Department. (d) Not available. Included in Deposits in Australia with trading banks.

## SAVINGS BANKS: ASSETS(a)—continued

(£'000)

Bank	Other securities	Loans to authorized dealers in the short-term money market	Cheques and bills of other banks and balances with and due from other banks	Loans (other than loans to authorized dealers in the short-term money market), advances and bills discounted (after deducting provisions for debts considered bad or doubtful)	Bank premises, furniture and sites	Bills receivable and remittances in transit	All other assets	Total assets
<b>1963—</b>								
Commonwealth Savings Bank of Australia ..	..	7,455	610	182,100	15,513	472	9,863	982,282
<b>State Savings Banks—</b>								
The State Savings Bank of Victoria(b) ..	..	4,510	..	104,265	5,900	..	5,058	385,630
The Savings Bank of South Australia ..	..	1,750	..	42,486	2,152	(c)	1,408	150,473
<i>Total, State Savings Banks</i> ..	..	6,260	..	146,751	8,052	..	6,466	536,103
<b>Trustee Savings Banks—</b>								
The Hobart Savings Bank ..	..	975	44	4,072	384	..	283	18,463
Launceston Bank for Savings ..	..	690	11	4,315	382	..	203	15,579
<i>Total, Trustee Savings Banks</i> ..	..	1,665	55	8,387	766	..	486	34,042
<b>Private Savings Banks—</b>								
Australia and New Zealand Savings Bank Ltd. ..	1,450	1,425	162	23,225	..	..	1,154	128,550
The Bank of Adelaide Savings Bank Ltd. ..	..	380	..	1,060	240	..	39	5,559
Bank of New South Wales Savings Bank Ltd. ..	..	3,024	2,237	54,184	1,050	..	2,331	256,887
Commercial Savings Bank of Australia Ltd. ..	..	650	..	2,018	..	..	199	22,194
C.B.C. Savings Bank Ltd. ..	..	..	..	13,244	..	..	498	73,666
E.S. & A. Savings Bank Ltd. ..	..	..	..	4,699	..	..	304	29,111
The National Bank Savings Bank Ltd. ..	..	700	..	4,920	..	..	364	44,205
<i>Total, Private Savings Banks</i> ..	1,450	6,179	2,399	103,350	1,290	..	4,889	560,172
<b>Grand Total, 1963</b>	1,450	21,559	3,064	440,588	25,621	472	21,704	2,112,599
.. .. 1962	500	12,845	2,375	376,707	23,267	419	18,376	1,865,449

(a) For dates of balance-sheets see table on p. 859.

(b) Includes Crédit Foncier Department.

(c) Not available. Included in All other assets.

6. Profit and Loss Accounts.—Details of the profit and loss accounts of all savings banks are given below for the years 1962 and 1963.

SAVINGS BANKS: PROFIT AND LOSS, APPROPRIATION OF PROFITS AND DIVIDENDS

(£'000)

Bank	Year ended	Profit and loss			
		Net earnings (a)	Expenses (b)	Income, land and other taxes and payments in lieu of taxes	Net profit
<b>1963—</b>					
Commonwealth Savings Bank of Australia ..	30.6.63	14,270	11,575	170	2,525
State Savings Banks—					
The State Savings Bank of Victoria(c) ..	30.6.63	8,215	6,186	n.a.	2,029
The Savings Bank of South Australia ..	30.6.63	1,929	1,429	n.a.	500
<i>Total, State Savings Banks</i> .. ..	..	<i>10,144</i>	<i>7,615</i>	<i>n.a.</i>	<i>2,529</i>
Trustee Savings Banks—					
The Hobart Savings Bank .. ..	31.8.63	279	188	8	83
Launceston Bank for Savings .. ..	31.8.63	254	175	6	73
<i>Total, Trustee Savings Banks</i> .. ..	..	<i>533</i>	<i>363</i>	<i>14</i>	<i>156</i>
Private Savings Banks—					
Australia and New Zealand Savings Bank Ltd. ..	30.9.63	2,027	1,082	440	505
The Bank of Adelaide Savings Bank Ltd. ..	30.9.63	82	50	3	29
Bank of New South Wales Savings Bank Ltd. ..	30.9.63	4,248	2,889	530	829
Commercial Savings Bank of Australia Ltd. ..	30.6.63	193	101	44	48
C.B.C. Savings Bank Ltd. .. ..	30.6.63	1,053	613	200	240
E.S. & A. Savings Bank Ltd. .. ..	30.6.63	469	305	55	109
The National Bank Savings Bank Ltd. ..	30.9.63	585	390	90	105
<i>Total, Private Savings Banks</i> .. ..	..	<i>8,657</i>	<i>5,430</i>	<i>1,362</i>	<i>1,865</i>
<b>Grand Total, 1963</b> .. ..	..	<b>33,604</b>	<b>24,983</b>	<b>1,546</b>	<b>7,075</b>
<b>Grand Total, 1962(d)</b> .. ..	..	<b>27,690</b>	<b>23,090</b>	<b>1,203</b>	<b>3,397</b>

Table continued on next page.

(a) Discount and interest earned, net exchange, commissions and other items (including transfers from contingencies accounts), after deducting interest paid and accrued on deposits, rebate on bills current at balance date, amounts written off assets, and losses on realization of assets and transfers to the credit of contingencies accounts (out of which accounts provisions for all bad and doubtful debts have been made). (b) Includes directors' fees. (c) Includes Crédit Foncier Department. (d) Balancing dates as in 1963.

SAVINGS BANKS: PROFIT AND LOSS, APPROPRIATION OF PROFITS AND DIVIDENDS—*continued*

(£'000)

Bank	Year ended	Profits appropriated to—						
		Reserve funds (a)	Written off bank premises	Other appropriations	Dividends(h)			
					Gross	British income taxes payable by bank and recouped from shareholders	Net	Rate per annum per cent.
<b>1963—</b>								
Commonwealth Savings Bank of Australia .. .. .	30.6.63	686	474	(b)1,365	..	..	..	..
State Savings Banks—								
The State Savings Bank of Victoria(c) .. .. .	30.6.63	881	260	50	..	..	..	..
The Savings Bank of South Australia .. .. .	30.6.63	500	(d)	..	..	..	..	..
<i>Total, State Savings Banks ..</i>	..	<i>1,381</i>	<i>260</i>	<i>50</i>	..	..	..	..
Trustee Savings Banks—								
The Hobart Savings Bank ..	31.8.63	55	22	5	..	..	..	..
Launceston Bank for Savings ..	31.8.63	45	28	..	..	..	..	..
<i>Total, Trustee Savings Banks ..</i>	..	<i>100</i>	<i>50</i>	<i>5</i>	..	..	..	..
Private Savings Banks—								
Australia and New Zealand Savings Bank Ltd. .. .. .	30.9.63	300	..	..	201	(e) 46	123	(f)10.0
The Bank of Adelaide Savings Bank Ltd. .. .. .	30.9.63	25	..	..	..	..	..	..
Bank of New South Wales Savings Bank Ltd. .. .. .	30.9.63	500	135	..	125	..	125	5.0
Commercial Savings Bank of Australia Ltd. .. .. .	30.6.63	..	..	..	..	..	..	..
C.B.C. Savings Bank Ltd. ..	30.6.63	150	..	..	75	..	75	7.5
E.S. & A. Savings Bank Ltd. ..	30.6.63	100	..	..	..	..	..	..
The National Bank Savings Bank Ltd. .. .. .	30.9.63	..	..	..	..	..	..	..
<i>Total, Private Savings Banks ..</i>	..	<i>1,075</i>	<i>135</i>	..	<i>401</i>	<i>46</i>	<i>323</i>	..
<b>Grand Total, 1963 .. .. .</b>	..	<b>3,242</b>	<b>919</b>	<b>1,420</b>	<b>401</b>	<b>46</b>	<b>323</b>	..
<b>Grand Total, 1962(g) .. .. .</b>	..	<b>1,625</b>	<b>724</b>	<b>633</b>	<b>276</b>	<b>32</b>	<b>217</b>	..

(a) Excludes accumulated profits and profit and loss accounts. (b) Provisions for settlements under Savings Bank Amalgamation Agreements, £679,000 and Commonwealth of Australia, £686,000. Under the terms of the Savings Bank Amalgamation Agreements relating to the absorption of the State savings banks by the Commonwealth Bank, the profits of a Commonwealth Savings Bank in New South Wales, Queensland, Western Australia and Tasmania are equally divided between the Bank and the former controlling authorities in those States. (c) Includes Crédit Foncier Department. (d) Included in expenses. (e) Calculated at the net rate of United Kingdom income tax payable by the bank (after taking double taxation relief into account) on the gross amount of dividends, viz.:—Australia and New Zealand Savings Bank Ltd., 4s. 7d. in the £ on £201,000; United Kingdom income tax relief to shareholders is limited to this net rate. In addition to the taxes stated above, the Australia and New Zealand Savings Bank Ltd. deducted £32,000 of United Kingdom income tax in accordance with the provisions of the Finance (No. 2) Act 1945, which authorizes deduction of tax from dividends at the full standard rate of United Kingdom income tax (7s. 9d. in the £). (f) Gross dividend before deduction of United Kingdom income tax at the standard rate 7s. 9d. in the £. The gross return to shareholders based on the sum of United Kingdom income tax payable by the bank and recouped from shareholders and the net dividend was 8.417 per cent. The net return to shareholders based on the net dividend was 6.125 per cent. (g) Balancing dates as in 1963. (h) Dividends paid or payable out of profits earned during year.

7. Number of Operative Accounts.—The following table shows the number of operative savings bank accounts in existence at the end of June, 1962 and 1963. It should be noted that these figures relate to the number of accounts and not necessarily to the number of depositors.

## ALL SAVINGS BANKS: NUMBER OF OPERATIVE ACCOUNTS(a)

State or Territory	End of June—(b)	
	1962	1963
New South Wales .. .. .	3,323,975	3,562,105
Victoria .. .. .	2,984,223	3,202,956
Queensland .. .. .	1,250,343	1,344,538
South Australia .. .. .	1,019,184	1,104,406
Western Australia .. .. .	625,070	683,417
Tasmania .. .. .	331,847	349,676
Northern Territory .. .. .	19,116	21,989
Australian Capital Territory .. .. .	45,072	53,980
Australia .. .. .	9,598,830	10,323,067

(a) Excludes school bank accounts and inoperative accounts, i.e. accounts of less than £1 which have not been operated on for more than two years. (b) Private savings banks and the Rural Industries Bank of Western Australia at last Wednesday in June, Launceston Bank for Savings at last Tuesday in June, other savings banks at end of June.

8. Business Transacted.—The following table shows details of the business transacted in Australia by savings banks during the years ended 30th June, 1962 and 1963.

## ALL SAVINGS BANKS: BUSINESS TRANSACTED IN AUSTRALIA (£'000)

State or Territory	Year ended June, 1962(a)				Year ended June, 1963(a)			
	Deposits during year	Withdrawals during year (b)	Interest added to accounts during year (b)	De-positors' balances at end of June, 1962	Deposits during year	Withdrawals during year (b)	Interest added to accounts during year (b)	De-positors' balances at end of June, 1963
New South Wales .. .. .	731,475	694,706	19,101	625,021	832,615	774,819	21,181	703,998
Victoria .. .. .	669,044	632,434	16,771	570,849	791,289	731,548	18,441	649,031
Queensland .. .. .	236,953	224,568	6,336	205,852	274,342	252,087	7,069	235,176
South Australia .. .. .	206,699	198,310	5,858	180,990	245,078	224,446	6,456	208,078
Western Australia .. .. .	111,831	104,692	2,677	90,528	129,066	118,216	3,028	104,406
Tasmania .. .. .	48,283	46,099	1,658	51,230	54,844	51,465	1,819	56,428
Northern Territory .. .. .	4,915	4,644	88	3,085	5,593	5,281	99	3,496
Australian Capital Territory .. .. .	12,984	11,995	210	7,331	15,664	14,019	257	9,233
Australia .. .. .	2,022,184	1,917,448	52,699	1,734,886	2,348,491	2,171,881	58,350	1,969,846

(a) See footnote (b) to table above.

(b) Includes inter-branch transfers.

9. Depositors' Balances.—The amount at credit of depositors' accounts and the average per head of population for each State and Territory at the end of June, 1959 to 1963 are shown in the following table.

## ALL SAVINGS BANKS: DEPOSITORS' BALANCES IN AUSTRALIA

End of June—(a)	N.S.W.	Victoria	Q'land	S. Aust.	W. Aust.	Tas.	N. Terr.	A.C.T.	Australia
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## COMMONWEALTH SAVINGS BANK

(£'000)

1959..	380,962	122,577	138,924	37,374	54,987	17,020	5,364		757,208
1960..	402,398	131,243	145,706	39,763	57,078	18,175	5,953		800,316
1961..	413,439	133,672	146,832	39,407	56,966	18,197	6,612		815,125
1962..	438,083	142,562	155,775	41,904	60,301	19,085	7,426		865,136
1963..	470,852	155,682	165,642	46,465	63,748	19,803	8,311		930,503

(a) See footnote (b) to table in para. 7 above.

## ALL SAVINGS BANKS: DEPOSITORS' BALANCES IN AUSTRALIA—continued

End of June— (a)	N.S.W.	Victoria	Q'land	S. Aust.	W. Aust.	Tas.	N. Terr.	A.C.T.	Australia
STATE SAVINGS BANKS (£'000)									
1959..	..	281,296	..	119,778	4,471	..	..	..	405,545
1960..	..	298,107	..	123,930	5,793	..	..	..	427,830
1961..	..	308,244	..	124,305	6,564	..	..	..	439,113
1962..	..	331,781	..	130,433	9,213	..	..	..	471,427
1963..	..	356,782	..	139,960	11,987	..	..	..	508,729

## TRUSTEE SAVINGS BANKS: HOBART AND LAUNCESTON

(£'000)									
1959..	..	..	..	..	..	25,442	..	..	25,442
1960..	..	..	..	..	..	27,257	..	..	27,257
1961..	..	..	..	..	..	27,969	..	..	27,969
1962..	..	..	..	..	..	29,258	..	..	29,258
1963..	..	..	..	..	..	30,874	..	..	30,874

## PRIVATE SAVINGS BANKS

(£'000)									
1959..	107,311	54,581	27,729	..	12,041	..	1,475	..	203,137
1960..	139,174	70,242	36,880	2,305	15,752	923	2,025	..	267,301
1961..	155,712	75,552	40,299	3,031	17,182	1,222	2,246	..	295,244
1962..	186,938	96,506	50,077	8,653	21,014	2,887	2,990	..	369,065
1963..	233,146	136,567	69,534	21,653	28,671	5,751	4,418	..	499,740

## ALL SAVINGS BANKS

(£'000)									
1959..	488,273	458,454	166,653	157,152	71,499	42,462	2,239	4,600	1,391,332
1960..	541,572	499,592	182,586	165,998	78,623	46,355	2,582	5,396	1,522,704
1961..	569,151	517,468	187,131	166,743	80,712	47,388	2,726	6,132	1,577,451
1962..	625,021	570,849	205,852	180,990	90,528	51,230	3,085	7,331	1,734,886
1963..	703,998	649,031	235,176	208,078	104,406	56,428	3,496	9,233	1,969,846

## PER HEAD OF POPULATION

(£)									
1959..	129.9	164.6	113.5	170.7	100.4	125.1	92.9	99.9	138.4
1960..	141.3	174.8	122.1	175.6	108.9	134.8	101.0	103.1	148.2
1961..	145.3	176.6	123.2	172.0	109.6	135.3	100.6	104.2	150.1
1962..	157.2	190.8	133.4	182.9	120.0	143.5	111.0	111.6	162.1
1963..	173.9	212.4	150.2	206.2	135.2	156.2	118.8	125.7	180.5

(a) See footnote (b) to table in para. 7, p. 861.

10. **Cheque Accounts.**—At most savings banks, cheque accounts are available to non-profit organizations such as friendly, co-operative and charitable societies. Similar facilities are also available to other depositors at the State Savings Bank of Victoria and the Savings Bank of South Australia. Details of the transactions on these accounts during the year ended June, 1963 (excluding the Savings Bank of South Australia), together with the number of operative accounts and the amount on deposit at the end of June, 1963, were as follows:—deposits during the year, £505.9 million; withdrawals during the year £502.0 million; interest added during the year, £1.1 million; amount on deposit at end of year, £55.4 million; number of operative accounts at the end of year, 245,775. These figures are included in the statistics in previous paragraphs.

11. **School Banking.**—With the object of encouraging principles of thrift among children, agencies of the savings banks have been established at most of the schools throughout Australia. Particulars of operative accounts within Australia at the end of June, 1959 to 1963 appear below.

**SCHOOL SAVINGS BANKS: AUSTRALIA**

End of June—(a)	Number of school agencies	Number of operative accounts	Deposits	Deposits per operative account
			£	£
1959 .. .. .	8,856	1,050,742	7,479,254	7.1
1960 .. .. .	9,042	1,118,101	8,154,973	7.3
1961 .. .. .	9,225	1,165,516	8,658,753	7.4
1962 .. .. .	9,444	1,219,113	9,224,645	7.6
1963 .. .. .	9,551	1,254,632	9,665,287	7.7

(a) See footnote (b) to table in para. 7, p. 861.

12. **Assets.**—The assets within Australia of all savings banks at the end of June, 1962 and 1963 are shown in the following table. In the table in paragraph 5, pages 857-8, assets are shown at balance sheet dates which are not in June for some banks. In addition, the table on pages 857-8 excludes statistics for the Savings Bank Division of the Rural and Industries Bank of Western Australia, which are included in the table below.

**ALL SAVINGS BANKS: ASSETS WITHIN AUSTRALIA(a)**  
(£'000)

Particulars	End of June—(b)	
	1962	1963
Coin, bullion and Australian notes .. .. .	4,934	4,736
Deposits with Reserve Bank .. .. .	159,494	183,116
Deposits in Australia with trading banks .. .. .	55,908	59,517
Australian public securities—		
Commonwealth and States (including Treasury bills and Treasury notes (c)) .. .. .	832,565	913,596
Local and semi-governmental authorities .. .. .	351,944	417,761
Other securities .. .. .	450	1,126
Loans to authorized dealers in the short-term money market	13,790	19,505
Cheques and bills of other banks and balances with and due from other banks .. .. .	119	180
Loans, advances and bills discounted—		
Housing .. .. .	339,354	396,970
Other .. .. .	35,717	40,352
Bank premises, furniture and sites .. .. .	23,744	26,055
Bills receivable and all other assets .. .. .	5,944	6,894
<b>Total .. .. .</b>	<b>1,823,963</b>	<b>2,069,808</b>

(a) Includes assets in Papua, New Guinea and Norfolk Island. (b) See footnote (b) to table in para. 7, p. 861. (c) Prior to July, 1962, Treasury bills and seasonal securities.

13. **Classification of Depositors' Balances.**—The classification of deposits published by savings banks does not permit a fully detailed analysis with respect to Australia as a whole, but the classification at 30th June, 1959 to 1963 of the combined deposits for The State Savings Bank of Victoria and The Savings Bank of South Australia is shown below.

**STATE SAVINGS BANKS: CLASSIFICATION OF DEPOSITS**  
(Per cent.)

30th June—	£500 and under	£501-£1,000	Over £1,000
1959 .. .. .	36.99	26.05	36.96
1960 .. .. .	36.43	24.24	39.33
1961 .. .. .	(a)	(b) 59.66	40.34
1962 .. .. .	(a)	(b) 57.31	42.69
1963 .. .. .	(a)	(b) 54.41	45.59

(a) Not available separately.

(b) £1-£1,000.



14. Rates of Interest on Deposits.—The following table shows the rates of interest allowed by savings banks at 30th June, 1959 to 1963.

**SAVINGS BANKS: INTEREST RATES ON DEPOSITS(a)**  
(Per cent. per annum)

Size of account	Interest rates at 30th June—				
	1959	1960	1961	1962	1963
<b>Ordinary accounts(b)—</b>					
£1 to £1,000 .. .. .	3	3	3½	3½	3
£1,001 to £1,500 .. .. .	3	3	3½	3½	3
£1,501 to £2,000 .. .. .	3	3	3½	3½	3
£2,001 to £2,500 .. .. .	..	..	3½	3½	3
£2,501 to £3,000 .. .. .	..	..	..	3½	3
<b>Friendly and other society accounts—</b>					
£1 to £2,000 .. .. .	3	3	3½	3½	3
£2,001 to £2,500 .. .. .	1½	1½	3½	3½	3
£2,501 to £3,000 .. .. .	1½	1½	1½	3½	3
£3,001 and over .. .. .	1½	1½	1½	2	1½

(a) Rates allowed by the Commonwealth Savings Bank, private savings banks and The State Savings Bank of Victoria. Trustee savings banks and The Savings Bank of South Australia allow slightly higher rates of interest. (b) No interest is payable on amounts in excess of the maximum amount shown.

15. War Savings and Savings Certificates.—Sales of savings certificates and stamps under the War Savings and Savings Certificate schemes, particulars of which were given in earlier issues of the Year Book (see No. 37, page 586), were discontinued after 31st January, 1949, except for some sales made to wind up savings groups, etc. The total value of war savings and savings certificates outstanding at 30th June in each of the last five years was:—1959, £10,633,000; 1960, £8,205,000; 1961, £5,989,000; 1962, £2,529,000; 1963, £1,796,000.

**REGISTERED BUILDING AND CO-OPERATIVE SOCIETIES**

**§ 1. Registered Building Societies**

1. Summary.—During 1960–61 and 1961–62, returns were received from 2,331 and 2,598 societies respectively, but the information was not exhaustive, as particulars regarding a number of organizations were not included. In the following table, general information is given relating to the societies in each State for the year 1961–62 and to the combined States for 1960–61.

**REGISTERED BUILDING SOCIETIES: SUMMARY**

Particulars	1961–62(a)							1960–61 (a)
	N.S.W.	Vic.	Q'land	S. Aust.	W. Aust.	Tas.	Total	Total
<b>Societies making returns—</b>								
Permanent .. .. .	48	31	11	5	10	8	113	105 2,226
Starr-Bowkett .. .. .	96	1	1	21	1	..	120	
Terminating(b) .. .. .	1,500	689	126	..	13	37	2,365	
<b>Total .. .. .</b>	<b>1,644</b>	<b>721</b>	<b>138</b>	<b>26</b>	<b>24</b>	<b>45</b>	<b>2,598</b>	<b>2,331</b>
<b>Shareholders .. .. .</b>	<b>151,358</b>	<b>55,203</b>	<b>39,029</b>	<b>24,854</b>	<b>26,482</b>	<b>10,594</b>	<b>307,520</b>	<b>289,030</b>
<b>Borrowers .. .. .</b>	<b>n.a.</b>	<b>60,736</b>	<b>20,264</b>	<b>5,408</b>	<b>7,802</b>	<b>4,366</b>	<b>n.a.</b>	<b>n.a.</b>
<b>Working expenses £'000</b>	<b>1,882</b>	<b>1,629</b>	<b>200</b>	<b>71</b>	<b>107</b>	<b>62</b>	<b>3,951</b>	<b>n.a.</b>
<b>Loans granted £'000</b>	<b>24,369</b>	<b>14,428</b>	<b>6,323</b>	<b>1,123</b>	<b>3,173</b>	<b>1,494</b>	<b>50,910</b>	<b>(c) 39,142</b>

(a) Year ended December, for Permanent and Starr-Bowkett Societies in Victoria, and year ended April, for Co-operative Housing Societies in Victoria. (b) Includes statistics for Co-operative Housing Societies in Victoria. (c) Excludes Co-operative Housing Societies in Victoria.

2. **Liabilities and Assets.**—Particulars of liabilities and assets in 1961–62 of the societies mentioned in the previous paragraph are shown below, with totals for 1960–61.

## REGISTERED BUILDING SOCIETIES: LIABILITIES

(£'000)

State	1961–62(a)					1960–61(a)
	Investing members' funds	Borrowing members' funds	Deposits	Bank overdrafts and other liabilities	Total liabilities	Total liabilities
New South Wales	28,404	37,878	1,810	122,108	190,200	173,352
Victoria(b) ..	5,875	15,864	6,332	77,580	105,651	95,671
Queensland ..	11,699	1,324	384	9,707	23,114	18,649
South Australia ..	3,569	..	691	1,691	5,951	5,392
Western Australia	5,482	126	2,179	5,339	13,126	11,036
Tasmania ..	2,512	70	2,544	1,604	6,730	5,846
<b>Total ..</b>	<b>57,541</b>	<b>55,262</b>	<b>13,940</b>	<b>218,029</b>	<b>344,772</b>	<b>309,946</b>

(a) Year ended December, for Permanent and Starr-Bowkett Societies in Victoria, and year ended April, for Co-operative Housing Societies in Victoria. (b) Includes statistics for Co-operative Housing Societies in Victoria.

## REGISTERED BUILDING SOCIETIES: ASSETS

(£'000)

State	1961–62(a)			1960–61(a)
	Advances on mortgage (b)	Other assets	Total assets	Total assets
New South Wales .. .. .	184,327	5,873	190,200	173,352
Victoria(c) .. .. .	103,444	2,207	105,651	95,671
Queensland .. .. .	21,960	1,154	23,114	18,649
South Australia .. .. .	5,557	394	5,951	5,392
Western Australia .. .. .	12,705	421	13,126	11,036
Tasmania .. .. .	6,175	555	6,730	5,846
<b>Total .. .. .</b>	<b>334,168</b>	<b>10,604</b>	<b>344,772</b>	<b>309,946</b>

(a) See footnote (a) to table above. (b) Includes advances on mortgages of terminating societies which are on a gross basis. Net advances may be derived by subtracting borrowing members' funds. See table above. (c) Includes statistics for Co-operative Housing Societies in Victoria.

## § 2. Co-operative Societies

Co-operative societies are divided into three classes—(i) those engaged in the manufacture and marketing of primary products and trade requirements; (ii) those engaged in retailing general household requirements; and (iii) those engaged in activities covered by both classes (i) and (ii). The first class may be described briefly as Producers' Co-operative Societies and the second as Consumers' Co-operative Societies. The particulars given for New South Wales relate to societies registered under the *Co-operation Act, 1923-1954*. A summary of the business of all co-operative societies for the years 1961-62 or 1962 for all States except Western Australia is given in the following tables. Separate particulars for each of the three types of Co-operative Societies are given in the annual bulletin *Insurance and Other Private Finance*, and issue No. 1, 1961-62 and 1962-63 contains details for 1960-61 or 1961.

## CO-OPERATIVE SOCIETIES

Particulars	N.S.W. 1961-62	Victoria 1961-62	Queensland 1961-62	S. Australia 1962	Tasmania 1961-62			
SUMMARY								
Societies .. .. .	322	114	159	70	17			
Branches .. .. .	n.a.	n.a.	120	n.a.	13			
Members .. .. .	258,308	85,911	130,984	116,405	5,044			
	(£'000)	(£'000)	(£'000)	(£'000)	(£'000)			
Gross turnover (sales) .. .. .	129,765	39,629	61,839	20,602	3,681			
Other income .. .. .	885	1,848	2,717	1,239	279			
<i>Total income</i> .. .. .	<i>130,650</i>	<i>41,477</i>	<i>64,556</i>	<i>21,841</i>	<i>3,960</i>			
Total purchases .. .. .	126,652	32,184	49,844	16,848	2,881			
Other expenditure .. .. .						8,274	11,942	4,650
<i>Total expenditure</i> .. .. .	<i>126,652</i>	<i>40,458</i>	<i>61,786</i>	<i>21,498</i>	<i>3,975</i>			
Rebates and bonuses .. .. .	2,845	296	934	867	16			
Dividends on share capital .. .. .	628	332	162	135	5			
LIABILITIES (£'000)								
Paid-up capital .. .. .	13,273	5,599	8,132	2,613	626			
Loan capital .. .. .	..	1,198	5,456	3,672	570			
Bank overdrafts .. .. .	8,311	3,279	6,373	1,735	344			
Accumulated profits .. .. .	10,107	1,015	1,397	483	97			
Reserve funds .. .. .						5,038	8,967	2,295
Sundry creditors .. .. .	15,523	3,676	9,956	1,718	431			
Other liabilities .. .. .						1,307	927	2,371
<i>Total</i> .. .. .	<i>47,214</i>	<i>21,112</i>	<i>41,208</i>	<i>14,887</i>	<i>2,147</i>			
ASSETS (£'000)								
Land and buildings .. .. .	21,295	11,520	7,340	3,570	522			
Machinery, plant and other fixed assets .. .. .						11,966	1,985	234
Stocks .. .. .	13,770	3,059	4,601	3,984	518			
Sundry debtors .. .. .	9,260	5,045	13,340	2,284	706			
Cash in hand and on deposit .. .. .	2,889	372	830	408	21			
Profit and loss account .. .. .						74	174	45
Other assets .. .. .						1,042	2,957	2,611
<i>Total</i> .. .. .	<i>47,214</i>	<i>21,112</i>	<i>41,208</i>	<i>14,887</i>	<i>2,147</i>			

## INSURANCE

## § 1. Introductory

1. **Legislation.**—Section 51 of the Commonwealth Constitution confers the necessary powers on the Commonwealth Parliament to legislate with respect to “insurance other than State insurance; also State insurance extending beyond the limits of the State concerned”. Commonwealth legislation includes the *Marine Insurance Act 1909* defining the limits of marine insurance and regulating the terms of contracts, etc., the *Insurance Act 1932–1960* requiring the lodgment of deposits by insurance companies, and the *Life Insurance Act 1945–1961* generally regulating life insurance business in Australia. The *Marine Insurance Act 1909* and the *Insurance Act 1932–1960* have limited application, and, except for life insurance business, which is regulated by the *Life Insurance Act 1945–1961*, insurance business is conducted almost entirely under State laws.

2. **Insurance Act 1932–1960.**—Companies, persons or associations of persons carrying on insurance business in Australia or in any Territory of Australia are required to lodge a deposit with the Commonwealth Treasurer.

Money deposited is invested by the Treasurer in prescribed securities selected by the depositor, and all interest is paid to depositors. Deposits remain as security against liability to policy holders, and are available to satisfy judgments obtained in respect of policies.

Deposits held by States on 1st February, 1932, could, however, remain with the States subject to the conditions embodied in the laws of the States, and depositors to the extent of the value of these deposits were exempt from liability to make deposits under the Commonwealth Act.

The following are not regarded as insurance business under the Act:—

Staff superannuation schemes; schemes of religious organizations solely for insurance of their property; friendly society, union and association schemes involving superannuation or insurance benefits to employees.

This Act does not apply to State insurance within the limits of the State concerned, and, under the *Life Insurance Act 1945–1961*, ceased to apply to life insurance business.

3. **Life Insurance Act 1945–1961.**—The objects of this Act are:—(a) to replace all State legislation on the subject of life insurance, except that relating to the life insurance operations of State insurance offices within the State concerned, and to provide uniform legislation for the whole of Australia; (b) to appoint an Insurance Commissioner to exercise active supervision of the activities of life insurance companies, with a view to securing the greatest possible protection for policy holders; (c) to set up adequate machinery for dealing with any company that fails to maintain a required minimum standard of solvency.

The Act was assented to on 16th August, 1945, and came into operation on 20th June, 1946. A summary of the provisions of the Act is given in Year Book No. 37, pages 595–7.

The provisions of the Act relating to the establishment of a Commonwealth Government Insurance Office were repealed under the *Life Insurance Act No. 94 of 1953*.

4. **Export Payments Insurance Corporation Act 1956.**—Details of the operations of the Export Payments Insurance Corporation set up under this Act may be found in § 5 of Chapter XIV. Oversea Trade (*see p. 518*).

5. **Deposits under Insurance Acts.**—Deposits lodged under the Insurance Acts at 30th June, 1963, totalled £14,814,708, comprising £1,812,950 held by the Commonwealth in respect of life insurance, and £12,983,738 held by the Commonwealth and £18,020 held by the State of New South Wales in respect of other forms of insurance. The deposits consisted of Commonwealth Government securities £8,318,703, United Kingdom Government securities £676,800, fixed deposits £21,120, bank guarantees and undertakings £3,805,000, corporation debentures and stock £1,077,310, titles and mortgages £863,775, and cash £52,000.

## § 2. Life Insurance

1. **General.**—Since 1947, returns lodged under the *Life Insurance Act 1945–1961* have been used to compile life insurance statistics. Except where otherwise indicated, the figures in the succeeding paragraphs refer only to Australian business. Business in the Territories of Papua and New Guinea is, however, included in the Australian figures.

The information shown has been compiled from returns of life insurance business submitted in the financial years which ended during the year stated.

2. **Offices Transacting Business.**—The number of offices which transacted life insurance business in Australia during 1963 was 43, including 12 oversea companies. Of the 31 Australian offices, 6 are purely mutual, including one which transacts general business in respect of which share capital is used, 23 are public companies, and 2 are State Government institutions. Of the total offices, 30 transacted ordinary business only and the remainder both ordinary and industrial business. Where possible, ordinary, industrial and superannuation business have been kept separate in the following tables.

3. **Australian Business—Policies in Existence.**—In the following table, details of policies on the registers in each State and in the Australian Capital Territory are given for the year 1962.

LIFE INSURANCE: POLICIES EXISTING IN AUSTRALIA, 1962

State or Territory(a)	Insurance and endowment policies				Annuity policies		
	Number of policies	Sum insured (£'000)	Bonus additions (£'000)	Annual premiums (£'000)	Number of policies	Annuities per annum (£'000)	Annual premiums (£'000)

ORDINARY BUSINESS

New South Wales ..	1,209,632	1,187,348	112,271	34,680	980	179	2
Victoria ..	976,756	1,069,303	95,513	30,047	872	146	6
Queensland(b) ..	656,194	609,460	58,280	16,110	223	29	..
South Australia(c) ..	398,608	380,834	32,705	11,022	212	26	..
Western Australia ..	275,425	255,967	23,442	7,599	157	22	1
Tasmania ..	125,606	126,398	11,196	3,435	86	12	..
Australian Capital Territory ..	48,775	142,432	7,104	3,100	76	34	..
<i>Australia(b) ..</i>	<i>3,690,996</i>	<i>3,771,742</i>	<i>340,511</i>	<i>105,993</i>	<i>2,606</i>	<i>448</i>	<i>9</i>

INDUSTRIAL BUSINESS

New South Wales ..	1,148,198	143,296	7,061	6,414	..	..	..
Victoria ..	938,393	113,466	5,767	5,018	..	..	..
Queensland(b) ..	382,643	45,436	2,134	2,034	..	..	..
South Australia(c) ..	326,304	35,377	1,742	1,586	..	..	..
Western Australia ..	191,961	23,377	1,126	1,037	..	..	..
Tasmania ..	72,194	8,271	429	361	..	..	..
Australian Capital Territory ..	16,274	2,517	126	113	..	..	..
<i>Australia(b) ..</i>	<i>3,075,967</i>	<i>371,740</i>	<i>18,385</i>	<i>16,563</i>	<i>..</i>	<i>..</i>	<i>..</i>

SUPERANNUATION BUSINESS

New South Wales ..	266,511	210,554	14,864	7,143	370	1,640	442
Victoria ..	132,883	412,191	18,077	9,649	860	3,022	1,187
Queensland(b) ..	58,672	66,646	4,912	2,501	24	52	11
South Australia(c) ..	44,180	61,502	5,159	2,373	55	60	12
Western Australia ..	33,732	42,979	2,776	1,367	28	43	8
Tasmania ..	16,812	31,377	2,584	1,018	33	16	3
Australian Capital Territory ..	46,724	329,864	7,686	4,971	319	7,193	1,376
<i>Australia(h) ..</i>	<i>599,514</i>	<i>1,155,113</i>	<i>56,058</i>	<i>29,022</i>	<i>1,689</i>	<i>12,026</i>	<i>3,039</i>

(a) Location of register of policies.  
Northern Territory.

(b) Includes Papua and New Guinea.

(c) Includes

The following table shows particulars of policies existing at the end of the years 1958 to 1962 inclusive.

## LIFE INSURANCE: POLICIES EXISTING IN AUSTRALIA

At end of year—	Insurance and endowment policies				Annuity policies	
	Number of policies	Sum insured (£'000)	Average sum insured per policy (£)	Annual premiums (£'000)	Number of policies	Annuities per annum (£'000)
<b>ORDINARY BUSINESS</b>						
1958(a) .. ..	3,576,943	2,873,388	803	90,752	12,016	9,486
1959(a) .. ..	3,710,479	3,285,710	886	99,997	5,673	9,762
1960(a) .. ..	4,110,289	3,845,171	935	112,280	4,354	10,528
1961 .. ..	3,580,643	3,373,178	942	97,621	2,754	461
1962 .. ..	3,690,996	3,771,742	1,022	105,993	2,606	448
<b>INDUSTRIAL BUSINESS</b>						
1958 .. ..	3,530,826	328,626	92	15,493	..	..
1959 .. ..	3,443,168	332,539	97	15,532	..	..
1960 .. ..	3,340,003	342,964	103	15,826	..	..
1961 .. ..	3,198,822	353,395	110	16,056	..	..
1962 .. ..	3,075,967	371,740	121	16,563	..	..
<b>SUPERANNUATION BUSINESS</b>						
1961 .. ..	620,848	998,534	1,608	25,584	1,582	11,082
1962 .. ..	599,514	1,155,113	1,927	29,022	1,689	12,026

(a) Includes particulars of superannuation business, available separately commencing 1961.

4. New Policies issued in Australia.—In the following table, details are given of new policies issued in each State and the Australian Capital Territory during 1962 for each class of business.

## LIFE INSURANCE: NEW POLICIES ISSUED IN AUSTRALIA, 1962

State or Territory(a)	Insurance and endowment policies				Annuity policies			
	Number of policies	Sum insured (£'000)	Premiums		Number of policies	Annuities per annum (£'000)	Premiums	
			Singl. (£'000)	Annual (£'000)			Single (£'000)	Annual (£'000)
<b>ORDINARY BUSINESS</b>								
New South Wales ..	106,885	201,574	98	4,816	37	13	94	..
Victoria .. ..	88,217	179,422	59	4,155	35	8	76	..
Queenstand(b) ..	51,555	92,911	29	2,085	3	..	2	..
South Australia(c) ..	39,888	65,849	21	1,618	9	2	9	..
Western Australia ..	26,861	43,473	13	1,094	4	2	7	..
Tasmania .. ..	12,115	20,013	3	480	1	..	5	..
Australian Capital Territory .. ..	8,551	39,836	5	742	6	6	58	..
<i>Australia(b)</i> .. ..	<i>334,072</i>	<i>643,078</i>	<i>228</i>	<i>14,990</i>	<i>95</i>	<i>31</i>	<i>251</i>	<i>..</i>

NOTE.—For footnotes see next page.

LIFE INSURANCE: NEW POLICIES ISSUED IN AUSTRALIA, 1962—*continued*

State or Territory(a)	Insurance and endowment policies				Annuity policies			
	Number of policies	Sum insured (£'000)	Premiums		Number of policies	Annuities per annum (£'000)	Premiums	
			Single (£'000)	Annual (£'000)			Single (£'000)	Annual (£'000)
<b>INDUSTRIAL BUSINESS</b>								
New South Wales ..	62,450	21,594	..	898	..	..	..	..
Victoria ..	43,705	15,534	..	616	..	..	..	..
Queensland(b) ..	20,183	6,154	..	260	..	..	..	..
South Australia(c) ..	15,728	4,377	..	186	..	..	..	..
Western Australia ..	9,795	3,086	..	129	..	..	..	..
Tasmania ..	3,175	1,102	..	45	..	..	..	..
Australian Capital Territory ..	1,280	407	..	18	..	..	..	..
<i>Australia(b)</i> ..	<i>156,316</i>	<i>52,254</i>	..	<i>2,152</i>	..	..	..	..

<b>SUPERANNUATION BUSINESS</b>								
State or Territory	Number of policies	Sum insured (£'000)	Premiums		Number of policies	Annuities per annum (£'000)	Premiums	
			Single (£'000)	Annual (£'000)			Single (£'000)	Annual (£'000)
New South Wales ..	30,344	40,912	117	1,260	6	169	44	79
Victoria ..	17,598	88,829	377	1,739	115	547	517	179
Queensland(b) ..	8,907	14,215	27	483	..	7	2	1
South Australia(c) ..	4,648	10,755	15	385	1	10	23	2
Western Australia ..	4,023	11,005	8	295	1	4	2	..
Tasmania ..	1,814	5,544	4	168	..	..	..	..
Australian Capital Territory ..	8,125	71,660	374	1,214	38	1,213	16	247
<i>Australia(b)</i> ..	<i>75,459</i>	<i>242,920</i>	<i>922</i>	<i>5,544</i>	<i>161</i>	<i>1,950</i>	<i>604</i>	<i>508</i>

(a) Location of register of policies. (b) Includes Papua and New Guinea. (c) Includes Northern Territory.

New policies issued in Australia during each of the years 1958 to 1962 were as shown in the following table.

## LIFE INSURANCE: NEW POLICIES ISSUED IN AUSTRALIA

Year	Insurance and endowment policies				Annuity policies			
	Number of policies	Sum insured (£'000)	Premiums		Number of policies	Annuities per annum (£'000)	Premiums	
			Single (£'000)	Annual (£'000)			Single (£'000)	Annual (£'000)
<b>ORDINARY BUSINESS</b>								
1958(a) ..	322,269	499,694	760	14,044	925	1,464	355	409
1959(a) ..	341,332	598,239	728	15,507	547	1,383	493	422
1960(a) ..	454,018	802,261	903	19,311	(b) -218	2,247	608	660
1961 ..	354,671	603,460	361	14,658	201	53	339	3
1962 ..	334,072	643,078	228	14,990	95	31	251	..
<b>INDUSTRIAL BUSINESS</b>								
1958 ..	200,954	33,070	..	1,553	..	..	..	..
1959 ..	192,524	32,796	..	1,543	..	..	..	..
1960 ..	187,150	39,394	..	1,777	..	..	..	..
1961 ..	176,389	44,106	..	1,906	..	..	..	..
1962 ..	156,316	52,254	..	2,152	..	..	..	..
<b>SUPERANNUATION BUSINESS</b>								
1961 ..	79,503	225,892	2,857	5,135	52	1,969	865	491
1962 ..	75,459	242,920	922	5,544	161	1,950	604	508

(a) Includes particulars of superannuation business, available separately commencing 1961. (b) Net decrease due to cancellation of individual policies and issue of blanket policies.

5. Policies Discontinued or Reduced in Australia.—In the following table, details are given of ordinary, industrial and superannuation life insurance policies discontinued or reduced in each State and the Australian Capital Territory during the year 1962.

LIFE INSURANCE: POLICIES DISCONTINUED OR REDUCED  
IN AUSTRALIA, 1962(a)

State or Territory(b)	Insurance and endowment policies			Annuity policies		
	Number of policies	Sum insured (£'000)	Annual premiums (£'000)	Number of policies	Annuities per annum (£'000)	Annual premiums (£'000)

ORDINARY BUSINESS

New South Wales .. ..	77,442	88,060	2,446	58	9	..
Victoria .. ..	59,583	71,936	1,841	135	29	3
Queensland(c) .. ..	36,551	33,361	899	18	3	..
South Australia(d) .. ..	24,995	23,372	684	13	1	..
Western Australia .. ..	16,339	15,765	443	4	..	..
Tasmania .. ..	9,179	10,129	270	13	2	..
Australian Capital Territory .. ..	-370	1,891	35	2	..	..
<i>Australia(c) .. ..</i>	<i>223,719</i>	<i>244,514</i>	<i>6,618</i>	<i>243</i>	<i>44</i>	<i>3</i>

INDUSTRIAL BUSINESS

New South Wales .. ..	105,379	13,716	662	..	..	..
Victoria .. ..	86,346	9,919	484	..	..	..
Queensland(c) .. ..	32,457	3,979	192	..	..	..
South Australia(d) .. ..	30,091	3,128	155	..	..	..
Western Australia .. ..	16,744	2,082	101	..	..	..
Tasmania .. ..	7,540	939	44	..	..	..
Australian Capital Territory .. ..	614	146	7	..	..	..
<i>Australia(c) .. ..</i>	<i>279,171</i>	<i>33,909</i>	<i>1,645</i>	<i>..</i>	<i>..</i>	<i>..</i>

SUPERANNUATION BUSINESS

New South Wales .. ..	45,351	23,888	950	21	239	114
Victoria .. ..	37,581	66,012	1,268	4	5,271	1,164
Queensland(c) .. ..	5,439	4,493	156	1	4	1
South Australia(d) .. ..	5,250	5,082	168	13	15	5
Western Australia .. ..	6,414	2,319	70	..	1	..
Tasmania .. ..	2,104	1,715	58	2	1	1
Australian Capital Territory .. ..	-5,346	-17,168	-564	13	-4,524	-764
<i>Australia(c) .. ..</i>	<i>96,793</i>	<i>86,341</i>	<i>2,106</i>	<i>54</i>	<i>1,007</i>	<i>521</i>

(a) Includes matured, surrendered, forfeited, transfers to other State registers, conversions to other classes of business, etc. (b) Location of register of policies. (c) Includes Papua and New Guinea. (d) Includes Northern Territory.

NOTE.—Minus sign (—) denotes an increase in existing business in the registers concerned due to an excess of transfers from other States, or of conversions from other classes of business over discontinuances in those registers.



Policies discontinued or reduced in Australia during each of the years 1958 to 1962 are shown in the following table.

**LIFE INSURANCE: POLICIES DISCONTINUED OR REDUCED  
IN AUSTRALIA(a)**

Year	Insurance and endowment policies			Annuity policies		
	Number of policies	Sum insured (£'000)	Annual premiums (£'000)	Number of policies	Annuities per annum (£'000)	Annual premiums (£'000)
<b>ORDINARY BUSINESS</b>						
1958(b)	190,970	159,702	5,627	2,217	543	197
1959(b)	207,796	185,917	6,260	6,890	1,106	330
1960(b)	287,031	242,800	7,028	1,267	1,481	486
1961	234,698	240,189	6,959	480	53	1
1962	223,719	244,514	6,618	243	44	3
<b>INDUSTRIAL BUSINESS</b>						
1958	285,399	26,960	1,393	..	..	..
1959	280,182	28,886	1,504	..	..	..
1960	290,315	28,969	1,482	..	..	..
1961	317,570	33,675	1,676	..	..	..
1962	279,171	33,909	1,645	..	..	..
<b>SUPERANNUATION BUSINESS</b>						
1961	108,274	62,622	1,909	(c) -209	953	267
1962	96,793	86,341	2,106	54	1,007	521

(a) See footnote (a) to preceding table. (b) Includes particulars of superannuation business, available separately commencing 1961. (c) Negative amount denotes excess of conversions from other classes of businesses over discontinuances.

The number of policies and sums insured, excluding annuities, discontinued during the years 1958 to 1962 and the causes for discontinuance are given in the following table.

**LIFE INSURANCE POLICIES(a) DISCONTINUED OR REDUCED IN AUSTRALIA:  
CAUSE OF DISCONTINUANCE OR REDUCTION(b)**

Year	Death or maturity	Surrender	Forfeiture	Other	Total
<b>Ordinary Business</b>					
<b>NUMBER OF POLICIES</b>					
1958(c)	58,914	85,211	42,805	4,040	190,970
1959(c)	62,251	92,030	45,413	8,102	207,796
1960(c)	70,539	122,201	58,767	35,524	287,031
1961	64,123	83,834	69,038	17,703	234,698
1962	68,027	81,132	71,538	3,022	223,719
<b>SUM INSURED (£'000)</b>					
1958(c)	21,689	69,721	49,444	18,848	159,702
1959(c)	23,018	77,059	60,150	25,690	185,917
1960(c)	25,989	99,166	77,789	39,856	242,800
1961	23,284	69,393	102,760	44,752	240,189
1962	25,853	72,330	108,344	37,977	244,514

NOTE.—For footnotes see next page.

LIFE INSURANCE POLICIES<sup>(a)</sup> DISCONTINUED OR REDUCED IN AUSTRALIA:  
CAUSE OF DISCONTINUANCE OR REDUCTION<sup>(b)</sup>—*continued*

Year	Death or maturity	Surrender	Forfeiture	Other	Total
<b>Industrial Business</b>					
NUMBER OF POLICIES					
1958	159,145	69,878	56,168	208	285,399
1959	155,108	74,069	50,865	140	280,182
1960	172,026	71,178	47,041	70	290,315
1961	192,833	77,143	47,547	47	317,570
1962	161,387	75,028	41,205	1,551	279,171
SUM INSURED (£'000)					
1958	8,006	9,416	9,478	60	26,960
1959	8,200	10,600	10,023	63	28,886
1960	8,996	10,561	9,363	49	28,969
1961	10,593	12,031	11,040	11	33,675
1962	9,103	12,226	12,435	145	33,909
<b>Superannuation Business</b>					
NUMBER OF POLICIES					
1961	9,419	68,415	587	29,853	108,274
1962	9,517	32,848	972	53,456	96,793
SUM INSURED (£'000)					
1961	5,822	68,058	2,814	-14,072	62,622
1962	6,583	65,829	3,187	10,742	86,341

(a) Excludes annuities. (b) See footnote (a) on p. 871. (c) Includes particulars of superannuation business, available separately commencing 1961.

NOTE.—Minus sign (-) denotes an increase in existing business due to an excess of transfers from oversea registers to Australian registers, or of conversions from other classes of business over discontinuances.

6. Premiums and Claims, Australia.—(i) *Premiums.* (a) *Ordinary Business.* Details of revenue from premiums in respect of the ordinary business of all offices doing business in Australia are shown in the following tables for each State and the Australian Capital Territory for the year 1962.

ORDINARY LIFE INSURANCE: AUSTRALIAN REVENUE FROM PREMIUMS,  
1962  
(£'000)

State or Territory <sup>(a)</sup>	Insurance and endowment premiums		Consideration for annuities		Total
	Single premiums	Other premiums	Single premiums	Other premiums	
New South Wales .. ..	102	34,780	104	11	34,997
Victoria .. ..	87	29,490	64	12	29,653
Queensland <sup>(b)</sup> .. ..	31	15,834	1	1	15,867
South Australia <sup>(c)</sup> .. ..	20	10,896	4	6	10,926
Western Australia .. ..	13	7,500	7	..	7,520
Tasmania .. ..	4	3,372	5	..	3,381
Australian Capital Territory .. ..	5	2,602	47	..	2,654
Australia <sup>(b)</sup> .. ..	262	104,474	232	30	104,998

(a) Location of register of policies.

(b) Includes Papua and New Guinea.

(c) Includes Northern Territory.

(b) *Industrial Business.* Details of revenue from premiums in respect of the industrial business of all offices doing business in Australia are shown in the following table for each State and the Australian Capital Territory for the year 1962.

**INDUSTRIAL LIFE INSURANCE: AUSTRALIAN REVENUE FROM PREMIUMS,  
1962  
(£'000)**

State or Territory(a)	Insurance and endowment premiums		Total
	Single premiums	Other premiums	
New South Wales .. .. .	..	6,228	6,228
Victoria .. .. .	..	4,914	4,914
Queensland(b) .. .. .	..	1,978	1,978
South Australia(c) .. .. .	..	1,549	1,549
Western Australia .. .. .	..	1,011	1,011
Tasmania .. .. .	..	354	354
Australian Capital Territory .. .. .	..	108	108
<b>Australia(b) .. .. .</b>	<b>..</b>	<b>16,142</b>	<b>16,142</b>

(a) Location of register of policies.  
Northern Territory.

(b) Includes Papua and New Guinea.

(c) Includes

(c) *Superannuation Business.* Details of revenue from premiums in respect of the superannuation business of all offices doing business in Australia are shown in the following table for each State and the Australian Capital Territory for the year 1962.

**SUPERANNUATION BUSINESS(a): AUSTRALIAN REVENUE FROM PREMIUMS,  
1962  
(£'000)**

State or Territory(b)	Insurance and endowment premiums		Consideration for annuities		Total
	Single premiums	Other premiums	Single premiums	Other premiums	
New South Wales .. .. .	117	7,900	53	554	8,624
Victoria .. .. .	385	10,350	398	1,313	12,446
Queensland(c) .. .. .	27	2,347	2	12	2,388
South Australia(d) .. .. .	15	2,279	14	14	2,322
Western Australia .. .. .	8	1,410	2	18	1,438
Tasmania .. .. .	4	968	..	3	975
Australian Capital Territory .. .. .	365	7,470	16	1,734	9,585
<b>Australia(c) .. .. .</b>	<b>921</b>	<b>32,724</b>	<b>485</b>	<b>3,648</b>	<b>37,778</b>

(a) Prior to 1962, included with ordinary business. (b) Location of register of policies.  
(c) Includes Papua and New Guinea. (d) Includes Northern Territory.

(d) *Ordinary, Industrial and Superannuation Business.* The following table shows, for each of the years 1958 to 1962, the total Australian income from premiums in respect of ordinary, industrial and superannuation business of all offices doing business in Australia.

LIFE INSURANCE: AUSTRALIAN REVENUE FROM PREMIUMS  
(£'000)

Year	Ordinary business(a)		Industrial business	Superannuation business		Total all businesses combined
	Insurance and endowment premiums	Con- sideration for annuities		Insurance and endowment premiums	Con- sideration for annuities	
1958 .. ..	92,126	3,377	15,184	(b)		110,687
1959 .. ..	101,749	3,593	15,264			120,606
1960 .. ..	113,504	4,133	15,448	33,645   4,133		133,085
1961 .. ..	129,184	4,564	15,682			149,430
1962 .. ..	104,736	262	16,142			158,918

(a) Prior to 1962, includes superannuation business. (b) Included with Ordinary business.

(ii) *Claims, etc., Paid.* Details of the claims, etc., paid on policies in each State and the Australian Capital Territory during the year 1962 are shown in the following table.

LIFE INSURANCE: PAYMENTS TO POLICY-HOLDERS IN AUSTRALIA, 1962  
(£ 000)

State or Territory(a)	Claims		Sur- renderers	Annuities	Cash bonuses	Total
	Death or disability	Maturity				

ORDINARY BUSINESS

New South Wales .. ..	5,819	6,225	4,413	163	74	16,694
Victoria .. ..	4,885	4,825	3,346	109	50	13,215
Queensland(b) .. ..	2,301	2,368	1,792	29	23	6,513
South Australia(c) .. ..	1,434	1,595	1,189	22	20	4,260
Western Australia .. ..	1,048	1,051	806	18	19	2,942
Tasmania .. ..	530	434	436	12	8	1,420
Australian Capital Territory .. ..	524	112	121	26	1	784
<i>Australia(b)</i> .. ..	<i>16,541</i>	<i>16,610</i>	<i>12,103</i>	<i>379</i>	<i>195</i>	<i>45,828</i>

INDUSTRIAL BUSINESS

New South Wales .. ..	399	3,352	1,012	..	..	4,763
Victoria .. ..	309	3,262	701	..	..	4,272
Queensland(b) .. ..	116	1,011	320	..	..	1,447
South Australia(c) .. ..	91	1,010	229	..	..	1,330
Western Australia .. ..	69	532	157	..	..	758
Tasmania .. ..	16	234	81	..	..	331
Australian Capital Territory .. ..	3	26	15	..	..	44
<i>Australia(b)</i> .. ..	<i>1,003</i>	<i>9,427</i>	<i>2,515</i>	<i>..</i>	<i>..</i>	<i>12,945</i>

For footnotes see next page.

**LIFE INSURANCE: PAYMENTS TO POLICY-HOLDERS  
IN AUSTRALIA, 1962—continued**  
(£'000)

State or Territory(a)	Claims		Surrenders	Annuities	Cash bonuses	Total
	Death or disability	Maturity				
<b>SUPERANNUATION BUSINESS</b>						
New South Wales .. ..	710	956	1,616	230	13	3,525
Victoria .. ..	1,349	1,401	3,083	154	150	6,137
Queensland(b) .. ..	256	239	283	5	..	783
South Australia(c) .. ..	228	336	234	5	..	803
Western Australia .. ..	129	129	168	4	..	430
Tasmania .. ..	95	99	135	3	..	332
Australian Capital Territory .. ..	994	579	1,575	46	81	3,275
<i>Australia(b)</i> .. ..	<i>3,761</i>	<i>3,739</i>	<i>7,094</i>	<i>447</i>	<i>244</i>	<i>15,285</i>

(a) Location of register of policies. (b) Includes Papua and New Guinea. (c) Includes Northern Territory.

In the following table details are given of claims, etc., paid on policies in Australia for each of the years 1958 to 1962.

**LIFE INSURANCE: PAYMENTS TO POLICY-HOLDERS IN AUSTRALIA**  
(£'000)

Year	Claims	Surrenders	Annuities	Cash bonuses	Total
<b>ORDINARY BUSINESS(a)</b>					
1958 .. ..	26,328	10,295	524	183	37,330
1959 .. ..	28,527	11,495	578	370	40,970
1960 .. ..	32,516	24,092	638	280	57,526
1961 .. ..	36,446	21,017	698	589	58,750
1962 .. ..	33,151	12,103	379	195	45,828
<b>INDUSTRIAL BUSINESS</b>					
1958 .. ..	8,806	1,664	..	..	10,470
1959 .. ..	9,050	1,848	..	..	10,898
1960 .. ..	10,022	1,964	..	..	11,986
1961 .. ..	11,899	2,345	..	..	14,244
1962 .. ..	10,430	2,515	..	..	12,945
<b>SUPERANNUATION BUSINESS(b)</b>					
1962 .. ..	7,500	7,094	447	244	15,285

(a) Prior to 1962, includes superannuation business.

(b) See footnote (a).

7. Total Revenue and Expenditure.—(i) *Total Revenue.* The following table shows particulars of the total life insurance revenue derived by life insurance offices from sources within and beyond Australia during each of the years 1958 to 1962.

**ORDINARY, INDUSTRIAL AND SUPERANNUATION LIFE INSURANCE:  
TOTAL REVENUE**  
(£'000)

Year	Insurance and endowment premiums	Con- sideration for annuities granted	Net interest, dividends and rents	All other revenue	Total revenue	
					Inside Australia	Outside Australia
<b>ORDINARY BUSINESS(a)</b>						
1958 .. ..	121,802	4,693	41,429	530	168,454	
1959 .. ..	138,168	5,591	49,678	2,433	195,870	
1960 .. ..	152,798	6,406	56,313	5,836	161,948	59,405
1961 .. ..	171,790	8,452	64,562	18,916	197,625	66,095
1962 .. ..	148,291	10,300	62,636	5,291	151,774	74,744
<b>INDUSTRIAL BUSINESS</b>						
1958 .. ..	17,336	..	6,072	12	23,420	
1959 .. ..	17,746	..	6,787	406	24,939	
1960 .. ..	17,897	..	7,190	446	21,984	3,549
1961 .. ..	18,104	..	7,648	320	22,491	3,581
1962 .. ..	18,598	..	8,116	472	23,539	3,647
<b>SUPERANNUATION BUSINESS(b)</b>						
1962 .. ..	36,743	4,621	13,204	3,189	52,843	4,914

(a) Prior to 1962, includes superannuation business.

(b) See footnote (a).

(ii) *Total Expenditure.* The next table supplies details of the total expenditure, both within and beyond Australia, of life insurance offices during each of the years 1958 to 1962.

**ORDINARY, INDUSTRIAL AND SUPERANNUATION LIFE INSURANCE:  
TOTAL EXPENDITURE**  
(£'000)

Year	Claims and annuities paid	Surrenders	Cash bonuses paid to policy-holders	Com- mission	Salaries and directors' fees	All other expenditure	Total expenditure	
							Inside Australia	Outside Australia
<b>ORDINARY BUSINESS(a)</b>								
1958 .. ..	39,693	13,708	306	9,900	7,157	7,306	78,070	
1959 .. ..	44,827	16,209	559	11,045	8,044	9,391	90,075	
1960 .. ..	50,378	28,875	489	13,128	9,335	12,631	83,348	31,488
1961 .. ..	56,316	26,474	821	14,169	10,422	14,756	88,390	34,568
1962 .. ..	53,856	17,390	434	14,309	9,578	11,819	71,400	35,986
<b>INDUSTRIAL BUSINESS</b>								
1958 .. ..	10,556	1,830	..	2,548	1,839	1,893	18,666	
1959 .. ..	10,932	2,066	..	2,495	1,896	1,977	19,366	
1960 .. ..	12,150	2,194	..	2,579	2,209	1,923	17,834	3,221
1961 .. ..	14,461	2,593	..	2,685	2,246	1,907	20,136	3,756
1962 .. ..	12,844	2,809	..	2,752	2,309	1,775	18,870	3,619
<b>SUPERANNUATION BUSINESS(b)</b>								
1962 .. ..	8,718	7,772	264	1,699	1,855	1,879	20,253	1,934

(a) Prior to 1962, includes superannuation business.

(b) See footnote (a).

8. **Liabilities and Assets.**—(i) *General.* The liabilities of the Australian offices consist mainly of their insurance funds, but in the case of public companies there is a further liability on account of the shareholders' capital. The assets consist chiefly of government and municipal securities, mortgages, loans on policies, landed and house property, etc. Loans on personal security are granted by very few of the Australian offices. Separate details of liabilities in respect of Australian business are not available.

(ii) *Total Liabilities and Assets.* In the two tables which follow, the details of liabilities and assets relate to all business (Australian and overseas) of Australian companies, the life insurance business of the two State Government offices, all business of the Provident Life Assurance Co. Ltd. (incorporated in New Zealand), and the Australian business only of the other eleven overseas companies operating in Australia. For various reasons, several offices do not attempt the dissection of liabilities and assets according to type of business, and, therefore, the figures in the following tables relate to all types of business combined. Details of the total liabilities of life insurance offices for the year 1962 are given in the following table.

**ORDINARY, INDUSTRIAL AND SUPERANNUATION LIFE INSURANCE:  
TOTAL LIABILITIES, 1962  
(£'000)**

Particulars	Life insurance business	Other classes of business	Total liabilities
Shareholders' Capital—			
Authorized .. .. .	..	21,450	21,450
Less unissued .. .. .	..	14,152	14,152
Subscribed Capital .. .. .	..	7,298	7,298
Paid-up—			
In money .. .. .	..	5,719	5,719
Otherwise than in money .. .. .	..	291	291
Total .. .. .	..	6,010	6,010
Life Insurance Statutory Funds—			
Ordinary business .. .. .	1,245,596	..	1,245,596
Industrial business .. .. .	157,991	..	157,991
Superannuation business .. .. .	249,841	..	249,841
Total .. .. .	1,653,428	..	1,653,428
Funds in respect of other classes of business .. .. .	..	2,351	2,351
General reserves .. .. .	22,198	3,602	25,800
Profit and loss account balance .. .. .	..	557	557
Total, Shareholders' Capital, Insurance Funds and Reserves .. .. .	1,675,626	12,520	1,688,146
Other liabilities—			
Deposits .. .. .	10,857	5,747	16,604
Staff provident and superannuation funds .. .. .	700	372	1,072
Claims admitted or intimated but not paid .. .. .	17,032	1,365	18,397
Annuities due but not paid .. .. .	..	..	..
Premiums paid in advance and in suspense .. .. .	1,018	27	1,045
Sundry creditors .. .. .	7,420	413	7,833
Bank overdraft .. .. .	7,453	139	7,592
Reserves and provisions for taxation .. .. .	11,455	671	12,126
All other liabilities .. .. .	1,316	586	1,902
Grand Total .. .. .	1,732,877	21,840	1,754,717

The following table furnishes details of the total assets of life insurance offices for the year 1962.

**ORDINARY, INDUSTRIAL AND SUPERANNUATION LIFE INSURANCE:  
TOTAL ASSETS, 1962  
(£'000)**

Particulars	Life insurance business	Other classes of business	Total	Amount of assets held in Australia		
				Life insurance business	Other classes of business	Total
<b>Fixed assets—</b>						
Freehold and leasehold property, office premises ..	115,601	592	116,193	84,823	592	85,415
Furniture, etc. ..	2,065	142	2,207	1,481	136	1,617
<i>Total</i> .. ..	<i>117,666</i>	<i>734</i>	<i>118,400</i>	<i>86,304</i>	<i>728</i>	<i>87,032</i>
<b>Loans—</b>						
On mortgage .. ..	554,326	1,697	556,023	390,335	1,697	392,032
On policies of the company ..	63,943	..	63,943	48,782	..	48,782
Other loans .. ..	24,496	842	25,338	23,886	827	24,713
<i>Total</i> .. ..	<i>642,765</i>	<i>2,539</i>	<i>645,304</i>	<i>463,003</i>	<i>2,524</i>	<i>465,527</i>
<b>Investments—</b>						
<b>Government securities—</b>						
Australia .. ..	304,138	1,302	305,440	284,726	1,302	286,028
Other .. ..	96,624	478	97,102	2	..	2
<b>Securities of local and semi-governmental bodies ..</b>	<b>199,048</b>	<b>1,411</b>	<b>200,459</b>	<b>147,660</b>	<b>1,298</b>	<b>148,958</b>
Other investments .. ..	318,611	12,441	331,052	254,755	12,301	267,056
<i>Total</i> .. ..	<i>918,421</i>	<i>15,632</i>	<i>934,053</i>	<i>687,143</i>	<i>14,901</i>	<i>702,044</i>
Cash on deposit, current account and in hand .. ..	3,884	1,665	5,549	2,837	1,552	4,389
Other assets(a) .. ..	50,141	1,270	51,411	38,158	1,236	39,394
<b>Grand Total</b> .. ..	<b>1,732,877</b>	<b>21,840</b>	<b>1,754,717</b>	<b>1,277,445</b>	<b>20,941</b>	<b>1,298,386</b>

(a) Includes advances of premiums.

(iii) *Assets held in Australia.* Details of assets held in Australia for the years 1958 to 1962 are set out in the following table.

**ORDINARY, INDUSTRIAL AND SUPERANNUATION LIFE INSURANCE(a):  
ASSETS HELD IN AUSTRALIA  
(£'000)**

Particulars	1958	1959	1960	1961	1962
Landed and house property ..	43,670	51,566	58,833	72,358	85,415
Government and municipal securities .. ..	350,671	359,172	356,836	388,556	434,988
Other investments .. ..	117,824	148,849	200,858	234,391	267,056
Loans on mortgage .. ..	294,625	319,442	353,060	374,955	392,032
Loans on companies' policies ..	37,402	42,078	37,739	44,959	48,782
Other loans .. ..	23,522	34,232	26,598	26,161	24,713
All other assets .. ..	16,689	19,914	33,929	38,472	45,400
<b>Total</b> .. ..	<b>884,403</b>	<b>975,253</b>	<b>1,067,853</b>	<b>1,179,852</b>	<b>1,298,386</b>

(a) Life insurance and other classes of business.

9. **Loans.**—In the following table, details are given of new loans paid over by life insurance companies during each of the years ended 31st December, 1959 to 1963. The information has been compiled from monthly returns furnished by each company. New loans paid over by the Government Insurance Office of New South Wales and the Queensland State Government Insurance Office are not included. Advances of premiums are also excluded.



**LIFE INSURANCE COMPANIES: NEW LOANS PAID OVER**  
(£'000)

Particulars	1959	1960	1961	1962	1963
<b>CLASS OF SECURITY</b>					
Mortgage of real estate ..	58,900	67,680	51,111	47,446	59,873
Companies' policies ..	7,925	10,080	12,796	10,722	11,747
Other .. .. .	2,132	4,531	2,190	1,024	962
<i>Total</i> .. ..	<i>68,957</i>	<i>82,291</i>	<i>66,097</i>	<i>59,192</i>	<i>72,582</i>
<b>STATE OR TERRITORY(a)</b>					
New South Wales .. ..	30,054	35,065	26,835	27,814	32,920
Victoria .. .. .	19,895	24,775	21,649	15,557	21,890
Queensland(b) .. ..	7,007	7,567	5,689	5,227	5,737
South Australia(c) ..	5,579	6,935	5,179	4,803	5,556
Western Australia ..	3,515	4,453	3,861	2,856	4,075
Tasmania .. .. .	2,767	3,191	2,472	1,836	1,726
Australian Capital Territory	140	305	412	1,099	678
<i>Total</i> .. ..	<i>68,957</i>	<i>82,291</i>	<i>66,097</i>	<i>59,192</i>	<i>72,582</i>

(a) State or Territory of location of mortgage, registration of policy, or residence of borrower.  
 (b) Includes Papua and New Guinea. (c) Includes the Northern Territory.

### § 3. Fire, Marine and General Insurance

1. **General.**—The following statistics, which are in respect of the Australian business of companies operating in Australia and State government insurance offices, conform to the following definitions and should be interpreted in accordance therewith.

(a) Premiums represent the full amount receivable in respect of policies issued and renewed in the year, less returns, rebates and bonuses paid or credited to policy-holders during the year. They are not adjusted to provide for premiums unearned at the end of the year and consequently the amounts differ from "earned premium income" appropriate to the year. When business is increasing, as in recent years, premiums receivable (as shown in the statistics) are greater than "earned premium income" appropriate to the year. The converse applies when business is declining.

(b) Claims or losses include provision for outstanding claims and represent claims or losses incurred in the year. Salvage and other amounts recoverable have been deducted.

(c) Contributions to fire brigades, commission and agents' charges, and expenses of management represent mainly charges paid during the year.

(d) Taxation represents mainly payments made during the year, and includes income tax, pay-roll tax, licence fees, stamp duty (where paid by the company), etc. Income tax paid during the year is based on the income of earlier years.

The figures relate to selected items of statistics and are not construable as "Profit and Loss" statements or "Revenue Accounts".

In cases where the business is underwritten in one State and the risk is situated in another, the business is included in the State in which the policy was issued.

During 1962-63, revenue from premiums amounted to £225.6 million, and that from net interest on investments, etc., to £13.5 million, a total of £239.1 million. Expenditure on claims amounted to £139.7 million, contributions to fire brigades £5.8 million, commission and agents' charges £20.6 million, expenses of management £38.2 million, and taxation £6.9 million, a total of £211.2 million.

2. **States.**—The following table shows, for each State, the aggregate premium income less returns, rebates and bonuses, and claims or losses less amounts recoverable, for all classes of insurance other than life for the years 1958-59 to 1962-63.

**FIRE, MARINE AND GENERAL INSURANCE: PREMIUMS AND CLAIMS**  
(£'000)

State	1958-59	1959-60	1960-61	1961-62	1962-63
<b>GROSS PREMIUMS, LESS RETURNS, REBATES AND BONUSES</b>					
New South Wales(a) ..	65,371	71,419	79,773	84,131	92,746
Victoria .. .. .	53,961	58,119	62,424	64,851	67,744
Queensland .. .. .	19,291	22,154	24,017	25,945	27,290
South Australia .. .. .	12,990	13,836	15,979	16,671	18,475
Western Australia .. .. .	9,340	10,785	11,791	12,511	13,661
Tasmania .. .. .	4,292	4,567	4,923	5,106	5,714
<i>Total</i> .. .. .	<i>165,245</i>	<i>180,880</i>	<i>198,907</i>	<i>209,215</i>	<i>225,630</i>
<b>GROSS CLAIMS OR LOSSES, LESS AMOUNTS RECOVERABLE</b>					
New South Wales(a) ..	39,753	44,688	56,513	57,450	59,627
Victoria .. .. .	30,854	33,417	38,680	39,095	41,125
Queensland .. .. .	12,381	13,702	15,778	16,050	17,604
South Australia .. .. .	6,639	7,127	8,342	8,413	9,662
Western Australia .. .. .	5,489	6,327	7,438	7,292	8,689
Tasmania .. .. .	2,113	2,701	2,760	2,747	2,975
<i>Total</i> .. .. .	<i>97,229</i>	<i>107,962</i>	<i>129,511</i>	<i>131,047</i>	<i>139,682</i>

(a) Excludes workers' compensation insurance in coal-mining industry in New South Wales.

3. Classes of Insurance.—The following statement shows premiums and claims in respect of the principal classes of risks for the years 1958-59 to 1962-63.

**FIRE, MARINE AND GENERAL INSURANCE: PREMIUMS AND CLAIMS—**  
**PRINCIPAL CLASSES OF RISK, AUSTRALIA**  
(£'000)

Class of risk	1958-59	1959-60	1960-61	1961-62	1962-63
<b>GROSS PREMIUMS, LESS RETURNS, REBATES AND BONUSES</b>					
Fire .. .. .	30,642	31,850	33,842	35,536	36,923
Householders' comprehensive	8,270	9,410	10,815	11,924	13,380
Workers' compensation(a) ..	34,805	38,876	43,825	43,629	44,006
Motor vehicle—					
Compulsory third party ..	17,166	19,831	23,094	25,900	30,700
Other .. .. .	43,827	48,939	52,662	56,480	60,218
Marine .. .. .	7,646	8,033	8,839	8,579	9,577
Personal accident .. .. .	5,563	6,151	6,875	7,170	7,950
All other .. .. .	17,326	17,790	18,955	19,997	22,876
<i>Total</i> .. .. .	<i>165,245</i>	<i>180,880</i>	<i>198,907</i>	<i>209,215</i>	<i>225,630</i>
<b>GROSS CLAIMS OR LOSSES, LESS AMOUNTS RECOVERABLE</b>					
Fire .. .. .	9,370	10,104	12,007	12,465	13,203
Householders' comprehensive	1,668	1,929	2,285	3,135	3,362
Workers' compensation(a) ..	27,391	29,154	31,871	33,926	35,005
Motor vehicle—					
Compulsory third party ..	17,342	18,848	22,764	25,218	27,100
Other .. .. .	28,405	32,416	38,875	37,761	41,315
Marine .. .. .	2,999	3,311	4,204	4,099	4,452
Personal accident .. .. .	2,427	2,831	3,390	3,562	3,738
All other .. .. .	7,627	9,369	13,960	10,881	11,507
<i>Total</i> .. .. .	<i>97,229</i>	<i>107,962</i>	<i>129,356</i>	<i>131,047</i>	<i>139,682</i>

(a) Excludes workers' compensation insurance in coal-mining industry in New South Wales.

**NEW CAPITAL RAISINGS BY COMPANIES IN AUSTRALIA**

1. General.—Information relating to capital raised by companies in Australia is given in the following tables. More detailed information may be found in the annual bulletin *Insurance and Other Private Finance* and in quarterly bulletins dealing with capital raisings (see NOTE at beginning of this chapter).

The statistics (the collection of which commenced in July, 1954) relate to capital raised by companies through issues of shares, and in the case of companies listed on stock exchanges, through the issue of debentures, notes and similar securities and the acceptance of deposits, and in the case of unlisted companies, by way of loans secured over the entire assets of the company. Capital obtained by way of bank overdraft, trade credit, temporary advances, and loans secured over part only of the assets of the company is not included. Totally unsecured loans are included in the case of listed companies, but are excluded in the case of unlisted companies.

Separate statistics are given for listed and unlisted companies. Listed companies are companies incorporated in Australia or the Australian territories and listed on one or more of the Australian stock exchanges. All other companies incorporated in Australia, including subsidiaries of listed companies, are classified as unlisted companies. Companies incorporated overseas, whether listed on an Australian stock exchange or not, are excluded from the statistics of share issues. However, subsidiaries of oversea companies, if incorporated in Australia, are included. The statistics of new capital raised through issues of debentures, notes, etc., and the acceptance of deposits, include, in addition to capital raised by Australian companies, capital raised in this way from Australian sources by oversea public companies through their Australian offices.

The following are explanatory notes relating to some of the items shown in the tables.

**New Money.** This is the net amount of cash transferred from the investing public to the companies. For this purpose, the "investing public" includes banks and life insurance companies (except when subscribing to issues by associated companies), and government and private superannuation funds, but excludes other government agencies. Subscriptions by associated companies, whether local or overseas, are excluded. In the tables which follow, the amount of new money is obtained by deducting from the total cash raised the "amount not involving a net transfer of funds from the investing public".

**Amounts not involving new money.** These amounts include cash subscriptions received by issuing companies from associated companies. Such subscriptions represent inter-company transfers only, and do not involve a receipt of funds from the "investing public". Also included are amounts which, although subscribed by the "investing public" (i.e. subscribers other than "associated companies"), are not retained by the issuing company or its associates, but are used to redeem shares, debentures or unsecured notes, etc., or are used to purchase from individuals existing shares, debentures, etc., in other companies, including existing shares, etc., in associated and subsidiary companies. The funds used in this way are thus returned to another section of the "investing public", and do not represent a net transfer of cash from the "investing public" to the companies. (Besides these purchases of existing shares, etc., from individuals, purchases of existing shares, etc., from companies other than associates of the issuing company might also be included in this item, but the amounts involved are small and separate details have not been collected.)

2. Companies Listed on Stock Exchanges.—Details of new capital raised through issues of shares, debentures, or registered notes, or through accepting deposits, are given in the following table for each of the years 1958–59 to 1962–63.

**LISTED AUSTRALIAN COMPANIES(a): NEW CAPITAL RAISED THROUGH ISSUES OF SHARES, DEBENTURES, OR REGISTERED NOTES, ETC.(b), OR ACCEPTING DEPOSITS(c)**

(£ million)

Year	Share capital					New money	Debentures, registered notes and deposits		
	Value of issues commenced	Non-cash issues commenced (d)	Cash issues commenced	Cash raised during period (e)	Amounts not involving new money		Total amount raised (f)	Amounts not involving new money (f)	New money
1958–59 ..	99.6	41.1	58.5	57.7	9.0	48.7	310.9	168.7	142.2
1959–60 ..	158.6	96.6	62.0	62.2	14.3	47.9	414.3	213.9	200.4
1960–61 ..	263.6	127.3	136.3	127.2	28.7	98.5	435.3	314.9	120.4
1961–62 ..	191.5	72.9	118.6	94.9	18.7	76.2	381.2	281.6	99.6
1962–63 ..	137.9	72.0	65.9	74.9	22.5	52.4	417.3	303.6	113.7

(a) Includes companies incorporated in the Australian Territories. (b) Includes convertible notes. (c) Deposits accepted by banks, life insurance companies, pastoral companies, building societies and loans to authorized dealers in the short-term money market are not included. (d) Includes bonus issues, conversion issues, issues in exchange for existing shares, etc. (e) Amounts paid up on issues commenced during the year plus calls on issues commenced in earlier years. (f) Includes conversions, renewals, etc.

3. Companies not listed on Stock Exchanges.—Details of new capital raised by unlisted companies through issues of shares and loans secured by charges over the companies' entire assets are given in the following table for each of the years 1958–59 to 1962–63.

**UNLISTED COMPANIES(a): NEW CAPITAL RAISED THROUGH ISSUES OF SHARES AND LOANS SECURED BY CHARGES OVER THE COMPANIES' ENTIRE ASSETS**

(£ million)

Year	Share capital						Loans secured by charges over the companies' entire assets		
	Value of issues commenced	Non-cash issues commenced (b)	Cash issues commenced	Cash raised during period (c)	Amounts not involving new money	New money	Total amount raised (d)	Amounts not involving new money (d)	New money
1958-59 ..	175.1	94.6	80.5	70.0	51.9	18.1	18.8	6.3	12.5
1959-60 ..	224.7	107.6	117.1	104.9	69.4	35.5	29.2	17.6	11.6
1960-61 ..	319.6	203.1	116.5	113.4	81.2	32.2	24.6	15.3	9.3
1961-62 ..	253.1	135.2	117.9	108.9	81.4	27.5	24.0	17.1	6.9
1962-63 ..	206.2	109.3	96.9	102.3	79.6	22.7	29.4	22.7	6.7

(a) Excludes companies incorporated in the Northern Territory and Australian External Territories. (b) Includes bonus issues, conversion issues, issues in exchange for existing shares, etc. (c) Amounts paid up on issues commenced during year plus calls on issues commenced in previous years. (d) Includes conversions, renewals, etc.

4. Listed and Unlisted Companies, New Money Raised, Classified by Industry Group.—A summary of new money raised by listed and unlisted companies during each of the years 1958-59 to 1962-63, as shown in the preceding tables, is given below, together with a classification by industry groups of the amounts raised.

**LISTED AND UNLISTED COMPANIES: NEW MONEY RAISED, INDUSTRY GROUPS**  
(£ million)

Year	Companies listed on stock exchanges			Companies not listed on stock exchanges			Grand total
	Share capital (a)	Debentures, registered notes and deposits (b)	Total	Share capital (a)	Secured loans (c)	Total	
<b>MANUFACTURING</b>							
1958-59 ..	20.7	27.7	48.4	4.6	8.8	13.4	61.8
1959-60 ..	17.9	24.5	42.4	(d)	(d)	13.2	55.6
1960-61 ..	37.9	24.9	62.8	5.8	3.4	9.2	72.0
1961-62 ..	42.1	29.4	71.5	5.5	1.5	7.0	78.5
1962-63 ..	20.2	13.9	34.1	5.2	1.8	7.0	41.1
<b>FINANCE AND PROPERTY(b)</b>							
1958-59 ..	10.5	91.5	102.0	4.0	1.7	5.7	107.7
1959-60 ..	9.5	140.2	149.7	10.3	2.6	12.9	162.6
1960-61 ..	20.2	61.4	81.6	9.8	3.7	13.5	95.1
1961-62 ..	6.0	45.1	51.1	8.1	2.7	10.8	61.9
1962-63 ..	5.9	76.3	82.2	6.4	1.8	8.2	90.4
<b>COMMERCE</b>							
1958-59 ..	11.9	16.6	28.5	3.9	1.6	5.5	34.0
1959-60 ..	9.6	24.4	34.0	7.2	0.8	8.0	42.0
1960-61 ..	21.6	22.6	44.2	5.9	1.0	6.9	51.1
1961-62 ..	13.7	13.6	27.3	5.1	0.7	5.8	33.1
1962-63 ..	11.5	16.0	27.5	4.0	1.2	5.2	32.7
<b>OTHER INDUSTRIES</b>							
1958-59 ..	5.6	6.4	12.0	4.1	0.4	4.5	16.5
1959-60 ..	10.9	11.3	22.2	(d)	(d)	11.3	33.5
1960-61 ..	18.8	11.5	30.3	9.0	1.2	10.2	40.5
1961-62 ..	14.4	11.5	25.9	7.3	2.0	9.3	35.2
1962-63 ..	14.8	7.5	22.3	5.7	1.9	7.6	29.9
<b>TOTAL, ALL INDUSTRIES</b>							
1958-59 ..	48.7	142.2	190.9	18.1	12.5	30.6	221.5
1959-60 ..	47.9	200.4	248.3	35.5	11.6	47.1	295.4
1960-61 ..	98.5	120.4	218.9	32.2	9.3	41.5	260.4
1961-62 ..	76.2	99.6	175.8	27.5	6.9	34.4	210.2
1962-63 ..	52.4	113.7	166.1	22.7	6.7	29.4	195.5

(a) Includes preference shares. (b) Excludes deposits accepted by banks, insurance companies, pastoral companies and building societies, and loans to authorized dealers in the short-term money market. (c) Includes only loans which are secured by charges over the companies' entire assets. (d) Not available for publication. (e) Small share issues of less than £1,000 for which returns have not been collected have not been included in the industrial classification but are included in Total, All Industries.

## OVERSEA INVESTMENT BY PRIVATE INVESTORS

1. *General.*—A survey of Oversea Investment has been conducted since 1947-48 to obtain particulars of certain types of private capital flows to and from Australia. The survey, when supplemented by other information, provides statistics of oversea investment in companies in Australia and in Australian public authority securities domiciled in Australia, and statistics of Australian investment in companies overseas and in foreign government securities. Particulars of investment income from most of those classes of investment are also obtained from the survey.

Certain types of private oversea investment are not included in the statistics which follow. Investment in real estate (except when made through companies), investment by means of bank deposits and advances, and loans between Australian individuals and non-resident individuals are not covered. Nor are changes in short-term liabilities between exporters and importers in Australia and overseas covered, except in so far as they arise from exports and imports between branches or subsidiaries and their home offices—in this case, they are included in the figures of investment in branches or subsidiaries.

In some cases, the capital invested in a company in Australia may be received from a company in one oversea country even though the ultimate ownership and control of that capital may rest with a parent company in a second oversea country. In the tables which classify investment in Australia according to country of origin, the investment is shown as an inflow from the country which is the immediate source of the capital rather than from the country in which the parent company with ultimate ownership and control is domiciled. Income payable overseas is classified on a similar basis, i.e., it is classified to the country to which it is directly payable.

Remittances between Australia and overseas by Australian life insurance companies are regarded as capital transactions made to bring assets located in oversea countries into line with commitments in those countries, and are shown as a flow of investment between Australia and overseas in the table in para. 4, pp. 889-90. Similar considerations apply to oversea life insurance companies with branches in Australia.

The following are some explanatory notes relating to terms used in the tables.

*Overseas.* For the purpose of these statistics, "overseas" includes Papua and New Guinea.

*Companies.* In these statistics, the term "companies" relates to both incorporated and unincorporated businesses.

*Subsidiary.* For the purpose of these statistics, this term is applied to all companies in which there is a "direct" holding, irrespective of the degree of control, if any, which is actually exercised. A holding is treated as "direct" when there is ownership of 25 per cent. or more of a company's ordinary shares (or voting stock) by one company or a number of companies incorporated in one country, or ownership of 50 per cent. or more of a company's ordinary shares (or voting stock) by individuals or companies in one country.

*Portfolio Investment.* Investment in company shares, debentures, etc., other than direct investment in such securities of a subsidiary company.

*Unremitted profits.* For these statistics, this represents the net earnings of branches during the year after tax, less remittances by the branches to their home offices during the year of net earnings and interest (irrespective of the period to which the earnings and interest relate). "Net earnings" of Australian branches of oversea companies is, in general, based on the value of their income for taxation purposes.

*Undistributed profits.* This term refers, in the case of Australian "subsidiaries", to the equity of the oversea parent in the net earnings of the Australian company, less tax (or tax provision) and less dividends declared. "Net earnings" of Australian subsidiaries of oversea companies is, in general, based on the value of their income for taxation purposes. In the case of oversea subsidiaries of Australian companies, this term represents the equity of the Australian parent in the book value of the net earnings of the subsidiary after tax, less dividends paid or payable.

The annual bulletin *Insurance and Other Private Finance* and the *Annual Bulletin of Oversea Investment: Australia* contain additional figures relating to oversea investment, including a longer range of years covered, and also more detailed description of the figures.

2. Private Oversea Investment in Companies in Australia and Investment Income Payable Overseas by Companies in Australia.—The inflow of private overseas investment in companies in Australia since 1957-58, and a classification by country of origin, are shown in the following two tables.

**ANNUAL INFLOW OF PRIVATE OVERSEA INVESTMENT IN COMPANIES IN AUSTRALIA, BY TYPE OF COMPANY IN WHICH CAPITAL INVESTED(a)**  
(£A. million)

Year	Direct investment				Total direct investment	Portfolio investment (b)	Annual inflow of overseas investment in companies
	Australian branches		Australian subsidiaries				
	Unremitted profits	Other investment	Undistributed profits	Other investment			
1957-58 ..	4.6	5.8	38.8	47.4	96.6	7.9	104.5
1958-59 ..	11.6	9.5	51.7	32.8	105.6	19.7	125.3
1959-60 ..	9.5	21.7	59.2	69.3	159.7	33.6	193.3
1960-61 ..	2.8	24.7	54.8	105.4	187.7	48.4	236.1
1961-62 ..	2.2	25.5	27.6	48.0	103.3	37.1	140.4

(a) Increases in investment by some overseas investors are offset against withdrawals of investment by other overseas investors. (b) Partly estimated.

**ANNUAL INFLOW OF PRIVATE OVERSEA INVESTMENT IN COMPANIES IN AUSTRALIA, BY DOMICILE OF INVESTOR AND CATEGORY OF INVESTMENT(a)**  
(£A. million)

Year	United Kingdom	New Zealand	U.S.A. and Canada	Other	Annual inflow of overseas investment in companies
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UNDISTRIBUTED INCOME(b)

1957-58.. ..	19.8	1.0	20.6	2.0	43.4
1958-59.. ..	28.3	0.9	31.5	2.6	63.3
1959-60.. ..	31.1	0.2	34.8	2.6	68.7
1960-61.. ..	20.4	1.3	30.7	5.2	57.6
1961-62.. ..	18.3	1.4	8.1	2.0	29.8

OTHER INVESTMENT

1957-58.. ..	42.3	3.8	6.5	8.5	61.1
1958-59.. ..	38.3	-1.4	14.9	10.2	62.0
1959-60.. ..	74.3	7.7	28.0	14.6	124.6
1960-61.. ..	93.3	1.6	56.7	26.9	178.5
1961-62.. ..	39.0	3.8	63.2	4.6	110.6

TOTAL ANNUAL INFLOW

1957-58.. ..	62.1	4.8	27.1	10.5	104.5
1958-59.. ..	66.6	-0.5	46.4	12.8	125.3
1959-60.. ..	105.4	7.9	62.8	17.2	193.3
1960-61.. ..	113.7	2.9	87.4	32.1	236.1
1961-62.. ..	57.3	5.2	71.3	6.6	140.4

(a) See footnote (a) to preceding table. (b) Unremitted profits of Australian branches plus undistributed profits of Australian subsidiaries.

NOTE.—Minus sign (-) denotes outflow.

The next two tables show investment income payable overseas by companies in Australia, and the countries to which it is payable.

**INVESTMENT INCOME<sup>(a)</sup> PAYABLE OVERSEAS BY COMPANIES IN AUSTRALIA,  
BY TYPE OF COMPANIES**

(£A. million)

Year	Income payable on direct investment				Total income payable on direct investment	Income payable on portfolio investment (b)	Total
	Australian branches		Australian subsidiaries				
	Unremitted profits (net)	Remitted profits	Undistributed profits (net)	Dividends declared			
1957-58 ..	4.6	19.1	38.8	25.2	87.7	6.9	94.6
1958-59 ..	11.6	14.8	51.7	27.7	105.8	9.5	115.3
1959-60 ..	9.5	17.7	59.2	27.2	113.6	9.3	122.9
1960-61 ..	2.8	21.3	54.8	28.5	107.4	10.2	117.6
1961-62 ..	2.2	20.0	27.6	36.6	86.4	10.1	96.5

(a) Excludes interest payable overseas. The amount payable by Australian companies (excluding branches of oversea companies) was £0.8 m. in 1957-58, £1.0 m. in 1958-59, £1.8 m. in 1959-60, £2.8 m. in 1960-61, and £2.7 m. in 1961-62. (b) Because of certain differences in scope, these figures differ from those in the category "Other" in item 12, Table 2, in *Balance of Payments* and in the table on p. 549 of this Year Book.

**INVESTMENT INCOME PAYABLE<sup>(a)</sup> OVERSEAS BY COMPANIES IN AUSTRALIA,  
BY COUNTRY TO WHICH PAYABLE AND CATEGORY OF INCOME**

(£A. million)

Year	United Kingdom	New Zealand	U.S.A. and Canada	Other	Total
<b>UNDISTRIBUTED INCOME<sup>(b)</sup></b>					
1957-58 ..	19.8	1.0	20.6	2.0	43.4
1958-59 ..	28.3	0.9	31.5	2.6	63.3
1959-60 ..	31.1	0.2	34.8	2.6	68.7
1960-61 ..	20.4	1.3	30.7	5.2	57.6
1961-62 ..	18.3	1.4	8.1	2.0	29.8
<b>OTHER INCOME<sup>(c)</sup></b>					
1957-58 ..	29.0	2.9	17.4	1.9	51.2
1958-59 ..	28.3	4.8	16.5	2.4	52.0
1959-60 ..	31.2	3.8	17.0	2.2	54.2
1960-61 ..	35.1	3.5	19.0	2.4	60.0
1961-62 ..	31.5	3.2	29.0	3.0	66.7
<b>TOTAL INCOME PAYABLE OVERSEAS</b>					
1957-58 ..	48.8	3.9	38.0	3.9	94.6
1958-59 ..	56.6	5.7	48.0	5.0	115.3
1959-60 ..	62.3	4.0	51.8	4.8	122.9
1960-61 ..	55.5	4.8	49.7	7.6	117.6
1961-62 ..	49.8	4.6	37.1	5.0	96.5

(a) See footnote (a) to preceding table.  
undistributed profits of Australian subsidiaries.

(b) Unremitted profits of Australian branches plus  
(c) See footnote (b) to preceding table.

A classification by broad industry group of the inflow of direct investment and the income payable overseas on direct investment in 1961-62 is shown in the following table.

**INFLOW OF DIRECT PRIVATE OVERSEA INVESTMENT IN COMPANIES IN AUSTRALIA AND INCOME FROM DIRECT INVESTMENT PAYABLE OVERSEAS BY COMPANIES IN AUSTRALIA, BY INDUSTRY IN WHICH CAPITAL INVESTED, 1961-62**

(£A. million)

Category of investment or income	Primary production and mining	Manufacturing	Other industries	Total
<b>Inflow of Direct Investment—</b>				
Undistributed income(a) .. ..	-0.6	19.1	11.3	29.8
Other direct investment .. ..	11.7	33.4	28.4	73.5
<b>Total Inflow of Direct Investment ..</b>	<b>11.1</b>	<b>52.5</b>	<b>39.7</b>	<b>103.3</b>
<b>Income from Direct Investment Payable Overseas—</b>				
Undistributed income(a) .. ..	-0.6	19.1	11.3	29.8
Other income from direct investment ..	3.9	36.1	16.6	56.6
<b>Total Income from Direct Investment</b>	<b>3.3</b>	<b>55.2</b>	<b>27.9</b>	<b>86.4</b>

(a) See footnote (b) to preceding table.

3. Australian Investment in Companies Overseas and Investment Income receivable from Companies Overseas.—The outflow of Australian investment in companies since 1957-58, and a classification by country in which the capital was invested, are shown in the following two tables.

**ANNUAL OUTFLOW OF AUSTRALIAN INVESTMENT IN COMPANIES OVERSEAS, BY TYPE OF COMPANY IN WHICH CAPITAL INVESTED(a)**

(£A. million)

Year	Direct investment					Portfolio investment	Annual outflow of Australian investment in companies overseas
	Overseas branches		Overseas subsidiaries		Total direct investment		
	Unre-mitted profits	Other	Undis-tributed profits	Other			
1957-58 ..	0.7	2.0	3.6	1.6	7.9	-1.4	6.5
1958-59 ..	1.1	5.0	1.4	4.7	12.2	-1.4	10.8
1959-60 ..	-0.1	0.9	3.2	3.8	7.8	-4.4	3.4
1960-61 ..	0.9	2.8	2.6	2.5	8.8	-4.4	4.4
1961-62 ..	0.5	4.1	3.9	1.2	9.7	-2.2	7.5

(a) Increases in investment by some Australian investors are offset against withdrawals of investment by other Australian investors.

NOTE.—Minus sign (-) denotes inflow.



**ANNUAL OUTFLOW OF AUSTRALIAN INVESTMENT IN COMPANIES OVERSEAS,  
BY COUNTRY IN WHICH CAPITAL INVESTED AND CATEGORY OF  
INVESTMENT(a)**

(£A. million)

Year	United Kingdom	New Zealand	U.S.A. and Canada	Other	Annual outflow of Australian investment in companies overseas
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**UNDISTRIBUTED INCOME(b)**

1957-58.. ..	0.2	1.6	-0.1	2.6	4.3
1958-59.. ..	0.2	2.3	..	..	2.5
1959-60.. ..	0.1	2.0	-0.1	1.1	3.1
1960-61.. ..	0.9	1.7	..	0.9	3.5
1961-62.. ..	0.3	1.7	-0.1	2.5	4.4

**OTHER INVESTMENT**

1957-58.. ..	0.1	-0.2	-0.1	2.2	2.2
1958-59.. ..	1.1	3.5	-0.4	4.1	8.3
1959-60.. ..	-2.9	2.3	-0.4	1.3	0.3
1960-61.. ..	-1.3	1.1	0.6	0.5	0.9
1961-62.. ..	-0.1	2.2	-0.2	1.2	3.1

**TOTAL INVESTMENT**

1957-58.. ..	0.3	1.4	..	4.8	6.5
1958-59.. ..	1.3	5.8	-0.4	4.1	10.8
1959-60.. ..	-2.8	4.3	-0.5	2.4	3.4
1960-61.. ..	-0.4	2.8	0.6	1.4	4.4
1961-62.. ..	0.2	3.9	-0.3	3.7	7.5

(a) See footnote (a) to preceding table. (b) Unremitted profits of Australian branches plus undistributed profits of Australian subsidiaries.

NOTE.—Minus sign (-) denotes inflow.

The next two tables show income from direct investments payable to Australia by companies overseas, and countries from which it is receivable.

**INCOME FROM DIRECT INVESTMENTS PAYABLE TO AUSTRALIA BY  
COMPANIES OVERSEAS, BY TYPE OF COMPANY**

(£A. million)

Year	Oversea branches		Oversea subsidiaries		Total income from direct investments
	Unremitted profits	Remitted profits	Undistributed profits	Dividends declared	
1957-58.. ..	0.7	2.4	3.6	1.8	8.5
1958-59.. ..	1.1	2.1	1.4	4.6	9.2
1959-60.. ..	-0.1	2.4	3.2	2.9	8.4
1960-61.. ..	0.9	2.4	2.6	3.7	9.6
1961-62.. ..	0.5	2.4	3.9	3.9	10.7

INCOME FROM DIRECT INVESTMENTS PAYABLE TO AUSTRALIA BY COMPANIES OVERSEAS, BY COUNTRY FROM WHICH RECEIVABLE AND CATEGORY OF INCOME

(£A. million)

Year	United Kingdom	New Zealand	U.S.A. and Canada	Other	Total
UNDISTRIBUTED INCOME(a)					
1957-58..	0.2	1.6	-0.1	2.6	4.3
1958-59..	0.2	2.3	..	..	2.5
1959-60..	0.1	2.0	-0.1	1.1	3.1
1960-61..	0.9	1.7	..	0.9	3.5
1961-62..	0.3	1.7	-0.1	2.5	4.4
OTHER INCOME					
1957-58..	0.5	1.9	..	1.8	4.2
1958-59..	0.4	1.9	..	4.4	6.7
1959-60..	0.3	2.3	..	2.7	5.3
1960-61..	0.5	2.8	..	2.8	6.1
1961-62..	0.6	3.3	..	2.4	6.3
TOTAL					
1957-58..	0.7	3.5	-0.1	4.4	8.5
1958-59..	0.6	4.2	..	4.4	9.2
1959-60..	0.4	4.3	-0.1	3.8	8.4
1960-61..	1.4	4.5	..	3.7	9.6
1961-62..	0.9	5.0	-0.1	4.9	10.7

(a) Unremitted profits of Australian branches plus undistributed profits of Australian subsidiaries.

4. Net Annual Flow of Investment.—The net annual flow of investment between Australia and overseas, and its classification by country, are shown in the following two tables. Changes in classifications have been made to these tables in order to conform with the presentation in *The Australian Balance of Payments*, 1958-59 to 1962-63. The annual inflow of investment in Australian public authority debt domiciled overseas and net overseas remittances by the insurance companies have been incorporated into both tables.

NET ANNUAL FLOW OF INVESTMENT BETWEEN AUSTRALIA AND OVERSEA COUNTRIES(a)

(£A. million)

Year	Annual inflow of investment	Annual outflow of investment	Net annual flow of investment to Australia
1957-58 .. .. .	115.0	11.3	103.7
1958-59 .. .. .	155.6	15.8	139.8
1959-60 .. .. .	225.8	5.8	220.0
1960-61 .. .. .	245.6	4.6	241.0
1961-62 .. .. .	145.3	7.1	138.2

(a) Increases in investment by some investors are offset against withdrawals of investment by other investors.

## NET ANNUAL FLOW OF INVESTMENT BETWEEN AUSTRALIA AND OVERSEA COUNTRIES, BY REGION

(£A. million)

Year	United Kingdom	New Zealand	U.S.A. and Canada	I.B.R.D. (a)	Other	Net annual flow of investment to Australia
1957-58 ..	47.2	2.5	36.0	13.2	4.8	103.7
1958-59 ..	79.2	-11.5	62.8	2.2	7.1	139.8
1959-60 ..	118.5	3.0	85.7	-7.2	20.0	220.0
1960-61 ..	110.5	0.1	102.1	-7.5	35.8	241.0
1961-62 ..	56.2	0.3	81.8	-7.9	7.8	138.2

(a) No particulars are available of the domicile of securities issued to the International Bank of Reconstruction and Development.

NOTE.—Minus sign (-) denotes outflow.

## UNIT TRUSTS, LAND TRUSTS, AND MUTUAL FUNDS

1. General.—Statistics relating to operations in Australia of unit trusts, land trusts and mutual funds have been collected quarterly since March, 1961, and are shown in the following tables. The figures do not include details of superannuation funds conducted by unit trusts management companies.

2. Transactions of Trusts and Funds.—Particulars of cash transactions in trust units and fund shares and of purchases and sales of investments by trusts and funds are given below.

## TRANSACTIONS OF TRUSTS AND FUNDS

(£ million)

Period	Cash transactions in respect of trust units and fund shares		Purchases and sales of investments(a)	
	Total amount received for trust units and fund shares issued (b)	Total amount paid for trust units and fund shares repurchased (c)	Purchases (d)	Sales (e)
Year ended—				
June, 1962 .. .. .	17.5	6.9	11.7	3.5
June, 1963 .. .. .	15.9	6.9	13.7	4.8
Quarter ended—				
September, 1962 .. .. .	4.1	1.3	3.8	0.8
December, 1962 .. .. .	3.7	1.8	4.1	1.7
March, 1963 .. .. .	3.3	2.1	2.9	1.3
June, 1963 .. .. .	4.8	1.7	2.9	1.0
September, 1963 .. .. .	4.2	2.0	4.1	1.3
December, 1963 .. .. .	6.3	2.6	4.1	1.2

(a) Commonwealth Government, local authority and semi-governmental securities, shares, debentures, unsecured notes, loans, deposits on term or notice of three months or longer, land and buildings, etc. (b) Includes re-issues and new issues. Includes fees and expenses. (c) Includes those units and fund shares intended for re-issue. (d) Payments for assets acquired during period. Includes brokerage and stamp duty. (e) Receipts for assets sold or redeemed during period. Excludes brokerage and stamp duty.

3. Analysis of Purchases and Sales of Investments.—Details of purchases and sales of investments by trusts and funds during 1961–62 and 1962–63 are given in the following table.

**ANALYSIS OF PURCHASES AND SALES OF INVESTMENTS BY TRUSTS AND FUNDS**

(£ million)

Year	Shares (including preference shares)	Debentures, unsecured notes, deposits (a)	Common- wealth Government, local authority, and semi- governmental securities	Other (b)	Total
<b>PURCHASES</b>					
1961–62 .. .. .	9.1	1.4	0.1	1.1	11.7
1962–63 .. .. .	9.5	2.6	0.1	1.5	13.7
<b>SALES</b>					
1961–62 .. .. .	2.7	0.2	0.2	0.4	3.5
1962–63 .. .. .	3.2	0.3	0.3	1.0	4.8

(a) Excludes cash on hand and at bank, loans to authorized dealers in the short-term money market, and other deposits under three months term or notice. (b) Includes land and buildings, mortgages on land and buildings, and other investments.

4. Market Value of Trusts and Funds, and Cash and Short-term Deposits of Trusts and Funds.—The total market value of trusts and funds and the cash and short-term deposits of trusts and funds are shown in the following table.

**TOTAL MARKET VALUE OF TRUSTS AND FUNDS, AND CASH AND SHORT-TERM DEPOSITS OF TRUSTS AND FUNDS**

(£ million)

At—	Total market value of trusts and funds(a)	Cash and short-term deposits		
		Cash(b)	Short-term deposits(c)	Total
30th June, 1961 .. .. .	84.0	0.6	3.2	3.8
30th June, 1962 .. .. .	91.8	0.6	3.6	4.2
30th September, 1962 .. .. .	93.6	1.1	2.6	3.7
31st December, 1962 .. .. .	98.4	0.9	2.1	3.0
31st March, 1963 .. .. .	100.9	0.5	2.5	3.0
30th June, 1963 .. .. .	103.9	1.0	2.9	3.9
30th September, 1963 .. .. .	111.4	0.6	2.7	3.3
31st December, 1963 .. .. .	119.3	0.8	3.0	3.8

(a) Includes value of land trusts at valuation. (b) Includes cash on hand and at bank. (c) Includes loans to authorized dealers in the short-term money market, and other deposits under three months term or notice.

## PASTORAL FINANCE COMPANIES

NOTE.—Any discrepancies between totals and sums of components in the tables following are due to rounding.

1. Rural Advances.—The following table is derived from returns supplied to the Reserve Bank by major pastoral finance companies, and shows the total rural advances outstanding at the end of June, 1959 to 1962, and of subsequent quarters to December, 1963.

## RURAL ADVANCES OF PASTORAL FINANCE COMPANIES(a)

(Source: Reserve Bank of Australia)

(£ million)

End of—	New South Wales	Victoria	Queensland	South Australia	Western Australia and Tasmania	Total
June, 1959 ..	26.5	16.0	21.2	13.4	14.2	91.3
„ 1960 ..	29.6	17.7	24.3	14.9	15.4	101.9
„ 1961 ..	29.8	19.9	23.4	17.4	15.9	106.4
„ 1962 ..	29.4	16.4	24.3	17.4	16.5	104.0
September, 1962 ..	32.4	18.6	25.4	17.3	16.9	110.6
December, 1962 ..	29.4	19.7	25.4	17.1	15.5	107.1
March, 1963 ..	29.3	18.0	24.8	16.1	15.6	103.8
June, 1963 ..	30.7	17.8	25.0	16.5	16.9	106.9
September, 1963 ..	33.0	20.7	26.2	17.7	16.6	114.1
December, 1963 ..	30.7	22.1	25.9	18.2	15.1	111.9

(a) Compiled from returns supplied by major pastoral finance companies. Advances are classified according to the location of the branch holding the advance, which in some cases may differ from the State of residence of the borrower. The statistics refer to the total advances outstanding at the end of the month shown.

2. Liabilities and Assets.—The following table gives details of the liabilities and assets of pastoral finance companies at the end of June, 1962, and subsequent quarters to December, 1963.

## LIABILITIES AND ASSETS OF PASTORAL FINANCE COMPANIES(a)

(Source: Reserve Bank of Australia)

(£ million)

## LIABILITIES

End of—	Balances due to banks	Clients' credit balances	Debentures, notes and deposits		Other outside liabilities	Shareholders' funds	Overseas liabilities	Total liabilities, assets
			Maturing within 12 months	Other				
June, 1962 ..	25.4	19.4	13.5	6.5	38.8	53.5	54.4	211.5
September, 1962	29.9	20.3	12.5	7.5	47.5	53.4	49.6	220.7
December, 1962	27.2	22.0	7.4	7.7	54.3	55.9	50.8	225.3
March, 1963 ..	28.6	22.8	11.0	8.2	51.1	57.7	50.5	229.9
June, 1963 ..	27.9	23.2	5.6	7.8	44.3	56.0	52.4	217.3
September, 1963	27.1	25.0	12.3	8.9	51.6	57.5	50.8	233.2
December, 1963	31.4	29.2	6.6	10.9	48.0	66.1	53.1	245.2

(a) Compiled from returns supplied by major pastoral finance companies.

LIABILITIES AND ASSETS OF PASTORAL FINANCE COMPANIES—*continued*

## ASSETS

End of—	Cash and deposits with banks	Loans to authorized money market dealers	Other short-term assets (excluding Commonwealth Government securities)	Commonwealth Government securities	Advances and sundry debtors		Stocks	Fixed assets	Other assets
					Rural	Other			
June, 1962 ..	2.6	..	4.3	6.9	104.0	10.2	14.1	58.0	11.3
September, 1962	2.9	0.6	5.9	6.7	110.6	13.2	13.7	58.9	8.3
December, 1962	4.7	0.6	6.2	6.5	107.1	17.3	13.5	60.1	9.3
March, 1963 ..	3.4	2.5	5.3	15.1	103.8	12.6	13.6	62.6	11.0
June, 1963 ..	2.8	1.1	5.1	7.3	106.9	11.3	14.6	58.7	9.6
September, 1963	5.2	1.0	6.9	9.5	114.1	12.4	14.4	60.3	9.4
December, 1963	7.1	3.1	10.3	11.3	111.9	15.1	14.5	60.9	11.0

(a) Compiled from returns supplied by major pastoral finance companies.

## SHORT-TERM MONEY MARKET

1. **General.**—For some years prior to 1959, leading stockbrokers had been actively engaged in the acceptance of short-term funds against the security of government securities, but their operations were limited by the absence of suitable short-term securities and their liquidity requirements,

In February, 1959, the Commonwealth Bank (now the Reserve Bank) gave official status to the market by announcing that under certain conditions it would act as lender of last resort to authorized dealers in the short-term money market.

The form of organization so far developed consists of several companies authorized to act as dealers in the market. These dealers accept loans overnight, at call or for fixed periods in amounts of at least £25,000, and invest the funds in "money market securities", which have been defined as Commonwealth Government securities with currencies not exceeding three years.

Dealers are required to provide for a minimum capitalization and, in addition, to lodge with the Bank part of their capital in the form of money market securities as general backing for their operations. These lodgments, which are referred to as "margins", are required to be equivalent on market values to at least:—(a) one per cent. of the total holdings by the dealer of securities maturing in one year; (b) two per cent. of the total holdings by the dealer of securities maturing within one to two years; and (c) four per cent. of the total holdings by the dealer of securities maturing within two to three years.

The Bank approves for each dealer the maximum portfolio of money market securities which may be carried and establishes a line of credit in favour of the dealer to the extent of that approved maximum portfolio. Under the line of credit, which is subject to renewal from time to time, the dealer may in the last resort borrow from the Bank against lodgment of security.

Any discrepancies between totals and sums of components in the tables on page 894 are due to rounding.

2. **Selected Assets and Liabilities of Authorized Dealers and Rates of Interest on Loans Accepted.**—In the following table, details of selected assets and liabilities of authorized dealers and the interest rates on loans accepted by dealers are given for June, 1959 to 1962, and for each month January to December, 1963.

**SHORT-TERM MONEY MARKET: SELECTED ASSETS AND  
LIABILITIES OF AUTHORIZED DEALERS**

*(Source: Reserve Bank of Australia)*

Month	Liabilities to clients			Holdings of Commonwealth Government securities (at face value)	Interest rates on loans accepted during month				Weighted average interest rate on loans outstanding (a) per cent. per annum
	All cheque-paying banks	Other clients	Total		At call		For fixed periods		
					Minimum per cent. per annum	Maximum per cent. per annum	Minimum per cent. per annum	Maximum per cent. per annum	
	Average of weekly figures—£ million								
June, 1959 ..	28.3	19.8	48.1	50.4	2.94	3.13	3.00	3.50	3.11
June, 1960 ..	27.2	52.7	79.9	82.3	2.75	3.50	3.00	3.50	3.25
June, 1961 ..	34.4	62.7	97.1	100.4	2.50	4.88	3.50	4.83	4.17
June, 1962 ..	27.9	88.5	116.4	121.2	2.00	4.00	3.00	3.88	3.45
1963—									
January ..	43.1	86.7	129.8	135.2	2.00	4.00	3.25	4.00	3.23
February ..	37.8	87.5	125.3	134.4	2.00	4.25	3.13	4.13	3.57
March ..	33.6	90.3	123.9	131.4	2.00	4.75	2.50	4.50	3.50
April ..	31.4	90.9	122.3	132.7	2.00	4.00	3.31	4.00	3.59
May ..	31.1	97.3	128.4	135.2	2.00	4.06	3.13	4.00	3.54
June ..	29.0	104.5	133.5	143.4	2.00	4.25	3.13	4.25	3.75
July ..	33.5	104.8	138.3	144.8	2.00	4.00	3.00	4.00	3.31
August ..	38.0	96.8	134.8	140.0	2.00	3.75	3.00	3.63	3.31
September ..	41.3	99.9	141.2	148.9	2.00	3.76	3.00	3.78	3.38
October ..	39.4	107.9	147.3	155.1	2.00	3.81	3.00	3.75	3.28
November ..	39.7	113.2	152.9	159.5	1.75	3.50	2.75	3.53	3.13
December(b)	38.4	112.0	150.4	157.5	1.00	3.53	2.63	3.65	3.08

(a) As at last Wednesday.

(b) Excludes one Wednesday in December.

3. Authorized Dealers' Liabilities Classified by Type of Client.—The following table shows a classification of authorized dealers' liabilities by type of client, as at 30th June, 1962, and 1963.

**SHORT-TERM MONEY MARKET: AUTHORIZED DEALERS' LIABILITIES,  
TYPE OF CLIENT(a)**

*(Source: Reserve Bank of Australia)*

(£ million)

Clients	30th June, 1962	30th June, 1963
All cheque-paying banks .. .. .	32.3	40.1
Savings banks .. .. .	13.6	19.7
Insurance offices .. .. .	6.6	4.8
Superannuation, pension and provident funds .. .. .	0.5	0.8
Hire purchase and other instalment credit companies .. .. .	1.1	0.6
Companies (not elsewhere included) .. .. .	26.0	32.7
Commonwealth and State governments .. .. .	17.7	16.7
Local and semi-governmental authorities (not elsewhere included) .. .. .	15.6	22.0
All other lenders (including marketing boards and trustee companies) .. .. .	4.7	5.0
<b>Total .. .. .</b>	<b>118.1</b>	<b>142.5</b>

(a) Compiled from returns supplied by authorized dealers in the short-term money market. Liabilities to Reserve Bank as lender of last resort are excluded.

FRIENDLY SOCIETIES

1. General.—The total membership of friendly societies in Australia is about 430,000, but as certain benefits, such as medical attendance and free medicines, and in many cases funeral expenses, are granted to members' families as well as to members themselves, this figure must be more than doubled to arrive at an estimate of the number of persons who receive some direct benefit from these societies, even when due allowance is made for young and unmarried members. Legislation has conferred certain privileges on friendly societies, but, on the other hand, it insists on their registration, and it is the duty of the Registrars in the various States, prior to registering a new society, to see that its proposed rules conform to the law, and that the scale of contribution is sufficient to provide the promised benefits. Societies are obliged to forward to the Registrar annual returns about their membership and their finances, and reports are published in most of the States dealing with the returns received.

2. Societies, Members and Revenue.—The following table sets out the number of societies, members, etc., revenue and expenditure, and funds of registered societies for the year. More detailed information is available in the bulletin *Insurance and Other Private Finance*, and issue No. 1, 1961-62 and 1962-63, contained particulars for the years 1960-61 and 1961-62.

FRIENDLY SOCIETIES(a), 1961-62

Particulars	New South Wales (b)	Victoria (c)	Queensland	South Australia	Western Australia	Tasmania (c)	Total
Registered societies .. ..	47	139	22	14	12	11	245
Branches .. ..	1,910	1,185	442	596	258	123	4,514
Benefit members at end of year .. ..	141,980	154,723	52,402	51,198	17,898	6,816	425,017
Average benefit members during year .. ..	143,226	158,855	51,489	51,375	18,195	7,034	430,174
Members who received sick pay .. ..	n.a.	27,975	8,545	8,640	3,042	1,337	n.a.
Total weeks sick pay granted .. ..	n.a.	441,910	131,593	167,500	55,343	23,281	n.a.
Average weeks per member sick .. ..	n.a.	15.8	15.4	19.4	18.2	17.4	n.a.
Deaths of benefit members .. ..	n.a.	2,403	1,070	963	341	262	n.a.
Proportion of deaths per 1,000 members (average) .. ..	n.a.	15.1	20.8	18.7	18.8	37.2	n.a.
<b>Revenue—</b>	£'000	£'000	£'000	£'000	£'000	£'000	£'000
Entrance fees, levies and members' contributions .. ..	3,753	3,030	837	1,522	642	23	9,807
Interest, dividends and rents .. ..	460	695	182	297	60	35	1,729
All other revenue .. ..	226	92	80	415	14	7	834
<b>Total .. ..</b>	<b>4,439</b>	<b>3,817</b>	<b>1,099</b>	<b>2,234</b>	<b>716</b>	<b>65</b>	<b>12,370</b>
<b>Expenditure—</b>							
Sick pay .. ..	210	266	86	83	24	10	679
Medical attendance and medicine .. ..	2,860	1,885	597	618	541	3	6,504
Sums payable at death .. ..	154	89	61	53	22	22	401
Administration .. ..	840	753	227	304	63	15	2,202
All other expenditure .. ..	155	315	..	735	69	5	1,279
<b>Total .. ..</b>	<b>4,219</b>	<b>3,308</b>	<b>971</b>	<b>1,793</b>	<b>719</b>	<b>55</b>	<b>11,065</b>
<b>Funds—Total .. ..</b>	<b>10,121</b>	<b>12,718</b>	<b>3,466</b>	<b>5,916</b>	<b>1,823</b>	<b>711</b>	<b>34,755</b>

(a) Excludes juvenile branches, dispensaries, medical institutes and certain miscellaneous societies. Receipts and payments of subsidy under the Commonwealth medical and hospital benefit schemes are excluded. (b) Includes the Australian Capital Territory. (c) Year 1962.

PROBATES AND LETTERS OF ADMINISTRATION

The following table gives some particulars of the number and value of estates of deceased persons in each State for the latest year for which information is available. Owing to differences in legislation in the various States, the figures are not entirely comparable.



## PROBATES AND LETTERS OF ADMINISTRATION

Particulars		New South Wales 1961-62 (a)	Victoria 1962	Queens- land 1961-62	South Australia 1962	Western Australia 1962	Tasmania 1962 (b)
<b>Probates—</b>							
Estates .. .. .	No.	21,681	n.a.	n.a.	3,330	2,107	1,410
Gross value .. ..	£'000	n.a.	n.a.	n.a.	25,011	15,829	9,580
Net value .. .. .	£'000	136,480	n.a.	n.a.	23,624	14,584	8,826
<b>Letters of Administration—</b>							
Estates .. .. .	No.	n.a.	n.a.	n.a.	728	255	172
Gross value .. ..	£'000	n.a.	n.a.	n.a.	1,795	1,110	457
Net value .. .. .	£'000	n.a.	n.a.	n.a.	1,576	1,001	359
<b>Total—</b>							
Estates .. .. .	No.	n.a.	17,024	n.a.	4,058	2,362	1,582
Gross Value .. ..	£'000	n.a.	110,900	n.a.	26,806	16,939	10,037
Net Value .. .. .	£'000	n.a.	104,640	n.a.	25,200	15,585	9,185

(a) Total estates of deceased persons assessed for death duty.  
Taxation Department.

(b) Estates dealt with by the

## LOTTERIES AND BETTING

## § 1. Lotteries

State Governments operate lotteries in New South Wales, Queensland and Western Australia. Tattersall Lotteries are operated under government licence in Victoria. Tasmanian Lotteries were operated under government licence until 30th September, 1961, when they surrendered their licence. In general, revenue derived by the State Governments from these lotteries is used directly or indirectly to provide funds for expenditure on hospitals, charities, etc. For information as to the origin, purpose and method of payment of proceeds or taxes to State revenues *see* Year Book No. 46, page 808 and earlier issues.

Details of ticket sales, prizes allotted, and taxes paid and other net contributions to State Government revenues, relating to lotteries drawn during each of the years 1958-59 to 1962-1963, are given in the following table.

**LOTTERIES: VALUE OF TICKET SALES, PRIZES ALLOTTED, TAXES PAID  
AND OTHER NET CONTRIBUTIONS TO STATE GOVERNMENT REVENUES**  
(£'000)

Year	New South Wales	Victoria	Queens-land	Western Australia	Tasmania	Total
<b>TICKET SALES</b>						
1958-59.. ..	13,598	8,750	6,760	1,138	796	31,042
1959-60.. ..	14,505	9,300	6,510	1,263	490	32,068
1960-61.. ..	16,670	10,400	6,480	1,350	105	35,005
1961-62.. ..	19,298	9,700	6,690	1,625	(a)	37,313
1962-63.. ..	22,215	10,100	6,800	1,950	(a)	41,065
<b>PRIZES ALLOTTED</b>						
1958-59.. ..	8,725	5,250	4,308	628	485	19,396
1959-60.. ..	9,292	5,570	4,149	698	299	20,008
1960-61.. ..	10,659	6,240	4,130	758	64	21,851
1961-62.. ..	12,349	5,820	4,262	920	(a)	23,351
1962-63.. ..	14,217	6,060	4,333	1,118	(a)	25,728
<b>TAXES PAID AND OTHER NET CONTRIBUTIONS TO STATE GOVERNMENT REVENUES</b>						
1958-59.. ..	4,326	2,713	1,902	352	232	9,525
1959-60.. ..	4,661	2,883	1,774	392	143	9,853
1960-61.. ..	5,380	3,224	1,744	407	32	10,787
1961-62.. ..	6,307	3,007	1,813	484	(a)	11,611
1962-63.. ..	7,367	3,131	1,840	573	(a)	12,911

(a) Licence surrendered 30th September, 1961.

## § 2. Betting

Estimates of totalizator investments and investments with licensed bookmakers for the years 1958–59 to 1962–63 are given in the following table.

**TOTALIZATOR INVESTMENTS AND INVESTMENTS WITH LICENSED BOOKMAKERS**  
(£'000)

Year	New South Wales	Victoria	Queensland	South Australia	Western Australia	Tasmania	Total
<b>TOTALIZATOR INVESTMENTS(a)</b>							
1958–59 .. ..	14,340	11,532	2,771	2,014	2,018	823	33,498
1959–60 .. ..	14,691	13,198	2,623	2,294	2,263	793	35,862
1960–61 .. ..	13,677	15,298	2,912	2,361	2,342	750	37,340
1961–62 .. ..	13,880	27,129	2,851	2,506	9,257	711	56,334
1962–63 .. ..	14,072	40,129	6,452	2,291	13,389	641	76,974
<b>INVESTMENTS WITH LICENSED BOOKMAKERS(b)</b>							
1958–59 .. ..	100,201	62,150	n.a.	26,366	24,385	11,103	n.a.
1959–60 .. ..	110,792	71,600	n.a.	27,269	25,032	11,884	n.a.
1960–61 .. ..	111,911	78,585	n.a.	28,922	21,751	13,158	n.a.
1961–62 .. ..	113,543	75,824	n.a.	28,442	14,167	12,975	n.a.
1962–63 .. ..	118,669	75,542	53,169	28,006	11,334	13,302	300,022

(a) Estimated from taxes on totalizators.

(b) Estimated from taxes on betting with licensed bookmakers.

## PENSION AND SUPERANNUATION SCHEMES

### § 1. Government, Local Government and Semi-governmental Pension and Superannuation Schemes

1. General.—The Commonwealth and all State Governments have established pension and superannuation schemes for their employees. These schemes are operated through funds to which both the Governments and the employees make contributions.

Employees of local government and semi-governmental authorities are covered either by the Commonwealth and State Government schemes or by a separate scheme of the authority which is operated either through a separately constituted fund or through a life insurance office.

2. Schemes operated through Separately Constituted Funds.—In the table on page 898, particulars cover the following funds and authorities.

- (i) *Commonwealth.* The Superannuation Fund; Defence Forces Retirement Benefits Fund; Cable Pension Funds (Various); Commonwealth Hostels Provident Fund.
- (ii) *New South Wales.* The State Superannuation Fund; Government Railways Superannuation Fund; Police Superannuation and Reward Fund; State Government Non-contributory Pensions and Gratuities; Metropolitan Meat Industry Board—Officers' Endowment Fund and Wage Employees' Provident Fund; Local Government Provident Fund; Local Government Superannuation Board—Management Fund.
- (iii) *Victoria.* The State Superannuation Fund; Police Pensions and Police Superannuation Fund; Melbourne Harbor Trust Superannuation Fund; Geelong Harbor Trust Superannuation Fund; Melbourne and Metropolitan Board of Works Superannuation Fund; State Electricity Commission Provident Fund; Country Fire Authority Superannuation Fund; Gas and Fuel Corporation Superannuation Fund; Melbourne University Provident Fund; Port Phillip Pilots Sick and Superannuation Fund; Married Women Teachers Pensions Fund; Local Authorities Superannuation Fund; Metropolitan Fire Brigades Board Superannuation Fund; City of Melbourne Officers Superannuation Fund; Samuel Gillott Provident Fund; State Savings Bank Provident Fund.
- (iv) *Queensland.* The Public Service Superannuation Fund; The Public Service Superannuation Additional Benefits Fund; Railways Superannuation Fund; Police Superannuation Fund.

- (v) *South Australia.* The State Superannuation Fund; Police Pensions Fund; Electricity Trust of South Australia—Superannuation Scheme and Retiring Gratuities for Wages Employees Scheme; University of Adelaide—Personal Superannuation Recumulation Account, Ancillary Staff Superannuation Fund and Invalidity Scheme Fund; Mount Barker Soldiers Memorial Hospital Fund; St. Margaret's Convalescent Hospital Fund; Whyalla Hospital Fund; and Schemes operated by Adelaide City Council, District Council of Yorke Peninsula, Walkerville City Council, and Mitcham City Council.
- (vi) *Western Australia.* The State Superannuation Fund, Provident Fund and Non-contributory Funds; Metropolitan (Perth) Passenger Transport Trust Provident Fund; State Electricity Commission—Electricity and Gas Department—Superannuation Fund; Western Australian Fire Brigades Board Superannuation Fund; University of Western Australia Superannuation Scheme; City of Nedlands Superannuation Fund; The City of Perth Superannuation Fund.
- (vii) *Tasmania.* The State Public Service Fund; Public Service "Old" Fund; State Teachers Superannuation Fund; Police Provident Fund; Hobart and Launceston Marine Boards Superannuation Funds; Metropolitan Transport Trust (Hobart) Employees Retiring Allowance Fund; University of Tasmania Superannuation Fund and Invalidity Pensions Fund.

For details of approved authorities contributing to the State Superannuation Funds see annual *Insurance and Other Private Finance* Bulletin, 1961-62 and 1962-63.

**GOVERNMENT, LOCAL GOVERNMENT AND SEMI-GOVERNMENTAL PENSION AND SUPERANNUATION SCHEMES OPERATED THROUGH SEPARATELY CONSTITUTED FUNDS, 1961-62**

Particulars	C'wth	N.S.W.	Vic.	Q'land	S. Aust.	W. Aust.	Tas.	Total
	£'000	£'000	£'000	£'000	£'000	£'000	£'000	£'000
<b>Income—</b>								
Contributions—								
Employees ..	12,672	6,944	4,531	1,351	1,329	844	630	28,301
Employing authorities ..	9,126	12,753	7,646	1,520	1,542	1,079	576	34,242
Interest, dividends and rent ..	5,012	5,883	3,912	597	874	416	328	17,022
Other income ..	4	238	(a)1,602	6	26	23	85	1,984
<b>Total ..</b>	<b>26,814</b>	<b>25,818</b>	<b>17,691</b>	<b>3,474</b>	<b>3,771</b>	<b>2,362</b>	<b>1,619</b>	<b>81,549</b>
<b>Expenditure—</b>								
Pensions ..	9,874	10,704	6,901	803	1,718	1,224	602	31,826
Lump sum payments—								
On retirement ..	1,146	2,276	677	30	65	21	48	7,209
On resignation(b)	1,503		946	119	145	148	85	
Gratuities ..	778	55	20	..	..	..	..	853
Other expenditure ..	4	221	143	36	89	9	19	521
<b>Total ..</b>	<b>13,305</b>	<b>13,256</b>	<b>8,687</b>	<b>988</b>	<b>2,017</b>	<b>1,402</b>	<b>754</b>	<b>40,409</b>
<b>Assets at end of year—</b>								
Cash—								
Deposits with Treasury ..	368	32	440	9,774	263	21	..	10,898
Other deposits and cash ..	47	405	112	68	226	60	143	1,061
Commonwealth Govt. securities	31,761	3,194	9,804	..	4,057	141	1,328	50,285
Local and semi-govt. securities ..	76,823	82,691	71,821	5,298	6,630	8,690	3,498	255,451
Mortgages ..	2,235	300	119	..	7,337	3	1,746	11,740
Loans to building societies ..	207	5,185	1,004	41	..	..	..	6,437
Company shares, debentures and notes ..	55	25,073	1,244	..	3	..	18	26,393
Other assets ..	15	1,131	989	..	177	130	82	2,524
<b>Total ..</b>	<b>111,511</b>	<b>118,011</b>	<b>85,533</b>	<b>15,181</b>	<b>18,693</b>	<b>9,045</b>	<b>6,815</b>	<b>364,789</b>
<b>Contributors at end of year—</b>	No.	No.	No.	No.	No.	No.	No.	No.
Males ..	143,975	127,763	76,964	14,318	17,781	13,478	7,782	429,273
Females ..	17,831			5,131	1,985		2,265	
<b>Pensions at end of year—</b>								
Ex-employees—								
Males ..	13,330	23,049	10,313	1,365	3,011	2,747	988	58,831
Females ..	1,090		1,413	440	556	281	248	
Widows ..	7,656	3,703	7,182	419	2,541	1,837	698	24,036
Children ..	2,093	458	766	118	254	161	127	3,977

(a) Includes transfers from other funds. (b) Includes refunds of contributions to continuing members and refunds of contributions to members withdrawing from the scheme.

3. Schemes operated through Life Insurance Offices.—In the table following, particulars cover the following funds and authorities.

- (i) *Commonwealth.* The Australian National University Staff Superannuation Scheme; Joint Coal Board Staff Superannuation Fund; Overseas Telecommunications Commission Staff Life Assurance Pension Scheme.
- (ii) *New South Wales.* The Metropolitan Water, Sewerage and Drainage Board Group Assurance Scheme; the University of Sydney Professorial Superannuation System; Local Government (Servants) Insurance.
- (iii) *Victoria.* The Country Fire Authority Superannuation and Endowment Fund; State Savings Bank of Victoria Provident Fund; University of Melbourne Staff Superannuation Scheme; Victorian Hospitals Association Trustee Superannuation Trust Account; Local Authorities Employees Insurance Account; Victorian Inland Meat Authority Staff Superannuation Fund; Monash University Staff Superannuation Fund; Totalizator Agency Board of Victoria.
- (iv) *Queensland.* The Brisbane City Council Superannuation Fund.
- (v) *South Australia.* Schemes operated by:—University of Adelaide; Municipal Tramways Trust; Metropolitan and Export Abattoirs Board; Betting Control Board; National Park Commission; Fauna and Flora Board of South Australia; Adelaide, Queen Victoria and other hospitals; six other semi-governmental schemes; and 98 local government schemes.
- (vi) *Western Australia.* The University of Western Australia Superannuation Scheme; Lotteries Commission Staff Superannuation Plan; Motor Vehicle Insurance Trust Staff Superannuation Fund; King's Park Board Superannuation Scheme; Fremantle Cemetery Board Superannuation Scheme; Karrakatta Cemetery Board Staff Contributory Endowment Fund; Local Government Authorities Superannuation Scheme; Midland Junction Abattoir Board Staff Superannuation Provident Fund; Rottne Island Board Superannuation Scheme; Royal Perth Hospital Superannuation Scheme; Totalisator Agency Board Staff Superannuation Fund; Western Australian Museum Scientific Staff Superannuation Plan.
- (vii) *Tasmania.* Marine Boards Superannuation Schemes (Launceston, Burnie, Devonport, Circular Head, Strahan, King Island); University of Tasmania Superannuation Board; Metropolitan Transport Trust (Hobart) Staff Pension Scheme and Employees Superannuation Fund (Launceston and Burnie); Municipalities Superannuation Scheme.

**LOCAL GOVERNMENT AND SEMI-GOVERNMENTAL PENSIONS AND SUPERANNUATION SCHEMES OPERATED THROUGH LIFE INSURANCE OFFICES, 1961-62**

Particulars	Amount
Income—	£'000
Contributions—	
Employees .. .. .	1,788
Employing authorities .. .. .	2,130
Surrenders .. .. .	280
Death claims .. .. .	162
Matured policies .. .. .	419
Other income .. .. .	75
<i>Total</i> .. .. .	4,854
Expenditure—	
Premiums paid to insurance companies .. .. .	3,875
Benefits—	
On death or retirement .. .. .	516
On resignation or dismissal .. .. .	251
Other expenditure (a) .. .. .	113
<i>Total</i> .. .. .	4,755
Contributions at end of year .. .. .	No. 49,754

(a) Includes transfers to other funds.

## § 2. Parliamentary Pension and Superannuation Schemes

Pensions and superannuation schemes have been established for members of the Commonwealth and State Parliaments. Details of these schemes, except for Tasmania, are given in pages 91 to 99 of Year Book No. 38. Details of the Tasmanian scheme are given on page 72 of Year Book No. 44. All the schemes are operated through funds to which the members of Parliament and the Commonwealth or State Governments contribute.

### PARLIAMENTARY PENSION AND SUPERANNUATION SCHEMES, 1961-62

Particulars	C'wth	N.S.W.	Vic.	Q'land	S. Aust.	W. Aust.	Tas.	Total
	£	£	£	£	£	£	£	£
<b>Income—</b>								
<b>Contributions—</b>								
Members .. .. .	47,654	30,159	15,504	15,600	8,552	16,796	12,648	146,913
Government .. .. .	54,622	22,067	35,459	15,600	18,552	16,640	1,496	164,436
Interest .. .. .	20,572	8,519	..	16,879	6,484	5,171	916	58,541
<b>Total .. .. .</b>	<b>122,848</b>	<b>60,745</b>	<b>50,963</b>	<b>48,079</b>	<b>33,588</b>	<b>38,607</b>	<b>15,060</b>	<b>369,890</b>
<b>Expenditure—</b>								
Pension payments(a) ..	81,055	31,218	50,027	14,563	13,781	14,848	10,509	216,001
Other .. .. .	..	5,503	936	150	873	822	146	8,430
<b>Total .. .. .</b>	<b>81,055</b>	<b>36,721</b>	<b>50,963</b>	<b>14,713</b>	<b>14,654</b>	<b>15,670</b>	<b>10,655</b>	<b>224,431</b>
<b>Assets at end of year—</b>								
<b>Cash—</b>								
Deposits with Treasury	6,847	4,209	..	8,044	4,445	880	..	24,425
Other deposits and cash .. .. .	..	..	..	..	..	386	1,676	2,062
<b>Commonwealth Government securities ..</b>	<b>466,411</b>	<b>39,076</b>	<b>..</b>	<b>..</b>	<b>83,618</b>	<b>22,500</b>	<b>22,089</b>	<b>633,694</b>
Local government and semi-governmental securities .. .. .	..	135,450	..	363,683	57,500	86,538	1,900	645,071
Other assets .. .. .	..	14,930	..	5,172	1,818	1,224	144	23,288
<b>Total .. .. .</b>	<b>473,258</b>	<b>193,665</b>	<b>..</b>	<b>376,899</b>	<b>147,381</b>	<b>111,528</b>	<b>25,809</b>	<b>1,328,540</b>
	No.	No.	No.	No.	No.	No.	No.	No.
<b>Contributors at end of year—</b>								
Males .. .. .	178	94	99	75	57	79	51	633
Females .. .. .	5	..	..	..	2	1	3	11
<b>Pensioners at end of year—</b>								
Ex-members .. .. .	57	37	40	18	12	20	11	195
Widows .. .. .	19	24	28	13	13	18	5	120

(a) Includes lump sum payments.

## § 3. Coal and Oil-Shale Mine Workers Superannuation Schemes

In all States except South Australia, superannuation schemes have been established for coal and oil-shale mine workers. These schemes are operated through funds to which mine workers, mine owners and the State Governments contribute.

## COAL AND OIL-SHALE MINE WORKERS SUPERANNUATION SCHEMES, 1961-62

Particulars	Amount
<b>Income—</b>	<b>£'000</b>
Contributions—	
Mine workers .. .. .	373
Mine owners .. .. .	1,608
State Governments .. .. .	179
Interest, dividends and rent .. .. .	411
<i>Total</i> .. .. .	2,571
<b>Expenditure—</b>	
Pension payments .. .. .	2,131
Lump sum payments .. .. .	33
Refunds of contributions .. .. .	1
Administration .. .. .	57
<i>Total</i> .. .. .	2,222
<b>Assets at end of year—</b>	
Deposits with Treasury .. .. .	80
Other deposits and cash .. .. .	522
Commonwealth Government securities .. .. .	64
Local government and semi-governmental securities .. .. .	7,608
Other assets .. .. .	176
<i>Total</i> .. .. .	8,450
<b>Contributors at end of year—</b>	<b>No.</b>
Males .. .. .	16,182
Females .. .. .	15
<b>Pensioners at end of year—</b>	
Former employees—	
Males .. .. .	6,598
Females .. .. .	2
Widows .. .. .	4,186
Children .. .. .	34

#### § 4. Private Superannuation, Pension and Retiring Allowance Schemes

1. General.—In this section, details are given of the results of a survey of private superannuation, pension and retiring allowance schemes conducted by private businesses, for the benefit of their employees, during the year ended June, 1962, or the accounting period nearest to that year. Similar surveys were conducted in 1955-56 and 1960-61.

Separate information was requested for the following:—

- (a) Schemes operated through life insurance offices, friendly societies, unit trusts, etc.;
- (b) Superannuation, pension and retiring allowance funds; and
- (c) Direct payments by the employer of pensions and/or retiring allowances.

The survey was based upon a sample of all businesses with a payroll of over approximately £860 a month. Commonwealth Government airlines and banks were included, if contributing to their own separate funds rather than to State or Commonwealth superannuation funds, but other government businesses were excluded. Also excluded were rural industries, private and domestic services and statutory coal miners' pension funds.

The figures shown in this statement are estimates for the whole field from which the sample was drawn. Some indication of the extent of the field surveyed is given by the fact that the figures relate to approximately 78 per cent. of all employees in private employment, excluding those employed in rural industries and private and domestic services.

2. **Types of Private Superannuation, Pension and Retiring Allowance Schemes.**—The survey showed that some type of scheme was operated by 54 per cent. of businesses (State branches and subsidiary companies being treated as separate businesses). Ninety-three per cent. of large businesses (monthly pay-roll over £20,000) operated schemes; 72 per cent. of medium businesses (monthly pay-roll £3,000 to £20,000); and 44 per cent. of small businesses (monthly pay-roll £860 to £3,000). Of the businesses which operated schemes, 62 per cent. operated a life insurance scheme but no superannuation, etc., fund; 18 per cent. operated both a life insurance scheme and superannuation, etc., fund; 19 per cent. operated a superannuation, etc., fund but no life insurance scheme; and one per cent. operated only direct payments. The percentage of businesses using a life insurance scheme without a superannuation, etc., scheme was greater among small businesses than among large.

3. **Financial Operations of Private Superannuation, Pension and Retiring Allowance Schemes.**—(i) *Operated through Life Insurance Offices, etc.* The following table shows details of the contributions to these schemes during 1961–62, together with comparative information for previous surveys.

**PRIVATE SUPERANNUATION, ETC. SCHEMES OPERATED THROUGH LIFE INSURANCE OFFICES, ETC.(a): AMOUNTS CONTRIBUTED**

(£ million)

Year	Contributions		
	Employee	Employer	Total
1955–56 .. .. .	6.4	9.9	16.3
1960–61 .. .. .	10.1	16.7	26.8
1961–62 .. .. .	10.7	17.4	28.1

(a) Includes schemes operated partly through life insurance offices, etc.

In 1961–62 the average contributions per employee covered by these schemes were:—by employees £43.3; by employers, £70.8; total, £114.1. Of the amounts contributed, employees paid 38 per cent. in 1961–62 (38 per cent. in 1960–61 and 39 per cent. in 1955–56), and employers 62 per cent. in 1961–62 (62 per cent. in 1960–61 and 61 per cent. in 1955–56).

(ii) *Superannuation, Pension and Retiring Allowance Funds.* (a) *Income and Expenditure.* The following table shows particulars of the income and expenditure of these funds during 1961–62 together with comparative information for previous surveys.

**SUPERANNUATION, PENSION AND RETIRING ALLOWANCE FUNDS:  
INCOME AND EXPENDITURE**

(£ million)

Year	Income				Expenditure			
	Contributions		Other	Total	Pensions paid	Lump sum payments	Other (a)	Total
	Em- ployee	Em- ployer						
1955–56 .. .. .	5.8	13.2	7.5	26.5	2.6	n.a.	n.a.	7.0
1960–61 .. .. .	10.2	20.8	17.8	48.8	4.4	7.7	1.9	14.0
1961–62 .. .. .	12.0	24.3	21.6	57.9	5.2	9.4	2.6	17.2

(a) Includes administrative expenses payable from funds, loss on sale of investments, life insurance premiums paid, etc.

In 1961-62, the average contributions per employee covered by these schemes were:— by employees, £47.1; by employers, £95.5; total, £142.6. Of the total income in 1961-62, employee contributions constituted 21 per cent., employer contributions 42 per cent., and other income 37 per cent. Corresponding percentages were 21, 43 and 36 in 1960-61; and 22, 50 and 28 in 1955-56.

(b) *Assets of Funds.* In 1961-62, the assets of superannuation, pension and retiring allowance funds totalled £334.7 million. Liabilities to sundry creditors amounted to £2.5 million, leaving £332.2 million as the amount of funds in existence at the end of 1961-62. The composition of the assets is shown below, together with comparative information for previous surveys.

**BOOK VALUE OF SUPERANNUATION, PENSION AND RETIRING ALLOWANCE FUNDS, BY TYPE OF ASSET**

(Per cent.)

Survey	Cash and bank balances	Commonwealth Government securities	Local government and semi-governmental securities	Shares in companies, debentures, loans, etc.	Other	Total
1955-56.. ..	8	30	25	24	13	100
1960-61.. ..	3	r 16	r 25	46	10	100
1961-62.. ..	2	16	25	47	10	100

(iii) *Direct Payments of Pensions and, or, Retiring Allowances by the Employer.* Some businesses make direct payments of pensions and retiring allowances, either instead of, or in addition to, operating a scheme through a life insurance office, or a superannuation, pension and retiring allowance fund. In 1961-62, 10,400 direct payments of pensions were made, totalling £2.9 million, and 4,000 retiring allowances were paid, totalling £2.3 million. Payments per head of recipient in 1961-62 were:—Pensions, £278; retiring allowances, £565. Corresponding figures in 1960-61 were £275 and £657, and in 1955-56, £221 and £632.

4. *Self-employed and Other Superannuation and Retirement Schemes.*—A survey of self-employed and other superannuation and retirement schemes carried out in respect of 1960-61 was not repeated for 1961-62. Details of the 1960-61 results may be found in Year Book No. 49, page 912.

**INSTALMENT CREDIT FOR RETAIL SALES**

1. *General.*—Information relating to instalment credit for retail sales in Australia is given in the following tables. Information in more detail may be found in the annual bulletin *Insurance and Other Private Finance* and in the monthly and quarterly statements relating to instalment credit for retail sales issued by this Bureau (*see NOTE* at beginning of this chapter).

The statistics cover operations of all types of instalment credit schemes which relate primarily to the financing of retail sales of goods, whether the credit is advanced by a retail business or by a non-retail finance business. In general, the term "instalment credit" is defined as relating to schemes in which repayment is made by regular pre-determined instalments. Types of schemes covered include hire purchase, time payment, budget account, and personal loan schemes which relate primarily to the financing of retail sales of goods. In these statistics, the term "retail sales" relates not only to retail sales by retail establishments coming within the scope of the Censuses of Retail Establishments conducted periodically by this Bureau, but includes also other sales of goods to final purchasers (e.g. plant and machinery).



Since the previous issue of this Year Book, as a result of the Census of Retail Establishments and Other Services, 1961-62, revisions have been made to the statistics relating to the financing of retail sales of goods by retail businesses. In addition, revisions to data for both non-retail finance businesses and retail businesses have been necessary as a result of the reclassification of certain businesses formerly classified as retail businesses but now classified as non-retail finance businesses. The figures in the tables in the following paragraphs incorporate these revisions.

Any discrepancies between totals and sums of components in the tables on pages 904-6 are due to rounding.

2. New Retail Agreements.—Details of amount financed on new retail agreements in the years 1958-59 to 1962-63 are given in the following tables.

**INSTALMENT CREDIT FOR RETAIL SALES: AMOUNT FINANCED<sup>(a)</sup> ON NEW AGREEMENTS BY RETAIL BUSINESSES AND NON-RETAIL FINANCE BUSINESSES**

(£ million)

Year	N.S.W.(b)	Vic.	Q'land	S. Aust.(c)	W. Aust.	Tas.	Aust.
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**HIRE PURCHASE**

1958-59 .. ..	124.9	91.0	43.8	28.9	20.9	8.5	317.9
1959-60 .. ..	135.1	106.2	53.8	39.0	27.1	9.4	370.6
1960-61 .. ..	120.0	87.3	44.3	31.9	24.7	9.4	317.4
1961-62 .. ..	111.8	74.3	39.6	21.8	24.6	9.3	281.3
1962-63 .. ..	129.7	82.1	49.2	26.1	29.3	11.2	327.5

**OTHER INSTALMENT CREDIT**

1958-59 .. ..	28.8	16.0	6.1	3.2	4.4	1.5	60.0
1959-60 .. ..	36.1	20.0	8.3	6.6	6.3	2.7	80.0
1960-61 .. ..	40.3	23.5	8.6	8.9	7.7	2.8	91.9
1961-62 .. ..	45.6	23.0	10.8	10.7	7.4	2.7	100.1
1962-63 .. ..	49.8	29.3	12.9	11.7	7.0	2.9	113.6

**TOTAL INSTALMENT CREDIT**

1958-59 .. ..	153.7	107.0	50.0	32.1	25.3	9.9	377.9
1959-60 .. ..	171.2	126.2	62.1	45.6	33.4	12.1	450.6
1960-61 .. ..	160.3	110.8	52.9	40.7	32.3	12.2	409.2
1961-62 .. ..	157.4	97.3	50.3	32.5	32.0	12.0	381.5
1962-63 .. ..	179.5	111.4	62.1	37.7	36.3	14.1	441.1

(a) Excludes hiring charges, interest and insurance.  
(c) Includes Northern Territory.

(b) Includes Australian Capital Territory.

3. New Retail Agreements, Classified by Commodity Groups.—The details shown for 1962-63 in the preceding table are classified by commodity groups below.

**INSTALMENT CREDIT FOR RETAIL SALES: AMOUNT FINANCED(a) ON NEW AGREEMENTS BY RETAIL BUSINESSES AND NON-RETAIL FINANCE BUSINESSES: COMMODITY GROUPS, 1962-63**

(£ million)

Commodity group	N.S.W. (b)	Vic.	Q'land	S. Aust. (c)	W. Aust.	Tas.	Aust.
<b>HIRE PURCHASE</b>							
Motor vehicles, tractors, etc.(d) .. ..	88.6	49.7	29.6	18.4	20.0	8.0	214.2
Plant and machinery(e) .. ..	9.3	6.2	3.6	1.9	3.1	0.7	24.9
Household and personal goods(f) .. ..	31.9	26.1	16.0	5.8	6.2	2.5	88.5
<b>Total .. ..</b>	<b>129.7</b>	<b>82.1</b>	<b>49.2</b>	<b>26.1</b>	<b>29.3</b>	<b>11.2</b>	<b>327.5</b>
<b>OTHER INSTALMENT CREDIT</b>							
Motor vehicles, tractors, etc.(d) .. ..	1.4	9.7	2.6	2.1	1.8	..	17.6
Plant and machinery(e) .. ..	0.2	..	..	..	0.1	..	0.4
Household and personal goods(f) .. ..	48.2	19.6	10.3	9.6	5.1	2.8	95.6
<b>Total .. ..</b>	<b>49.8</b>	<b>29.3</b>	<b>12.9</b>	<b>11.7</b>	<b>7.0</b>	<b>2.9</b>	<b>113.6</b>
<b>TOTAL INSTALMENT CREDIT</b>							
Motor vehicles, tractors, etc.(d) .. ..	89.9	59.4	32.2	20.4	21.9	8.0	231.8
Plant and machinery(e) .. ..	9.5	6.3	3.7	1.9	3.2	0.8	25.3
Household and personal goods(f) .. ..	80.1	45.7	26.2	15.4	11.3	5.3	184.0
<b>Total .. ..</b>	<b>179.5</b>	<b>111.4</b>	<b>62.1</b>	<b>37.7</b>	<b>36.3</b>	<b>14.1</b>	<b>441.1</b>

(a) Excludes hiring charges, interest and insurance. (b) Includes Australian Capital Territory.  
 (c) Includes Northern Territory. (d) Includes new and used motor cars, motor cycles, commercial vehicles, tractors, caravans, trailers, motor parts and accessories, etc. (e) Includes farm machinery and implements, earth-moving equipment, aircraft, industrial plant and machinery, business machines and equipment (including commercial refrigeration equipment), etc. (f) Includes furniture, furnishings and floor coverings, domestic refrigerators, electrical goods, radios, television, musical instruments, bicycles, motor mowers, clothing, etc.

The following are some additional particulars relating to new hire purchase agreements made during 1962-63.

**NEW HIRE PURCHASE AGREEMENTS, COMMODITY GROUPS: AVERAGE VALUE AND AMOUNT AND PROPORTION FINANCED, AUSTRALIA, 1962-63**

Commodity group	Average value of goods purchased per agreement		Average amount financed per agreement	Average proportion financed
	£	£	£	Per cent.
Motor vehicles, tractors, etc. .. ..	737	481	65	
Plant and machinery .. ..	856	564	66	
Household and personal goods .. ..	85	71	83	
<b>All groups .. ..</b>	<b>272</b>	<b>188</b>	<b>69</b>	

4. Balances Outstanding on Retail Agreements.—Details of the balances outstanding on retail agreements at 30th June, 1959 to 1963, are given below.

**INSTALMENT CREDIT FOR RETAIL SALES: BALANCES OUTSTANDING ON AGREEMENTS MADE BY RETAIL BUSINESSES AND NON-RETAIL FINANCE BUSINESSES**

(Including hiring charges, interest and insurance)

(£ million)

30th June—	N.S.W.(a)	Vic.	Q'land	S. Aust.(b)	W. Aust.	Tas.	Aust.
<b>HIRE PURCHASE</b>							
1959 .. ..	173.8	120.2	55.9	37.1	26.8	11.1	424.9
1960 .. ..	200.0	143.7	68.5	50.9	35.1	12.3	510.5
1961 .. ..	201.2	137.4	68.6	51.4	38.5	13.4	510.5
1962 .. ..	193.9	123.4	64.4	42.9	38.5	13.8	476.9
1963 .. ..	204.5	124.5	70.6	42.2	43.3	15.9	501.0
<b>OTHER INSTALMENT CREDIT</b>							
1959 .. ..	22.9	12.3	4.7	2.7	3.1	1.5	47.2
1960 .. ..	29.3	18.2	7.6	5.9	4.3	2.7	68.0
1961 .. ..	37.1	25.0	8.7	9.8	6.1	3.8	90.5
1962 .. ..	44.5	27.9	10.8	12.5	8.1	4.1	107.8
1963 .. ..	50.3	34.5	13.3	15.5	8.8	4.3	126.7
<b>TOTAL INSTALMENT CREDIT</b>							
1959 .. ..	196.6	132.5	60.6	39.8	29.8	12.7	472.2
1960 .. ..	229.3	161.9	76.1	56.8	39.3	15.1	578.5
1961 .. ..	238.3	162.4	77.3	61.2	44.6	17.1	601.0
1962 .. ..	238.4	151.3	75.2	55.4	46.6	17.8	584.7
1963 .. ..	254.8	159.0	83.9	57.6	52.1	20.2	627.7

(a) Includes Australian Capital Territory.

(b) Includes Northern Territory.

5. **Non-retail Finance Businesses.**—The preceding tables include all instalment credit for retail sales, whether advanced by retail businesses and their subsidiaries or by non-retail finance businesses. In the following table, particulars for non-retail finance businesses, including statistics of collections by such businesses, are shown for the years 1958–59 to 1962–63. The figures include hire purchase and other instalment credit agreements.

**INSTALMENT CREDIT FOR RETAIL SALES, FINANCED BY NON-RETAIL FINANCE BUSINESSES**

(£ million)

Year	N.S.W.(a)	Vic.	Q'land	S. Aust.(b)	W. Aust.	Tas.	Aust.
<b>AMOUNT FINANCED DURING YEAR(c)</b>							
1958–59 .. ..	103.5	65.8	39.1	22.4	15.1	8.1	254.0
1959–60 .. ..	113.8	80.4	48.5	30.7	19.8	9.4	302.6
1960–61 .. ..	102.2	66.6	38.2	26.4	17.7	9.0	260.2
1961–62 .. ..	96.8	58.0	33.5	19.6	19.3	9.0	236.2
1962–63 .. ..	113.4	70.3	43.8	24.4	25.2	10.9	287.9
<b>COLLECTIONS DURING YEAR(d)(e)</b>							
1959–60 .. ..	123.6	83.2	50.2	29.5	19.5	10.9	317.0
1960–61 .. ..	133.9	90.0	52.2	32.2	20.6	11.5	340.4
1961–62 .. ..	126.3	85.0	48.5	30.3	22.5	11.6	324.2
1962–63 .. ..	130.0	81.3	49.4	29.2	24.8	12.3	327.1
<b>BALANCES OUTSTANDING AT END OF YEAR(d)</b>							
1958–59 .. ..	137.8	90.3	50.0	29.6	19.9	10.9	338.4
1959–60 .. ..	159.2	108.5	62.1	40.1	24.6	12.4	406.8
1960–61 .. ..	160.3	102.8	58.8	40.7	25.9	13.3	401.7
1961–62 .. ..	155.8	92.8	53.1	35.5	27.5	13.4	378.2
1962–63 .. ..	166.7	101.5	59.8	37.8	33.9	15.4	415.1

(a) Includes Australian Capital Territory.  
hiring charges, interest and insurance.

(b) Includes Northern Territory.

(c) Excludes hiring charges, interest and insurance.

(d) Includes hiring charges, interest and insurance.

(e) Not available for years prior to 1959–60.

## CHAPTER XXII

### PUBLIC FINANCE

**NOTE.**—The subject of Public Finance is dealt with in this chapter under the two major divisions of Commonwealth Finance and State Finance. The close financial relations between the Commonwealth and States, however, particularly since the Financial Agreement has been in operation, demand also a combination of these two divisions under the heading of Commonwealth and State Finance. Under the Financial Agreement, the Commonwealth assumed the liability to bondholders for the States' Securities existing at the date of the Agreement and now arranges for all borrowings for and on behalf of the Commonwealth or any State and for all conversions, renewals, redemptions and consolidations of such securities. In view of this, it is convenient to deal with the Commonwealth and State Government Securities on Issue in a separate division of this chapter (p. 951).

The subject of income taxes is also dealt with in a separate division at the end of this chapter.

For further detailed information on the subjects covered by this chapter, *see* the annual bulletins *Commonwealth Finance; State, Territories, and Local Government Authorities' Finance and Government Securities;* and *Commonwealth Taxation* published by this Bureau. Current information in summarized form is contained in the *Quarterly Summary of Australian Statistics*, the *Monthly Review of Business Statistics*, and the *Digest of Current Economic Statistics*.

#### COMMONWEALTH FINANCE

##### § 1. Financial Provisions of the Constitution

The main provisions of the Constitution relating to the initiation and development of the financial system of the Commonwealth are contained in Sections 81 to 105A of the Commonwealth Constitution (*see* pp. 17–20 of this Year Book). Two other sections which have a most important bearing on questions of Commonwealth finance are Sections 69 and 51.

Section 69 provides for the transfer from the States to the Commonwealth of certain specified departments, and Section 51, in outlining the powers of the Commonwealth Parliament, implies the transfer or creation of other departments. Sections 87 and 96 deal with the financial relations between the Commonwealth and the States. These matters have been treated in previous issues of the Year Book, and on pages 924–32 of this issue a summary is given of the present provisions for Commonwealth financial assistance to the States.

The *Audit Act 1901–1961* lays down the procedure which must be followed in accounting for the receipt and disbursement of public funds. The general administration of Commonwealth finances is the responsibility of the Treasurer of the Commonwealth.

##### § 2. Commonwealth Public Account

1. **Nature of Account.**—The Commonwealth Public Account includes the Consolidated Revenue Fund, the Trust Fund and the Loan Fund. Ordinary revenues from taxation and other sources are paid into the Consolidated Revenue Fund, from which the main expenditures are for defence, war and repatriation services, social services, payments to the States, Commonwealth business undertakings (mostly postal, telephone and telegraph) and administration. The Trust Fund covers special transactions outside the ordinary operations of departmental expenditures, such as pension funds and moneys held for expenditure by the Commonwealth at some future time. The Loan Fund receives its funds from the sale of Commonwealth securities, and expenditures from the Fund are made in accordance with the purpose of issue of each loan. The main disbursements from the Loan Fund are to the States, either by way of distribution of the proceeds of loans raised by the Commonwealth on their behalf or in accordance with the provisions of the Commonwealth and State Housing Agreements, and the remaining disbursements are for Commonwealth purposes such as defence or war service land settlement.

2. **Summary of Receipts and Expenditure.**—A summary of transactions on the Commonwealth Public Account for 1962–63 and the four preceding years is given in the table which follows.

**COMMONWEALTH PUBLIC ACCOUNT: SUMMARY OF TRANSACTIONS**  
(£ million)

Particulars	1958-59	1959-60	1960-61	1961-62	1962-63
<b>Expenditure—</b>					
Consolidated Revenue Fund(a) ..	1,268.2	1,396.9	1,495.7	1,619.4	1,659.0
<b>Loan Fund—</b>					
Defence services .. .. .	37.3	12.0	..	23.6	66.1
State works and housing programmes ..	207.1	214.9	225.6	244.6	249.1
War service land settlement .. .. .	5.7	6.9	2.0	1.6	0.6
Mount Isa Railway Agreement .. .. .	..	..	..	3.8	5.9
Snowy Mountains Hydro-electric Authority .. .. .	..	..	..	..	13.1
<b>Total Expenditure</b> .. .. .	<b>1,518.3</b>	<b>1,630.7</b>	<b>1,723.3</b>	<b>1,893.0</b>	<b>1,993.8</b>
<b>Redemptions—</b>					
Loan fund .. .. .	..	..	5.0	..	32.0
National Debt Sinking Fund .. .. .	95.2	95.2	96.3	94.6	57.6
<b>Total Expenditure and Redemptions</b> ..	<b>1,613.5</b>	<b>1,725.9</b>	<b>1,824.6</b>	<b>1,987.6</b>	<b>2,083.4</b>
<b>Receipts—</b>					
Consolidated Revenue Fund .. .. .	1,296.1	1,438.3	1,638.3	1,641.5	1,685.4
National Debt Sinking Fund .. .. .	72.3	71.1	73.8	76.7	81.8
Net movement in cash balances of other Trust Funds .. .. .	11.7	2.9	-12.0	2.2	15.2
<b>Total Receipts</b> .. .. .	<b>1,380.1</b>	<b>1,512.3</b>	<b>1,700.1</b>	<b>1,720.4</b>	<b>1,782.4</b>
<b>Excess of Expenditure and Redemptions over Receipts to be met from Borrowings</b> ..	<b>233.4</b>	<b>213.6</b>	<b>124.5</b>	<b>267.2</b>	<b>301.0</b>
<b>Borrowings—</b>					
Public loan proceeds—					
Australia .. .. .	174.9	142.6	114.9	224.0	251.5
Overseas .. .. .	29.0	42.1	25.4	16.2	65.6
Increase in temporary borrowings .. .. .	31.0	30.0	-15.0	22.0	-15.5
Reduction in cash balances .. .. .	-1.5	-1.1	-0.8	5.0	-0.6
<b>Total</b> .. .. .	<b>233.4</b>	<b>213.6</b>	<b>124.5</b>	<b>267.2</b>	<b>301.0</b>

(a) Excludes payments to Loan Consolidation and Investment Reserve:—1958-59, £27.9 million; 1959-60, £41.4 million; 1960-61, £142.6 million; 1961-62, £22.2 million; 1962-63, £26.4 million.

### § 3. Commonwealth Consolidated Revenue Fund

#### REVENUE

1. Sources of Revenue.—The following table shows details of the revenue from each source and the amount per head of population under each of the main headings during the years 1958-59 to 1962-63. Taxation constitutes the main sources of Commonwealth revenue, accounting for 85.5 per cent. in 1962-63.

#### COMMONWEALTH CONSOLIDATED REVENUE FUND: SOURCES OF REVENUE (£'000)

Source	1958-59	1959-60	1960-61	1961-62	1962-63
<b>Taxation</b> .. .. .	<b>1,133,298</b>	<b>1,249,790</b>	<b>1,425,239</b>	<b>1,416,524</b>	<b>1,440,459</b>
Per head of population .. .. .	£113.92	£122.96	£137.15	£133.56	£133.23
<b>Business undertakings</b> .. .. .	<b>116,896</b>	<b>137,238</b>	<b>153,867</b>	<b>158,389</b>	<b>171,200</b>
Per head of population .. .. .	£11.75	£13.50	£14.81	£14.93	£15.84
<b>Territories</b> .. .. .	<b>3,189</b>	<b>4,198</b>	<b>5,455</b>	<b>5,996</b>	<b>7,732</b>
Per head of population .. .. .	£0.32	£0.41	£0.53	£0.57	£0.72
<b>Other revenue—</b>					
Interest .. .. .	11,572	13,276	14,588	17,069	22,153
Coinage .. .. .	149	415	321	589	106
Defence .. .. .	6,185	5,832	5,827	4,806	4,409
Civil aviation .. .. .	1,497	1,872	2,621	3,806	3,264
Health .. .. .	92	106	119	111	155
Patents, trade marks, etc. .. .. .	351	399	476	582	606
Bankruptcy .. .. .	98	113	143	169	181
Shipping and transport .. .. .	621	2,645	1,761	1,832	1,985
Net profit on Australian note issue .. .. .	10,935	10,516	12,930	15,751	12,780
Surplus balances of trust accounts .. .. .	5,722	5,674	2,053	3,525	4,700
Australian Aluminium Production Commission .. .. .	..	..	2,500	250	250
Reserve Bank Reserve Fund .. .. .	..	..	2,691	3,352	4,487
Commonwealth Banking Corporation .. .. .	..	..	756	921	717
Joint Coal Board—repayment of advances .. .. .	143	..	..	..	..
Other .. .. .	5,302	6,212	6,932	7,870	10,202
<b>Total, Other Revenue</b> .. .. .	<b>42,667</b>	<b>47,060</b>	<b>53,718</b>	<b>60,633</b>	<b>65,995</b>
<b>Per head of population</b> .. .. .	<b>£4.28</b>	<b>£4.63</b>	<b>£5.18</b>	<b>£5.72</b>	<b>£6.11</b>
<b>Grand Total</b> .. .. .	<b>1,296,050</b>	<b>1,438,286</b>	<b>1,638,279</b>	<b>1,641,542</b>	<b>1,685,386</b>
<b>Per head of population</b> .. .. .	<b>£130.27</b>	<b>£141.50</b>	<b>£157.67</b>	<b>£154.78</b>	<b>£155.90</b>

A graphical representation of the revenue and expenditure of the Commonwealth Consolidated Revenue Fund appears on page 915.

2. **Taxation.**—(i) *Total Collections.* (a) *Amount.* Collections under each heading for the years 1958–59 to 1962–63 are shown below.

**COMMONWEALTH TAXATION: TOTAL NET COLLECTIONS**

(£'000)

Type of tax	1958–59	1959–60	1960–61	1961–62	1962–63
Customs .. .. .	71,671	84,381	101,785	85,160	105,101
Excise .. .. .	236,254	252,111	257,409	265,645	274,402
Sales tax .. .. .	143,617	164,185	173,040	148,824	156,531
Pay-roll tax .. .. .	49,619	55,162	61,260	60,971	63,255
Income taxes—					
Individuals .. .. .	388,965	442,164	518,744	537,345	541,711
Companies .. .. .	219,695	229,130	282,562	282,688	259,914
Dividend (withholding) .. .. .	..	..	5,960	8,117	8,965
Estate duty .. .. .	13,309	13,753	14,807	17,029	17,850
Gift duty .. .. .	2,000	2,435	2,783	2,797	3,164
Special industry taxes(a) .. .. .	8,168	6,469	6,889	7,948	9,566
<b>Total Taxation .. .. .</b>	<b>1,133,298</b>	<b>1,249,790</b>	<b>1,425,239</b>	<b>1,416,524</b>	<b>1,440,459</b>

(a) Used for purposes of industries concerned. The taxes are as follows:—Wheat Tax, Wool Levy, Wheat Export Charge, Miscellaneous Export Charges, Stevedoring Industry Charge, Tobacco Charge, Dairy Produce Levy, Canning Fruit Charge, Cattle Slaughter Levy, and Honey Levy.

(b) *Proportion of each Class to Total Collections.* The following table shows the proportion of the total collections represented by returns from each class of taxation for the years 1958–59 to 1962–63.

**COMMONWEALTH TAXATION: PROPORTION OF EACH CLASS TO TOTAL NET COLLECTIONS**

(Per cent.)

Type of tax	1958–59	1959–60	1960–61	1961–62	1962–63
Customs .. .. .	6.3	6.8	7.2	6.0	7.3
Excise .. .. .	20.9	20.2	18.1	18.8	19.0
Sales tax .. .. .	12.7	13.1	12.1	10.5	10.9
Pay-roll tax .. .. .	4.4	4.4	4.3	4.3	4.4
Income taxes .. .. .	53.7	53.7	56.6	58.5	56.3
Estate duty .. .. .	1.2	1.1	1.0	1.2	1.2
Gift duty .. .. .	0.2	0.2	0.2	0.2	0.2
Special industry taxes(a) .. .. .	0.6	0.5	0.5	0.5	0.7
<b>Total Taxation .. .. .</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>

(a) See footnote (a) to previous table.

(ii) *Customs Revenue.* The following table gives details of net customs receipts for the years 1958-59 to 1962-63.

**COMMONWEALTH CUSTOMS REVENUE: CLASSIFICATION OF NET RECEIPTS**

(£'000)

Class	1958-59	1959-60	1960-61	1961-62	1962-63
Foodstuffs of animal origin .. ..	336	473	677	515	599
Foodstuffs of vegetable origin .. ..	1,512	1,784	2,100	2,063	2,080
Spirituos and alcoholic liquors .. ..	3,274	4,762	5,202	5,847	5,478
Tobacco, cigars and cigarettes .. ..	12,190	13,034	13,352	11,997	12,759
Animal substances (not foodstuffs) .. ..	5	7	8	5	5
Vegetable substances and fibres .. ..	182	259	168	247	321
Yarns, textiles and apparel .. ..	9,800	12,176	15,573	12,863	14,944
Oils, fats and waxes .. ..	11,123	10,970	12,430	9,149	11,367
Pigments, paints and varnishes .. ..	179	219	317	284	405
Rocks and minerals .. ..	24	56	46	62	113
Metals, metal manufactures and machinery ..	18,348	23,036	28,655	20,836	32,505
Rubber and leather and manufactures thereof	620	606	939	838	1,318
Wood and wicker, raw and manufactured ..	1,398	1,802	2,353	1,514	1,623
Earthenware, cement, china, glass and stone-ware	1,866	2,233	3,002	2,673	2,952
Pulp, paper and board, paper manufactures and stationery	940	1,426	2,361	2,404	2,778
Sporting materials, toys, fancy goods, jewellery and timepieces .. ..	2,297	2,825	3,526	3,237	3,600
Optical, surgical and scientific instruments, photographic goods .. ..	1,169	1,404	1,683	1,592	1,677
Chemicals, pharmaceutical products, essential oils and fertilizers .. ..	1,317	1,690	1,806	2,131	2,220
Miscellaneous goods .. ..	2,269	3,047	5,045	4,762	6,068
Primage .. ..	2,078	1,939	2,298	1,840	2,152
Other receipts .. ..	744	633	244	301	137
<b>Total .. ..</b>	<b>71,671</b>	<b>84,381</b>	<b>101,785</b>	<b>85,160</b>	<b>105,101</b>

(iii) *Excise Revenue.* Net excise receipts for the years 1958-59 to 1962-63 were as follows.

**COMMONWEALTH EXCISE REVENUE: CLASSIFICATION OF NET RECEIPTS**

(£'000)

Particulars	1958-59	1959-60	1960-61	1961-62	1962-63
Beer .. ..	105,286	109,724	111,740	113,504	117,263
Spirits .. ..	8,692	8,683	8,586	8,418	8,582
Tobacco .. ..	15,207	14,366	13,389	11,898	10,541
Cigars and cigarettes .. ..	55,824	61,459	64,969	67,488	70,186
Cigarette papers .. ..	811	770	716	640	571
Petrol .. ..	44,253	49,255	51,952	57,904	61,014
Diesel fuel .. ..	1,475	2,179	2,282	2,257	2,632
Matches .. ..	1,092	1,125	1,105	1,095	1,126
Playing cards .. ..	48	52	50	53	49
Coal .. ..	578	418	389	290	280
Cathode ray tubes .. ..	2,040	2,850	1,961	2,056	2,106
Miscellaneous .. ..	948	1,230	270	42	52
<b>Total .. ..</b>	<b>236,254</b>	<b>252,111</b>	<b>257,409</b>	<b>265,645</b>	<b>274,402</b>

(iv) *Other Taxation.* (a) *General.* Taxes other than customs and excise and the various export charges are, in general, assessed and collected by the Commissioner of Taxation. The organization comprises a Head Office in Canberra, an office in each State assessing the returns of taxpayers whose interests are restricted to that State, and a Central Office situated in Melbourne assessing taxpayers whose interests are in more than one State.

For detailed statistics relating to Commonwealth income taxes, estate duty, gift duty and sales tax, see the annual bulletin *Commonwealth Taxation* issued by this Bureau.

(b) *Sales Tax.* The sales tax was first imposed in August, 1930. The operation of the tax is controlled chiefly by a system of registration of taxpayers whereby all manufacturers and wholesale merchants, who are the taxpayers under the Act in respect of goods sold in Australia, must be registered with the Department. The tax on imports subject to sales tax is collected by the Customs Department at ports of entry.

Since the inception of the tax, certain exemptions have been allowed. These exemptions, which have been extended from time to time, relate mainly to goods of an essential nature or those for use in primary production. The most recent exemptions were those granted from 14th August, 1963.

A general rate of tax is levied on all goods other than those specified in the schedules to the *Sales Tax (Exemptions and Classifications) Act 1935-1963*. These schedules set out details of goods exempt from sales tax and those subject to special rates. The following are the general and special rates which operated from 7th August, 1952.

Period	General rate	Special rates
7th August, 1952, to 9th September, 1953 ..	12½ per cent. ..	20, 33½ and 50 per cent.
10th September, 1953, to 18th August, 1954 ..	12½ per cent. ..	16½ per cent.
19th August, 1954, to 14th March, 1956 ..	12½ per cent. ..	10 and 16½ per cent.
15th March, 1956, to 3rd September, 1957 ..	12½ per cent. ..	10, 16½, 25 and 30 per cent.
4th September, 1957, to 15th November, 1960 ..	12½ per cent. ..	8½, 16½, 25 and 30 per cent.
16th November, 1960, to 21st February, 1961 ..	12½ per cent. ..	8½, 16½, 25 and 40 per cent.
22nd February, 1961, to 15th August, 1961 ..	12½ per cent. ..	8½, 16½, 25 and 30 per cent.
16th August, 1961, to 6th February, 1962 ..	12½ per cent. ..	2½, 16½, 25 and 30 per cent.
From 7th February, 1962 .. ..	12½ per cent. ..	2½, 22½ and 25 per cent.

Particulars of the net amount of sales tax payable and the sales of taxable and exempt goods in each State for 1962-63 are given in the following table. The figures relate to sales during the period 1st July to 30th June. The figures for sales tax payable differ from those for net collections shown on page 909 because the latter include some adjustments in respect of earlier tax years and relate to tax payable on returns lodged during the year, which in general cover sales for the period June to May.

## SALES TAX AND AMOUNT OF SALES, 1962-63

(£'000)

Particulars	N.S.W. (a)	Vic.	Q'land	S. Aust.	W. Aust.	Tas.	N. Terr.	Australia
Net sales on which sales tax was payable at—								
2½ per cent. ..	83,124	69,838	24,602	18,837	12,064	4,479	36	212,980
12½ per cent. ..	253,675	179,936	79,965	54,145	37,984	12,068	638	618,411
22½ per cent. ..	80,535	67,433	29,606	21,376	17,083	3,206	1	219,240
25 per cent. ..	45,804	29,816	10,982	7,004	4,885	2,183	33	100,707
Total ..	463,138	347,023	145,155	101,362	72,016	21,936	708	1,151,338
Sales of exempt goods by registered persons ..	1,024,578	775,759	358,757	217,760	172,380	72,231	5,626	2,627,091
Total sales of Taxable and Exempt Goods ..	1,487,716	1,122,782	503,912	319,122	244,396	94,167	6,334	3,778,429
Sales tax payable ..	63,359	46,864	20,018	13,800	10,114	2,888	89	157,132

(a) Includes Australian Capital Territory.



Sales of taxable and exempt goods and sales tax payable for Australia as a whole are shown in the following table for the years 1958-59 to 1962-63.

### SALES TAX AND AMOUNT OF SALES

(£'000)

Year				Net sales on which sales tax was payable	Sales of exempt goods by registered persons	Total sales of taxable and exempt goods	Sales tax payable
1958-59	..	..	..	890,293	2,152,026	3,042,319	143,296
1959-60	..	..	..	1,020,033	2,354,204	3,374,237	167,839
1960-61	..	..	..	1,040,552	2,447,126	3,487,678	171,584
1961-62	..	..	..	1,049,841	2,415,896	3,465,737	148,565
1962-63	..	..	..	1,151,338	2,627,091	3,778,429	157,132

In the foregoing tables, sales include goods transferred to stock for sale by retail, goods imported by persons other than registered taxpayers, and goods used in the business of the taxpayer. Exempt sales relate to goods exempted from sales tax under the *Sales Tax (Exemptions and Classifications) Act 1935-1963*. The figures shown do not represent the total sales of all commodities, as vendors trading only in exempt goods are not required to be registered, and consequently the volume of their sales is not included in the statistics above. In addition, non-taxable sales (i.e., goods sold by one registered taxpayer to another registered taxpayer) are excluded.

(c) *Land Tax.* Commonwealth Land Tax was levied annually from 1910-11 to 1951-52 on the unimproved value of land. It was abolished from 1st July, 1952.

(d) *Pay-roll Tax.* The *Pay-roll Tax Act 1941* and the *Pay-roll Tax Assessment Act 1941-1942* imposed a pay-roll tax of 2½ per cent. on all wages and salaries in excess of £20 a week paid by an employer after 30th June, 1941. Employers who are liable for tax are required to register and to furnish a monthly return of all wages paid. These measures formed part of the Commonwealth scheme of child endowment, the revenue from the tax being designed to provide part of the money required. However, the collections now form part of the general revenues of the Commonwealth. For particulars of the present method of financing the National Welfare Fund, out of which Child Endowment is paid, see para. 5, page 922. The exemption was increased to £80 a week (£4,160 per annum) from 1st October, 1953, to £120 a week (£6,240 per annum) from 1st September, 1954, and to £200 a week (£10,400 per annum) from 1st September, 1957. Employers whose export sales have increased above the annual average of export sales effected during a base period of two years ended 30th June, 1960, are entitled under the Commonwealth Government's export incentive scheme to a rebate of pay-roll tax of twelve and one half times the percentage increase in export sales.

(e) *Income Taxes.* Details of taxes on income are given in the division, Taxes on Income, at the end of this chapter.

(f) *Wool Sales Deduction.* The Wool Sales Deduction scheme operated from 2nd December, 1950, until 17th November, 1951. For particulars, see Year Book No. 46, page 819.

(g) *Estate Duty.* Commonwealth Estate Duty was first levied in 1914. Under the *Estate Duty Assessment Act 1914-1963*, Estate Duty is assessed on the net value of the estate less a statutory exemption determined in accordance with the following formula:— (a) where the whole of the estate passes to the widow, children (including adopted children, step-children and ex-nuptial children), or grand-children of the deceased, the sum of £10,000 decreasing by £1 for every £4 by which the value exceeds £10,000 and ceasing to apply at £50,000; (b) where no part of the estate passes to the widow, children or grand-children, the sum of £5,000 decreasing by £1 for every £4 by which the value exceeds £5,000 and ceasing to apply at £25,000; and (c) where only part of the estate passes to the widow, children or grand-children, the statutory exemption is to be calculated proportionately under (a) and (b).

An amendment to this Act, assented to on 20th November, 1957, provided for rebates of duty on estates which become liable for duty on two or more occasions within a period of five years.

The rates of duty levied under the *Estate Duty Act 1914-1941* increase as the value of the estate increases, as follows:—£1 to £10,000, 3 per cent.; £10,001 to £20,000, 3 per cent. to 6 per cent.; £20,001 to £120,000, 6 per cent. to 26 per cent.; £120,001 to £500,000, 26 per cent. to 27.9 per cent.; £500,001 and over 27.9 per cent.

Particulars of the number and value of estates and duty assessed, for each of the assessment years 1957-58 to 1961-62, are given in the following table.

## ESTATE DUTY ASSESSMENTS

Particulars	1957-58	1958-59	1959-60	1960-61	1961-62
Number of estates .. ..	13,599	11,794	13,978	14,196	16,449
Gross value assessed .. .. £'000	227,310	202,899	233,560	244,976	279,382
Deductions .. .. .. £'000	39,707	35,589	40,453	45,683	47,725
Statutory exemption .. .. £'000	30,492	26,555	31,597	33,051	37,180
Dutiable value .. .. .. £'000	157,111	140,755	161,510	166,241	194,477
Duty payable .. .. .. £'000	13,967	13,013	14,116	15,589	17,164
Average dutiable value .. .. £	11,553	11,934	11,555	11,710	11,823
Average duty per estate .. .. £	1,027	1,103	1,010	1,098	1,043

(h) *Gift Duty.* The *Gift Duty Act 1941-1947* and the *Gift Duty Assessment Act 1941-1957* impose a gift duty on all gifts made after 29th October, 1941. A gift has been defined as any disposition of property which is made otherwise than by will without adequate consideration in money or money's worth. There is a liability on both the donor and the donee to furnish a return, and both are jointly and severally liable for payment of the duty.

The following rates of duty are levied under the *Gift Duty Act 1941-1947* and relate to the value of all gifts made by the donor within a period of eighteen months:—not exceeding £2,000, nil; £2,001 to £10,000, 3 per cent.; £10,001 to £20,000, 3 per cent. to 6 per cent.; £20,001 to £120,000, 6 per cent. to 26 per cent.; £120,001 to £500,000, 26 per cent. to 27.9 per cent.; £500,001 and over, 27.9 per cent.

An amendment which operated from 3rd June, 1947, provides that gift duty shall not exceed one-half of the amount by which the value of the gift exceeds £2,000.

(i) *Entertainments Tax.* The Commonwealth levied an Entertainments Tax from 1st October, 1942, to 30th September, 1953. Details of rates are given in earlier issues of the Year Book (*see No. 40, pp. 672-3*).

(j) *Wool Levy.* The *Wool Tax Act 1936* and *Wool Tax Assessment Act 1936* provided for a levy on all wool grown in Australia and shorn on or after 1st July, 1936. Details of this levy are given in earlier issues of the Year Book. This levy was suspended from 1st July, 1946, until 30th June, 1952, while the Wool Contributory Charge was imposed.

With the repeal of the Wool Contributory Charge, however, a levy on wool produced in Australia was re-introduced from 1st July, 1952. The *Wool Tax Acts (Nos. 1 and 2)* of 1952 provided for the payment of a levy of four shillings a bale until 30th June, 1953, after which date the rate of tax could be varied within prescribed limits. There was no variation until 1st July, 1957, when the rate was increased to six shillings a bale. On 1st August, 1960, the rate prescribed was raised to seven shillings a bale which was retained until 28th August, 1961, when a rate of twelve shillings a bale was introduced. The purpose of the tax is to provide funds for publicity and research previously provided by the Wool Contributory Charge. Collections during 1958-59, 1959-60, 1960-61, 1961-62 and 1962-63 were £1,389,000, £1,542,000, £1,655,000, £2,854,000 and £2,955,000 respectively.

(k) *Wool Contributory Charge.* The *Wool (Contributory Charge) Act 1945* and the *Wool (Contributory Charge) Assessment Act 1945* imposed a charge on all wool produced in Australia and sold, manufactured or exported. Wool sold by the Australian Wool Realization Commission was not liable to the charge. Details of the rate of the charge and collections made were given in earlier issues of the Year Book (see No. 40, p. 675).

The various *Wool (Contributory Charge) Acts* were repealed by the *Wool Tax Assessment Act 1952* and the charge superseded by the wool levy.

(l) *Wheat Export Charge and Wheat Tax.* A summary of the provisions of the *Wheat Export Charge Acts 1946, 1948, 1952 and 1954* is contained in previous issues of the Year Book (see No. 40, p. 676, No. 41, p. 604 and No. 46, p. 820).

The *Wheat Export Charge Act 1958* repealed the *Wheat Export Charge Act 1954* and provided for an export charge on wheat and wheat products for the seasons 1958-59 to 1963-64 inclusive. The charge levied is the excess of the export price over the cost of production or 1s. 6d. per bushel whichever is the less. Under the *Wheat Industry Stabilization Act 1958*, to which the Wheat Export Charge is complementary, the Commonwealth Government guarantees a return to wheat-growers of the ascertained cost of production of up to 100 million bushels of wheat harvested each season exported from Australia. Collections from the wheat export charge are paid into the Wheat Prices Stabilization Fund, out of which payments will be made to the Australian Wheat Board, when required, for the purpose of building up the average export price for any season to the guaranteed price. If the fund is exhausted, additional payments will be made from the Consolidated Revenue Fund.

Collections of the wheat export charge amounted to £1,211,000 in 1958-59 and £1,000 in 1959-60, and were nil in the years 1960-61 to 1962-63.

The *Wheat Tax Act 1957* imposed a tax of  $\frac{1}{4}$ d. for each bushel of wheat—

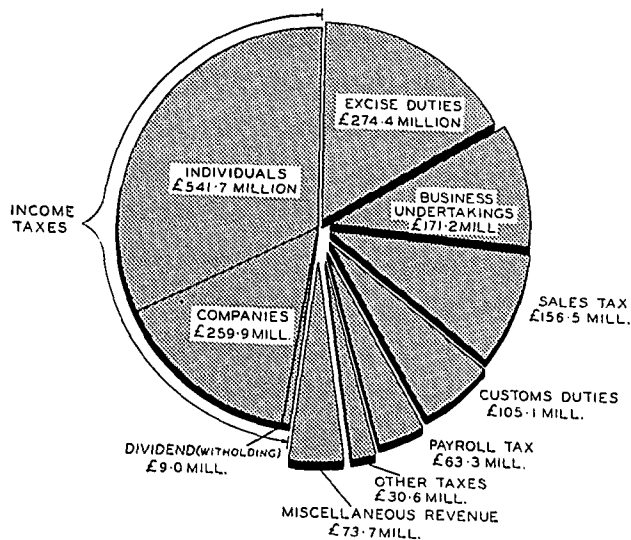
- (a) which has been delivered to the Wheat Board on or after the first day of October, 1956, and before the date of commencement of the Act; or
- (b) which is delivered to the Wheat Board on or after that date.

The Act also provided that where, before the commencement of the Act, a person delivering to the Board wheat upon which tax is imposed by the Act authorized the Board to deduct an amount from the moneys payable to him and to pay the amounts so deducted to a person, authority or association for the purposes of soil fertility research or other research likely to benefit the wheat industry, and the Board did so, the tax otherwise payable upon that wheat is to be reduced by the amount so deducted.

The *Wheat Research Act 1957* provided for the establishment of a Wheat Research Trust Account to receive moneys payable under the *Wheat Act 1957*, and for the setting up of a Wheat Industry Research Council to direct the expenditure of moneys from that Trust Account for research, etc., to benefit the wheat industry.

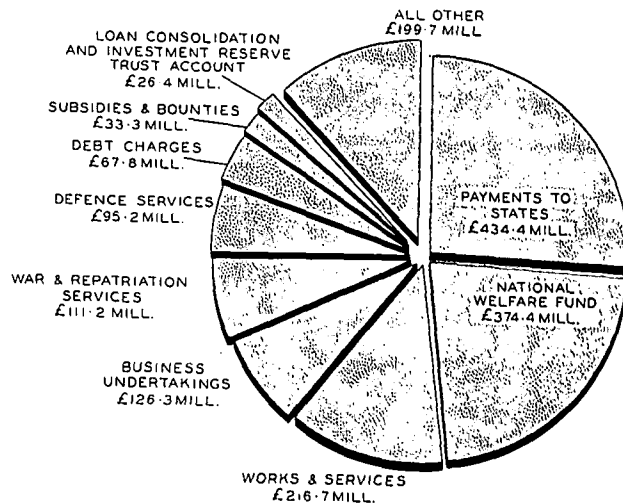
# COMMONWEALTH CONSOLIDATED REVENUE FUND, YEAR ENDED 30<sup>TH</sup> JUNE, 1963

REVENUE



TOTAL REVENUE  
£1,685.4 MILLION

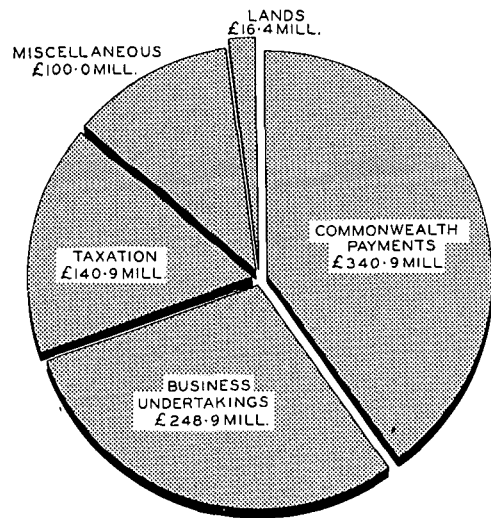
EXPENDITURE



TOTAL EXPENDITURE  
£1,685.4 MILLION

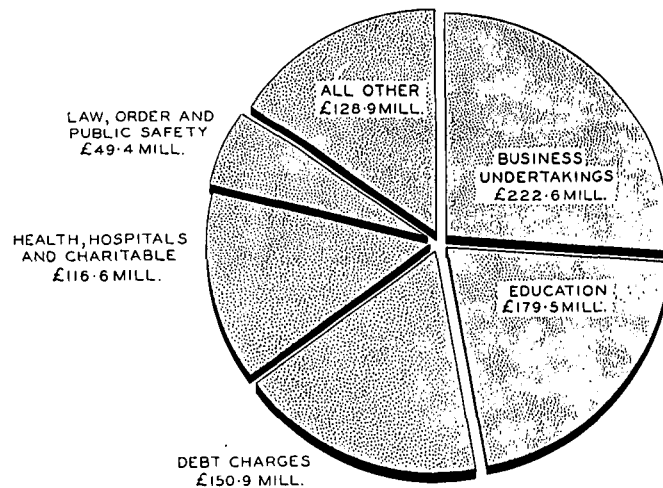
# STATE CONSOLIDATED REVENUE FUNDS, YEAR ENDED 30<sup>TH</sup> JUNE, 1963

## REVENUE



TOTAL REVENUE  
£847.1 MILLION

## EXPENDITURE



TOTAL EXPENDITURE  
£847.9 MILLION

Collections of Wheat Tax amounted to £207,000 in 1958–59, £187,000 in 1959–60, £261,000 in 1960–61, £234,000 in 1961–62 and £297,000 in 1962–63, and were paid to the Wheat Research Trust Account.

(m) *Miscellaneous Export Charges*. These consist of charges levied on exports of apples and pears (*Apple and Pear Export Charges Act 1938–1960*), canned fruits (*Canned Fruits Export Charges Act 1962–1963*), dairy produce (*Dairy Produce Export Charge Act 1924–1962*), dried fruits (*Dried Fruits Export Charges Act 1924–1929*), eggs (*Eggs Export Charges Act 1947*) and meat (*Meat Export Charges Act 1935–1954*), and on grapes used in the manufacture of wine (*Wine Grapes Charges Act 1929–1954*). The collections are paid into special funds to be applied, for the purposes of Export Boards established under various Acts, in controlling the quantity and quality of produce exported.

Collections for the last five years were as follows:—1958–59, £566,000; 1959–60, £540,000; 1960–61, £529,000; 1961–62, £618,000, and 1962–63, £826,000.

(n) *Stevedoring Industry Charge*. The *Stevedoring Industry Charge Act 1947* and the *Stevedoring Industry Charge Assessment Act 1947* imposed a charge of 4½d. a man-hour on the employer of a waterside worker after 22nd December, 1947.

The amounts received are paid to the Stevedoring Industry Board for the payment of attendance money to waterside workers and for other expenses of the Board.

Since 1947, the charge has been amended as follows:—11th October, 1949, a reduction to 2½d. a man-hour; 11th December, 1951, an increase to 4d. a man-hour; 28th October, 1952, an increase to 11d. a man-hour; 4th May, 1954, a reduction to 6d. a man-hour; 30th October, 1956, an increase to 1s. 7d. a man-hour; and from 21st May, 1957, an increase to 2s. a man-hour.

Further amendments under the Stevedoring Industry Charge Acts of 1958 and 1962 provided for an increase of the charge to 3s. a man-hour from 1st April, 1958 until 1st July, 1959, a reduction to 2s. 6d. a man-hour between 1st July, 1959 and 1st April, 1962, and an increase to 3s. 4d. a man-hour on or after 1st April, 1962.

Collections during the years 1958–59 to 1962–63 were as follows:—1958–59, £4,572,000; 1959–60, £3,717,000; 1960–61, £3,844,000; 1961–62, £3,433,000; and 1962–63, £4,493,000.

(o) *Tobacco Charge*. The *Tobacco Charge Acts* (Nos. 1, 2 and 3) 1955 and the *Tobacco Charges Assessment Act 1955*, which came into operation on 1st January, 1956, provided for charges on tobacco leaf grown in Australia.

The *Tobacco Charge Act* (No. 1) 1955 imposed a maximum charge of ½d. a pound on all Australian tobacco leaf sold to a manufacturer.

The *Tobacco Charge Act* (No. 2) 1955 imposed a charge at twice the rate to be levied under the *Tobacco Charge Act* (No. 1) on all Australian tobacco leaf purchased by a manufacturer.

The *Tobacco Charge Act* (No. 3) 1955 imposed a charge on all Australian tobacco leaf grown by a manufacturer and appropriated by him for manufacturing purposes. Where the manufacturer grew, in Australia, not less than nine-tenths of the tobacco leaf used by him in manufacturing, the charge was at the rate imposed by the *Tobacco Charge Act* (No. 1). In other cases, the charge was at twice that rate.

The charges collected under the *Tobacco Charges Assessment Act 1955* were paid into the Tobacco Industry Trust Account which was established by the *Tobacco Industry Act 1955*. Moneys in this account are used for the promotion of the tobacco industry.

Collections in 1958–59, 1959–60, 1960–61, 1961–62 and 1962–63 amounted to £72,000, £112,000, £136,000, £164,000 and £120,000 respectively.

(p) *Dairy Produce Levy*. The *Dairy Produce Levy Act 1958* imposed a levy on the manufacture of butter and cheese for the purpose of financing a research and sales promotion scheme for the dairy industry. The maximum rates of the levy are fixed at three-sixteenths of a penny a pound on butter and three-thirty-seconds of a penny on cheese. In 1958–59, 1959–60, 1960–61, 1961–62 and 1962–63, collections amounted to £151,000, £334,000, £350,000, £390,000 and £395,000, respectively.

(q) *Canning Fruit Charge*. The *Canning Fruit Charge Act 1959* imposed a levy on apricots, peaches and pears accepted by canneries as of canning quality or for use in the production of canned fruit, for the purpose of promoting the sale of Australian canned fruits both overseas and in Australia. The rate of the charge was ten shillings per ton of

fruit delivered to canneries or such lesser rate as may be prescribed from time to time. In 1959-60, 1960-61, 1961-62 and 1962-63, collections amounted to £35,000, £30,000, £45,000 and £71,000 respectively.

(r) *Cattle Slaughter Levy.* The *Cattle Slaughter Levy Act 1960* imposed a levy upon the slaughter of cattle for human consumption at rates to be prescribed from time to time but not exceeding two shillings per head of cattle slaughtered. The proceeds of this levy may be expended on purposes associated with scientific, economic, or technical research related to the raising of cattle or the production or distribution of beef and other products of the slaughter of cattle. In 1960-61, 1961-62 and 1962-63, collections amounted to £84,000, £210,000 and £406,000.

(s) *Honey Levy.* The *Honey Levy Act 1962* imposed a levy on honey sold for domestic consumption in Australia at the initial operative rate of one halfpenny a pound and provided for a maximum rate of one penny a pound. The proceeds of this levy may be expended on the regulation of Australian exports of honey and on associated promotional and research activities. In 1962-63, collections amounted to £3,000.

3. *Business Undertakings.*—(i) *Postmaster-General's Department.* Particulars of net receipts for each of the financial years 1958-59 to 1962-63 are given in the following table.

**POSTMASTER-GENERAL'S DEPARTMENT: NET RECEIPTS**  
(£'000)

Particulars	1958-59	1959-60	1960-61	1961-62 (a)	1962-63
Telegraph .. .. .	6,321	6,804	7,275	7,448	7,919
Telephone .. .. .	59,717	71,209	81,114	85,166	92,315
Postal .. .. .	34,379	40,531	44,211	47,104	49,427
Miscellaneous .. .. .	3,050	3,087	3,565	96	1,028
<b>Total .. .. .</b>	<b>103,467</b>	<b>121,631</b>	<b>136,165</b>	<b>139,814</b>	<b>150,689</b>

(a) Owing to changes in accounting practices, exact comparisons cannot be made with previous years.

(ii) *Broadcasting and Television Services.* Following the amendment of the *Australian Broadcasting Act 1942-1946* by Act No. 64 of 1948, the Australian Broadcasting Control Board was set up on 15th March, 1949. (See also Chapter XV. Transport and Communication, pp. 615-24).

Details of net receipts for the years 1958-59 to 1962-63 are shown in the following table.

**BROADCASTING AND TELEVISION SERVICES: NET RECEIPTS**  
(£'000)

Particulars	1958-59	1959-60	1960-61	1961-62	1962-63
Listeners' licence fees .. .. .	5,693	5,656	5,536	5,413	5,434
Broadcasting station licence fees .. .. .	85	88	104	97	107
Television viewers' licence fees .. .. .	2,777	4,624	5,781	6,626	7,778
Television station licence fees .. .. .	19	38	65	91	91
Miscellaneous .. .. .	44	54	67	126	164
<b>Total .. .. .</b>	<b>8,618</b>	<b>10,460</b>	<b>11,553</b>	<b>12,353</b>	<b>13,574</b>

(iii) *Commonwealth Railways.* The Commonwealth Government is responsible for four railways—the Trans-Australian, the Central Australia, the North Australia and the Australian Capital Territory. The following table shows the amounts paid to the credit of the Consolidated Revenue Fund on account of each of these railways for the years 1958-59 to 1962-63.

COMMONWEALTH RAILWAYS REVENUE  
(£'000)

Railway	1958-59	1959-60	1960-61	1961-62	1962-63
Trans-Australian .. .. .	2,927	3,249	4,091	4,187	4,493
Central Australia .. .. .	1,635	1,601	1,867	1,821	2,251
North Australia .. .. .	203	272	149	155	148
Australian Capital Territory .. .. .	46	25	42	59	45
<b>Total .. .. .</b>	<b>4,811</b>	<b>5,147</b>	<b>6,149</b>	<b>6,222</b>	<b>6,937</b>

Further particulars to 1962-63 are given in Chapter XV. Transport and Communication (see pp. 573-4 and 576-7).

4. **Other Sources of Revenue.**—Revenue derived by the Consolidated Revenue Fund from the Territories of the Commonwealth during 1962-63 amounted to £7,732,000 (Australian Capital Territory, £5,625,000; Northern Territory, £2,105,000; Cocos (Keeling) Islands, £2,000). Of other sources of revenue, amounting to £65,995,000, the following are noteworthy:—interest, £22,153,000; defence, £4,409,000; net profit on Australian note issue, £12,780,000.

For details of the revenue of the Territories see Chapter V. of this Year Book.

## EXPENDITURE

1. **Details of Expenditure from Consolidated Revenue.**—The following table shows details of expenditure from the Consolidated Revenue Fund during the years 1958-59 to 1962-63.

COMMONWEALTH CONSOLIDATED REVENUE FUND: EXPENDITURE  
(£'000)

Particulars	1958-59	1959-60	1960-61	1961-62	1962-63
<b>Debt charges(a)—</b>					
Interest (including exchange on oversea interest) .. .. .	47,701	46,617	43,489	43,039	40,441
Debt redemption .. .. .	14,204	19,190	23,104	25,109	27,243
Other(b) .. .. .	706	401	1,002	588	158
<i>Total .. .. .</i>	<i>62,611</i>	<i>66,208</i>	<i>67,595</i>	<i>68,736</i>	<i>67,842</i>
Defence services .. .. .	107,868	138,112	151,333	133,500	95,219
War and repatriation services .. .. .	78,770	86,579	97,947	104,280	111,158
Subsidies and bounties .. .. .	21,570	20,198	22,561	34,271	33,318
National Welfare Fund(c) .. .. .	273,460	295,064	326,447	360,877	374,425
Loan Consolidation and Investment Reserve					
Trust Account .. .. .	27,947	41,382	142,561	22,155	26,378
<b>Business undertakings—</b>					
Postmaster-General .. .. .	96,681	107,777	110,136	114,772	106,902
Broadcasting and television services .. .. .	8,371	9,983	11,372	12,800	14,055
Railways .. .. .	3,725	4,088	4,616	5,222	5,315
Territories .. .. .	20,240	23,559	26,839	30,328	34,874
<b>Works and services—</b>					
Defence .. .. .	45,198	44,723	49,325	48,112	55,154
Repatriation .. .. .	35,308	35,242	35,386	35,460	37,998
Postmaster-General .. .. .	36,353	39,937	42,145	46,939	62,093
Broadcasting services .. .. .	1,408	3,551	1,429	2,847	3,833
Railways .. .. .	1,281	1,091	1,248	1,697	2,208
Territories .. .. .	14,906	16,901	18,229	20,764	24,340
Other .. .. .	41,211	41,615	37,698	49,885	31,036
Payments to or for States .. .. .	293,564	330,542	363,191	406,030	434,448
Primary production—research sales promotion, etc. .. .. .	3,451	3,839	4,053	5,895	6,210
Other expenditure .. .. .	122,127	127,895	124,168	136,972	158,580
<b>Grand Total .. .. .</b>	<b>1,296,050</b>	<b>1,438,286</b>	<b>1,638,279</b>	<b>1,641,542</b>	<b>1,685,386</b>
<b>Per head of population .. .. .</b>	<b>£130.27</b>	<b>£141.50</b>	<b>£157.67</b>	<b>£154.78</b>	<b>£155.90</b>

(a) Excludes payments to or for the States under the Financial Agreement (see pp. 925-7).  
 (b) Redemption, conversion and loan management, etc., expenses. (c) Excludes Tuberculosis Benefits maintenance grants, included in Payments to or for the States—1958-59, £4,767,000; 1959-60, £4,299,000; 1960-61, £4,157,000; 1961-62, £4,314,000; 1962-63, £4,869,000.

Further details of the expenditure in each section are given in paragraphs 2 to 12 following.



2. Defence Services.—Details of the expenditure on defence services, including works and services, but excluding debt charges, etc., by the Departments of Defence, Navy, Army, Air and Supply are shown in the following table. This table covers expenditure by the service and associated departments only, and includes the cost of maintaining forces in overseas posts.

The figures represent the combined expenditures from Consolidated Revenue and Loan Funds for the years 1958–59 to 1962–63. In earlier issues of the Year Book, this table covered expenditure from Trust Funds also, but there has been no expenditure from this source on defence services in recent years.

**DEFENCE SERVICES(a): COMMONWEALTH EXPENDITURE FROM REVENUE AND LOAN FUNDS**  
(£'000)

Particulars	1958–59	1959–60	1960–61	1961–62	1962–63
Department of Defence .. .. .	1,008	1,231	1,303	1,660	2,817
Department of the Navy—					
Naval Forces—pay, maintenance, etc. ..	30,782	32,175	31,737	32,784	30,804
Naval construction and additions to the fleet ..	5,220	5,557	7,898	6,469	7,402
Ships, aircraft and aircraft engines ..	2,576	1,937	2,151	5,078	7,466
Buildings, works, etc. ..	1,548	1,165	1,745	1,721	1,781
Advances to States under Commonwealth-State Housing Agreement ..	254	274	311	236	180
Administrative and miscellaneous expenditure .. .. .	1,296	1,420	1,693	1,851	2,178
<i>Total, Navy .. .. .</i>	<i>41,676</i>	<i>42,528</i>	<i>45,535</i>	<i>48,139</i>	<i>49,811</i>
Department of the Army—					
Military Forces—pay, maintenance, etc. ..	41,184	44,210	42,162	43,023	43,601
Arms, armament, ammunition ..	18,939	15,924	17,333	16,846	18,479
Buildings, works, etc. ..	3,498	3,142	3,350	2,631	2,741
Advances to States under Commonwealth-State Housing Agreement ..	456	394	568	427	690
Administrative and miscellaneous expenditure .. .. .	2,645	2,676	3,296	3,159	3,426
<i>Total, Army .. .. .</i>	<i>66,722</i>	<i>66,346</i>	<i>66,709</i>	<i>66,086</i>	<i>68,937</i>
Department of Air—					
Air Force—pay, maintenance, etc. ..	27,038	29,711	31,662	32,795	33,372
Aircraft, equipment and stores ..	25,874	26,011	25,064	26,091	27,782
Buildings, works, etc. ..	4,147	3,650	3,833	3,266	3,072
Advances to States under Commonwealth-State Housing Agreement ..	485	393	551	679	580
Administrative and miscellaneous expenditure .. .. .	2,296	2,472	3,137	3,228	3,509
<i>Total, Air .. .. .</i>	<i>59,840</i>	<i>62,237</i>	<i>64,247</i>	<i>66,059</i>	<i>68,315</i>
Department of Supply—					
Weapons Research Establishment ..	9,500	9,500	9,490	9,510	7,628
Defence research and development ..	1,311	1,321	1,383	1,520	2,669
Buildings, works, etc. ..	1,157	1,083	1,240	1,215	1,301
Administrative and miscellaneous expenditure .. .. .	8,026	8,879	8,860	9,373	11,453
<i>Total, Supply .. .. .</i>	<i>19,994</i>	<i>20,783</i>	<i>20,973</i>	<i>21,618</i>	<i>23,051</i>
Economic assistance to support defence programme of S.E.A.T.O. member countries ..	298	684	776	577	1,248
Administration of National Service Act ..	159	93	..	..	273
Civil defence .. .. .	102	105	112	222	500
Recruiting campaign .. .. .	311	302	474	481	1,446
Aid to India .. .. .	..	..	..	..	42
Other .. .. .	262	496	520	385	..
Source—					
Consolidated Revenue Fund .. .. .	153,066	182,835	100,658	181,612	150,373
Loan Fund .. .. .	37,306	11,970	—9	23,615	66,067
<i>Grand Total .. .. .</i>	<i>190,372</i>	<i>194,805</i>	<i>200,649</i>	<i>205,227</i>	<i>216,440</i>

(a) Excludes expenditure on debt charges, audit charges, pension and superannuation payments and Defence Division of the Department of the Treasury.

3. War and Repatriation Services.—Expenditure from Consolidated Revenue and Loan Fund for war and repatriation services (excluding debt charges) in relation to both the 1914-18 and 1939-45 Wars is shown in the following table for the years 1958-59 to 1962-63. Expenditure on the maintenance of forces in oversea posts and the cost of arms and equipment is included in Defence Services.

**WAR AND REPATRIATION SERVICES: COMMONWEALTH EXPENDITURE  
FROM CONSOLIDATED REVENUE AND LOAN FUNDS**

(£'000)

Particulars	1958-59	1959-60	1960-61	1961-62	1962-63
War gratuities .. .. .	8	9	10	13	3
War and service pensions and widows' allowances .. .. .	60,770	65,823	73,673	77,270	81,347
Commonwealth Reconstruction Training Scheme .. .. .	365	297	212	154	86
War service land settlement .. .. .	7,520	8,458	3,670	3,549	2,170
Re-establishment loans for agricultural purposes .. .. .	63	58	37	39	38
Repatriation Department—					
Repatriation benefits .. .. .	12,456	13,908	15,646	17,283	19,875
Other benefits .. .. .	608	646	730	824	959
Administration and general expenses .. .. .	3,009	3,581	3,846	4,887	5,070
<i>Total, Repatriation Department ..</i>	<i>16,073</i>	<i>18,135</i>	<i>20,222</i>	<i>22,994</i>	<i>25,904</i>
War service homes—salaries and general expenses .. .. .	978	1,127	1,105	1,170	1,296
Other departments—miscellaneous expenditure .. .. .	368	392	432	538	485
Other administrations—recoverable expenditure(a) .. .. .	-1,675	-782	613	129	436
Capital works and services—					
Repatriation Department .. .. .	308	242	386	461	498
War Service Homes Act 1918-1949 .. .. .	35,000	35,000	35,000	35,000	37,500
<i>Total, Capital Works and Services ..</i>	<i>35,308</i>	<i>35,242</i>	<i>35,386</i>	<i>35,461</i>	<i>37,998</i>
Total, War and Repatriation Services—					
Consolidated Revenue Fund .. .. .	114,078	121,821	133,333	139,740	149,156
Loan Fund .. .. .	5,700	6,938	2,027	1,577	607
<b>Grand Total .. .. .</b>	<b>119,778</b>	<b>128,759</b>	<b>135,360</b>	<b>141,317</b>	<b>149,763</b>

(a) Munitions stores, etc., supplied to the British Government and other administrations. Includes repayments and waiver of war-time indebtedness of other administrations.

NOTE.—Minus sign (–) indicates excess of credits or repayments over expenditure.

4. Subsidies and Bounties.—The following table shows details of Commonwealth expenditure from revenue on subsidies, bounties and assistance to primary producers for the years 1958-59 to 1962-63. Expenditure on special relief such as drought, frost, flood and bush fire, etc., is not included here (included under items in tables, pp. 925-7), nor is expenditure from the proceeds of certain taxes on primary products and profits from marketing schemes, which have been paid to trust funds for the purpose of price or other stabilization schemes or for distribution to producers (see paragraph 11, p. 932). Payments to the States for Cattle Tick Control, Dairy Industry Extension and Agricultural Advisory Services are also not included under this heading, but under the heading Payments to or for the States (see para. 10, pp. 925-7).

Further information relating to assistance to primary producers is given in Chapter XXIII. Rural Industry. Details of price stabilization subsidies and of various forms of assistance to primary producers for earlier years may be found on pages 414 and 1014-15, respectively, of Year Book No. 38.

**SUBSIDIES AND BOUNTIES: COMMONWEALTH EXPENDITURE**  
(£'000)

Particulars	1958-59	1959-60	1960-61	1961-62	1962-63
Dairy industry(a) .. .. .	13,500	13,500	13,500	13,500	13,500
Wheat prices stabilization .. .. .	1,211	2	..	11,906	7,288
Oil search .. .. .	463	360	1,399	2,543	5,000
Air services .. .. .	500	500	500	500	500
Assistance to gold mining industry .. .. .	898	838	699	659	791
Cellulose acetate flake .. .. .	110	128	127	69	101
Coastal shipping service—					
Tasmania .. .. .	202	49	..	13	..
Papua and New Guinea .. .. .	100	100	100	112	150
Copper .. .. .	768	408	405	687	699
Copper and brass strip .. .. .	..	..	..	..	19
Cotton .. .. .	140	214	374	315	287
Flax fibre .. .. .	93	83	5	12	18
Processed milk products .. .. .	..	..	..	..	284
Pyrites .. .. .	..	..	86	397	398
Rayon yarns .. .. .	69	72	72	69	135
Ship construction .. .. .	1,800	1,842	3,000	1,553	1,800
South American shipping service .. .. .	..	..	..	50	111
Sulphate of ammonia .. .. .	..	..	..	..	180
Sulphuric acid .. .. .	1,301	1,481	1,353	1,009	1,094
Tractor .. .. .	415	621	941	877	963
<b>Total .. .. .</b>	<b>21,570</b>	<b>20,198</b>	<b>22,561</b>	<b>34,271</b>	<b>33,318</b>

(a) Dairy products.

5. **National Welfare Fund.**—The National Welfare Fund was established for the purpose of providing a fund for the payment of Commonwealth social services benefits. During the year 1949-50, an amount equivalent to the total collections of pay-roll tax and social services contribution was paid to the fund from Consolidated Revenue. During 1950-51, the social services contribution was amalgamated with the normal income tax, and it became necessary to base the contribution on another formula. For the year 1950-51, the amount paid to the fund was the total of collections of pay-roll tax and social services contribution plus £30,000,000. In 1951-52, the amount paid to the fund was the amount paid in 1950-51 increased in the same proportion as collections of pay-roll tax increased over the collections of pay-roll tax in 1950-51. By an amendment to the *National Welfare Fund Act 1943-1950*, the amount to be paid to the fund in 1952-53 and subsequent years was changed to the amount of moneys paid out of the fund. In addition to these payments from Consolidated Revenue, the fund received interest from investments.

In the following table, details are given of the income and expenditure of the National Welfare Fund and the balance in the fund at the end of each year for the years 1958-59 to 1962-63. For a detailed account of the establishment of the National Welfare Fund, the services provided and the numbers and amounts of benefits paid, see Chapter XVI. Welfare Services.

**NATIONAL WELFARE FUND: RECEIPTS, EXPENDITURE AND BALANCES**  
(£'000)

Year	Income			Expenditure (a)	Balance in fund at end of year
	Contribution from Consolidated Revenue (a)	Interest on investments	Total (a)		
1958-59 .. .. .	278,227	1,977	280,204	278,227	198,997
1959-60 .. .. .	299,363	2,002	301,365	299,363	200,999
1960-61 .. .. .	330,604	2,017	332,621	330,604	203,016
1961-62 .. .. .	365,191	2,037	367,228	365,191	205,053
1962-63 .. .. .	379,295	2,059	381,354	379,294	207,113

(a) Includes Tuberculosis Benefits maintenance grants elsewhere included in Payments to or for the States—1958-59, £4,767,000; 1959-60, £4,299,000; 1960-61, £4,157,000; 1961-62, £4,314,000; 1962-63, £4 869 000

6. **Loan Consolidation and Investment Reserve Trust Account.**—The *Loan Consolidation and Investment Reserve Act 1955* established the Loan Consolidation and Investment Reserve Trust Account for the purpose of repurchase or redemption of securities on issue on account of the Commonwealth.

Payments from the Consolidated Revenue Fund were made as follows:—1958–59, £27,947,000; 1959–60, £41,382,000; 1960–61, £142,561,000; 1961–62, £22,155,000; and 1962–63, £26,378,000. Expenditure from the Trust Account on repurchase of securities was £100,046,000 in 1958–59; £79,885,000 in 1959–60; £30,899,000 in 1960–61; £67,847,000 in 1961–62; and £103,782,000 in 1962–63. The major portion of the balance of the Trust Account at 30th June, 1963, was invested in Commonwealth securities in special loans to finance Commonwealth and State works programmes.

7. **Business Undertakings.**—(i) *Postmaster-General's Department.* Details of the expenditure of this Department for the years 1958–59 to 1962–63 are given in the following table.

**POSTMASTER-GENERAL'S DEPARTMENT: EXPENDITURE**  
(£'000)

Particulars	1958–59	1959–60	1960–61	1961–62	1962–63
Salaries, stores and materials, mail, engineering services, etc. . . . .	95,306	106,404	108,593	113,113	105,139
Rents, repairs, etc. . . . .	1,375	1,373	1,543	1,659	1,763
<i>Total, Working, etc., Expenses</i> . . . . .	<i>96,681</i>	<i>107,777</i>	<i>110,136</i>	<i>114,772</i>	<i>106,902</i>
Works and services . . . . .	36,353	39,937	42,145	46,939	62,093
<b>Grand Total</b> . . . . .	<b>133,034</b>	<b>147,714</b>	<b>152,281</b>	<b>161,711</b>	<b>168,995</b>

Further details of the Postmaster-General's Department expenditure for 1962–63 appear in Chapter XV. Transport and Communication, of this Year Book (see p. 607).

(ii) *Broadcasting and Television Services.* Details of expenditure for the years 1958–59 to 1962–63 are shown in the following table. Further details of broadcasting and television services appear in Chapter XV. Transport and Communication of this Year Book (see p. 615).

**COMMONWEALTH BROADCASTING AND TELEVISION SERVICES:**  
**EXPENDITURE**  
(£'000)

Particulars	1958–59	1959–60	1960–61	1961–62	1962–63
Australian Broadcasting Control Board . . . . .	192	258	301	319	348
Australian Broadcasting Commission—Salaries, general and programme expenses . . . . .	5,936	7,238	8,460	9,300	10,302
Technical and other services—Postmaster-General—Sound broadcasting . . . . .	2,060	2,181	2,195	2,590	2,627
Television . . . . .	159	275	386	517	686
Repairs, maintenance, etc. . . . .	24	31	30	74	92
<i>Total, Working, etc., Expenses</i> . . . . .	<i>8,371</i>	<i>9,983</i>	<i>11,372</i>	<i>12,800</i>	<i>14,055</i>
Works and services . . . . .	1,408	3,551	1,429	2,847	3,833
<b>Grand Total</b> . . . . .	<b>9,779</b>	<b>13,534</b>	<b>12,801</b>	<b>15,647</b>	<b>17,888</b>

(iii) *Railways.* The expenditure on railways for the years 1958–59 to 1962–63 is shown below.

**COMMONWEALTH RAILWAYS: EXPENDITURE**  
(£'000)

Particulars	1958–59	1959–60	1960–61	1961–62	1962–63
Working expenses—					
Trans-Australian . . . . .	2,301	2,610	3,047	3,379	3,508
North Australia . . . . .	169	202	170	183	208
Central Australia . . . . .	1,168	1,185	1,288	1,561	1,487
Aust. Capital Territory . . . . .	50	52	59	61	67
Miscellaneous . . . . .	37	39	52	38	45
<i>Total, Working, etc., Expenses</i> . . . . .	<i>3,725</i>	<i>4,088</i>	<i>4,616</i>	<i>5,222</i>	<i>5,315</i>
Works and services . . . . .	1,281	1,091	1,248	1,697	2,208
<b>Grand Total</b> . . . . .	<b>5,006</b>	<b>5,179</b>	<b>5,864</b>	<b>6,919</b>	<b>7,523</b>

Additional details of the financial operations of the Commonwealth Railways to 1962–63 are given in Chapter XV. Transport and Communications (see p. 573–7).

8. Territories.—The following table shows the expenditure on account of Commonwealth Territories for the years 1958–59 to 1962–63. The Australian Capital Territory is administered by the Department of the Interior, and the Department of Territories controls the Northern Territory and the external territories. The expenditure has been grouped in one table for convenience. Information in greater detail will be found in Chapter V. The Territories of Australia, of this Year Book.

**COMMONWEALTH TERRITORIES: EXPENDITURE**  
(£'000)

Territory	1958–59	1959–60	1960–61	1961–62	1962–63
Administration and maintenance of services—					
Aust. Capital Territory(a) ..	3,685	4,301	4,805	5,020	5,825
Northern Territory(a) ..	4,877	6,245	6,853	7,758	8,769
Papua and New Guinea ..	11,611	12,951	15,094	17,477	20,197
Norfolk Island ..	31	32	32	38	46
Cocos (Keeling) Islands ..	36	30	55	35	37
<i>Total</i> ..	<i>20,240</i>	<i>23,559</i>	<i>26,839</i>	<i>30,328</i>	<i>34,874</i>
Works and services—					
Aust. Capital Territory(a) ..	11,098	12,433	13,157	13,811	16,474
Northern Territory(a) ..	3,678	3,874	4,531	6,380	7,179
Papua and New Guinea ..	87	591	532	569	682
Cocos (Keeling) Islands ..	43	3	9	4	5
<i>Total</i> ..	<i>14,906</i>	<i>16,901</i>	<i>18,229</i>	<i>20,764</i>	<i>24,340</i>

(a) Excludes Railways, see para. 7 (iii), page 923.

9. Works and Services.—In the following table, details are given of Commonwealth expenditure on works and services during each of the years 1958–59 to 1962–63. The table covers expenditure on works and services made from the Consolidated Revenue Fund. In earlier issues of the Year Book, this table also covered expenditure from Trust and Loan Funds.

**COMMONWEALTH EXPENDITURE ON WORKS AND SERVICES FROM  
CONSOLIDATED REVENUE**  
(£'000)

Particulars	1958–59	1959–60	1960–61	1961–62	1962–63
Defence services—					
Navy .. .. .	7,504	6,996	9,980	10,594	14,485
Army .. .. .	15,831	13,163	15,270	13,487	14,259
Air Force .. .. .	14,847	12,676	15,427	15,733	17,103
Other .. .. .	7,016	11,888	8,648	8,298	9,307
Repatriation services—					
War service homes .. .. .	35,000	35,000	35,000	35,000	37,500
Other .. .. .	308	242	386	460	498
Postmaster-General's Department .. .. .	36,353	39,937	42,145	46,939	62,093
Broadcasting and television services .. .. .	1,408	3,551	1,429	2,847	3,833
Railways—					
Commonwealth .. .. .	1,281	1,091	1,248	1,697	2,208
Overseas telecommunications .. .. .	..	..	..	1,000	3,500
Territories—					
Australian Capital Territory .. .. .	11,098	12,433	13,157	13,811	16,474
Northern Territory .. .. .	3,678	3,874	4,531	6,380	7,179
Papua-New Guinea .. .. .	87	591	532	569	682
Cocos (Keeling) Islands .. .. .	43	3	9	4	5
Other—					
Civil aviation .. .. .	5,688	4,801	5,999	4,564	5,089
Snowy Mountains Scheme .. .. .	24,000	28,250	18,500	16,010	9,266
Immigration .. .. .	270	350	391	460	507
Health .. .. .	678	811	789	534	311
Subscriptions to capital .. .. .	4,750	1,300	2,680	12,150	500
Advances .. .. .	230	166	500	..	..
Australian National University .. .. .	613	623	1,044	2,020	1,449
All other works, buildings, etc. .. .. .	4,982	5,314	7,795	13,147	10,414
<i>Grand Total</i> .. .. .	<i>175,665</i>	<i>183,060</i>	<i>185,460</i>	<i>205,704</i>	<i>216,662</i>

(a) In addition, an amount of £13,100,000 was provided from Loan Fund

10. Payments to or for the States.—(i) *General.* An outline of the provisions of the Constitution requiring the Commonwealth to make payments to the States, and of the systems which followed, is given in earlier issues of the Year Book (see No. 37, pp. 633 to 638). The following paragraphs refer to the existing arrangements.

(ii) *Amounts Paid.* (a) Year 1962-63. The table below shows particulars of the amounts paid to each of the States as grants for the several purposes referred to in subsequent paragraphs.

## COMMONWEALTH PAYMENTS TO OR FOR THE STATES, 1962-63(a)

(£'000)

Particulars	N.S.W.	Vic.	Q'land	S.A.	W.A.	Tas.	Total
<b>Financial Agreement—</b>							
Interest on States' debts ..	2,917	2,127	1,096	704	474	267	7,585
Sinking fund on States' debts(b) ..	2,491	1,695	913	962	701	486	7,248
Special grants .. .. .	..	..	..	..	6,210	5,041	11,251
Financial assistance grants ..	103,321	76,134	45,541	34,776	31,240	13,308	304,320
Additional financial assistance ..	4,646	3,727	4,240	2,003	1,364	1,520	17,500
Commonwealth Aid Roads(c) ..	14,940	10,877	9,796	6,200	9,487	2,700	54,000
Tuberculosis Act 1948—reimbursement of capital expenditure ..	70	55	315	13	34	5	492
National Welfare Fund—Tuberculosis Benefits—maintenance grants .. .. .	1,746	1,271	894	376	400	182	4,869
Mental institutions—contribution to capital expenditure .. .. .	647	..	38	52	58	..	795
Coal mining industry—long service leave(c) .. .. .	220	..	42	..	15	4	281
Grants to universities .. .. .	6,166	4,655	1,659	1,570	1,150	509	15,709
Cattle tick control .. .. .	268	..	..	..	..	..	268
Dairy industry extension grant ..	65	65	66	18	21	9	244
Expansion of agricultural advisory services .. .. .	76	60	56	27	26	18	263
Development of north-western Australia .. .. .	..	..	..	..	1,432	..	1,432
Railway projects(d) .. .. .	173	1,315	..	1,300	2,163	..	4,951
Cattle roads(d) .. .. .	..	..	1,000	..	700	..	1,700
Coal loading works—New South Wales(e) .. .. .	498	..	..	..	..	..	498
Natural disaster payments .. .. .	65	..	..	..	..	..	65
Replacement of Derby jetty(d) ..	..	..	..	..	300	..	300
Brigalow lands development(e) ..	..	..	600	..	..	..	600
Cattle dip chemicals .. .. .	48	..	5	..	..	..	53
Tobacco industry extension services	3	8	13	..	..	..	24
<b>Total .. .. .</b>	<b>138,360</b>	<b>101,989</b>	<b>66,274</b>	<b>48,001</b>	<b>55,775</b>	<b>24,049</b>	<b>434,448</b>

(a) Excludes relief to primary producers, subsidies and bounties, and other payments for medical research, etc. (b) Paid to National Debt Sinking Fund. (c) Paid to Trust Fund. (d) Includes repayable advances. (e) Repayable advances.

(b) 1958-59 to 1962-63. The following table shows particulars of payments by the Commonwealth to or on behalf of the States during each of these years.

**COMMONWEALTH PAYMENTS TO OR FOR THE STATES(a)**  
(£'000)

Particulars	1958-59	1959-60	1960-61	1961-62	1962-63
<b>Financial Agreement—</b>					
Interest on States' debts .. ..	7,585	7,585	7,585	7,585	7,585
Sinking fund on States' debts(b) ..	5,386	5,942	6,274	6,739	7,248
Special grants .. .. .	20,750	8,326	8,618	11,231	11,251
Financial assistance grants .. ..	174,547	244,500	269,994	292,140	304,320
Special financial assistance .. ..	30,437	..	..	..	..
Additional financial assistance .. ..	..	..	..	10,000	17,500
Grants for road construction, etc.(c) ..	33,249	43,923	46,000	50,000	54,000
Commonwealth Aid Roads—special assistance .. .. .	2,950	..	..	..	..
Tuberculosis Act 1948—reimbursement of capital expenditure .. .. .	1,412	781	410	386	492
National Welfare Fund—Tuberculosis Benefits—maintenance grants .. ..	4,767	4,299	4,157	4,314	4,869
Mental institutions—contribution to capital expenditure .. .. .	1,120	1,147	727	824	795
Western Australian waterworks grants ..	524	609	517	61	..
Coal mining industry—long service leave(c)	525	484	380	290	281
Encouragement of meat production .. ..	16	6	7	5	..
Grants to universities .. .. .	6,919	7,628	11,227	14,161	15,709
Cattle tick control .. .. .	578	477	541	330	268
Dairy industry extension grant .. ..	261	247	243	246	244
Expansion of agricultural advisory services	236	218	264	260	263
Development of north-western Australia ..	171	484	1,208	1,705	1,432
Railway projects(d) .. .. .	1,882	3,723	4,716	4,000	4,951
Cattle roads(d) .. .. .	..	..	..	1,150	1,700
Coal loading works—New South Wales(e) ..	..	..	..	284	498
Natural disaster payments .. .. .	99	163	323	319	65
Eradication of house borers .. .. .	150	..	..	..	..
Replacement of Derby jetty(d) .. ..	..	..	..	..	300
Brigalow lands development(e) .. ..	..	..	..	..	600
Cattle dip chemicals .. .. .	..	..	..	..	53
Tobacco industry extension services .. ..	..	..	..	..	24
<b>Total .. .. .</b>	<b>293,564</b>	<b>330,542</b>	<b>363,191</b>	<b>406,030</b>	<b>434,448</b>

(a) Excludes relief to primary producers, subsidies and bounties, and other payments for medical research, etc. (b) Paid to National Debt Sinking Fund. (c) Paid to Trust Fund. (d) Includes repayable advances. (e) Repayable advances.

(c) The following table shows particulars of payments by the Commonwealth to each of the States to 30th June, 1963.

COMMONWEALTH PAYMENTS TO OR FOR THE STATES TO 30th JUNE, 1963(a)  
(£'000)

Particulars	N.S.W.	Vic.	Q'land	S. Aust.	W. Aust.	Tas.	Total
Section 87 of Constitution, 1900-01 to 1909-10 ..	27,732	19,988	8,921	6,193	8,758	2,612	74,204
Surplus Revenue Acts 1910-11 to 1926-27 ..	41,508	31,168	15,158	9,879	9,757	4,357	111,827
Financial agreements, 1927-28 to 1962-63 ..	139,885	96,885	51,567	37,293	26,700	14,392	366,722
Special grants(b) ..	..	..	..	78,096	119,401	55,178	252,675
Income tax reimbursement grants, 1942-43 to 1945-46(c) ..	55,419	24,330	22,212	9,038	9,492	3,409	123,900
Income tax reimbursement special grants, 1945-46 to 1946-47(c) ..	..	..	..	1,654	913	119	2,686
Entertainments tax reimbursement grants, 1942-43 to 1945-46(d) ..	603	1,399	..	364	368	138	2,872
Tax reimbursement grants, 1947-48 to 1958-59(e) ..	525,633	336,069	215,973	120,052	108,474	45,635	1,351,836
Additional tax reimbursement grants(f) ..	2,027	1,160	814	429	410	160	5,000
Special financial assistance(g) ..	80,419	55,320	31,388	17,345	15,603	6,799	206,874
Additional assistance(h) ..	1,989	1,061	1,125	368	315	142	5,000
Non-recurring grants from excess receipts, 1934-35 to 1936-37 ..	1,188	827	433	265	201	86	3,000
Financial assistance grants(i) ..	378,008	277,145	165,597	126,403	114,764	49,037	1,110,954
Additional financial assistance(j) ..	6,886	5,527	7,580	2,973	2,024	2,510	27,500
Special assistance(k) ..	23,131	8,467	8,250	4,923	14,560	1,195	60,526
Grants for road construction 1922-23 to 1962-63(l) ..	134,172	90,020	90,719	54,327	90,215	24,175	483,628
Payments to Commonwealth Aid Roads (Supplementary) Trust Account(m) ..	..	..	..	..	..	..	5,000
Tuberculosis Act 1948—reimbursement of capital expenditure ..	5,169	1,726	5,300	751	2,272	303	15,521
Tuberculosis Act 1948—maintenance grants ..	16,501	13,751	7,645	4,140	5,427	2,087	49,551
Mental institutions—contribution to capital expenditure ..	3,201	2,740	666	632	296	355	7,890
Encouragement of meat production ..	..	..	1,326	..	835	..	2,161
Grants to universities ..	27,536	17,163	7,782	7,147	5,327	3,342	68,297
Railways projects(n) ..	173	15,800	..	6,410	2,163	..	24,546
<b>Total</b> ..	<b>1,471,180</b>	<b>1,000,546</b>	<b>642,456</b>	<b>488,682</b>	<b>538,275</b>	<b>216,031</b>	<b>4,362,170</b>

(a) Includes non-recurring grants from excess receipts, but excludes payments on account of the Morgan-Whyalla Waterworks, amounts provided for relief of wheat-growers and other primary producers, and other payments for medical research, social services, etc. (b) Under various States Grants Acts. (c) Under States Grants (Income Tax Reimbursement) Act 1942. (d) Under States Grants (Entertainments Tax Reimbursement) Act 1942. (e) Under States Grants (Tax Reimbursement) Act 1946-1948. (f) Under States Grants (Additional Tax Reimbursement) Act 1950. (g) Under States Grants (Special Financial Assistance) Acts 1951 and 1952. (h) Under States Grants (Additional Assistance) Act 1958. (i) Under States Grants Act 1959. (j) Under States Grants (Additional Assistance) Act 1962. (k) Includes natural disaster (flood, cyclone, bush fire, drought, etc.) payments, unemployment relief, metalliferous mining, forestry, local public works, grants for price control reimbursement, coal strike emergency grant, grants for imported houses, Port Augusta-Port Pirie railway, Western Australian waterworks, cattle tick control, dairy industry extension, agricultural advisory services, cattle roads, coal-loading works, eradication of house borers, brigalow lands, cattle dip chemicals, tobacco industry extension services, etc. (l) Under Main Roads Development, Federal Aid Roads, Federal Aid Roads and Works and Commonwealth Aid Roads Acts. (m) Expenditure not allocable between States. (n) Under the Railway Standardization (South Australia) Agreement Act 1949 and the Railway Standardization (New South Wales and Victoria) Agreement Act 1958. Includes repayable advances.

(iii) *Financial Agreement.* Details of the Financial Agreement between the Commonwealth and the States are given in Year Book No. 37, pages 685-90. Under this Agreement, the Commonwealth undertook to contribute £7,584,912 per annum towards interest payable on the State loan securities for a period of 58 years from 1st July, 1927. This amount is distributed among the States as follows:—New South Wales, £2,917,411; Victoria, £2,127,159; Queensland, £1,096,235; South Australia, £703,816; Western Australia, £473,432; Tasmania, £266,859.

These amounts are equal to the sums paid by the Commonwealth to each State in the year 1926-27 at the rate of 25s. per head of population, the rate at which the Commonwealth had contributed annually to the States since 1st July, 1910, as compensation for the States relinquishing, after federation, the right to levy customs and excise duties.



In addition, under the Financial Agreement, the Commonwealth agreed to make certain contributions to the National Debt Sinking Fund for redemption of State loan securities. Details of these are given on pages 952-3 of this chapter.

(iv) *Special Grants.* The Constitution provides in Section 96 for the granting of special financial assistance to the States. Prior to 1933, financial assistance of varying amounts was granted by the Commonwealth to South Australia, Western Australia and Tasmania. Details of this may be found in earlier issues of the Year Book (see No. 40, p. 695).

In 1933, the Commonwealth Government appointed the Commonwealth Grants Commission of three members to inquire into and report upon claims made by any State for a grant of financial assistance and any matters relevant thereto.

Applications have been received from South Australia, Western Australia and Tasmania each year from 1933 onwards, and the recommendations of the Commission in respect of the years 1959-60 to 1963-64 are shown in the following table. Commencing with 1949-50, the Commission has divided the grants recommended into two parts. One part is the Commission's estimate of the indispensable need of the claimant State for the year in which the payment is to be made after allowing a sufficient margin for safety. The other part is an adjustment of this estimate for an earlier year after an examination of the audited accounts for that year. Thus the grants for 1963-64 include an estimate of the indispensable need of the claimant State for 1963-64 and an adjustment to the estimated grant for 1961-62. South Australia agreed with the Commonwealth not to apply for special grants in other than exceptional circumstances after 1st July, 1959, when the new financial arrangements under the *States Grants Act 1959* came into operation (see sub-para. (v) below).

**COMMONWEALTH GRANTS COMMISSION: GRANTS RECOMMENDED**  
(£'000)

Particulars	1959-60	1960-61	1961-62	1962-63	1963-64
<b>South Australia—</b>					
Estimated grant .. ..	..	..	..	..	..
Adjustment(a) .. ..	(b) 1,426	..	..	..	..
<i>Net grant recommended</i> ..	<u>1,426</u>	..	..	..	..
<b>Western Australia—</b>					
Estimated grant .. ..	3,149	3,700	5,200	5,900	5,900
Adjustment(a) .. ..	351	609	956	310	172
<i>Net grant recommended</i> ..	<u>3,500</u>	<u>4,309</u>	<u>6,156</u>	<u>6,210</u>	<u>6,072</u>
<b>Tasmania—</b>					
Estimated grant .. ..	2,597	3,400	4,100	4,900	5,100
Adjustment(a) .. ..	803	909	975	141	278
<i>Net grant recommended</i> ..	<u>3,400</u>	<u>4,309</u>	<u>5,075</u>	<u>5,041</u>	<u>5,378</u>
<b>Grand Total .. ..</b>	<b>8,326</b>	<b>8,618</b>	<b>11,231</b>	<b>11,251</b>	<b>11,450</b>

(a) Adjustment to estimated grant paid two years previously. (b) Includes the final adjusting payment of £1,027,000 in 1959-60.

(v) *Financial Assistance Grants.* The *States Grants Act 1959* repealed the *States Grants (Tax Reimbursement) Acts* of 1946, 1947 and 1948 and provided for payment of financial assistance to the States in 1959-60 amounting to £244,500,000 to be distributed among the States as follows:—New South Wales, £83,450,000; Victoria, £60,625,000; Queensland, £36,375,000; South Australia, £27,675,000; Western Australia, £25,462,000; Tasmania, £10,913,000. In subsequent years, the financial assistance grant payable to each State has been determined by increasing its grant for 1959-60 in accordance with a formula which takes into account movements in population in each State and the increases (if any) in the level of average wages per person employed as shown in returns submitted under the *Pay-roll Tax Assessment Act 1941-1961*. In 1962-63, the grants determined according to this formula were as follows:—New South Wales, £103,321,000; Victoria, £76,134,000; Queensland, £45,541,000; South Australia, £34,776,000; Western Australia, £31,240,000; Tasmania, £13,308,000.

Details of the *States Grants (Income Tax Reimbursement) Act 1942* and the *States Grants (Entertainments Tax Reimbursement) Act 1942* are given in earlier issues of the Year Book (see No. 37, pp. 635–7). These Acts provided for grants to the States as compensation for vacating the fields of income tax and entertainments tax. Grants under these Acts ceased after 1945–46 and were replaced by grants under the *States Grants (Tax Reimbursement) Act 1946–1948* which expired after 1958–59. See Year Book No. 46, pages 837–8.

(vi) *Special Financial Assistance Grants*. During the years 1954–55 to 1958–59, special assistance grants amounting to £19,902,000, £15,348,000, £19,405,000, £24,145,000 and £30,437,000, respectively, were made to assist the States in meeting their increasing financial needs. For details of amounts paid to each State see earlier issues of the Year Book or the annual bulletin *Commonwealth Finance*.

(vii) *Additional Financial Assistance*. The *States Grants (Additional Assistance) Act 1958* provided for the payment of £5,000,000 from the Consolidated Revenue Fund for financial assistance to the States.

During 1961–62 and 1962–63 additional assistance grants of £10,000,000 and £17,500,000, respectively were provided for the States on a non-repayable basis under the authority of the *States Grants (Additional Assistance) Acts 1962* and 1963 for expenditure on employment-giving activities, mainly in the works field.

(viii) *Grants for Road Construction*. (a) *Main Roads Development Act 1923–1925, Federal Aid Roads Acts 1926, 1931 and 1936, Federal Aid Roads and Works Act 1937, Commonwealth Aid Roads and Works Act 1947–1949, Commonwealth Aid Roads Act 1950, Commonwealth Aid Roads Act 1954, and Commonwealth Aid Roads (Special Assistance) Act 1957*. Details of these Acts are given in earlier issues of the Year Book (see No. 38, pp. 787–8, No. 41, p. 62, and No. 46, p. 838) and in the annual bulletin *Commonwealth Finance*.

(b) *Commonwealth Aid Roads Act 1959*. A new scheme of Commonwealth assistance to the States for roads was established by the *Commonwealth Aid Roads Act 1959*. Under this Act, which is to operate for a period of five years from 1st July, 1959, the Commonwealth has undertaken to make available up to £250,000,000 to the States for the construction, reconstruction, maintenance and repair of roads.

Of this amount, a total of £220,000,000 will be paid to the States as basic grants for roads over five years. The basic grants are fixed annual amounts which rise progressively by £2,000,000 a year from £40,000,000 in 1959–60 to £48,000,000 in 1963–64. In each year, the grants will be distributed between the States on the basis of 5 per cent. of the total to Tasmania and the balance shared between the other five States, one-third in proportion to their respective populations at the date of the last preceding Census, one-third in proportion to their respective areas, and one-third in proportion to the respective number of motor vehicles registered in these States at 31st December preceding the year of payment.

The balance of up to £30,000,000 over the five years will be made available to the States as matching assistance for roads. The total amounts of matching assistance will increase by £2,000,000 a year from £2,000,000 in 1959–60 to £10,000,000 in 1963–64. Up to the limit of its share of the total matching assistance available in any year, each State qualifies for £1 of matching assistance from the Commonwealth for each £1 by which the amount it allocates in that year from its own resources for expenditure on roads exceeds the amount so allocated in 1958–59. The share of each State in the total matching assistance available in any year is determined by the same formula as is used to determine its share of the basic grant in that year.

The full amount of the matching assistance available to each State in any year is being paid during that year on the understanding that the road grants to the State in the following year will be adjusted if it is subsequently found that the State did not qualify in full for the matching assistance paid to it in that year.

The legislation relating to the years 1947–48 to 1958–59 provided for annual allocations to the Commonwealth for expenditure on strategic roads and the promotion of road safety practices. No such provisions are contained in the present legislation, the Commonwealth making separate provision for these purposes.

(ix) *Tuberculosis Act 1948*. The *Tuberculosis Act 1948* provided for the reimbursement by the Commonwealth of capital and maintenance expenditure incurred by the States in the provision of facilities for the diagnosis, treatment and control of tuberculosis.

Re-imbursments from the National Welfare Fund of maintenance expenditure on tuberculosis hospitals equal the amounts by which such expenditures of the States in any financial year exceed those for the year 1947-48. As from 1st July, 1948, the States have also been reimbursed from annual appropriations of the Department of Health for all their capital expenditure on buildings, furnishings, equipment and plant.

(x) *States Grants (Mental Institutions) Act 1955*. This Act provides for financial assistance to the States for capital expenditure on mental institutions to a maximum amount of £10,000,000. Each State is entitled to one-third of expenditure made on or after 1st July, 1955, on buildings or equipment of a mental institution.

(xi) *Other Payments*. (a) *Western Australian Waterworks*. The *Western Australia Grant (Water Supply) Act 1948-1957* provides for grants to Western Australia not exceeding an aggregate of £5,000,000 for the development of the Agricultural Areas, Great Southern Towns and Goldfields Water Supply schemes. The amount provided by the Commonwealth was limited to half the total expenditure on the scheme. (see also pp. 681-2)

(b) *Coal Mining Industry—Long Service Leave*. To provide funds for the payment for long service leave in the coal mining industry, the Commonwealth imposed an excise duty on coal produced of 6d. a ton between 1st November, 1949, and 26th August, 1951; 7½d. a ton from 26th August, 1951, and 30th May, 1952; 8d. a ton from 30th May, 1952, to 1st September, 1959; and 5d. a ton from 1st September, 1959, to 1st June, 1961. The rate of excise was fixed at 4d. a ton from 1st June, 1961, when the excise was removed from coal produced for export. The proceeds of this excise duty are paid to a trust fund out of which the States are reimbursed for expenditure incurred in granting long service leave to employees in the coal mining industry.

(c) *Encouragement of Meat Production*. To develop meat production in Queensland and Western Australia, grants are made to these States for the provision and improvement of roads and other facilities for the movement of live-stock. Provision is made for the Commonwealth to meet the cost of the construction and improvement of certain specified roads in both States and the construction of eight cattle loading and unloading points in Queensland. Provision is also made for the Commonwealth to meet half the cost of improving watering facilities on specified stock routes in both States. The amount of the grants for improving watering facilities on stock routes is limited to £150,000 in Queensland and £50,000 in Western Australia.

(d) *Grants to Universities*. Payments to the States for universities were first introduced in 1951-52 under the *States Grants (Universities) Act 1951*, and were continued under similar legislation passed in 1953, 1955, 1956 and 1957. Following on the Government's acceptance of the main recommendations of the Committee on Australian Universities, the provisions of the 1957 Act relating to financial assistance for 1958 were superseded by the *States Grants (Universities) Act 1958*, which operated from 1st January, 1958.

This legislation authorized the Commonwealth to make payments to the States for universities of up to £21,400,000 over the three calendar years 1958 to 1960, inclusive, where certain conditions have been satisfied. These payments include increased contributions towards the running expenses of universities, new grants for capital works and equipment and new emergency grants.

Under the *States Grants (Universities) Act 1960*, which carried on the principle of grants for capital works and equipment introduced in the 1958 legislation, payments of up to £42,000,000 over the three calendar years 1961, 1962 and 1963 are to be made to the States. (See also Chapter XIX. Education, Cultural Activities, and Research, pp. 737-741.)

(e) *Cattle Tick Control*. Since 1926-27, the Commonwealth has subsidized the cost of eradication and control of cattle tick in New South Wales. From 1950-51, the subsidy was increased on a £1 for £1 basis up to an agreed maximum. The payments are charged to the departmental expenditure of the Department of Health.

(f) *Western Australia Northern Development*. The Commonwealth provides financial assistance of up to £5,000,000 to the State of Western Australia under the *Western Australia Grant (Northern Development) Act 1958-1959* in respect of developmental expenditure by the State in the area of Western Australia north of the twentieth parallel of latitude during the period of five years commencing on 1st July, 1958. Under the scheme, Commonwealth

assistance is provided in respect of projects, nominated by the State, which the Commonwealth is satisfied will contribute to the development of the area and which could not reasonably be expected to be carried out during the period of five years without the grant of Commonwealth assistance.

Payments to the State during 1962-63 amounted to £1,432,000, bringing total payments by the Commonwealth in respect of the scheme to £5,000,000.

(g) *Dairy Industry Extension Grant.* The Commonwealth provides financial assistance, with a maximum annual limit of £250,000, to promote improved farm practices in the dairy industry. The grants are charged to the departmental expenditure of the Department of Primary Industry.

(h) *Expansion of Agricultural Advisory Services.* These payments were introduced in 1952-53 to encourage expansion of agricultural advisory services by the State Departments of Agriculture and to promote increased farm efficiency. The payments are charged to the departmental expenditure of the Department of Primary Industry.

(i) *Grants for Railway Projects.* Under the *Railway Standardization (South Australia) Agreement Act 1949*, the Commonwealth is providing funds for the conversion of lines in the south-eastern division of the State as an initial step towards eventual standardization of 4' 8½" gauge. The State is to repay three-tenths of the cost of this work over a period of 50 years and is to bear the full cost of subsequent conversion from broad to standard gauge.

Under the *Railway Standardization (New South Wales and Victoria) Agreement Act 1958*, the Commonwealth provided funds for the construction of the standard gauge rail link between Albury and Melbourne on the basis that the States of Victoria and New South Wales will each bear 15 per cent. of the cost by instalments over a period of 50 years.

The total expenditure on railway standardization (the 30 per cent. advances to the States and the 70 per cent. grants to the States) is charged to the capital works and services vote of the Department of Shipping and Transport.

(j) *Cattle Roads Grants.* The *Queensland Grant (Beef Cattle Roads) Act 1961* provides for a grant of £5,000,000 to be paid to Queensland over the five-year period commencing 1st July, 1961, for expenditure on approved roads for the transport of beef cattle. In 1962-63, an amount of £1,000,000 was paid to the State.

Under the *Western Australia Grant (Beef Cattle Roads) Act 1961*, a special grant of £700,000 was made to Western Australia in 1962-63 for certain work on roads and bridges in the north of the State.

(k) *Coal Loading Works—New South Wales.* Under the *Coal Loading Works Agreement (New South Wales) Act 1961*, the Commonwealth is providing financial assistance to New South Wales of up to £2,650,000, partly by way of repayable advances from the Consolidated Revenue Fund and partly by grants from the Coal Industry Fund of the Joint Coal Board, for improvements to coal loading facilities at Newcastle, Port Kembla and Balmain. In 1962-63, repayable advances amounted to £498,000 and grants to £302,000.

(l) *Natural Disaster Payments.* Special Commonwealth payments are provided from time to time to assist State schemes for the relief of personal hardship and distress caused by serious floods, cyclones or bush fires in the States and for restoration of damaged public assets such as roads and bridges.

(m) *Brigalow Lands.* Under the *Brigalow Lands Agreement Act 1962*, Commonwealth advances to the State of Queensland for specified works associated with the production of beef cattle and other primary products in the Fitzroy River Basin and the supply of beef for export were limited to £7,250,000 during the period of five years ending 30th June, 1967. Repayments over a twenty year period are to commence in 1968. Advances amounted to £600,000 in 1962-63.

(n) *Cattle Dip Chemicals.* In 1962-63, special payments of £48,000 to New South Wales and £5,000 to Queensland were made by the Commonwealth towards the cost of changing the chemicals in cattle dips.

(o) *Tobacco Industry Extension Services.* In 1962-63, the Commonwealth provided £24,000 for additional extension services for tobacco growers in New South Wales, Victoria and Queensland.

11. **Primary Production Research and Sales Promotion, Export Funds, etc.—** Expenditure under this item includes the proceeds of special industry taxes and profits from marketing schemes which are paid to trust funds or other authorities for the purposes of the industries concerned. Information relating to the taxes levied is given in sub-section Revenue of this section (*see pp. 914-18*). Details of expenditure from the trust funds are included in § 4, Commonwealth Trust Funds. Details of expenditure from the Consolidated Revenue Fund during the last five years are given in the following table.

**PRIMARY PRODUCTION—RESEARCH AND SALES PROMOTION, EXPORT FUNDS, ETC.: EXPENDITURE FROM COMMONWEALTH CONSOLIDATED REVENUE FUND**

(£'000)

Particulars	1958-59	1959-60	1960-61	1961-62	1962-63
<b>Research and sales promotion—</b>					
Canned fruit (sales promotion) .. .. .	..	35	27	53	42
Cattle and beef research .. .. .	..	..	82	170	504
Dairy produce research .. .. .	..	162	198	277	262
Dairy produce sales promotion .. .. .	..	207	222	262	263
Tobacco industry research .. .. .	..	72	112	125	169
Wheat research .. .. .	..	207	187	262	234
Wool research .. .. .	..	1,389	1,542	1,507	1,463
Wool use promotion .. .. .	..	926	1,028	1,168	2,346
<b>Export funds—</b>					
Apple and pear .. .. .	..	43	45	81	102
Canned fruits .. .. .	..	70	76	59	66
Dairy produce .. .. .	..	96	100	81	104
Dried fruits .. .. .	..	51	43	34	54
Egg .. .. .	..	6	36	60	34
Honey .. .. .	..	..	..	..	2
Meat .. .. .	..	160	131	100	139
Wine .. .. .	..	140	109	93	112
<b>Other—</b>					
Meat agreement deficiency payments .. .. .	..	..	..	264	53
Fisheries development .. .. .	..	114	9	1	..
Other .. .. .	..	26	17	5	2
<b>Total .. .. .</b>	<b>3,451</b>	<b>3,839</b>	<b>4,053</b>	<b>5,895</b>	<b>6,210</b>

12. **Other Expenditure.**—Expenditure shown in this table covers expenditure not included under the other headings shown in the table in paragraph 1, page 919, and in the main relates to expenditure on administrative services and other activities (i.e. what might be termed "running expenses").

Information on the functions of departments and the Acts administered by the Ministers of Departments may be found on pages 87-98 of Year Book No. 49.

COMMONWEALTH CONSOLIDATED REVENUE FUND: OTHER EXPENDITURE  
(£'000)

Department	1958-59	1959-60	1960-61	1961-62	1962-63
Governor-General .. .. .	147	164	148	171	172
Parliament .. .. .	1,715	2,080	2,120	2,076	2,139
Prime Minister—					
Audit Office .. .. .	623	709	725	771	846
Public Service Board .. .. .	667	755	829	868	919
National Library .. .. .	201	280	353	463	517
High Commissioner's Office, London .. .. .	832	928	966	1,083	1,165
Australian National University .. .. .	1,404	1,684	2,389	3,200	3,510
Australian Universities Commission .. .. .	..	23	28	29	44
Commonwealth Grants Commission .. .. .	21	24	26	27	29
Office of Education .. .. .	408	385	412	521	652
Security services .. .. .	498	578	669	661	705
Commonwealth Scholarship Scheme .. .. .	1,587	2,100	2,551	2,927	3,535
Grants-in-aid .. .. .	175	324	224	360	361
Departmental, n.e.i. .. .. .	605	799	676	785	1,116
<i>Total, Prime Minister .. .. .</i>	<i>7,021</i>	<i>8,589</i>	<i>9,848</i>	<i>11,695</i>	<i>13,399</i>
External Affairs—					
Oversea representation .. .. .	1,655	1,983	2,320	2,690	3,072
United Nations and allied organizations .. .. .	927	993	1,264	2,737	1,198
Colombo Plan—Economic development .. .. .	2,152	3,172	2,870	2,232	2,764
Technical assistance .. .. .	1,252	1,292	1,572	1,767	2,058
Indus Basin Development .. .. .	..	..	268	1,358	968
Other international development and relief .. .. .	693	758	1,097	910	1,127
Departmental, n.e.i. .. .. .	953	1,002	995	1,104	1,198
Antarctic Division .. .. .	527	738	764	731	814
<i>Total, External Affairs .. .. .</i>	<i>8,159</i>	<i>9,938</i>	<i>11,150</i>	<i>13,529</i>	<i>13,199</i>
Treasury—					
Taxation Branch and Boards of Review .. .. .	8,641	9,822	10,200	10,987	11,314
Bureau of Census and Statistics .. .. .	1,493	1,841	2,188	3,324	2,786
Commonwealth Superannuation Board .. .. .	88	108	127	144	134
Superannuation Act—total Government contributions .. .. .	4,773	5,356	5,978	6,861	7,464
I.B.R.D., I.M.F. and I.D.A. .. .. .	20,302	14,742	3,380	3,634	15,574
Departmental, n.e.i. .. .. .	1,056	1,393	1,321	1,510	1,530
<i>Total, Treasury .. .. .</i>	<i>36,353</i>	<i>33,262</i>	<i>23,194</i>	<i>26,460</i>	<i>38,802</i>
Attorney-General—					
Crown Solicitor .. .. .	343	413	420	439	480
High Court .. .. .	131	148	158	169	166
Bankruptcy .. .. .	180	197	214	242	261
Conciliation and Arbitration Commission, Industrial Court and Registrar .. .. .	245	281	318	352	367
Patents, Trade Marks and Designs .. .. .	414	475	476	520	589
Other branches .. .. .	396	516	533	586	646
Departmental, n.e.i. .. .. .	314	321	375	403	467
<i>Total, Attorney-General .. .. .</i>	<i>2,023</i>	<i>2,351</i>	<i>2,494</i>	<i>2,711</i>	<i>2,976</i>
Interior—					
Electoral Branch .. .. .	911	702	694	1,110	784
Bureau of Meteorology .. .. .	1,372	1,655	1,727	1,861	1,996
Ionospheric Prediction Service .. .. .	44	52	57	74	79
Forestry Branch .. .. .	144	190	195	234	225
News and Information Bureau .. .. .	417	453	479	529	620
Rents on behalf of other Departments .. .. .	957	967	1,210	1,220	1,353
Departmental, n.e.i. .. .. .	1,308	1,230	1,491	1,595	1,646
<i>Total, Interior .. .. .</i>	<i>5,153</i>	<i>5,249</i>	<i>5,853</i>	<i>6,623</i>	<i>6,703</i>
Works—					
Repairs and maintenance on behalf of other Departments .. .. .	1,167	1,212	1,118	1,091	1,072
Other .. .. .	2,145	2,870	2,827	3,526	4,018
<i>Total, Works .. .. .</i>	<i>3,312</i>	<i>4,082</i>	<i>3,945</i>	<i>4,617</i>	<i>5,090</i>

COMMONWEALTH CONSOLIDATED REVENUE FUND: OTHER  
EXPENDITURE—continued

(£'000)

Department	1958-59	1959-60	1960-61	1961-62	1962-63
<b>Civil Aviation—</b>					
Maintenance and development of civil aviation .. .. .	7,066	7,594	7,528	7,613	8,164
Meteorological services .. .. .	653	776	828	895	960
Departmental, n.e.i. .. .. .	3,087	3,484	3,651	3,888	4,246
<i>Total, Civil Aviation</i> .. .. .	<i>10,806</i>	<i>11,854</i>	<i>12,007</i>	<i>12,396</i>	<i>13,370</i>
<b>Customs and Excise—</b>					
Refunds of diesel fuel taxation .. .. .	989	278	115	129	106
Departmental .. .. .	4,351	5,097	5,793	5,266	5,521
<i>Total, Customs and Excise</i> .. .. .	<i>5,340</i>	<i>5,375</i>	<i>5,908</i>	<i>5,395</i>	<i>5,627</i>
<b>Health</b> .. .. .	2,283	2,679	3,009	3,313	4,297
<b>Trade—</b>					
Tariff Board .. .. .	134	166	175	208	215
Commercial intelligence services abroad .. .. .	619	694	871	1,016	1,188
Departmental, n.e.i. .. .. .	2,320	1,990	2,144	2,566	2,750
<i>Total, Trade</i> .. .. .	<i>3,073</i>	<i>2,850</i>	<i>3,190</i>	<i>3,790</i>	<i>4,153</i>
<b>Primary Industry—</b>					
Inspection of goods for export .. .. .	1,144	1,321	1,360	1,446	1,593
Division of Agricultural Economics .. .. .	133	157	172	188	186
Departmental, n.e.i. .. .. .	673	751	769	960	1,018
<i>Total, Primary Industry</i> .. .. .	<i>1,950</i>	<i>2,229</i>	<i>2,301</i>	<i>2,594</i>	<i>2,797</i>
<b>Social Services—</b>					
Homes for aged persons—grants to eligible organizations .. .. .	1,767	1,872	2,154	3,473	3,186
Departmental .. .. .	3,378	3,888	4,013	4,449	4,730
<i>Total, Social Services</i> .. .. .	<i>5,145</i>	<i>5,760</i>	<i>6,167</i>	<i>7,922</i>	<i>7,916</i>
<b>Shipping and Transport—</b>					
Marine Services Division .. .. .	1,224	1,367	1,402	1,389	1,393
Road safety practices .. .. .	150	150	150	150	150
Departmental, n.e.i. .. .. .	1,036	546	411	561	577
<i>Total, Shipping and Transport</i> .. .. .	<i>2,410</i>	<i>2,063</i>	<i>1,963</i>	<i>2,100</i>	<i>2,120</i>
<b>Territories</b> .. .. .	271	341	376	428	454
<b>Immigration—</b>					
Assisted migration .. .. .	7,188	7,567	7,348	5,984	7,209
Other migration activities .. .. .	1,862	1,811	1,994	2,578	2,466
Departmental, n.e.i. .. .. .	1,956	2,130	2,245	2,329	2,418
<i>Total, Immigration</i> .. .. .	<i>11,006</i>	<i>11,508</i>	<i>11,587</i>	<i>10,891</i>	<i>12,093</i>
<b>Labour and National Service—</b>					
Stevedoring Industry Charge .. .. .	4,572	3,718	3,542	3,436	4,418
Departmental .. .. .	2,141	2,444	2,483	2,637	2,824
<i>Total, Labour and National Service</i> .. .. .	<i>6,713</i>	<i>6,162</i>	<i>6,025</i>	<i>6,073</i>	<i>7,242</i>
<b>National Development—</b>					
Bureau of Mineral Resources .. .. .	784	1,027	1,346	1,683	2,010
Division of National Mapping .. .. .	312	415	417	577	673
Joint Coal Board .. .. .	170	175	187	155	187
Australian Atomic Energy Commission .. .. .	1,525	2,233	2,379	2,804	3,259
Departmental, n.e.i. .. .. .	233	293	816	387	408
<i>Total, National Development</i> .. .. .	<i>3,024</i>	<i>4,143</i>	<i>5,145</i>	<i>5,606</i>	<i>6,537</i>
<b>Commonwealth Scientific and Industrial Research Organization</b> .. .. .	6,223	7,216	7,738	8,582	9,494
<b>Total, Other Expenditure</b> .. .. .	<b>122,127</b>	<b>127,895</b>	<b>124,168</b>	<b>136,972</b>	<b>158,580</b>

## § 4. Commonwealth Trust Funds

1. Receipts, Expenditure and Balances, 1962-63.—The following table shows the opening and closing balances and receipts and expenditure of some of the more important trust funds of the Commonwealth for the year ended 30th June, 1963.

## COMMONWEALTH TRUST FUNDS: RECEIPTS, EXPENDITURE AND BALANCES, 1962-63

(£'000)

Fund	Balance at 30th June, 1962	Year ended 30th June, 1963		Balance at 30th June, 1963
		Receipts	Expenditure	
Canadian Loan .. .. .	7,327	302	252	7,377
Coal Mining Industry Long Service Leave	1,893	383	477	1,799
Coinage .. .. .	..	2,928	2,928	..
Commonwealth Aid Roads (Supplementary)	67	—67	..	..
Defence Forces Retirement Benefits ..	19,205	6,742	3,466	22,481
Insurance Deposits .. .. .	10,278	1,928	1,214	10,992
Imperial Pensions .. .. .	453	5,207	5,165	495
International Development and Relief ..	192	330	286	236
Korean Operations Pool .. .. .	11,464	..	..	11,464
Lend-Lease Settlement .. .. .	489	30	190	329
Loan Consolidation and Investment Reserve	294,637	41,501	103,816	232,322
National Debt Sinking Fund .. .. .	143,239	81,818	57,596	167,461
National Welfare .. .. .	205,054	381,353	379,294	207,113
Parliamentary Retiring Allowances ..	473	135	93	515
Pensions Suspense .. .. .	112	—101	11	..
Post Office Stores and Services .. .. .	14	58,938	58,282	670
Superannuation .. .. .	91,383	22,343	11,037	102,689
Swiss Loan .. .. .	15,700	558	..	16,258
Taxation Refunds Suspense .. .. .	21	—19	2	..
Temple Society .. .. .	511	1,004	818	697
Tobacco Industry .. .. .	90	157	171	76
War Service Homes .. .. .	..	38,772	38,772	..
War Service Homes—Insurance .. .. .	836	306	311	831
Wheat Industry Stabilization .. .. .	266	..	266	..
Wheat Prices Stabilization .. .. .	..	7,288	7,288	..
Wheat Research .. .. .	763	600	511	852
Wine Research .. .. .	427	20	19	428
Wool Research .. .. .	8,654	1,907	2,741	7,820
Other .. .. .	13,925	67,339	67,459	13,805
<b>Total .. .. .</b>	<b>827,473</b>	<b>721,702</b>	<b>742,465</b>	<b>806,710</b>

2. Summary, 1958-59 to 1962-63.—In the following table, the balances and total receipts and expenditure of the trust funds are shown for each of these years.

## COMMONWEALTH TRUST FUNDS

(£'000)

Particulars	1958-59	1959-60	1960-61	1961-62	1962-63
Balances brought forward .. .. .	888,033	810,099	767,830	874,117	827,473
Receipts .. .. .	880,171	915,830	1,059,621	715,831	721,702
Expenditure .. .. .	958,105	958,099	953,334	762,475	742,465
Balance carried forward .. .. .	810,099	767,830	874,117	827,473	806,710



### § 5. Commonwealth Loan Fund

1. **General.**—Brief historical notes relating to the Commonwealth Loan Fund are given in earlier issues of the Year Book (see No. 37, p. 640). The following tables show details for the years 1958–59 to 1962–63 of receipts by, and expenditure from, Commonwealth Loan Fund in respect of loans raised for both Commonwealth and State Governments. Information relating to the Commonwealth Government securities on issue is given in the Division, Government Securities on Issue, Commonwealth and States, of this chapter.

2. **Loans raised for the Commonwealth.**—The following table shows the receipts by, and expenditure from, Commonwealth Loan Fund in respect of loans raised for the Commonwealth Government during the years 1958–59 to 1962–63.

#### COMMONWEALTH LOAN FUND: LOANS RAISED FOR THE COMMONWEALTH (£'000)

Particulars	1958–59	1959–60	1960–61	1961–62	1962–63
<b>RECEIPTS</b>					
Balance from 30th June .. ..	450	493	167	79	98
Loans raised in Australia—					
Stocks and bonds .. .. .	32,232	24,677	29,808	41,000	28,915
Special bonds .. .. .	5,904	4,797	6,733	10,528	19,486
Advance loan subscriptions .. ..	202	Dr. 85	Dr. 785	1,374	11,407
Treasury bills—Public (net) .. ..	31,000	30,000	Dr. 15,000	36,600	Dr. 58,700
Treasury bills—Internal (investment of Trust Fund) (net) .. .. .	5,300	Dr. 18,087	17,600	2,700	38,900
Treasury notes .. .. .	..	..	..	..	69,490
Peace savings certificates .. .. .	2	2	2	1	1
Loans raised overseas—					
London—Stock and bonds .. .. .	3,145	14,895	14,635	1	2,707
New York—Bonds .. .. .	1,851	12,581	1,763	6,997	17,465
Loan—Qantas Empire Airways Limited ..	6,033	4,646	1,573	11,827	2,067
Loan—Australian National Airlines Commission .. .. .	1,337	..	892	..	560
International Bank dollar loan .. ..	7,492	..	..	..	14,236
Canadian bonds .. .. .	..	..	1,439	..	..
Swiss loan .. .. .	..	6,117	1,005	..	..
Netherlands loan .. .. .	..	..	..	886	..
Total, Loans Raised .. .. .	94,498	79,543	59,665	111,914	146,534
Deduct—					
Expenses of floatation—					
Loans raised in Australia .. .. .	556	502	Cr. 196	Cr. 159	902
London loans .. .. .	230	Cr. 183	525	Cr. 526	42
New York loans .. .. .	46	345	33	60	455
Canadian loans .. .. .	..	..	33	Cr. 3	..
Swiss loans .. .. .	..	347	62	..	..
Netherlands loan .. .. .	..	..	..	42	..
Total, Deductions .. .. .	832	1,011	457	Cr. 586	1,399
Total .. .. .	93,666	78,532	59,208	112,500	145,135
<b>Grand Total</b> .. .. .	<b>94,116</b>	<b>79,025</b>	<b>59,375</b>	<b>112,579</b>	<b>145,233</b>
<b>EXPENDITURE</b>					
Financial assistance to States for housing—					
New South Wales .. .. .	12,000	12,350	13,000	17,003	16,300
Victoria .. .. .	10,300	10,300	10,300	13,527	12,850
Queensland .. .. .	3,310	3,480	3,100	4,200	3,900
South Australia .. .. .	5,000	5,000	5,800	9,036	9,491
Western Australia .. .. .	3,000	3,000	3,000	3,706	3,470
Tasmania .. .. .	2,200	1,950	2,000	2,928	2,600
Total .. .. .	35,810	36,080	37,200	50,400	48,611
Defence services .. .. .	37,308	11,987	..	23,641	66,070
War and repatriation services .. ..	5,700	6,937	2,027	1,577	607
Loan—Qantas .. .. .	6,033	4,646	1,573	11,827	2,067
Loan—Australian National Airlines Commission .. .. .	1,337	..	892	..	560
Mount Isa Railway Agreement .. ..	..	..	..	3,750	5,959
Snowy Mountains Hydro-electric Authority ..	..	..	..	..	13,100
International Bank dollar loans—Paid to National Debt Sinking Fund .. ..	7,492	..	..	..	..
Works and other purposes—Repayments ..	Cr. 67	Cr. 43	Cr. 52	Cr. 30	Cr. 17
Redemptions—					
Treasury bills—Internal .. .. .	..	18,013	..	12,900	..
Stock and bonds—Australia .. .. .	9	4	4	3	4,649
Stock and bonds—London .. .. .	..	..	14,636	..	..
Bonds—New York .. .. .	..	..	..	5,055	..
Savings stamps .. .. .	1	..	..	..	..
Special bonds .. .. .	..	1,234	3,016	3,358	3,578
Balance at 30th June .. .. .	493	167	79	98	49
<b>Grand Total</b> .. .. .	<b>94,116</b>	<b>79,025</b>	<b>59,375</b>	<b>112,579</b>	<b>145,233</b>

3. Loans raised for the States.—The following table shows the receipts by, and expenditure from, Commonwealth Loan Fund in respect of loans raised for the State Governments during the years 1958–59 to 1962–63.

## COMMONWEALTH LOAN FUND: LOANS RAISED FOR THE STATES

(£'000)

Particulars	1958–59	1959–60	1960–61	1961–62	1962–63
<b>RECEIPTS</b>					
Balance from 30th June .. ..	..	36	..	..	..
Loans raised in Australia—					
Stock and bonds .. ..	125,717	150,387	163,839	168,628	180,811
Special bonds .. ..	21,238	21,380	12,364	16,841	19,596
Loans raised overseas—					
London—Stock and bonds .. ..	33,106	..	14,747	..	16,110
New York—Bonds .. ..	9,005	9,067	9,134	17,011	19,644
Canadian bonds .. ..	..	..	7,459	..	..
Swiss bonds .. ..	..	..	5,206	..	..
Netherlands bonds .. ..	..	..	..	4,071	..
<i>Total</i> .. ..	<i>189,066</i>	<i>180,870</i>	<i>212,749</i>	<i>206,551</i>	<i>236,161</i>

## EXPENDITURE

Payments of loan proceeds to the States—					
New South Wales .. ..	55,090	58,140	60,694	62,298	65,404
Victoria .. ..	43,912	46,086	48,619	49,545	52,680
Queensland .. ..	19,232	18,629	21,075	23,150	21,288
South Australia .. ..	24,300	25,385	25,967	25,148	25,729
Western Australia .. ..	16,756	17,684	18,640	19,581	20,522
Tasmania .. ..	11,954	12,928	13,445	14,498	14,884
<i>Total</i> .. ..	<i>171,244</i>	<i>178,852</i>	<i>188,440</i>	<i>194,220</i>	<i>200,507</i>
Redemptions—					
Stock and bonds—Australia .. ..	..	..	4,981	..	27,310
Special bonds .. ..	..	1,981	4,581	4,239	4,271
London .. ..	17,786	37	14,747	..	4,073
New York .. ..	..	..	..	8,092	..
Balance at 30th June .. ..	36	..	..	..	..
<i>Grand Total</i> .. ..	<i>189,066</i>	<i>180,870</i>	<i>212,749</i>	<i>206,551</i>	<i>236,161</i>

## STATE FINANCE

## § 1. General

1. Functions of State Governments.—In comparing the financial returns of the States, allowances must be made for the various functions discharged by the respective governments, and for local conditions in each case. Direct comparisons of the revenue, expenditure, and debt of the individual States are difficult, owing to the fact that functions which in one State are assumed by the central government are in another delegated to local government or semi-governmental bodies which are vested with certain defined borrowing powers and whose financial transactions are not included with those of the central government.

Care is needed, therefore, in making comparisons, and the particulars contained in this chapter should be read with those contained in Chapter XX. Local Government. In many respects, moreover, the budgets of the Australian governments differ materially from those of most European countries, owing to the inclusion therein of the revenue and expenditure of departments concerned with rendering public services, such as railways, tramways, water supply, etc., which in other countries are often left to private enterprise.

**2. Accounts of State Governments.**—The various financial transactions of the States are in each case concerned mainly with one or other of three funds—the Consolidated Revenue Fund, the Trust Fund, and the Loan Fund. All revenue (except certain items paid into special funds) collected by a State is paid into its Consolidated Revenue Fund, from which payments are made under authority of an annual Appropriation Act passed by the legislature, or by a permanent appropriation under a special Act.

Figures in § 2 below relating to New South Wales represent the transactions of the Consolidated Revenue Fund and the business undertakings included in the annual budget papers. These undertakings are:—railways, tramways and omnibuses, and Sydney Harbour Trust Section of the Maritime Services Board. Adjustments have been made to the Budget figures, however, in order to eliminate duplications caused by inter-fund payments. Particulars for all other States relate to the transactions of the Consolidated Revenue Fund.

The Trust Fund comprises all moneys held in trust by the government, and includes such items as superannuation funds, road funds, insurance companies' deposits, etc.

The Loan Fund is debited with all loan moneys raised by the State, and credited with the expenditure therefrom on public works or other purposes.

**3. Inter-relation of Commonwealth and State Finances.**—A statement in some detail, covering the inter-relation of Commonwealth and State finances during the period from the inception of federation to the passing of the *Financial Agreement Act 1928*, was published in Year Book No. 22, pages 379–80. Changes in the financial relations between the Commonwealth and States since the passing of the Financial Agreement Act have been described in issues of the Year Book from year to year (*see also* pp. 952–3).

## § 2. State Consolidated Revenue Funds

### REVENUE

**1. General.**—The principal sources of State revenue are:—(a) taxation; (b) the business undertakings controlled by the State Governments; (c) sale of and rental from crown lands; (d) interest on advances; (e) payments by the Commonwealth Government under the Financial Agreements, Special Grants and Financial Assistance Acts, etc.; (f) Commonwealth National Welfare Fund payments; and (g) miscellaneous sources, comprising fines, fees, etc.

Of these sources, that yielding the largest revenue to the Consolidated Revenue Funds for the States as a whole in the year 1962–63 was Commonwealth payments under financial assistance and other grants (40.2 per cent. of the total revenue). Next in magnitude was the group of business undertakings (29.4 per cent.), the principal contributors being the Government railways and tramways, followed by taxation receipts (16.6 per cent.). More than one-quarter of the total State taxation collections are not paid into Consolidated Revenue Funds, however, but into special funds (*see* para. 3 (ii) (b) following). Of the remaining sources of revenue, interest (n.e.i.) constituted 4.0 per cent., land revenue 1.9 per cent., and National Welfare Fund payments 1.1 per cent.

**2. Revenue Received.**—The following table shows particulars of the total amounts, and the amounts per head of population, of Consolidated Revenue received by the several States during the years 1958–59 to 1962–63.

## STATE CONSOLIDATED REVENUE

Year	N.S.W.(a)	Vic.	Q'land	S. Aust.	W. Aust.	Tas.	Total
<b>TOTAL REVENUE</b> (£'000)							
1958-59 ..	239,769	151,248	99,007	68,030	60,068	21,837	639,959
1959-60 ..	262,533	168,310	103,103	76,077	64,388	25,099	699,510
1960-61 ..	282,364	185,101	108,817	81,979	69,333	27,795	755,389
1961-62 ..	295,612	196,309	117,325	89,102	74,926	31,293	804,567
1962-63 ..	312,630	207,076	123,491	93,684	78,591	31,659	847,131
<b>PER HEAD OF POPULATION</b> (£)							
1958-59 ..	64.30	55.00	68.25	74.90	85.10	64.49	64.76
1959-60 ..	69.15	59.69	69.75	81.49	89.76	72.94	69.33
1960-61 ..	72.85	63.98	72.37	85.65	95.01	79.40	73.27
1961-62 ..	74.87	66.34	76.84	90.91	100.46	87.73	76.50
1962-63 ..	77.86	68.53	79.60	93.78	102.81	87.43	79.07

(a) See § 1, para. 2, p. 938, for transactions included.

3. Sources of Revenue.—(i) *General.* Classifying the revenue of the several States in the manner indicated in para. 1 above, particulars for the year 1962-63 were as follows.

## STATE CONSOLIDATED REVENUE: SOURCES, 1962-63

Source of revenue	N.S.W. (a)	Vic.	Q'land	S. Aust.	W. Aust.	Tas. (b)	Total
<b>TOTAL REVENUE</b> (£'000)							
Taxation(c) .. ..	52,805	45,386	17,004	13,470	7,621	4,614	140,900
Business undertakings ..	110,482	54,201	36,633	24,964	22,551	81	248,912
Lands .. ..	5,563	3,369	4,211	842	1,751	627	16,363
Interest, n.e.i. .. ..	2,438	7,992	5,989	8,110	3,461	5,540	33,530
Commonwealth grants(d)—							
Financial assistance ..	103,321	76,134	45,541	34,776	31,240	13,308	304,320
Other(e) .. ..	7,944	5,854	6,472	4,295	6,684	5,308	36,557
Commonwealth National							
Welfare Fund payments(f)	6,049	1,490	652	967	74	327	9,559
Miscellaneous .. ..	24,028	12,650	6,989	6,260	5,209	1,854	56,990
<b>Total .. ..</b>	<b>312,630</b>	<b>207,076</b>	<b>123,491</b>	<b>93,684</b>	<b>78,591</b>	<b>31,659</b>	<b>847,131</b>
<b>PER HEAD OF POPULATION</b> (£)							
Taxation(c) .. ..	13.15	15.02	10.96	13.48	9.97	12.74	13.15
Business undertakings ..	27.51	17.94	23.61	24.99	29.50	0.23	23.23
Lands .. ..	1.39	1.12	2.71	0.84	2.29	1.73	1.53
Interest, n.e.i. .. ..	0.61	2.64	3.86	8.12	4.53	15.30	3.13
Commonwealth grants(d)—							
Financial assistance ..	25.73	25.19	29.36	34.81	40.87	36.75	28.41
Other(e) .. ..	1.98	1.94	4.17	4.30	8.74	14.66	3.41
Commonwealth National							
Welfare Fund payments(f)	1.51	0.49	0.42	0.97	0.10	0.87	0.89
Miscellaneous .. ..	5.98	4.19	4.51	6.27	6.81	5.15	5.32
<b>Total .. ..</b>	<b>77.86</b>	<b>68.53</b>	<b>79.60</b>	<b>93.78</b>	<b>102.81</b>	<b>87.43</b>	<b>79.07</b>

(a) See § 1, para. 2, p. 938.

(b) Tasmanian transport services are under the separate control of semi-governmental authorities.

(c) In all States, certain taxation collections are not paid into Consolidated Revenue Fund. For total collections see next page.

(d) Excludes Commonwealth payments paid to trust funds.

(e) Includes payments under Financial Agreement, special grants, additional financial assistance, grants to universities, etc.

(f) Consolidated Revenue Fund receipts only. Excludes payments to Trust Funds.

(ii) *Revenue from Taxation.* (a) *General.* In the tables on taxation collections in these paragraphs, the collections have been grouped according to the nature of the tax rather than the method of collection. For example, stamp duties on betting tickets and bookmakers' licences have been included under Racing instead of under Stamp duties and Licences respectively.

Prior to federation, customs and excise duties were the principal source of revenue from taxation. Thereafter, until the introduction of the uniform income tax scheme in 1942-43, the highest yields from the State taxation were drawn from the various income taxes which, in 1941-42, included unemployment relief, State development, and hospital taxes. From 1942-43 to 1958-59, the States were reimbursed by the Commonwealth for the revenue lost by the discontinuance of these taxes. Commencing with 1959-60, however, a new scheme for the payment of financial assistance to the States was instituted (for details *see* para. 10 (v), p. 928). Information relating to the State income taxes which were levied prior to 1942-43 may be found in earlier issues of the Year Book.

(b) *Net Collections, 1962-63.* The following tables show, for the year 1962-63, details of the collections in each State from the various types of tax in operation, irrespective of whether such moneys have been paid into the Consolidated Revenue Funds or not. For this reason the particulars hereunder differ from those shown in the tables relating to the Consolidated Revenue Funds and present a comprehensive statement of all taxation collections by the Government in each State.

**STATE REVENUE FROM TAXATION: TOTAL NET COLLECTIONS(a), 1962-63**  
(£'000)

Tax	N.S.W.	Victoria	Q'land	S. Aust.	W. Aust.	Tas.	Total
<b>Motor—</b>							
Registration fees and taxes .. ..	14,050	10,841	6,170	4,382	3,158	1,446	40,047
Drivers', etc., licences .. ..	2,270	637	341	418	329	125	4,120
Other .. ..	5,687	4,607	2,877	72	194	155	13,592
<b>Total .. ..</b>	<b>22,007</b>	<b>16,085</b>	<b>9,388</b>	<b>4,872</b>	<b>3,681</b>	<b>1,726</b>	<b>57,759</b>
<b>Probate and succession duties .. ..</b>	<b>17,780</b>	<b>12,322</b>	<b>4,861</b>	<b>2,625</b>	<b>1,544</b>	<b>882</b>	<b>40,014</b>
Stamp duties, n.e.i. .. ..	16,937	12,839	5,077	2,310	2,673	1,042	40,878
Land .. ..	10,144	8,545	1,655	2,457	1,276	628	24,705
Liquor .. ..	4,780	3,475	1,645	222	691	289	11,102
Lotteries .. ..	..	3,202	343	..	..	..	3,545
Racing .. ..	2,984	3,735	1,286	1,109	1,076	409	10,599
Entertainments .. ..	..	366	..	..	..	104	470
Poker machine licence fees .. ..	3,279	..	..	..	..	..	3,279
Licences, n.e.i. .. ..	180	413	213	106	220	12	1,144
Other .. ..	..	..	2,555	144	337	..	3,036
<b>Grand Total .. ..</b>	<b>78,091</b>	<b>60,982</b>	<b>27,023</b>	<b>13,845</b>	<b>11,498</b>	<b>5,092</b>	<b>196,531</b>

(a) From all sources of taxation irrespective of whether paid to Consolidated Revenue Fund or to other funds.

Of the total taxation collections detailed above, the following were paid into special funds.

**STATE REVENUE FROM TAXATION: PAYMENTS INTO SPECIAL FUNDS,**  
1962-63  
(£'000)

Tax	N.S.W.	Victoria	Q'land	S. Aust.	W. Aust.	Tas.	Total
Motor .. ..	22,007	15,114	7,466	..	3,540	309	48,436
Stamp duties, n.e.i. .. ..	..	242	..	..	..	..	242
Liquor .. ..	..	172	60	..	..	..	232
Racing .. ..	..	..	134	375	..	169	678
Poker machine licence fees .. ..	3,279	..	..	..	..	..	3,279
Other .. ..	..	68	2,359	..	337	..	2,764
<b>Total .. ..</b>	<b>25,286</b>	<b>15,596</b>	<b>10,019</b>	<b>375</b>	<b>3,877</b>	<b>478</b>	<b>55,631</b>

The table hereunder shows, for the year 1962-63, the proportions of collections under individual classes of tax to total taxation revenue.

**STATE REVENUE FROM TAXATION: PROPORTIONS OF INDIVIDUAL TAXES TO TOTAL, 1962-63**

(Per cent.)

Tax	N.S.W.	Vic.	Q'land	S. Aust.	W. Aust.	Tas.	Total
Motor .. .. .	28.18	26.38	34.74	35.19	32.02	33.89	29.39
Probate and succession duties	22.77	20.21	17.99	18.96	13.43	17.32	20.36
Stamp duties, n.e.i. ..	21.69	21.05	18.79	16.69	23.24	20.46	20.80
Land .. .. .	12.99	14.01	6.12	17.75	11.10	12.34	12.57
Liquor .. .. .	6.12	5.70	6.09	1.60	6.01	5.68	5.65
Lotteries .. .. .	..	5.25	1.27	..	..	..	1.81
Racing .. .. .	3.82	6.12	4.76	8.01	9.35	8.03	5.39
Entertainments .. .. .	..	0.60	..	..	..	2.05	0.24
Poker machine licence fees	4.20	..	..	..	..	..	1.67
Licences, n.e.i. .. .. .	0.23	0.68	0.79	0.76	1.92	0.23	0.58
Other .. .. .	..	..	9.45	1.04	2.93	..	1.54
<b>Grand Total ..</b>	<b>100.00</b>	<b>100.00</b>	<b>100.00</b>	<b>100.00</b>	<b>100.00</b>	<b>100.00</b>	<b>100.00</b>

(c) *Net Collections, 1958-59 to 1962-63.* The total amounts and the amounts per head raised from all sources of taxation by the several State Governments, including amounts not paid into the Consolidated Revenue Fund, during the years 1958-59 to 1962-63, are shown in the following table.

**STATE REVENUE FROM TAXATION: TOTAL NET COLLECTIONS**

Year	N.S.W.	Vic.	Q'land	S. Aust.	W. Aust.	Tas.	Total
<b>TOTAL NET COLLECTIONS</b>							
(£'000)							
1958-59 ..	54,006	42,845	18,509	10,576	7,655	4,307	137,898
1959-60 ..	61,451	51,713	22,913	11,522	9,014	4,428	161,041
1960-61 ..	63,580	55,946	22,701	12,102	9,518	4,581	168,428
1961-62 ..	67,433	57,819	24,274	12,951	10,200	4,804	177,481
1962-63 ..	78,091	60,982	27,023	13,845	11,498	5,092	196,531

**PER HEAD OF POPULATION**

(£)

1958-59 ..	14.48	15.58	12.76	11.64	10.85	12.72	13.95
1959-60 ..	16.19	18.34	15.50	12.34	12.57	12.87	15.96
1960-61 ..	16.40	19.34	15.10	12.64	13.04	13.09	16.34
1961-62 ..	17.08	19.54	15.90	13.21	13.68	13.47	16.88
1962-63 ..	19.45	20.18	17.42	13.86	15.04	14.06	18.34

The following table shows, for the years 1958-59 to 1962-63, the aggregate amounts collected by the several State Governments under the various forms of State taxation, and includes amounts paid to funds other than Consolidated Revenue.

**STATE REVENUE FROM TAXATION: TOTAL NET COLLECTIONS<sup>(a)</sup>**  
(£'000)

Tax	1958-59	1959-60	1960-61	1961-62	1962-63
Motor .. .. .	41,973	46,527	48,926	51,609	57,759
Probate and succession duties .. .. .	27,177	33,991	33,878	37,583	40,014
Stamp duties, n.e.i. .. .. .	28,317	36,901	37,887	36,528	40,878
Land .. .. .	15,424	17,220	19,914	22,660	24,705
Liquor .. .. .	8,483	8,623	9,052	9,861	11,102
Lotteries .. .. .	3,434	3,444	3,610	3,509	3,545
Racing .. .. .	7,540	8,262	8,526	9,115	10,599
Entertainments .. .. .	1,846	1,609	1,421	1,090	470
Poker machine licence fees .. .. .	906	1,265	1,677	1,772	3,279
Licences n.e.i., and all other .. .. .	2,798	3,199	3,537	3,754	4,180
<b>Total .. .. .</b>	<b>137,898</b>	<b>161,041</b>	<b>168,428</b>	<b>177,481</b>	<b>196,531</b>

(a) From all sources of taxation irrespective of whether paid to Consolidated Revenue or to other funds.

Details of taxation collections paid into special funds and included in the table above are shown below.

**STATE REVENUE FROM TAXATION: PAYMENTS INTO SPECIAL FUNDS**  
(£'000)

Tax	1958-59	1959-60	1960-61	1961-62	1962-63
Motor .. .. .	35,814	39,604	41,131	43,060	48,436
Stamp duties, n.e.i. .. .. .	220	225	209	200	242
Liquor .. .. .	168	193	182	170	232
Lotteries .. .. .	31	10	..	..	..
Racing .. .. .	521	544	571	549	678
Poker machine licence fees .. .. .	906	1,265	1,677	1,772	3,279
Other .. .. .	1,741	2,093	2,407	2,540	2,764
<b>Total .. .. .</b>	<b>39,401</b>	<b>43,934</b>	<b>46,177</b>	<b>48,291</b>	<b>55,631</b>

(iii) *Business Undertakings.* (a) 1962-63. A considerable proportion of State gross revenue is made up of receipts from business undertakings under the control of the Governments. The most important of these are railways and tramways, harbour works, water supply and sewerage, and electricity supply, and, in addition, State batteries for the treatment of auriferous ores in Western Australia and various minor revenue-producing services rendered by the Governments of all States are included. For the year 1962-63 the revenue from these sources was £248,912,000 or 29.4 per cent. of the revenue from all sources. Details of revenue are as follows.

**STATE REVENUE FROM BUSINESS UNDERTAKINGS, 1962-63**  
(£'000)

Source	N.S.W.	Vic.	Q'land	S. Aust.	W. Aust.	Tas.(a)	Total
Railways <sup>(b)</sup> .. .. .	91,241	43,564	36,633	14,085	16,908	..	202,431
Tramways and omnibuses .. .. .	12,385	..	..	..	..	..	12,385
Harbours, rivers, lights .. .. .	6,856	(c) 678	..	2,512	694	..	10,740
Water supply, sewerage, irrigation and drainage .. .. .	..	5,078	..	7,708	4,612	2	17,400
Electricity supply .. .. .	..	4,294	..	..	..	..	4,294
Other .. .. .	..	587	..	659	337	79	1,662
<b>Total .. .. .</b>	<b>110,482</b>	<b>54,201</b>	<b>36,633</b>	<b>24,964</b>	<b>22,551</b>	<b>81</b>	<b>248,912</b>

(a) Tasmanian transport services are under the separate control of semi-governmental authorities. (b) The following contributions to railways revenue from Consolidated Revenue Fund are excluded—New South Wales, £800,000; South Australia, £3,900,000. (c) Includes Harbour Trust Fund contribution, £385,000.

(b) 1958-59 to 1962-63. The total revenue from business undertakings and the revenue per head in each State are shown in the following table.

## STATE REVENUE FROM BUSINESS UNDERTAKINGS

Year	N.S.W.	Vic.	Q'land	S. Aust.	W. Aust.	Tas. (a)	Total
TOTAL REVENUE (£'000)							
1958-59 ..	92,186	46,258	35,129	20,303	18,620	..	212,496
1959-60 ..	99,850	47,518	34,846	20,690	19,891	58	222,853
1960-61 ..	107,126	51,995	35,398	22,939	21,075	48	238,581
1961-62 ..	107,540	53,225	35,072	24,449	22,038	112	242,436
1962-63 ..	110,482	54,201	36,633	24,964	22,551	81	248,912

PER HEAD OF POPULATION  
(£)

1958-59 ..	24.72	16.82	24.22	22.35	26.38	..	21.50
1959-60 ..	26.30	16.85	23.58	22.16	27.73	0.17	22.09
1960-61 ..	27.64	17.97	23.54	23.97	28.88	0.14	23.14
1961-62 ..	27.24	17.99	22.97	24.95	29.55	0.31	23.05
1962-63 ..	27.51	17.94	23.61	24.99	29.50	0.23	23.23

(a) Tasmanian transport services are under the separate control of semi-governmental authorities.

In the table below, particulars of total State revenue from business undertakings for the various types of undertakings are shown for the years 1958-59 to 1962-63.

STATE REVENUE FROM BUSINESS UNDERTAKINGS  
(£'000)

Source	1958-59	1959-60	1960-61	1961-62	1962-63
Railways, tramways and omnibuses .. ..	189,773	198,709	210,123	209,855	214,816
Harbour services .. ..	6,158	6,736	8,703	10,670	10,740
Water supply, sewerage, irrigation and drainage .. ..	12,315	12,922	14,995	16,383	17,400
Other .. ..	4,250	4,486	4,760	5,528	5,956
<b>Total .. ..</b>	<b>212,496</b>	<b>222,853</b>	<b>238,581</b>	<b>242,436</b>	<b>248,912</b>

For further information on the finances of the various types of business undertakings in the States, see Chapters XV. Transport and Communication and XX. Local Government of this Year Book.



(iv) *Lands.* The revenue from the sale and rental of Crown lands has, with few exceptions, been treated from the earliest times as forming part of the Consolidated Revenue Funds, and has been applied to meet ordinary expenses. The following table shows the revenue from sales and rentals of Crown lands for the year 1962-63.

STATE LAND REVENUE, 1962-63  
(£'000)

Source	N.S.W.	Vic.	Q'land	S. Aust.	W. Aust.	Tas.	Total
Sales ..	1,068	336	..	175	95	28	1,702
Conditional purchases ..	225	..	..	10	200	..	435
Rentals(a) ..	2,828	600	3,720	293	377	49	7,867
Forestry ..	1,331	2,260	..	..	1,079	545	5,215
Other ..	111	173	491	364	..	5	1,144
<b>Total ..</b>	<b>5,563</b>	<b>3,369</b>	<b>4,211</b>	<b>842</b>	<b>1,751</b>	<b>627</b>	<b>16,363</b>

(a) Includes mining royalties, rents, etc.

The total land revenue for all States for the years 1958-59 to 1962-63 respectively was:—£12,890,000, £14,324,000, £15,269,000, £15,785,000 and £16,363,000.

(v) *Commonwealth Grants.* Commonwealth grants to the States represent a very large proportion of the States' revenue. In 1962-63, the total amount (excluding sundry minor items) paid to the Consolidated Revenue Funds of the States was £340,877,000 (40.2 per cent.). Details were as follows:—contribution towards interest on States' debts under the Financial Agreement, £7,585,000; special grants to the States of Western Australia and Tasmania, £11,251,000; financial assistance, £304,320,000; additional assistance, £14,616,000; grants to universities, £2,706,000; and other grants, £399,000.

In addition to these, the States receive a number of other grants which are paid to trust funds. The main items in this class are the contribution to the sinking fund on States' debts (£7,248,000 in 1962-63) paid to the National Debt Sinking Fund, grants for Commonwealth Aid Roads (£54,000,000 in 1962-63), and grants for universities (£13,003,000 in 1962-63) paid to State trust funds.

More detailed information concerning Commonwealth grants to the States is given on pages 928-32.

(vi) *Commonwealth National Welfare Fund Payments.* The States also receive payments from the Commonwealth in respect of hospital and pharmaceutical benefits, nutrition of children and reimbursement of maintenance expenditure on tuberculosis sanatoria. These receipts are paid into Consolidated Revenue Funds or trust funds according to the varying accounting procedures in the States. In 1962-63, the total amount paid to State Consolidated Revenue Funds was £9,559,000 (1.1 per cent.). This amount was made up of hospital benefits, £2,062,000; pharmaceutical benefits, £2,117,000; milk for school children, £1,318,000; tuberculosis—reimbursement of maintenance expenditure, £4,014,000; other, £48,000.

(vii) *Interest and Miscellaneous.* In addition to the foregoing, there are in each State several miscellaneous sources of revenue, including such items as interest, fines, fees, etc. Interest, mainly from loans to local governing bodies, on public account balances, and for soldier land settlement amounted to £33,530,000 in 1962-63, while miscellaneous revenue, which includes fines of the courts and fees for services, amounted to £56,990,000 in 1962-63.

## EXPENDITURE

1. *General.*—The principal heads of State expenditure from Consolidated Revenue Funds are:—(a) interest, exchange and debt redemption charges in connexion with debt; (b) working expenses of business undertakings; (c) education; (d) health and charitable expenditure; (e) justice; (f) police; (g) penal establishments; and (h) all other expenditure, including expenditure on public works, lands and surveys, agriculture and forestry, legislative and general administration, pensions, and miscellaneous.

The working expenses of railways and tramways are the largest item of State Government expenditure. In 1962–63, the working expenses of the railways, tramways and omnibuses were 23.5 per cent. of the total expenditure from the State Consolidated Revenue Funds; next in magnitude were education, 21.2 per cent.; debt charges, 17.8 per cent.; charitable, public health and hospitals, 13.6 per cent.; and law, order and public safety, 5.8 per cent.

As stated at the beginning of this division, figures relating to New South Wales represent the transactions of the Consolidated Revenue Fund and the business undertakings included in the annual budget papers. These undertakings are:—railways, tramways and omnibuses, and Sydney Harbour Trust Section of the Maritime Services Board. Adjustments have been made to the Budget figures, however, in order to eliminate duplications caused by inter-fund payments. Particulars for all other States relate to the transactions of the Consolidated Revenue Fund.

2. *Total Expenditure.*—The total expenditure from the Consolidated Revenue Funds of the several States and the expenditure per head of population during each of the years 1958–59 to 1962–63 are shown in the following table.

## STATE EXPENDITURE: CONSOLIDATED REVENUE FUNDS

Year	N.S.W.(a)	Vic.	Q'land	S. Aust.	W. Aust.	Tas.	Total
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## TOTAL EXPENDITURE

(£'000)

1958–59	..	239,727	153,796	100,198	69,057	61,753	22,745	647,276
1959–60	..	262,463	167,997	103,267	76,389	65,794	26,131	702,041
1960–61	..	282,701	184,932	109,435	80,791	70,537	27,993	756,389
1961–62	..	298,745	196,298	117,215	88,596	75,890	31,651	808,395
1962–63	..	312,444	207,075	123,464	93,394	79,344	32,150	847,871

## PER HEAD OF POPULATION

(£)

1958–59	..	64.29	55.93	69.07	76.03	87.48	67.17	65.50
1959–60	..	69.13	59.58	69.86	81.82	91.72	75.94	69.58
1960–61	..	72.94	63.91	72.78	84.41	96.66	79.96	73.36
1961–62	..	75.66	66.34	76.76	90.39	101.76	88.74	76.86
1962–63	..	77.81	68.53	79.59	93.49	103.80	88.78	79.14

(a) See para. 1, above, for transactions included.

3. *Details of Expenditure.*—(i) 1962–63. The following tables show the total expenditure and expenditure per head of population for each of the principal items.

## STATE EXPENDITURE: DETAILS, 1962-63

Particulars	N.S.W.(a)	Vic.	Q'land	S. Aust.	W. Aust.	Tas.(b)	Total
<b>TOTAL EXPENDITURE</b>							
(£'000)							
Debt (interest, exchange, debt redemption, etc.) ..	42,945	38,826	20,429	22,807	15,660	10,195	150,862
Railways ..	74,332	40,815	37,496	14,089	17,070	1,374	185,176
Tramways and omnibuses ..	12,926	..	..	..	569	300	13,795
Harbours and rivers, etc. ..	5,191	545	..	1,443	780	34	7,993
Water supply, sewerage, irrigation and drainage ..	..	4,137	..	4,760	3,660	296	12,853
Other business and industrial undertakings ..	..	727	49	261	1,657	50	2,744
Education ..	67,996	50,309	21,303	18,784	14,050	7,086	179,528
Health and charitable ..	41,944	29,505	17,545	11,206	10,969	4,357	115,526
Justice ..	4,755	2,056	1,626	603	593	322	9,955
Police ..	11,646	8,685	5,651	2,755	2,218	1,126	31,481
Penal establishments ..	2,722	1,372	533	678	530	276	6,111
Public safety ..	755	28	639	153	190	122	1,887
All other expenditure ..	47,232	30,070	18,793	15,855	11,398	6,612	129,960
<b>Total .. ..</b>	<b>312,444</b>	<b>207,075</b>	<b>123,464</b>	<b>93,394</b>	<b>79,344</b>	<b>32,150</b>	<b>847,871</b>

## PER HEAD OF POPULATION

(£)

Debt (interest, exchange, debt redemption, etc.) ..	10.69	12.85	13.17	22.83	20.49	28.15	14.08
Railways ..	18.51	13.51	24.17	14.10	22.33	3.79	17.28
Tramways and omnibuses ..	3.22	..	..	..	0.74	0.83	1.28
Harbours and rivers, etc. ..	1.29	0.18	..	1.44	1.02	0.09	0.75
Water supply, sewerage, irrigation and drainage ..	..	1.37	..	4.76	4.79	0.82	1.20
Other business and industrial undertakings ..	..	0.24	0.03	0.26	2.17	0.14	0.26
Education ..	16.93	16.65	13.73	18.80	18.38	19.57	16.76
Health and charitable ..	10.45	9.76	11.31	11.22	14.35	12.03	10.78
Justice ..	1.18	0.68	1.05	0.61	0.78	0.89	0.93
Police ..	2.90	2.87	3.26	2.76	2.90	3.11	2.94
Penal establishments ..	0.68	0.46	0.34	0.68	0.69	0.76	0.57
Public safety ..	0.21	0.01	0.41	0.15	0.25	0.34	0.18
All other expenditure ..	11.75	9.95	12.12	15.88	14.91	18.26	12.13
<b>Total .. ..</b>	<b>77.81</b>	<b>68.53</b>	<b>79.59</b>	<b>93.49</b>	<b>103.80</b>	<b>88.78</b>	<b>79.14</b>

(a) See para. 1, p. 945, for transactions included. (b) Tasmanian transport services are under the separate control of semi-governmental authorities. Figures shown for relevant items represent payments to the authorities.

For further information on the finances of the various types of business undertakings in the States, see Chapters XV. Transport and Communication and XX. Local Government of this Year Book.

(ii) 1958-59 to 1962-63. Combined expenditure by the several States for these years on each of the principal items is shown in the following table.

**STATE EXPENDITURE**  
(£'000)

Particulars	1958-59	1959-60	1960-61	1961-62	1962-63
Debt (interest, exchange, debt redemption, etc.) .. ..	105,051	116,850	125,217	137,455	150,862
Railways, tramways and omnibuses (working expenses) .. ..	182,958	193,282	198,779	200,182	198,971
Harbours and rivers, etc. ..	4,354	4,786	6,313	7,922	7,993
Water supply, sewerage, irrigation, and drainage .. ..	9,500	10,976	11,211	12,640	12,853
Other business and industrial undertakings .. ..	3,977	2,688	2,764	2,739	2,744
Education .. ..	116,546	130,641	149,348	163,929	179,528
Health and charitable .. ..	92,057	99,406	105,994	114,360	115,526
Justice .. ..	7,602	8,435	9,449	10,011	9,955
Police .. ..	23,888	25,904	28,139	29,804	31,481
Penal establishments .. ..	4,340	4,676	5,311	5,857	6,111
Public safety .. ..	1,371	1,262	1,418	1,672	1,887
All other expenditure .. ..	95,632	103,135	112,446	121,824	129,960
<b>Total .. ..</b>	<b>647,276</b>	<b>702,041</b>	<b>756,389</b>	<b>808,395</b>	<b>847,871</b>

**SURPLUS REVENUE**

The following table shows for each of the years 1958-59 to 1962-63 the total amount and amount per head of population of the surplus or deficit of each State.

**STATE SURPLUS REVENUE**

Year	N.S.W.(a)	Vic.	Q'land	S. Aust.	W. Aust.	Tas.	Total
<b>TOTAL AMOUNT</b> (£'000)							
1958-59 ..	42	-2,548	-1,191	-1,027	-1,685	- 908	-7,317
1959-60 ..	70	313	- 164	- 312	-1,406	-1,032	-2,531
1960-61 ..	- 337	169	- 618	1,188	-1,204	- 198	-1,000
1961-62 ..	-3,133	11	110	506	- 964	- 358	-3,828
1962-63 ..	186	1	27	290	- 753	- 491	- 740

**PER HEAD OF POPULATION**  
(£)

1958-59 ..	0.01	-0.93	-0.82	-1.13	-2.39	-2.68	-0.74
1959-60 ..	0.02	0.11	-0.11	-0.33	-1.96	-3.00	-0.25
1960-61 ..	-0.09	0.07	-0.41	1.24	-1.65	-0.56	-0.10
1961-62 ..	-0.79	..	0.08	0.52	-1.30	-1.01	-0.36
1962-63 ..	0.05	..	0.01	0.29	-0.99	-1.35	-0.07

(a) See para. 1, p. 945.

NOTE.—Minus sign (—) indicates deficit.

## § 3. State Loan Funds

1. **General.**—State public borrowing is due mainly to the fact that the State Governments, in addition to ordinary administrative duties, undertake functions, such as the construction and operation of the railway systems, which in other countries are usually entrusted to local authorities or left to private enterprise. Loan moneys have also been largely used for improvements to harbours and rivers, and for the construction of roads, water supply and sewerage works. The State debt thus consists chiefly of moneys raised and expended with the object of assisting the development of the resources of the country, and is to a very large extent represented by tangible assets.

Statements relating to "gross" loan expenditure are shown below. The gross expenditure represents the amounts disbursed during each year. Details of "net" loan expenditure, i.e., gross expenditure less any credits to the Loan Fund during the year on account of repayments of advances to local governing bodies, settlers, etc., the sale of assets, and transfers from other funds, may be found in the annual bulletin *State, Territories and Local Government Authorities' Finance and Government Securities*. Such moneys are credited to the Loan Fund in the year of repayment irrespective of when the advance was made.

2. **Gross Loan Expenditure.**—(i) 1962–63. Particulars of gross loan expenditure on works, services, etc., are shown in the following table.

## STATE GROSS LOAN EXPENDITURE ON WORKS, SERVICES, ETC., 1962-63

(£'000)

Particulars	N.S.W.	Vic.(a)	Q'land	S. Aust.	W. Aust.	Tas.	Total
<b>Public Works and Services—</b>							
Railways .. .. .	8,100	7,809	5,566	2,046	4,031	60	27,612
Tramways and omnibuses ..	23	..	..	..	133	50	206
Roads .. .. .	1,033	.. 503	.. 386	.. 290	..	..	..
Bridges .. .. .	..	..	..	..	..	..	..
Harbours and rivers .. .. .	5,157	.. 305	.. 573	1,497	1,497	1,899	13,140
Lights and lighthouses .. ..	..	..	..	..	..	..	..
Water supply .. .. .	..	8,496	1,699	8,676	3,400	1,977	37,176
Sewerage .. .. .	9,224	..	..	3,105	599	..	..
Electricity supply .. .. .	8,000	8,500	1,145	3,000	262	6,750	27,657
Gas supply .. .. .	..	50	..	..	..	..	50
Public buildings .. .. .	27,977	23,018	9,664	7,889	7,212	3,933	79,693
Loans and grants to local bodies .. .. .	311	952	2,377	..	159	41	3,840
Housing(b) .. .. .	384	840	2,700	350	1,062	82	5,418
Other public works, etc... ..	402	385	..	341	683	674	2,485
<b>Primary Production—</b>							
Soldier settlement .. .. .	104	91	..	..	..	..	195
Land for settlement .. .. .	500	1,414	.. 279	.. 12	..	.. 150	2,355
Advances to settlers .. .. .	..	..	..	118	..	300	418
Water conservation, irrigation and drainage .. .. .	7,170	..	2,487	691	1,207	..	11,555
Vermin-proof fencing .. .. .	..	1	25	(c)	65	..	91
Agriculture .. .. .	300	68	..	..	146	..	514
Agricultural Bank .. .. .	..	..	2,216	..	225	..	2,441
Forestry .. .. .	492	1,010	2,216	979	125	444	5,266
Mines and mineral resources .. .. .	553	67	76	124	187	..	1,007
Other... .. .	601	909	..	243	61	7	1,821
<b>Other purposes .. .. .</b>	..	(d) 914	22	440	1,101	90	2,567
<b>Total, Public Works, Services, etc. .. .. .</b>	<b>70,331</b>	<b>55,332</b>	<b>31,431</b>	<b>29,801</b>	<b>22,155</b>	<b>16,457</b>	<b>225,507</b>
<b>Per head of population</b>	<b>£17.52</b>	<b>£18.31</b>	<b>£20.26</b>	<b>£29.83</b>	<b>£28.98</b>	<b>£45.45</b>	<b>£21.05</b>

(a) Expenditure from loan funds and on account of loans; includes expenditure from loan funds, from Treasurer's Advance Account and from State Loans Repayment Fund. (b) Excludes expenditure from Commonwealth loans under Commonwealth-State Housing Agreement. (c) Included in item Advances to settlers. (d) Includes Rural Finance Corporation, for advances to rural industries, £683,000.

(ii) 1958-59 to 1962-63. Particulars of gross loan expenditure on works, etc., for these years are shown in the following table.

## STATE GROSS LOAN EXPENDITURE ON WORKS, SERVICES, ETC.

Year	N.S.W.	Vic.(a)	Q'land	S. Aust.	W. Aust.	Tas.	Total
GROSS LOAN EXPENDITURE (£'000)							
1958-59 ..	60,052	44,421	26,531	27,262	17,689	12,859	188,814
1959-60 ..	63,651	49,491	29,362	28,245	18,016	14,470	203,235
1960-61 ..	65,182	51,705	29,686	31,385	19,353	16,767	214,078
1961-62 ..	67,520	53,417	30,688	30,655	20,773	16,095	219,148
1962-63 ..	70,331	55,332	31,431	29,801	22,155	16,457	225,507
PER HEAD OF POPULATION (£)							
1958-59 ..	16.10	16.15	18.29	30.01	25.06	37.98	19.10
1959-60 ..	16.77	17.55	19.87	30.25	25.12	42.05	20.14
1960-61 ..	16.82	17.87	19.74	32.79	26.52	47.90	20.76
1961-62 ..	17.10	18.05	20.10	31.28	27.85	45.12	20.84
1962-63 ..	17.52	18.31	20.26	29.83	28.98	45.45	21.05

(a) See footnote (a) to previous table.

The tables above do not include particulars of expenditure on loan discounts and floatations, the funding of deficits, the retirement of treasury bills, and similar items of a nature other than works, services, etc. Summaries of the gross and net expenditure and repayments in respect of all loan purposes for the years 1960-61 to 1962-63 are shown in the next paragraph.

3. Total Loan Expenditure.—The following table shows particulars, in summary form, of the total loan expenditure in each State during each of the years, 1960-61 to 1962-63.

STATE LOAN EXPENDITURE: SUMMARY  
(£'000)

Particulars	N.S.W.	Vic.	Q'land	S. Aust.	W. Aust.	Tas.	Total
1960-61							
Works and services—							
Gross expenditure ..	65,182	51,705	29,686	31,385	19,353	16,767	214,078
Net expenditure ..	60,076	48,588	23,853	26,543	17,709	15,185	191,954
Repayments ..	5,106	3,117	5,833	4,842	1,644	1,582	22,124
Other than works, etc.(a)—							
Gross expenditure ..	-2,739	-2,331	..	71	-107	166	-4,940
Net expenditure ..	-2,739	-2,331	650	..	-174	120	-4,474
Repayments ..	..	..	-650	71	(b) 67	46	-466
Total Loan Expenditure—							
Gross ..	62,443	49,374	29,686	31,456	19,246	16,933	209,138
Net ..	57,337	46,257	24,503	26,543	17,535	15,305	187,480
Repayments ..	5,106	3,117	5,183	4,913	1,711	1,628	21,658
1961-62							
Works and services—							
Gross expenditure ..	67,520	53,417	30,688	30,655	20,773	16,095	219,148
Net expenditure ..	62,198	50,461	24,831	26,282	18,876	14,950	197,598
Repayments ..	5,322	2,956	5,857	4,373	1,897	1,145	21,550
Other than works, etc.(a)—							
Gross expenditure ..	-1,410	-1,144	..	33	181	165	-2,175
Net expenditure ..	-1,410	-1,144	670	-695	128	94	-2,357
Repayments ..	..	..	-670	728	(b) 53	71	182
Total Loan Expenditure—							
Gross ..	66,110	52,273	30,688	30,688	20,954	16,260	216,973
Net ..	60,788	49,317	25,501	25,587	19,004	15,044	195,241
Repayments ..	5,322	2,956	5,187	5,101	1,950	1,216	21,732

For footnotes, see next page.

STATE LOAN EXPENDITURE: SUMMARY—*continued*  
(£'000)

Particulars	N.S.W.	Vic.	Q'land	S. Aust.	W. Aust.	Tas.	Total
1962-63							
<b>Works and services—</b>							
Gross expenditure ..	70,331	55,332	31,431	29,801	22,155	16,457	225,507
Net expenditure ..	64,739	52,341	26,006	25,005	19,447	15,100	202,638
Repayments ..	5,592	2,991	5,425	4,796	2,708	1,357	22,869
<b>Other than works, etc.(a)—</b>							
Gross expenditure ..	-3,147	796	..	40	-120	150	-2,281
Net expenditure ..	-3,147	796	700	..	-174	155	-1,670
Repayments ..	..	..	-700	40	(b) 54	-5	-611
<b>Total Loan Expenditure—</b>							
Gross ..	67,184	56,128	31,431	29,841	22,035	16,607	223,226
Net ..	61,592	53,137	26,706	25,005	19,273	15,255	200,968
Repayments ..	5,592	2,991	4,725	4,836	2,762	1,352	22,258

(a) Includes exchange, discounts and flotation expenses, revenue and general cash deficits.  
(b) From Consolidated Revenue Fund.

NOTE.—Minus sign (—) indicates excess of repayments to loan fund.

Information relating to the government securities on issue on behalf of the States is given in the division on Government Securities on Issue: Commonwealth and States (see p. 951).

COMMONWEALTH AND STATE FINANCE

1. Consolidated Revenue Fund Revenue and Expenditure.—The following table shows the aggregate revenue and expenditure of the Consolidated Revenue Funds of the Commonwealth and States for each of the years 1958-59 to 1962-63. In the table the combined Commonwealth and State totals have been adjusted to exclude major duplications, but the separate Commonwealth and State figures are as shown in other divisions of this chapter. The items excluded from the total figures are:—payments made by the Commonwealth to the States and included in the State Consolidated Revenue Funds on account of tax reimbursements up to 1958-59, and financial assistance grants in 1959-60 to 1962-63, interest under the Financial Agreement, special grants, special financial assistance, coal strike emergency grants, price control reimbursements, grants to universities, cattle tick control, Tuberculosis Act capital expenditure, National Welfare Fund payments, and estimated payments of pay-roll tax by the States to the Commonwealth. There are other relatively minor payments for which adjustments have not been made, and the adjusted figures are therefore still slightly overstated.

COMMONWEALTH AND STATES: REVENUE AND EXPENDITURE

Year ended 30th June—	Revenue			Expenditure		
	Commonwealth	States	Total	Commonwealth	States	Total
	£'000	£'000	£m.	£'000	£'000	£m.
1959 .. ..	1,296,050	639,959	1,682.9	1,296,050	647,276	1,690.3
1960 .. ..	1,438,286	699,510	1,857.3	1,438,286	702,041	1,859.8
1961 .. ..	1,638,279	755,389	2,085.3	1,638,279	756,389	2,086.3
1962 .. ..	1,641,542	804,567	2,102.6	1,641,542	808,395	2,106.4
1963 .. ..	1,685,386	847,131	2,173.0	1,685,386	847,871	2,173.8

2. Taxation.—The following table shows the combined Commonwealth and State taxation collections, and the amount per head of population, for the years 1958–59 to 1962–63. Taxation collections by the State Governments which are not paid into the Consolidated Revenue Funds are included.

**COMMONWEALTH AND STATE TAXATION: TOTAL NET COLLECTIONS(a)**

Particulars	1958–59	1959–60	1960–61	1961–62	1962–63
<b>NET COLLECTIONS</b> (£'000)					
Customs and excise duties .. ..	307,925	336,492	359,194	350,805	379,503
Sales tax .. ..	143,617	164,185	173,040	148,824	156,531
Land tax .. ..	15,424	17,220	19,914	22,660	24,705
Pay-roll tax .. ..	49,619	55,162	61,260	60,972	63,255
Income taxes .. ..	608,675	671,302	807,273	828,150	810,590
Probate and succession duties .. ..	40,486	47,744	48,685	54,612	57,864
Stamp duties, n.e.i. .. ..	28,317	36,901	37,887	36,528	40,878
Motor taxes .. ..	41,973	46,527	48,926	51,609	57,759
Liquor taxes .. ..	8,483	8,623	9,052	9,861	11,102
Racing .. ..	7,540	8,262	8,526	9,115	10,599
Entertainments tax .. ..	1,846	1,609	1,421	1,090	470
Licences n.e.i., and other taxes .. ..	17,291	16,804	18,489	19,779	23,734
<b>Total—</b>					
Commonwealth .. ..	1,133,298	1,249,790	1,425,239	1,416,524	1,440,459
States .. ..	137,898	161,041	168,428	177,481	196,531
<b>Grand Total .. ..</b>	<b>1,271,196</b>	<b>1,410,831</b>	<b>1,593,667</b>	<b>1,594,005</b>	<b>1,636,990</b>

**PER HEAD OF POPULATION**  
(£)

Customs and excise duties .. ..	30.95	33.11	34.56	33.07	35.10
Sales tax .. ..	14.44	16.15	16.65	14.03	14.48
Land tax .. ..	1.55	1.70	1.92	2.14	2.29
Pay-roll tax .. ..	4.99	5.43	5.90	5.75	5.85
Income taxes .. ..	61.18	66.05	77.69	78.08	74.98
Probate and succession duties .. ..	4.07	4.70	4.69	5.15	5.35
Stamp duties, n.e.i. .. ..	2.85	3.63	3.65	3.44	3.78
Motor taxes .. ..	4.22	4.57	4.71	4.87	5.34
Liquor taxes .. ..	0.85	0.85	0.87	0.93	1.03
Racing .. ..	0.76	0.81	0.82	0.86	0.98
Entertainments tax .. ..	0.18	0.16	0.13	0.10	0.04
Licences n.e.i., and other taxes .. ..	1.74	1.65	1.77	1.87	2.20
<b>Total—</b>					
Commonwealth .. ..	113.92	122.96	137.15	133.56	133.23
States .. ..	13.95	15.96	16.34	16.88	18.34
<b>Grand Total .. ..</b>	<b>127.78</b>	<b>138.81</b>	<b>153.36</b>	<b>150.29</b>	<b>151.42</b>

(a) For separate details of Commonwealth and State taxation collections, see pp. 909–18 and 939–42.

**GOVERNMENT SECURITIES ON ISSUE: COMMONWEALTH AND STATES**

NOTE.—For the following reasons, Government Securities on Issue, as set out in the tables in this division, may not be aggregated without adjustment to indicate what is sometimes described as the “public debt” or “net public debt” of the Commonwealth and State Governments.

There are forms of debt not evidenced by the issue of securities. Again, some of the securities included in the tables are held by the Governments themselves. For example, a State Government may hold temporarily, or even for long periods, securities issued by the Commonwealth Government. The Commonwealth Government itself, through such institutions as the National Debt Commission, or through the Trust Funds, holds large investments in securities issued, either directly by itself or on behalf of the States. In addition, some of the securities issued on behalf of the States and held by the Commonwealth



Government represent the proceeds of oversea loans, securities for which were issued directly by the Commonwealth Government. From the point of view of the aggregate net debt of the Commonwealth and the States, it would thus involve duplication if the sum of the securities on issue were to be regarded as representing the "net public debt".

### § 1. General

Under the Financial Agreement between the Commonwealth and the States in 1927, the Commonwealth Government accepted responsibility for the securities of the State Governments then on issue, and was empowered to arrange for all future borrowings on behalf of the Commonwealth and the States and to issue Commonwealth securities for all money borrowed. The Commonwealth is reimbursed by the States for interest, exchange, etc., paid on their behalf, and the securities are redeemed from the National Debt Sinking Fund to which both the Commonwealth and State Governments make contributions.

In the statistical tables relating to Government securities, details of securities on issue, annual interest liability and average rate of interest liability, except in § 3, paras. 3 and 4, are shown in the currencies in which they are repayable or payable respectively. Australian currency equivalents for oversea loans have been calculated using International Monetary Fund par rates of exchange (and the calculated equivalent for Swiss francs) ruling at 30th June in each year shown. Rates of exchange to £A. at 30th June, 1963, were as follows:—£Sterling, 0.8000; United States dollars, 2.2400; Canadian dollars, 2.4216; Swiss francs, 9.7955; Netherlands guilders, 8.1088; German Deutsche marks, 8.9600.

### § 2. The Financial Agreement between the Commonwealth and the States

1. **General.**—Full details of the Financial Agreement between the Commonwealth and the States are given in earlier issues of the Year Book (*see* No. 37, pp. 685–90). In this issue, a summary of the main provisions only is given.

2. **Australian Loan Council.**—The Australian Loan Council was set up to co-ordinate the borrowings of the Commonwealth and the States. It consists of the Prime Minister of the Commonwealth, or another Minister nominated by him in writing, as Chairman, and the State Premiers, or Ministers nominated by them in writing. Each year, the Loan Council examines the loan programmes of the Commonwealth and the States and determines the total amount to be borrowed during the year. Borrowings by the Commonwealth for defence purposes are not subject to decisions of the Loan Council.

3. **Loan Raisings for the Commonwealth and States.**—Subject to the decisions of the Loan Council, the Commonwealth arranges for all borrowings for or on behalf of the Commonwealth or any State, and for all conversions, renewals, redemptions, and consolidations of the securities issued on behalf of the Commonwealth and of the States.

If the Loan Council unanimously decides, however, a State may borrow outside Australia in its own name, and may issue securities for the amount so borrowed. The Commonwealth then guarantees that the State will fulfil all its obligations to bond-holders in respect of the money so borrowed, and the money is deemed to be borrowed by the Commonwealth for and on behalf of the State.

Subject to any maximum limits decided upon by the Loan Council for interest, brokerage, discount and other charges, the Commonwealth or any State may borrow within its own territory, for any purpose, money from any authorities, bodies, funds or institutions (including savings banks) constituted or established under Commonwealth or State law or practice; borrow from the public by means of counter sales of securities; and use any available public moneys.

However, any securities issued for money so borrowed or used must be Commonwealth securities on terms approved by the Loan Council.

4. **Taking over of State Government Securities.**—The Commonwealth on 1st July, 1929, took over securities issued by each State existing on 30th June, 1927; and all other securities of each State existing on 1st July, 1929, for money borrowed by that State deemed by the Agreement to be money borrowed by the Commonwealth for and on behalf of the State; and in respect of these securities assumed, as between the Commonwealth and the States, the liabilities of the States to bond-holders.

5. **Transferred Properties.**—In relation to State properties transferred to the Commonwealth under Section 85 of the Constitution, the States, as from 1st July, 1929, were discharged from any liability in respect of principal, interest or redemption on so much of the securities bearing interest at 5 per cent. per annum taken over by the Commonwealth as amounted to the agreed value of these properties, namely £10,924,323.

6. **Payment of Interest.**—For a period of 58 years from 1st July, 1927, the Commonwealth agreed to contribute the sum of £7,584,912 each year towards the interest payable on the State securities. The balance of the interest payable on the State securities is paid to the Commonwealth by the States.

7. **Sinking Fund.**—(i) *State Securities existing at 30th June, 1927.* A sinking fund at the rate of 7s. 6d. per annum for each £100 of the securities of the States existing on 30th June, 1927, and conversions thereof, was established under the terms of the Agreement. The Commonwealth contributes annually from revenue 2s. 6d. per £100 on the securities of the States existing at 30th June, 1927, and each State contributes annually 5s. per £100 on its securities at 30th June, 1927. The payments of the Commonwealth and of all States except New South Wales will continue for a period of 58 years from 1st July, 1927, and those of New South Wales for a similar period from 1st July, 1928.

(ii) *New Borrowings.* On new borrowings after 1st July, 1927 (except those for redemptions or conversions, or funding a State deficit), a sinking fund at the rate of 10s. per £100 per annum was established, and the State and the Commonwealth contribute from revenue equal shares for a period of 53 years from the date of raising. (New South Wales did not commence sinking fund contributions in respect of new loans raised in the financial year 1927–28 until 1st July, 1928.)

(iii) *Loans raised to meet a Revenue Deficit.* In respect of any loan (except any of the loans referred to in sub-para. (iv) below) raised by a State after 30th June, 1927, to meet a revenue deficit accruing after that date, no sinking fund contribution is made by the Commonwealth, but the State makes a sinking fund contribution at the rate of not less than 4 per cent. per annum of the loan for a period sufficient to provide for the redemption of the loan, the contributions being deemed to accumulate at the rate of 4½ per cent. per annum compound interest.

(iv) *Loans raised to meet Revenue Deficits between 30th June, 1927, and 1st July, 1935.* Special contributions are payable in respect of loans raised by a State or by the Commonwealth on behalf of a State, on the security of Commonwealth Treasury Bills, to meet a revenue deficit which accrued after 30th June, 1927, and before 1st July, 1935. Details of these contributions are given in Year Book No. 37, pages 688–9.

(v) *National Debt Commission.* The sinking funds established are controlled by the National Debt Commission, which may arrange with any State to act as its agent in connexion with payments due to bond-holders. Except where the conditions relating to sinking funds, redemption funds, and funds of a like nature held by a State on 30th June, 1929, precluded such transfer, all such funds were transferred to the National Debt Commission.

(vi) *Operation of Sinking Fund.* Sinking fund contributions made in respect of the securities of a State, and funds of that State transferred to the National Debt Commission, are not accumulated, but must be applied, whenever expedient, to the redemption and repurchase of loan securities. When such a loan security is repurchased or redeemed by the National Debt Commission, it is cancelled, and the State, in addition to sinking fund contributions otherwise payable, pays a further annual sinking fund contribution at the rate of 4½ per cent. on the face value of the cancelled security for the balance of the period during which the original contribution is payable in respect of that debt.

(vii) *Oversea Securities on Issue.* Sinking fund contributions in respect of oversea securities shall be calculated at the mint par of exchange prevailing on 1st July, 1927.

8. **Borrowing by Semi-governmental Authorities.**—It was realized from the inception of the Loan Council that, in the interests of co-ordinated borrowing, the Council should be advised of the borrowing of large amounts by semi-governmental authorities. In May, 1936, all resolutions passed by the Loan Council in connexion with semi-governmental borrowings were consolidated into one set of rules, which superseded all previous resolutions. This set of rules provides, *inter alia*, for the submission of annual loan programmes in respect of semi-governmental authorities proposing to raise £100,000 or more in a year, for the consideration of such programmes in conjunction with the loan programme of the government concerned, and for the fixing of the terms of individual semi-governmental loans coming within the scope of the annual programme.

### § 3. Government Securities on Issue: Commonwealth and States

1. Government Securities on Issue, Annual Interest Payable and Average Rate of Interest, 30th June, 1963.—In the following tables, details are given of government securities on issue on account of the Commonwealth and States, annual interest payable and average rate of interest at 30th June, 1963.

#### GOVERNMENT SECURITIES ON ISSUE: COMMONWEALTH AND STATES, 30th JUNE, 1963

Particulars	Currency in which repayable							Total— Aus- tralian currency equiva- lents(a)
	Aus- tralian currency	Sterling	United States dollars	Can- adian dollars	Swiss francs	Nether- lands guilders	German Deutsche marks	
	£A.'000	£Stg.'000	U.S. \$ '000	Can. \$ '000	Sw. fr. '000	f.'000	D.M. '000	£A.'000
For Commonwealth purposes ..	1,259,364	77,327	362,025	50,948	196,556	7,150	6,355	1,560,336
On account of States—								
New South Wales .. ..	898,646	112,420	87,965	5,247	15,833	10,383	..	1,083,506
Victoria .. ..	660,434	43,539	49,731	4,219	12,732	8,346	..	741,130
Queensland .. ..	330,613	45,687	35,538	2,118	6,391	4,250	..	405,637
South Australia .. ..	358,016	32,775	24,579	2,245	6,774	4,191	..	412,093
Western Australia .. ..	257,732	31,377	18,323	1,612	4,863	3,264	..	306,698
Tasmania .. ..	191,229	8,045	11,794	1,227	3,703	2,416	..	207,734
Total, States .. ..	2,696,670	273,843	227,930	16,668	50,296	32,850	..	3,156,798
Total, Commonwealth and States—								
Stock and bonds .. ..	3,449,266	346,929	344,556	31,610	240,000	40,000	..	4,079,234
Treasury Bills, Internal .. ..	279,800	..	..	..	..	..	..	279,800
Treasury Notes .. ..	69,538	..	..	..	..	..	..	69,538
Treasury Bills, Public .. ..	123,000	..	..	..	..	..	..	123,000
International Bank Loans .. ..	..	..	208,019	36,006	6,852	..	6,355	109,143
Commonwealth notes .. ..	..	..	37,380	..	..	..	..	16,688
Debentures .. ..	30,515	..	..	..	..	..	..	30,515
Balance of securities of States taken over by Commonwealth and still represented by State securities .. ..	..	4,241	..	..	..	..	..	5,301
Other .. ..	3,915	..	..	..	..	..	..	3,915
Grand Total— Currencies in which Re- payable .. ..	3,956,034	351,170	589,955	67,616	246,852	40,000	6,355	..
Australian Currency Equi- valents(a) .. £A.'000	3,956,034	438,962	263,373	27,922	25,201	4,933	709	4,717,134

(a) For rates of exchange to £A. ruling at 30th June, 1963, see p. 952.

#### GOVERNMENT SECURITIES ON ISSUE: COMMONWEALTH AND STATES— ANNUAL INTEREST PAYABLE, 30th JUNE, 1963

Particulars	Currency in which payable							Total— Aus- tralian currency equiva- lents(a)
	Aus- tralian currency	Sterling	United States dollars	Can- adian dollars	Swiss francs	Nether- lands guilders	German Deutsche marks	
	£A.'000	£Stg.'000	U.S. \$ '000	Can. \$ '000	Sw. fr. '000	f.'000	D.M. '000	£A.'000
For Commonwealth purposes ..	41,275	3,504	17,711	2,352	8,080	357	302	55,435
On account of States—								
New South Wales .. ..	39,346	4,906	4,293	301	712	519	..	47,657
Victoria .. ..	29,555	1,834	2,501	243	573	417	..	33,175
Queensland .. ..	14,310	1,677	1,680	122	287	213	..	17,262
South Australia .. ..	15,911	1,133	1,231	129	305	210	..	17,987
Western Australia .. ..	11,401	1,057	913	93	219	163	..	13,210
Tasmania .. ..	8,541	310	609	71	167	121	..	9,262
Total, States .. ..	119,064	10,917	11,227	959	2,263	1,643	..	138,553
Grand Total—								
Currencies in which Re- payable .. ..	160,339	14,421	28,938	3,311	10,343	2,000	302	..
Australian Currency Equi- valents(a) .. £A.'000	160,339	18,026	12,919	1,367	1,056	247	34	193,988

(a) For rates of exchange to £A. ruling at 30th June, 1963, see p. 952.

**GOVERNMENT SECURITIES ON ISSUE : COMMONWEALTH AND STATES—  
ANNUAL INTEREST PAYABLE, 30TH JUNE, 1963—continued**

Particulars	Currency in which payable							Total— Aus- tralian currency equiva- lents(a)
	Aus- tralian currency	Sterling	United States dollars	Can- adian dollars	Swiss francs	Nether- lands guilders	German Deutsche marks	
<b>AVERAGE RATE OF INTEREST LIABILITY</b>								
<b>(Per cent.)</b>								
For Commonwealth purposes ..	3.28	4.53	4.89	4.62	4.11	5.00	4.75	3.56
On account of States—								
New South Wales .. ..	4.38	4.36	4.38	5.75	4.50	5.00	..	4.40
Victoria .. ..	4.48	4.21	5.03	5.75	4.50	5.00	..	4.48
Queensland .. ..	4.33	3.67	4.73	5.75	4.50	5.00	..	4.26
South Australia .. ..	4.44	3.46	5.01	5.75	4.50	5.00	..	4.36
Western Australia .. ..	4.42	3.37	4.98	5.75	4.50	5.00	..	4.31
Tasmania .. ..	4.47	3.86	5.16	5.75	4.50	5.00	..	4.46
Total, States .. ..	4.42	3.99	4.93	5.75	4.50	5.00	..	4.39
Grand Total .. ..	4.05	4.11	4.91	4.90	4.19	5.00	4.75	4.11

(a) For rates of exchange to £A. ruling at 30th June, 1963, see p. 952.

2. Government Securities on Issue, Annual Interest Payable and Average Rate of Interest 30th June, 1959 to 1963.—The following tables give details of government securities on issue and annual interest payable, including the average rate of interest, at 30th June, 1959 to 1963.

**GOVERNMENT SECURITIES ON ISSUE: COMMONWEALTH AND STATES**

Particulars	30th June—				
	1959	1960	1961	1962	1963..
For Commonwealth purposes—					
Australian currency .. £A.'000	1,496,354	1,378,574	1,326,454	1,280,474	1,259,364
Sterling .. £Stg.'000	64,040	75,820	75,339	75,188	77,327
United States dollars U.S. \$'000	311,862	333,049	317,812	315,617	362,025
Canadian dollars Can. \$'000	50,911	50,328	51,933	51,627	50,948
Swiss francs .. Sw. fr.'000	148,166	205,794	210,657	209,658	196,556
Netherlands guilders .. f.'000	..	..	..	7,150	7,150
German Deutsche marks D.M.'000	12,337	8,369	6,355	6,355	6,355
<b>Total, Commonwealth—Australian Currency Equivalents(a) £A.'000</b>	<b>1,755,822</b>	<b>1,666,863</b>	<b>1,607,328</b>	<b>1,559,675</b>	<b>1,560,336</b>
On account of States—					
Australian currency .. £A.'000	2,093,752	2,244,605	2,389,864	2,548,700	2,696,670
Sterling .. £Stg.'000	267,865	267,105	266,691	266,161	273,843
United States dollars U.S. \$'000	146,008	161,538	178,256	187,701	227,930
Canadian dollars Can. \$'000	..	..	16,765	16,765	16,668
Swiss francs .. Sw. fr.'000	..	..	50,296	50,296	50,296
Netherlands guilders .. f.'000	..	..	..	32,850	32,850
<b>Total, States—Australian Currency Equivalents(a) £A.'000</b>	<b>2,493,766</b>	<b>2,650,601</b>	<b>2,815,240</b>	<b>2,981,305</b>	<b>3,156,798</b>
<b>Total, Commonwealth and States— Australian Currency Equivalents(a) £A.'000</b>	<b>4,249,588</b>	<b>4,317,464</b>	<b>4,422,568</b>	<b>4,540,980</b>	<b>4,717,134</b>

(a) For rates of exchange to £A. ruling at 30th June, 1963, see p. 952.

**GOVERNMENT SECURITIES ON ISSUE: COMMONWEALTH AND STATES—  
ANNUAL INTEREST PAYABLE**

Particulars	30th June—				
	1959	1960	1961	1962	1963
<b>AMOUNT</b>					
<b>For Commonwealth purposes—</b>					
Australian currency .. £A.'000	45,700	43,556	43,277	42,645	41,275
Sterling .. £Stg.'000	2,327	2,980	3,395	3,386	3,504
United States dollars U.S. \$'000	13,946	15,184	14,570	15,053	17,711
Canadian dollars Can. \$'000	2,302	2,279	2,388	2,380	2,352
Swiss francs .. Sw. fr.'000	5,922	8,514	8,723	8,675	8,080
Netherlands guilders .. f.'000	..	..	..	357	357
German Deutsche marks D.M.'000	586	398	302	302	302
<b>Total, Commonwealth—Australian Currency Equivalents(a) £A.'000</b>	<b>56,576</b>	<b>56,009</b>	<b>55,987</b>	<b>55,545</b>	<b>55,435</b>
<b>On account of States—</b>					
Australian currency .. £A.'000	84,746	93,252	104,072	112,943	119,064
Sterling .. £Stg.'000	9,859	9,832	10,355	10,328	10,917
United States dollars U.S. \$'000	6,124	6,989	7,900	8,976	11,227
Canadian dollars Can. \$'000	..	..	964	964	959
Swiss francs .. Sw. fr.'000	..	..	2,263	2,263	2,263
Netherlands guilders .. f.'000	..	..	..	1,643	1,643
<b>Total, States—Australian Currency Equivalents(a) £A.'000</b>	<b>99,804</b>	<b>108,662</b>	<b>121,194</b>	<b>130,663</b>	<b>138,553</b>
<b>Total, Commonwealth and States— Australian Currency Equivalents(a) £A.'000</b>	<b>156,380</b>	<b>164,671</b>	<b>177,181</b>	<b>186,208</b>	<b>193,988</b>

**AVERAGE RATE (PER CENT.) OF INTEREST PAYABLE**

<b>For Commonwealth purposes—</b>					
Australian currency .. ..	3.05	3.16	3.26	3.33	3.28
Sterling .. ..	3.63	3.93	4.51	4.50	4.53
United States dollars .. ..	4.47	4.56	4.58	4.77	4.89
Canadian dollars .. ..	4.52	4.53	4.60	4.61	4.62
Swiss francs .. ..	4.00	4.14	4.14	4.14	4.11
Netherlands guilders .. ..	..	..	..	5.00	5.00
German Deutsche marks .. ..	4.75	4.75	4.75	4.75	4.75
<b>Total Commonwealth—Australian Currency Equivalents(a) ..</b>	<b>3.22</b>	<b>3.36</b>	<b>3.48</b>	<b>3.56</b>	<b>3.56</b>
<b>On account of States—</b>					
Australian currency .. ..	4.05	4.15	4.35	4.43	4.42
Sterling .. ..	3.68	3.68	3.88	3.88	3.99
United States dollars .. ..	4.19	4.33	4.43	4.79	4.93
Canadian dollars .. ..	..	..	5.75	5.75	5.75
Swiss francs .. ..	..	..	4.50	4.50	4.50
Netherlands guilders .. ..	..	..	..	5.00	5.00
<b>Total, States—Australian Currency Equivalents(a) .. ..</b>	<b>4.00</b>	<b>4.10</b>	<b>4.30</b>	<b>4.38</b>	<b>4.39</b>
<b>Total, Commonwealth and States— Australian Currency Equivalents(a)</b>	<b>3.68</b>	<b>3.81</b>	<b>4.01</b>	<b>4.10</b>	<b>4.11</b>

(a) For rates of exchange to £A. ruling at 30th June, 1963, see p. 952.

3. Government Securities on Issue and Annual Interest Payable, 30th June, 1963—Australian Currency.—In the following tables, details, including per capita figures, are shown in Australian currency equivalents calculated at rates of exchange ruling at 30th June, 1963.

**GOVERNMENT SECURITIES ON ISSUE: COMMONWEALTH AND STATES, 30th JUNE, 1963—AUSTRALIAN CURRENCY**

Particulars	Currency in which repayable							Total
	Australian currency	Sterling	United States dollars	Canadian dollars	Swiss francs	Netherlands guilders	German Deutsche marks	
AMOUNT (£A.'000)								
For Commonwealth purposes—								
Treasury Bills, Internal	279,800	..	..	..	..	..	..	279,800
Other short-term	192,538	..	..	..	..	..	..	192,538
Other	787,026	96,658	161,618	21,039	20,066	882	709	1,087,998
<i>Total, Commonwealth</i>	<i>1,259,364</i>	<i>96,658</i>	<i>161,618</i>	<i>21,039</i>	<i>20,066</i>	<i>882</i>	<i>709</i>	<i>1,560,336</i>
On account of States—								
New South Wales	898,646	140,526	39,271	2,167	1,616	1,280	..	1,083,506
Victoria	660,434	54,423	22,202	1,742	1,300	1,029	..	741,130
Queensland	330,613	57,109	15,864	875	652	524	..	405,637
South Australia	358,016	40,969	10,972	927	692	517	..	412,093
Western Australia	257,732	39,221	8,180	665	497	403	..	306,698
Tasmania	191,229	10,056	5,266	507	378	298	..	207,734
<i>Total, States</i>	<i>2,696,670</i>	<i>342,304</i>	<i>101,755</i>	<i>6,883</i>	<i>5,135</i>	<i>4,051</i>	<i>..</i>	<i>3,156,798</i>
<b>Total, Commonwealth and States—</b>								
Treasury Bills, Internal	279,800	..	..	..	..	..	..	279,800
Other short-term	192,538	..	..	..	..	..	..	192,538
Other	3,483,696	438,962	263,373	27,922	25,201	4,933	709	4,244,796
<b>Grand Total</b>	<b>3,956,034</b>	<b>438,962</b>	<b>263,373</b>	<b>27,922</b>	<b>25,201</b>	<b>4,933</b>	<b>709</b>	<b>4,717,134</b>

**PER HEAD OF POPULATION  
(£A.)**

For Commonwealth purposes	115.37	8.85	14.81	1.93	1.84	0.08	0.06	142.94
On account of States—								
New South Wales	221.96	34.71	9.70	0.54	0.40	0.32	..	267.63
Victoria	216.13	17.81	7.27	0.57	0.42	0.34	..	242.54
Queensland	211.09	36.46	10.13	0.56	0.42	0.33	..	258.99
South Australia	354.83	40.60	10.87	0.92	0.69	0.51	..	408.42
Western Australia	333.63	50.77	10.59	0.86	0.64	0.52	..	397.01
Tasmania	529.25	27.83	14.57	1.40	1.05	0.83	..	574.93
<i>Total, States</i>	<i>249.38</i>	<i>31.66</i>	<i>9.41</i>	<i>0.64</i>	<i>0.47</i>	<i>0.37</i>	<i>..</i>	<i>291.93</i>
<b>Total, Commonwealth and States</b>	<b>362.40</b>	<b>40.21</b>	<b>24.13</b>	<b>2.56</b>	<b>2.31</b>	<b>0.45</b>	<b>0.06</b>	<b>432.12</b>

**GOVERNMENT SECURITIES ON ISSUE: COMMONWEALTH AND STATES—  
ANNUAL INTEREST PAYABLE, 30th JUNE, 1963—AUSTRALIAN CURRENCY**

Particulars	Currency in which repayable—							Total
	Australian currency	Sterling	United States dollars	Canadian dollars	Swiss francs	Netherlands guilders	German Deutsche marks	
AMOUNT (£A.'000)								
For Commonwealth purposes .. ..	41,275	4,379	7,907	971	825	44	34	55,435
On account of States—								
New South Wales .. ..	39,346	6,133	1,917	124	73	64	..	47,657
Victoria .. ..	29,555	2,293	1,116	100	59	52	..	33,175
Queensland .. ..	14,310	2,096	750	51	29	26	..	17,262
South Australia .. ..	15,911	1,416	550	53	31	26	..	17,987
Western Australia .. ..	11,401	1,321	407	39	22	20	..	13,210
Tasmania .. ..	8,541	388	272	29	17	15	..	9,262
<i>Total, States</i> .. ..	<i>119,064</i>	<i>13,647</i>	<i>5,012</i>	<i>396</i>	<i>231</i>	<i>203</i>	<i>..</i>	<i>138,553</i>
<b>Total, Commonwealth and States</b>	<b>160,339</b>	<b>18,026</b>	<b>12,919</b>	<b>1,367</b>	<b>1,056</b>	<b>247</b>	<b>34</b>	<b>193,988</b>

**PER HEAD OF POPULATION**

(£A.)

For Commonwealth purposes .. ..	3.78	0.40	0.73	0.09	0.08	..	..	5.08
On account of States—								
New South Wales .. ..	9.72	1.51	0.47	0.03	0.02	0.02	..	11.77
Victoria .. ..	9.67	0.75	0.37	0.03	0.02	0.02	..	10.86
Queensland .. ..	9.14	1.33	0.48	0.03	0.02	0.02	..	11.02
South Australia .. ..	15.77	1.40	0.55	0.05	0.03	0.03	..	17.83
Western Australia .. ..	14.76	1.71	0.52	0.05	0.03	0.03	..	17.10
Tasmania .. ..	23.64	1.07	0.75	0.08	0.05	0.04	..	25.63
<i>Total, States</i> .. ..	<i>11.01</i>	<i>1.26</i>	<i>0.46</i>	<i>0.04</i>	<i>0.02</i>	<i>0.02</i>	<i>..</i>	<i>12.81</i>
<b>Total, Commonwealth and States</b>	<b>14.69</b>	<b>1.65</b>	<b>1.18</b>	<b>0.13</b>	<b>0.10</b>	<b>0.02</b>	<b>..</b>	<b>17.77</b>

4. Government Securities on Issue and Annual Interest Payable, 30th June, 1959 to 1963.—In the following table, particulars of government securities on issue and annual interest payable thereon are shown in Australian currency equivalents calculated at rates of exchange ruling at 30th June in each year.

GOVERNMENT SECURITIES ON ISSUE: COMMONWEALTH AND STATES—  
SECURITIES ON ISSUE AND ANNUAL INTEREST PAYABLE—AUSTRALIAN  
CURRENCY  
(£A.'000)

Particulars	30th June—				
	1959	1960	1961	1962	1963
<b>SECURITIES ON ISSUE</b>					
<b>For Commonwealth purposes—</b>					
Treasury Bills, Internal .. .. .	269,600	233,500	251,100	240,900	279,800
Other short-term .. .. .	171,000	201,000	186,000	208,000	192,538
Other .. .. .	1,315,222	1,232,363	1,170,228	1,110,775	1,087,998
<i>Total, Commonwealth</i> .. .. .	<i>1,755,822</i>	<i>1,666,863</i>	<i>1,607,328</i>	<i>1,559,675</i>	<i>1,560,336</i>
<b>On account of States—</b>					
New South Wales .. .. .	875,770	924,707	976,284	1,028,308	1,083,506
Victoria .. .. .	571,859	612,003	653,756	696,270	741,130
Queensland .. .. .	320,714	340,118	361,154	382,885	405,637
South Australia .. .. .	326,614	347,914	369,749	390,323	412,093
Western Australia .. .. .	242,019	257,047	272,878	289,380	306,698
Tasmania .. .. .	156,790	168,812	181,419	194,139	207,734
<i>Total, States</i> .. .. .	<i>2,493,766</i>	<i>2,650,601</i>	<i>2,815,240</i>	<i>2,981,305</i>	<i>3,156,798</i>
<b>Total, Commonwealth and States—</b>					
Treasury Bills, Internal .. .. .	269,600	233,500	251,100	240,900	279,800
Other short-term .. .. .	171,000	201,000	186,000	208,000	192,538
Other .. .. .	3,808,988	3,882,964	3,985,468	4,092,080	4,244,796
<b>Grand Total</b> .. .. .	<b>4,249,588</b>	<b>4,317,464</b>	<b>4,422,568</b>	<b>4,540,980</b>	<b>4,717,134</b>
<b>ANNUAL INTEREST LIABILITY</b>					
<b>For Commonwealth purposes</b> .. .. .	<b>56,576</b>	<b>56,009</b>	<b>55,987</b>	<b>55,545</b>	<b>55,435</b>
<b>On account of States—</b>					
New South Wales .. .. .	34,985	37,827	42,126	45,042	47,657
Victoria .. .. .	23,581	25,798	28,812	31,211	33,175
Queensland .. .. .	12,381	13,427	15,025	16,335	17,262
South Australia .. .. .	13,094	14,290	15,890	17,086	17,987
Western Australia .. .. .	9,374	10,318	11,479	12,457	13,210
Tasmania .. .. .	6,389	7,002	7,862	8,532	9,262
<i>Total, States</i> .. .. .	<i>99,804</i>	<i>108,662</i>	<i>121,194</i>	<i>130,663</i>	<i>138,553</i>
<b>Total, Commonwealth and States</b> .. .. .	<b>156,380</b>	<b>164,671</b>	<b>177,181</b>	<b>186,208</b>	<b>193,988</b>

5. Government Securities on Issue at Each Rate of Interest.—(i) *Commonwealth*. The following table shows particulars of the securities on issue for Commonwealth purposes at 30th June, 1963, at each rate of interest.



**GOVERNMENT SECURITIES ON ISSUE: COMMONWEALTH—AMOUNTS AT EACH RATE OF INTEREST, 30th JUNE, 1963**

Rate of interest per annum (per cent.)	Currency in which repayable							Total— Australian currency equivalents(a)
	Aus- tralian currency	Sterling	United States dollars	Can- adian dollars	Swiss francs	Nether- lands guilders	German deutsche marks	
	£A.'000	£Stg.'000	U.S. \$ '000	Can. \$ '000	Sw. fr. '000	f.'000	D.M. '000	
6.0		15,593						19,490
5.75			55,111	3,217				25,932
5.5		23,529	49,078					51,321
5.375	36,687							36,687
5.25	21,208		12,412					26,749
5.0	332,643		38,385			7,150		350,661
4.75	111,674		90,105	30,406	451		6,355	165,210
4.625			29,992	4,259				15,149
4.5	91,581		2,267		69,704			99,709
4.2625	22							22
4.25	48,424		67,994	1,341	6,394			79,985
4.0	4,208	5,655		11,725	60,000			22,244
3.875	32							32
3.75	3,449		11,794		60,000			14,839
3.5		5,652	4,887					9,247
3.4375	49,369							49,369
3.25		17,129						21,411
3.233	20,169							20,169
3.125	70,331							70,331
3.0		9,769						12,212
1.0	402,800							402,800
Overdue	3,883							3,883
Special bonds	62,884							62,884
<b>Total—</b>								
Currencies in which								
Repayable	1,259,364	77,327	362,025	50,948	196,556	7,150	6,355	..
Australian Currency								
Equivalents (a)	£A.'000	96,658	161,618	21,039	20,066	882	709	1,560,336

(a) For rates of exchange to £A. ruling at 30th June, 1963, see p. 952.

(ii) *States.* The following table shows particulars of the securities on issue for State purposes at 30th June, 1963, at each rate of interest.
**GOVERNMENT SECURITIES ON ISSUE: STATES—AMOUNTS AT EACH RATE OF INTEREST, 30th JUNE, 1963**

Rate of interest per annum (per cent.)	Currency in which repayable						Total— Australian currency equivalents(a)
	Aus- tralian currency	Sterling	United States dollars	Can- adian dollars	Swiss francs	Nether- lands guilders	
	£A.'000	£Stg.'000	U.S. \$ '000	Can. \$ '000	Sw. fr. '000	f.'000	
6.0		43,913					54,891
5.75					16,668		6,883
5.5		41,832	83,897				89,744
5.375	126,742						126,742
5.25	56,259		40,153				74,184
5.0	687,603		28,976			32,850	704,591
4.75	277,553		18,379				285,758
4.5	544,688		19,008		50,296		558,309
4.25	318,625						318,625
4.125	9,600						9,600
4.0	103,745	21,665					130,826
3.875	702						702
3.75	67,661		5,942				70,314
3.625	107						107
3.5	4,459	25,135	31,575				49,973
3.4875	2						2
3.25	10,880	51,276					74,975
3.125	314,958						314,958
3.1	3,225						3,225
3.0	20,995	55,784					90,725
2.75		15,794					19,743
2.7125	308						308
2.5	1	18,441					23,053
2.325	1,398						1,398
1.5	2,936						2,936
1.0	30,515						30,515
Overdue			2				3
Special Bonds	113,708						113,708
<b>Total—</b>							
Currencies in which							
Repayable	2,696,670	273,843	227,930	16,668	50,296	32,850	..
Australian Currency							
Equivalents(a)	£A.'000	342,304	101,755	6,883	5,135	4,051	3,156,798

(a) For rates of exchange to £A. ruling at 30th June, 1963, see p. 952.

6. Government Securities on Issue at Dates of Maturity.—(i) *Commonwealth*. In the following tables, government securities on issue on account of the Commonwealth at 30th June, 1963, are classified according to the earliest and latest years of maturity.

GOVERNMENT SECURITIES ON ISSUE, 30th JUNE, 1963: COMMONWEALTH—  
BY EARLIEST YEAR OF MATURITY

Particulars	Currency in which repayable							Total— Aus- tralian currency equiva- lents(a)
	Aus- tralian currency	Sterling	United States dollars	Can- adian dollars	Swiss frances	Nether- lands guilders	German deutsche marks	
	£A.'000	£Stg.'000	U.S. \$ '000	Can. \$ '000	Sw. fr. '000	f.'000	D.M. '000	£A.'000
Before 30th June, 1963 ..	73,780	11,307	201,742	47,731	6,852	..	6,355	203,096
1963-64 .. ..	513,521	..	13,830	..	..	..	..	515,695
1964-65 .. ..	29,068	122	1,250	..	60,000	..	..	35,904
1965-66 .. ..	24,437	17,007	..	..	60,000	..	..	51,820
1966-67 .. ..	46,319	..	51,174	..	..	..	..	69,165
1967-68 .. ..	43,124	..	3,653	..	..	7,150	..	45,636
1968-69 .. ..	40,457	..	3,486	..	..	..	..	42,013
1969-70 .. ..	9,072	..	26,853	..	60,000	..	..	27,185
1970-71 .. ..	31,323	6,951	3,934	3,217	9,704	..	..	44,087
1971-72 .. ..	18,275	..	16,005	..	..	..	..	25,420
1972-73 .. ..	34,288	..	40,098	..	..	..	..	52,189
1974-75 .. ..	61,818	..	..	..	..	..	..	61,818
1975-76 .. ..	46,951	22,214	..	..	..	..	..	74,719
1976-77 .. ..	..	11,910	..	..	..	..	..	14,888
1979-80 .. ..	67,276	..	..	..	..	..	..	67,276
1980-81 .. ..	9,110	..	..	..	..	..	..	9,110
1981-82 .. ..	62,208	7,816	..	..	..	..	..	71,978
1982-83 .. ..	33,165	..	..	..	..	..	..	33,165
1984-85 .. ..	18,676	..	..	..	..	..	..	18,676
1985-86 .. ..	16,106	..	..	..	..	..	..	16,106
1986-87 .. ..	13,558	..	..	..	..	..	..	13,558
Special bonds .. ..	62,884	..	..	..	..	..	..	62,884
Overdue .. ..	3,883	..	..	..	..	..	..	3,883
Half-yearly instalments ..	33	..	..	..	..	..	..	33
Peace savings certificates	32	..	..	..	..	..	..	32
<b>Total—</b>								
Currencies in which Repayable ..	1,259,364	77,327	362,025	50,948	196,556	7,150	6,355	..
Australian Currency Equivalents (a) £A.'000	1,259,364	96,658	161,618	21,039	20,066	882	709	1,560,336

(a) For rates of exchange to £A. ruling at 30th June, 1963, see p. 952.

**GOVERNMENT SECURITIES ON ISSUE, 30th JUNE, 1963: COMMONWEALTH—  
BY LATEST YEAR OF MATURITY**

Particulars	Currency in which repayable							Total— Aus- tralian currency equiva- lents (a)
	Aus- tralian currency	Sterling	United States dollars	Can- adian dollars	Swiss francs	Nether- lands guilders	German Deutsche marks	
	£A.'000	£Stg.'000	U.S. \$ '000	Can. \$ '000	Sw. fr. '000	f.'000	D.M. '000	
1963-64 .. ..	555,478	5,655	4,370	..	..	..	..	564,498
1964-65 .. ..	57,431	..	3,900	..	..	..	..	59,172
1965-66 .. ..	27,897	..	1,000	..	..	..	..	28,343
1966-67 .. ..	46,319	5,652	14,117	..	..	..	..	59,686
1967-68 .. ..	43,124	..	4,600	..	..	..	..	45,178
1968-69 .. ..	40,457	..	42,898	8,988	60,000	..	..	69,445
1969-70 .. ..	9,072	17,007	41,786	4,299	60,007	..	..	56,870
1970-71 .. ..	31,323	..	1,017	11,725	..	..	..	36,619
1971-72 .. ..	18,275	..	40,039	2,243	..	..	6,355	37,785
1972-73 .. ..	34,288	6,951	18,077	19,175	451	..	..	59,011
1974-75 .. ..	61,818	122	..	..	60,000	..	..	68,095
1975-76 .. ..	46,951	7,776	67,994	1,341	16,098	..	..	89,222
1977-78 .. ..	..	11,973	..	..	..	..	..	14,966
1978-79 .. ..	..	2,465	3,486	..	..	..	..	4,637
1979-80 .. ..	67,276	11,910	26,853	..	..	..	..	95,152
1980-81 .. ..	9,110	..	3,934	3,217	..	..	..	11,194
1981-82 .. ..	62,208	..	16,005	..	..	7,150	..	70,235
1982-83 .. ..	33,165	..	40,098	..	..	..	..	51,066
1983-84 .. ..	..	7,816	..	..	..	..	..	9,770
1984-85 .. ..	18,676	..	..	..	..	..	..	18,676
1985-86 .. ..	16,106	..	..	..	..	..	..	16,106
1986-87 .. ..	13,558	..	31,851	..	..	..	..	27,778
Special bonds .. ..	62,884	..	..	..	..	..	..	62,884
Overdue .. ..	3,883	..	..	..	..	..	..	3,883
Half-yearly instalments ..	33	..	..	..	..	..	..	33
Peace savings certificates	32	..	..	..	..	..	..	32
<b>Total—</b>								
Currencies in which Repayable .. ..	1,259,364	77,327	362,025	50,948	196,556	7,150	6,355	..
Australian Currency Equivalents (a) £A.'000	1,259,364	96,658	161,618	21,039	20,066	882	709	1,560,336

(a) For rates of exchange to £A. ruling at 30th June, 1963, see p. 952.

(ii) *States.* Particulars of government securities on issue on account of the States at 30th June, 1963, are classified in the following tables according to the earliest and latest years of maturity.

**GOVERNMENT SECURITIES ON ISSUE, 30th JUNE, 1963: STATES—  
BY EARLIEST YEAR OF MATURITY**

Particulars	Currency in which repayable						Total— Aus- tralian currency equiva- lents(a)
	Aus- tralian currency	Sterling	United States dollars	Can- adian dollars	Swiss francs	Nether- lands guilders	
	£A.'000	£Stg.'000	U.S. \$ '000	Can. \$ '000	Sw.fr. '000	f.'000	
Before 30th June, 1963 .. ..	379,054	46,920	56,525	..	..	..	462,938
1963-64 .. ..	108,556	9,590	..	..	..	..	120,544
1964-65 .. ..	118,574	12,616	..	..	..	..	134,344
1965-66 .. ..	287,402	64,044	..	..	..	..	367,457
1966-67 .. ..	128,719	..	12,017	..	..	..	134,084
1967-68 .. ..	168,383	15,795	18,379	..	..	32,850	200,383
1968-69 .. ..	205,951	..	16,959	..	..	..	213,522
1969-70 .. ..	70,762	20,282	19,767	..	..	..	104,939
1970-71 .. ..	103,592	..	20,386	16,668	50,296	..	124,711
1971-72 .. ..	98,222	22,175	38,995	..	..	..	143,349
1972-73 .. ..	182,839	10,000	44,902	..	..	..	215,385
1973-74 .. ..	3,816	..	..	..	..	..	3,816
1974-75 .. ..	53,916	15,850	..	..	..	..	73,729
1975-76 .. ..	90,115	38,192	..	..	..	..	137,855
1976-77 .. ..	6,481	..	..	..	..	..	6,481
1977-78 .. ..	6,640	13,845	..	..	..	..	23,946
1978-79 .. ..	8,289	..	..	..	..	..	8,289
1979-80 .. ..	106,473	..	..	..	..	..	106,473
1980-81 .. ..	86,151	..	..	..	..	..	86,151
1981-82 .. ..	105,002	2,134	..	..	..	..	107,670
1982-83 .. ..	37,328	..	..	..	..	..	37,328
1983-84 .. ..	1,615	..	..	..	..	..	1,615
1984-85 .. ..	53,633	..	..	..	..	..	53,633
1985-86 .. ..	141,248	..	..	..	..	..	141,248
1986-87 .. ..	1,834	..	..	..	..	..	1,834
1987-88 .. ..	4,224	..	..	..	..	..	4,224
Special bonds .. ..	113,708	..	..	..	..	..	113,708
Overdue .. ..	..	2	..	..	..	..	2
Half-yearly instalments .. ..	14,634	..	..	..	..	..	14,634
Indefinite .. ..	9,509	..	..	..	..	..	9,509
Interminable .. ..	..	1	..	..	..	..	1
Treasurer's option .. ..	..	2,397	..	..	..	..	2,996
<b>Total—</b>							
Currencies in which Repayable	2,696,670	273,843	227,930	16,668	50,296	32,850	..
Australian Currency Equiva- lents(a) .. .. £A.'000	2,696,670	342,304	101,755	6,883	5,135	4,051	3,156,798

(a) For rates of exchange to £A. ruling at 30th June, 1963, see p. 952.

**GOVERNMENT SECURITIES ON ISSUE, 30th JUNE, 1963: STATES—  
BY LATEST YEAR OF MATURITY**

Particulars	Currency in which repayable						Total— Aus- tralian currency equiva- lents(a)
	Aus- tralian currency	Sterling	United States dollars	Can- adian dollars	Swiss francs	Nether- lands guilders	
	£A.'000	£ Stg. '000	U.S. \$ '000	Can. \$ '000	Sw. Fr. '000	f.'000	
1963-64 .. .. .	210,936	..	..	..	..	..	210,936
1964-65 .. .. .	293,425	12,655	..	..	..	..	309,244
1965-66 .. .. .	389,225	9,590	..	..	..	..	401,212
1966-67 .. .. .	128,719	23,294	31,575	..	..	..	171,933
1967-68 .. .. .	168,383	25,384	..	..	..	..	200,113
1968-69 .. .. .	205,951	..	..	..	..	..	205,951
1969-70 .. .. .	70,762	40,501	5,942	..	..	..	124,041
1970-71 .. .. .	103,592	10,971	19,008	..	..	..	125,791
1971-72 .. .. .	98,222	25,795	12,017	..	..	..	135,831
1972-73 .. .. .	182,839	10,000	18,379	..	..	..	203,544
1973-74 .. .. .	3,816	12,175	..	..	..	..	19,035
1974-75 .. .. .	53,916	31,057	..	..	..	..	92,737
1975-76 .. .. .	90,115	2,084	..	..	50,296	..	97,855
1976-77 .. .. .	6,481	15,850	..	..	..	..	26,294
1977-78 .. .. .	6,640	14,073	..	..	..	..	24,232
1978-79 .. .. .	8,289	22,035	16,959	..	..	..	43,404
1979-80 .. .. .	106,473	..	19,767	..	..	..	115,298
1980-81 .. .. .	86,151	13,845	20,386	16,668	..	..	119,441
1981-82 .. .. .	105,002	..	38,995	..	..	32,850	126,461
1982-83 .. .. .	37,328	..	44,902	..	..	..	57,374
1983-84 .. .. .	1,615	2,134	..	..	..	..	4,282
1984-85 .. .. .	53,633	..	..	..	..	..	53,633
1985-86 .. .. .	141,248	..	..	..	..	..	141,248
1986-87 .. .. .	1,834	..	..	..	..	..	1,834
1987-88 .. .. .	4,224	..	..	..	..	..	4,224
Special bonds .. .. .	113,708	..	..	..	..	..	113,708
Overdue .. .. .	..	2	..	..	..	..	2
Half-yearly instalments .. .. .	14,634	..	..	..	..	..	14,634
Indefinite .. .. .	9,509	..	..	..	..	..	9,509
Interminable .. .. .	..	1	..	..	..	..	1
Treasurer's option .. .. .	..	2,397	..	..	..	..	2,996
<b>Total—</b>							
Currencies in which Repayable	2,696,670	273,843	227,930	16,668	50,296	32,850	..
Australian Currency Equiva- lents(a) .. .. .	2,696,670	342,304	101,755	6,883	5,135	4,051	3,156,798

(a) For rates of exchange to £A. ruling at 30th June, 1963, see p. 952.

7. **Short-term Securities on Issue.**—Particulars of the short-term securities (Treasury bills, Treasury notes and seasonal securities) of the Commonwealth and States in Australia at intervals from 30th June, 1959, to 30th June, 1963, are shown in the following table. These securities are included in the government securities on issue as shown elsewhere. No short-term securities have been raised overseas since September, 1956, when all such securities held in London were expatriated to Australia.

**GOVERNMENT SHORT-TERM SECURITIES ON ISSUE(a): COMMONWEALTH AND STATES**

**MATURING IN AUSTRALIA**  
(£A.'000)

Date	Commonwealth		States(c)	Total
	Treasury bills	Treasury notes(b)		
30th June, 1959 .. ..	171,000	..	..	171,000
.. .. 1960 .. ..	201,000	..	..	201,000
.. .. 1961 .. ..	186,000	..	..	186,000
30th September, 1961 .. ..	236,000	25,099	2,000	263,099
31st December, 1961 .. ..	303,000	49,350	11,000	363,350
31st March, 1962 .. ..	213,000	86,125	5,500	304,625
30th June, 1962 .. ..	208,000	..	..	208,000
30th September, 1962 .. ..	187,000	59,966	2,000	248,966
31st December, 1962 .. ..	265,000	70,989	4,000	339,989
31st March, 1963 .. ..	142,000	142,862	2,000	286,862
30th June, 1963 .. ..	123,000	69,538	..	192,538

(a) Excludes overdrafts and internal Treasury bills.  
1962. (c) Treasury bills.

(b) Seasonal securities before 30th June,

The Treasury bill discount rate in Australia has remained at 1 per cent. since 29th July, 1952.

In 1962-63, daily issues of Treasury notes replaced those of seasonal securities which had, during the three previous financial years, all matured in the course of the same financial year in which they were issued. Treasury notes with a currency of thirteen weeks were issued in multiples of £1,000 over the minimum subscription of £5,000 and increases in value were subject to the usual income tax rebate of two shillings in the pound. In April, 1963, the terms of issue of these notes were altered from the price of £99.10 per cent. yielding £3.64 per cent. per annum to a price of £99.15 yielding £3.44 per cent. per annum.

8. **Government Securities on Issue on Account of the States; Local Government and Semi-governmental Authority Securities on Issue.**—In some States, certain public utilities, such as tramways, water supply and sewerage, harbour services, etc., are controlled by boards or trusts, which in addition to receiving advances from the central government, raise loans by borrowing on their own behalf, while in other States these services are controlled by the central government. Direct comparisons between States of the securities on issue on account of the several States should therefore be made with caution. The table following shows for 1957-58 to 1961-62 particulars of the securities on issue on account of the States, the securities on issue by local government and semi-governmental authorities, and the aggregates of these.

**GOVERNMENT SECURITIES ON ISSUE ON ACCOUNT OF THE STATES;  
LOCAL GOVERNMENT AND SEMI-GOVERNMENTAL AUTHORITY SECURITIES  
ON ISSUE**

Particulars	State	Local government (a)	Semi-gov- ernmental (a)	Total
<b>SECURITIES ON ISSUE</b>				
(£A.'000)(b)				
30th June, 1962				
New South Wales .. .. .	1,028,308	87,157	314,012	1,429,477
Victoria .. .. .	696,270	51,536	519,139	1,266,945
Queensland .. .. .	382,885	110,715	87,506	581,106
South Australia .. .. .	390,323	7,922	41,472	439,717
Western Australia .. .. .	289,380	15,249	22,460	327,089
Tasmania .. .. .	194,139	17,032	17,403	228,574
<b>Total, 30th June, 1962 .. .. .</b>	<b>2,981,305</b>	<b>289,611</b>	<b>1,001,992</b>	<b>4,272,908</b>
1961 .. .. .	2,815,240	257,945	921,247	3,994,432
1960 .. .. .	2,650,601	235,852	855,623	3,742,076
1959 .. .. .	2,493,766	214,182	771,354	3,479,302
1958 .. .. .	2,342,869	197,691	703,810	3,244,370

**PER HEAD OF POPULATION**

(£A.)(b)

30th June, 1962

New South Wales .. .. .	258.58	21.92	78.96	359.46
Victoria .. .. .	232.75	17.23	173.54	423.52
Queensland .. .. .	248.20	71.77	56.73	376.70
South Australia .. .. .	394.51	8.01	41.92	444.44
Western Australia .. .. .	383.55	20.21	29.77	433.53
Tasmania .. .. .	543.90	47.72	48.76	640.38
<b>Total, 30th June, 1962 .. .. .</b>	<b>280.95</b>	<b>27.29</b>	<b>94.42</b>	<b>402.66</b>
1961 .. .. .	270.12	24.75	88.39	383.26
1960 .. .. .	259.94	23.13	83.91	366.98
1959 .. .. .	249.72	21.45	77.24	348.41
1958 .. .. .	239.58	20.22	71.97	331.77

(a) Excludes amounts due to the central government. Includes bank overdrafts. (b) Oversea holdings have been converted to Australian currency at the rates of exchange current at 30th June of each year shown.

#### § 4. Commonwealth Loan Raisings

1. **General.**—Under the Financial Agreement between the Commonwealth and the States, the Commonwealth is responsible for raising all loan moneys required either by the Commonwealth or by the State Governments. Details of loan transactions given in this section relate, therefore, to all loans raised for the Commonwealth and the States.

2. **New Loans Raised, 1960-61 to 1962-63.**—(i) *Australia.* The following table shows details of new loans raised in Australia by the Commonwealth during the three years 1960-61 to 1962-63.

## COMMONWEALTH NEW LOANS(a) RAISED IN AUSTRALIA

Month of raising	Amount invited	Amount subscribed	Rate of interest per annum	Year of maturity	Price of issue	Allocation of loan		
						Commonwealth		States
						War (1939-45) etc.	Other purposes	
£'000	£'000	Per cent.	Per cent.	£'000	£'000	£'000		
1960-61—								
September (Loan No. 124) ..	30,000	{ 12,568 6,847 13,542	{ 4½ 4½ 5	1962	100	}	24	32,933
		{ 23,638 3,692 7,584	{ 5½ 5½ 5½	1969	98½			
February (Loan No. 126) ..	35,000	{ 24,747 1,338 8,425	{ 5½ 5½ 5½	1963	100	}	4	34,910
		{ 25,000	{ 5½	1970	98½			
May (Loan No. 127) ..	25,000	{ 24,747 1,338 8,425	{ 5½ 5½ 5½	1963	100	}	9	34,501
		{ 55,000	{ 5½	1970	98½			
June (Loan No. 129) (b) ..	90,000	{ 10,000 25,000	{ 5½ 5½	1963	100	}	1,304	31,614
		{ 25,000	{ 5½	1970	98½			
July-June (Special bonds) (c) ..	..	11,501	4-5	{ 1967 1968 }	100	2,216	1,502	7,783
1961-62—								
September (Loan No. 130) ..	40,000	{ 28,376 9,438 35,685	{ 4½ 5½ 5½	1964	100	}	5	73,494
		{ 47,787 17,404 25,495	{ 4½ 4½ 5	1970	100			
February (Loan No. 132) ..	55,000	{ 47,787 17,404 25,495	{ 4½ 4½ 5	1964	100	}	27,758	62,928
		{ 14,824 2,750 21,004	{ 4½ 4½ 5	1971	99½			
May (Loan No. 134) ..	40,000	{ 2,750 21,004 2,000	{ 4½ 4½ 4½	1965	100	}	6,131	32,447
		{ 5,000	{ 5	1984	100			
June (Loan No. 136) (b) ..	7,000	{ 2,000 5,000	{ 4½ 5	1971	98½	}	7,000	..
		{ 5,000	{ 5	1984	100			
July-June (Special bonds) (c) ..	..	20,312	4½-5½	{ 1968 1969 }	100	385	7,325	12,602
1962-63—								
September (Loan No. 137) ..	50,000	{ 28,953 10,464 40,743	{ 4½ 4½ 5	1965	99½	}	14,718	65,444
		{ 43,161 11,665 71,858	{ 4½ 4½ 5	1972	100			
February (Loan No. 139) ..	60,000	{ 43,161 11,665 71,858	{ 4½ 4½ 5	1966	100	}	38,457	88,227
		{ 71,858	{ 5	1972	99			
July-June (Special bonds) (c) ..	..	31,233	4-5	{ 1969 1970 }	100	3,590	12,318	15,325

(a) Includes loans raised for redemption of Treasury Bills, but excludes conversion loans, loans for redemption of debt maturing in London, short-term debt and certain miscellaneous debt (see p. 971).  
 (b) Special issue. For details see following paragraph. (c) Special bonds open for continuous subscription, redeemable at prices commencing at par and increasing to a premium of £3 per cent. if held until maturity in 1966-69. Interest increases from 4 per cent. to 5 per cent. over period of currency.

The loans of £90,000,000 and £7,000,000, raised in June, 1961 and 1962, respectively, were for the purpose of fulfilling an undertaking given by the Commonwealth that the States would have access to loan funds for their works programmes up to the approved Loan Council borrowing programmes. These programmes totalled £230,000,000 in 1960-61, £247,500,000 in 1961-62 and £255,000,000 in 1962-63. Subscriptions to these special loans for the two years covered came from the Loan Consolidation and Investment Reserve Trust Account.

Finance for the approved Loan Council programmes from 1960-61 to 1962-63 was provided from the following sources.



**LOAN COUNCIL PROGRAMME: SOURCE OF FINANCE**  
(£'000)

Source	1960-61	1961-62	1962-63
Public loans, domestic raisings, etc. . . . .	117,900	225,100	203,147
Oversea loans and special Commonwealth assistance	112,100	22,400	51,853
<b>Total . . . . .</b>	<b>230,000</b>	<b>247,500</b>	<b>255,000</b>

In addition to the new loans raised as shown in the table on the previous page and the redemption and conversion loans shown in paragraph 3 below, there were other miscellaneous loan operations in Australia (*see* p. 971).

(ii) *London.* The only new loan raised in London during the three years ended 1962-63 was for £Stg.12,000,000, 5½ per cent. interest, price of issue £Stg.98 per £Stg.100, maturing 1978, raised during 1962-63.

(iii) *New York.* The following table gives details of the loans raised during the period 1960-61 to 1962-63.

**COMMONWEALTH NEW LOANS RAISED IN NEW YORK**

Month of raising	Amount of loan	Rate of interest per annum	Price of issue	Year of maturity	Allocation of loan	
					Commonwealth	States
	\$'000	Per cent.	Per cent.		\$'000	\$'000
1960-61—						
September ..	25,000	5½	98	1980	4,044	20,956
July-June ..	3,517	5½	100	(a) 1962-68	(c) 3,517	..
July-June ..	2,000	5½	100	(b) 1961-65	(d) 2,000	..
1961-62—						
July ..	25,000	5½	97	1981	4,469	20,531
July-June ..	26,483	5½	100	1962-68	(c) 26,483	..
1962-63—						
July ..	30,000	5½	97½	1982	5,508	24,492
October ..	25,000	5½	99	1982	4,590	20,410
April ..	30,000	5	97½	1983	30,000	..
July-June ..	4,600	5½	100	1967	(c) 4,600	..
July-June ..	1,250	4½-4¾	100	1971	(d) 1,250	..

(a) Repayable in half-yearly instalments. (b) Repayable in quarterly instalments. (c) Proceeds used for Qantas Empire Airways Loan. (d) Proceeds used for Australian National Airlines Loan.

3. Conversion and Redemption Loans, 1960-61 to 1962-63.—(i) *Australia.* Particulars of conversion loans raised in Australia during the three years 1960-61 to 1962-63 are given in the following table.

## COMMONWEALTH CONVERSION AND REDEMPTION LOANS RAISED IN AUSTRALIA

Month of raising	Old loan		New loan				Increase in annual liability for interest
	Amount	Rate of interest per annum	Amount	Rate of interest per annum	Price of issue	Year of maturity	
1960-61—							
September ..	{ 39,561 118,431	{ 3½ 3½	{ 19,286 31,724 52,954	{ 4½ 4½ 5	{ 100 98½ 100	{ 1962 1969 1982	{ 195
May ..	{ 5,000	{ 4	{ (a)7,172 5,000	{ 4½-5 5½	{ 100 99½	{ 1968 1963	{ 62
May ..	{ 179,210	{ 4	{ 82,274 26,214 48,178 (a) 989	{ 5½ 5½ 5½ 4½-5½	{ 99½ 98½ 100 100	{ 1963 1970 1981 1968	{ 1,162
July-June (Special bonds) ..	{ 7,596	{ 4-5	{ 7,596	{ 4-5½	{ 100	{ 1967 1968	{ ..
1961-62—							
September ..	{ 123,517 24,397	{ 3½ 4½	{ 34,205 26,783 37,616 (a)5,743	{ 4½ 5½ 5½ 4½-5½	{ 100 100 100 100	{ 1964 1970 1982 1968	{ 198
February ..	{ 60,594	{ 4	{ 35,036 9,447 8,343 (a)1,440	{ 4½ 4½ 5 4½-5½	{ 99½ 99½ 100 100	{ 1964 1971 1984 1969	{ - 4
May ..	{ 48,484 29,831	{ 4 4½	{ 31,552 21,676 8,994 (a)1,052	{ 4½ 4½ 5 4½-5	{ 99½ 99½ 100 100	{ 1965 1971 1984 1969	{ -341
July-June (Special bonds) ..	{ 7,057	{ 4-5½	{ 7,057	{ 4½-5½	{ 100	{ 1968 1969	{ 18
1962-63—							
September ..	{ 76,573 101,044	{ 3½ 4½	{ 50,397 49,707 39,725 (a)5,801	{ 4½ 4½ 5 4½-5	{ 99½ 100 100 100	{ 1965 1972 1985 1969	{ -204
February ..	{ 39,986	{ 4	{ 21,483 12,707 2,153 (a) 596	{ 4½ 4½ 5 4½-5	{ 100 99 100 100	{ 1966 1972 1985 1970	{ 19
April ..	{ 62,892	{ 5	{ 99,790	{ 4	{ 100	{ 1966	
July-June (Special bonds) ..	{ 179,786 7,849	{ 5½ 4-5½	{ 91,539 (a)15,084 7,849	{ 4½ 4½-5 4-5	{ 98½ 100 100	{ 1972 1970 1969 1970	{ -4,061

(a) Special bonds.

NOTE.—Minus sign (-) indicates reduction in liability for interest.

(ii) *London.* The following table shows particulars of loans raised in London during the years 1958-59, 1960-61 and 1962-63 for the purpose of redeeming and converting London loans. None was raised during 1961-62.

## COMMONWEALTH LOANS RAISED FOR THE CONVERSION AND REDEMPTION OF LOANS MATURING IN LONDON

Month of raising	Old loan		New loan				Increase in annual liability for interest and exchange		
	Amount	Rate of interest per annum	Amount raised in—		Rate of interest per annum	Price of issue	Year of maturity		
			Australia	London					
	£Stg. '000	Per cent.	£A.'000	£Stg. '000	Per cent.	Per cent.	£Stg. '000	£A.'000 (a)	
1958-59—									
March ..	20,675	3½	..	20,000	5½	99	{ 1973 1979	400	500
1960-61—									
July ..	13,925	3	..	13,925	6	98	{ 1977-80 1975	418	523
January ..	20,579	3½	..	20,000	6	97½	{ 1981-83	531	664
1962-63—									
July ..	11,790	4	..	10,000	6	97	1972	128	160

(a) No account has been taken of the cost of issuing the conversion loans at a discount. Exchange calculated at £A.125 = £Stg. 100 (the International Monetary Fund par rate of exchange in the years shown).

(iii) *New York*. During 1946-47, four loans totalling \$128,000,000 were raised in New York to redeem loans which became due for redemption or which the Commonwealth had the option of redeeming. No further loans were raised in New York for this purpose until December, 1954. The loan raised in New York for this purpose in March, 1957, amounted to \$17,114,000, at 5 per cent. interest, issued at par, maturing in 1972. No loans were raised for the purpose of redeeming loans which became due for redemption or which the Commonwealth had the option of redeeming during 1957-58 to 1960-61 or in 1962-63. In 1961-62, a re-financing loan of \$30,000,000 was raised at 5½ per cent. interest, issued at £98½, maturing in 1982.

4. **International Bank for Reconstruction and Development Loans.**—To provide dollar funds for the purchase of certain types of capital equipment and plant which were indispensable to the furtherance of development in Australia and which could be obtained only in the United States of America or Canada, the Commonwealth Government arranged five loans from the International Bank for Reconstruction and Development between August, 1950, and December, 1956, amounting to \$308,500,000, repayable over periods of from 10 to 25 years, at rates of interest of from 4½ to 4¾ per cent. The proceeds of the latest of these loans were finally drawn in March, 1959.

The capital equipment and plant purchased from the proceeds of these loans are made available to Commonwealth and State Government departments and agencies and private firms and individuals for use in the development of Australian resources. The goods are imported and distributed through normal channels and payment made through the Australian banking system.

The loan on behalf of Qantas Empire Airways of \$9,230,000 at 4½ per cent. maturing in 1966-87 was finally drawn at the end of July, 1958, and in 1962-63 drawings of \$31,851,000 were made from the loan (at 5½ per cent. maturing in 1966-87) raised for the purposes of the Snowy Mountains Hydro-electric Authority.

5. **Swiss Loans.**—To foster industrial development in Australia and to stimulate trade relations between the two countries, the Commonwealth Government arranged for the issue in Switzerland in November, 1953, February, 1955, March, 1960, and March, 1961, of four public loans each of 60,000,000 Swiss francs. The loans were underwritten by a Swiss banking group headed by the Swiss Bank Corporation, the Crédit Suisse and the Union Bank of Switzerland. Certain Swiss taxes connected with the issue and servicing of the loans were paid on an agreed basis by the Australian Government.

The first loan was for a period of 15 years with an option on the part of the Commonwealth Government to repay the loan in full or in part after 12 years. The rate of interest was 4 per cent. and the issue price £99. Bondholders have the option of requiring payment either in Australian pounds or in the foreign currency equivalent of Australian pounds.

The second loan was for a period of 15 years with an option to redeem after 10 years. The rate of interest was 3¾ per cent. and the issue price £99 10s. Bonds and interest are payable only in Swiss francs. The third loan was for a period of fifteen years with an option to redeem after 10 years. The rate of interest was 4½ per cent. and the issue price £99. The fourth loan was issued at par in March, 1961, at the rate of 4½ per cent. maturing in April, 1976. Payments of interest and repayments of principal are to be made only in Swiss francs.

The loans were fully subscribed, and Swiss franc proceeds, after deducting borrowing expenses, were sold by the Commonwealth Government to the Reserve Bank in return for an equivalent amount of Australian currency.

6. **Canadian Loans.**—In October, 1955, the Commonwealth Government arranged for the issue in Canada of a public loan of 15,000,000 Canadian dollars raised to assist Australia's development programme. The loan was for a period of 15 years with an option on the part of the Australian Government to repay the loan in full or in part at any time prior to 1st November, 1970. The rate of interest was 4 per cent., payable half-yearly, and the issue price \$98.50. A second loan, of 20,000,000 Canadian dollars, was raised in March, 1961, on the security of the Commonwealth of Australia, 5½ per cent. twenty-year bonds being issued at the rate of \$98½ per cent. Bonds and interest are payable in Canadian dollars in each case.

The loans were fully subscribed, and the net Canadian dollar proceeds were sold to the Reserve Bank for Australian currency.

7. Netherlands Loan.—In 1961, the Commonwealth arranged for a public flotation in the Netherlands of a loan of 40,000,000 Netherlands guilders at par, with an interest rate of 5 per cent. per annum. The proceeds were used to assist the loan programmes of the Commonwealth and States.

The loan is to be repaid in fifteen annual instalments from 1967 to 1981, but, at the Commonwealth's option, an earlier redemption date may be negotiated on and after 15th December, 1971.

8. Summary of Loan Transactions, 1958-59 to 1962-63.—The following table contains a summary of loan transactions on behalf of the Commonwealth and State Governments during the five years 1958-59 to 1962-63.

## COMMONWEALTH LOAN TRANSACTIONS: SUMMARY

Details	1958-59	1959-60	1960-61	1961-62	1962-63
New loans(a) raised in—					
Australia .. .. £A.'000	184,683	198,462	203,881	230,075	238,079
London .. .. £Stg.'000	15,000	12,000	..	..	12,000
New York(b) .. .. \$'000	58,351	60,400	30,517	51,483	122,701
Switzerland .. .. francs '000	..	60,000	60,000	..	..
Canada .. .. \$'000	..	..	20,000	..	..
Netherlands .. .. guilders '000	..	..	..	40,000	..
Miscellaneous debt in Australia(c) £A.'000	3,230	5,224	3,676	4,465	17,397
Net increase in short-term debt—					
Australia—Public .. .. £A.'000	31,000	30,000	-15,000	22,000	-85,000
Internal .. .. £A.'000	5,300	-36,100	17,600	-10,200	38,900
Loans raised for conversion or redemption of existing securities maturing in—					
Australia .. .. £A.'000	259,249	229,732	281,387	228,944	396,831
London .. .. £Stg.'000	20,000	..	33,925	..	10,000
New York .. .. \$'000	..	..	..	30,000	..

(a) Includes loans raised for redemption of Treasury Bills. (b) Includes amounts drawn of \$100,000,000, \$50,000,000, \$54,000,000, \$54,500,000, \$9,230,000, \$50,000,000 and \$31,851,000 loans from International Bank for Reconstruction and Development. (c) Treasury notes, advance loan subscriptions (net increase), "over the counter sales" (instalment stock and inscribed stock and bonds issued by State Governments) and Peace Savings Certificates (interest credited).

NOTE.—Minus sign (-) denotes a decrease in debt.

9. Government Securities on Issue maturing in Australia, Classified by Holder.—The following table shows details of government securities maturing in Australia classified according to holder as at the 30th June, 1962 and 1963.

**GOVERNMENT SECURITIES ON ISSUE: COMMONWEALTH AND STATE—  
MATURING IN AUSTRALIA, BY HOLDER(a)**

*(Source: Reserve Bank of Australia Statistical Bulletin)*

Holder	30th June—			
	1962		1963	
	Amount	Proportion of total	Amount	Proportion of total
	£ million	Per cent.	£ million	Per cent.
Reserve Bank of Australia .. .. .	463	12.1	394	10.0
Trading banks .. .. .	385	10.1	419	10.6
Savings banks .. .. .	837	21.9	916	23.2
Life insurance offices .. .. .	259	6.8	311	7.9
Fire, marine and general insurance offices	42	1.1	42	1.1
Other private financial institutions—				
Pension and provident funds .. .. .	37	1.0	45	1.1
Friendly societies, hospitals and medical funds .. .. .	9	0.2	9	0.2
Trustee companies .. .. .	74	1.9	70	1.8
Pastoral finance companies .. .. .	7	0.2	7	0.2
Money market dealers .. .. .	123	3.2	148	3.7
Miscellaneous .. .. .	7	0.2	12	0.3
Government financial institutions—				
Insurance offices and funds .. .. .	39	1.0	41	1.0
Pension and provident funds .. .. .	64	1.7	66	1.7
Public trustees .. .. .	18	0.5	16	0.4
Stabilization funds .. .. .	..	..	..	..
All other(b) .. .. .	10	0.3	6	0.1
Public authorities (excluding finance)—				
Commonwealth Government (including Commonwealth semi-government) ..	706	18.4	668	16.9
State Government .. .. .	19	0.5	30	0.8
Local government and State semi-government .. .. .	75	1.9	96	2.4
Companies (excluding finance) .. .. .	70	1.8	95	2.4
Other holders—				
Marketing boards .. .. .	4	0.1	4	0.1
Farmers .. .. .	74	1.9	67	1.7
Non-profit organizations .. .. .	28	0.7	26	0.6
All other .. .. .	479	12.5	468	11.8
<b>Total .. .. .</b>	<b>3,829</b>	<b>100.0</b>	<b>3,956</b>	<b>100.0</b>

(a) Total stock inscribed, bonds in circulation, amounts paid up on outstanding applications, in transit claims and advance applications, Commonwealth Treasury Bills, debentures, and Savings Certificates. (b) Includes securities held by Commonwealth Development Bank of Australia.

### § 5. National Debt Sinking Fund

1. **Securities on Issue on behalf of the Commonwealth.**—Particulars relating to the creation of sinking funds are included in issues of the Year Book prior to No. 23.

The old sinking funds were merged in the National Debt Sinking Fund on 11th August, 1923. Particulars of receipts and expenditure of the Commonwealth Account for the years 1958–59 to 1962–63 are as follows.

NATIONAL DEBT SINKING FUND: COMMONWEALTH ACCOUNT  
(£'000)

Particulars	1958-59	1959-60	1960-61	1961-62	1962-63
<b>Receipts—</b>					
From Consolidated Revenue .. ..	14,376	19,533	23,092	25,161	27,230
Loans and advances repaid .. ..	3,213	3,398	3,751	3,834	3,992
War Service Homes money repaid ..	7,560	9,589	9,808	9,422	11,087
Half net profit Commonwealth Bank ..	5,749	2,808	(a)	(a)	(a)
Reparation moneys .. ..	20	43	16	8	..
Interest on investments .. ..	(b) 9,015	(b) 8,303	(b) 7,830	(b) 6,617	(b) 6,041
Loan (International Bank for Reconstruction and Development) Act .. ..	7,492	..	..	..	..
Other contributions .. ..	..	..	..	..	..
<b>Total, Receipts .. ..</b>	<b>47,425</b>	<b>43,674</b>	<b>44,497</b>	<b>45,042</b>	<b>48,350</b>
<b>Expenditure—</b>					
Securities repurchased and redeemed in—					
Australia .. ..	64,799	59,357	58,539	52,525	15,654
London .. ..	189	218	594	170	82
New York .. ..	(c) 6,029	(c) 7,969	(c) 8,062	(c) 10,331	(c) 9,675
Canada .. ..	..	..	..	..	8
<b>Total, Expenditure .. ..</b>	<b>71,017</b>	<b>67,544</b>	<b>67,195</b>	<b>63,026</b>	<b>25,419</b>
Balance at 30th June .. ..	206,752	182,882	160,184	142,200	165,131
<b>Face value of securities repurchased and redeemed in—</b>					
Australia .. ..	65,421	59,556	59,354	52,686	15,639
London .. ..	185	220	481	150	65
New York .. ..	(c) 2,783	(c) 3,681	(c) 3,720	(c) 4,767	(c) 4,457
Canada .. ..	..	..	..	..	4
<b>Total, Face Value .. ..</b>	<b>68,389</b>	<b>63,457</b>	<b>63,555</b>	<b>57,603</b>	<b>20,165</b>

(a) Amounts of £3,352,000 in 1960-61, £4,487,000 in 1961-62 and £1,676,000 in 1962-63 were transferred to the Commonwealth Consolidated Revenue Fund from the profits of the central banking business of the Reserve Bank. (b) Includes interest received under *National Debt Sinking Fund (Special Payment) Act 1951*—£3,382,000 in 1958-59, £3,082,000 in 1959-60, £2,799,000 in 1960-61, £1,906,000 in 1961-62 and £1,732,000 in 1962-63. (c) Includes instalment repayments of loans from International Bank for Reconstruction and Development:—1958-59, net cost, £5,688,000, face value, £2,618,000; 1959-60, net cost, £7,235,000, face value, £3,326,000; 1960-61, net cost, £7,563,000, face value, £3,481,000; 1961-62, net cost, £7,910,000, face value, £3,643,000; 1962-63, net cost, £8,289,000, face value, £3,812,000.

2. Securities on Issue on behalf of States.—(i) States, 1962-63. A sinking fund for the redemption of the securities on issue on behalf of States was established under the Financial Agreement. Details of contributions to be made to this fund are given on page 953. Particulars of the transactions of the National Debt Sinking Fund (States' Account) for each State during the year 1962-63 are shown below.

NATIONAL DEBT SINKING FUND: STATES' ACCOUNT, 1962-63  
(£'000)

Particulars	N.S.W.	Vic.	Q'land	S. Aust.	W. Aust.	Tas.	Total
<b>Receipts—</b>							
Contributions under Financial Agreement—							
Commonwealth .. ..	2,491	1,695	913	963	702	486	7,250
States .. ..	8,650	6,687	3,259	3,291	2,714	1,452	26,053
Interest from States on cancelled securities .. ..	11	9	5	5	1	2	33
Special contributions by States .. ..	48	51	31	38	3	1	172
Interest on investments, etc. .. ..	-13	-13	-3	-5	-4	-2	-40
<b>Total, Receipts .. ..</b>	<b>11,187</b>	<b>8,429</b>	<b>4,205</b>	<b>4,292</b>	<b>3,416</b>	<b>1,939</b>	<b>33,468</b>
<b>Expenditure—</b>							
Securities repurchased and redeemed in—							
Australia .. ..	7,193	7,595	3,698	3,786	3,050	1,712	27,034
London .. ..	2,863	57	57	25	26	6	3,034
New York .. ..	764	471	288	244	205	97	2,069
Canada .. ..	13	10	5	5	4	3	40
<b>Total, Expenditure .. ..</b>	<b>10,833</b>	<b>8,133</b>	<b>4,048</b>	<b>4,060</b>	<b>3,285</b>	<b>1,818</b>	<b>32,177</b>
Balance at 30th June, 1963 .. ..	736	507	321	336	243	187	2,330
<b>Face value of securities repurchased and redeemed in—</b>							
Australia .. ..	7,216	7,599	3,696	3,786	3,050	1,711	27,058
London .. ..	1,980	45	45	20	20	5	2,115
New York .. ..	354	219	133	113	96	45	960
Canada .. ..	6	5	3	3	2	1	20
<b>Total, Face Value .. ..</b>	<b>9,556</b>	<b>7,868</b>	<b>3,877</b>	<b>3,922</b>	<b>3,168</b>	<b>1,762</b>	<b>30,153</b>

(ii) *All States, 1958-59 to 1962-63.* The following table is a summary of the transactions of the National Debt Sinking Fund (States' Account) for the years 1958-59 to 1962-63.

NATIONAL DEBT SINKING FUND: STATES' ACCOUNT

(£'000)

Particulars	1958-59	1959-60	1960-61	1961-62	1962-63
<b>Receipts—</b>					
Contributions under Financial Agreement—					
Commonwealth .. .. .	5,386	5,942	6,274	6,739	7,250
States .. .. .	19,161	21,280	22,808	24,658	26,053
Interest from States on cancelled securities .. .. .	8	14	17	15	33
Special contributions by States .. .. .	239	227	238	193	172
Interest on investments, etc. .. .. .	47	..	19	4	-40
<b>Total, Receipts .. .. .</b>	<b>24,841</b>	<b>27,463</b>	<b>29,356</b>	<b>31,609</b>	<b>33,468</b>
<b>Expenditure (net cost)—</b>					
Securities repurchased and redeemed in—					
Australia .. .. .	21,359	24,570	26,291	25,891	27,034
London .. .. .	1,799	797	944	624	3,034
New York .. .. .	1,024	2,342	1,840	5,057	2,069
Canada .. .. .	..	..	..	..	40
<b>Total, Expenditure .. .. .</b>	<b>24,182</b>	<b>27,709</b>	<b>29,075</b>	<b>31,572</b>	<b>32,177</b>
<b>Balance at 30th June .. .. .</b>	<b>967</b>	<b>721</b>	<b>1,002</b>	<b>1,039</b>	<b>2,330</b>
<b>Face values of securities repurchased and redeemed in—</b>					
Australia .. .. .	21,435	24,617	26,420	25,726	27,058
London .. .. .	1,330	761	414	530	2,115
New York .. .. .	481	1,103	871	2,278	960
Canada .. .. .	..	..	..	..	20
<b>Total, Face Value .. .. .</b>	<b>23,246</b>	<b>26,481</b>	<b>27,705</b>	<b>28,534</b>	<b>30,153</b>

TAXES ON INCOME

1. *General.*—A description of the development of income taxes in Australia appeared in Year Book No. 35, page 926. Since July, 1942, the Commonwealth, under the uniform tax arrangement, has been the only authority imposing taxes on income. Taxes on income are assessed and imposed under the *Income Tax and Social Services Contribution Assessment Act 1936-1963* and the *Income Tax and Social Services Contribution Act 1963*. The latter Act is an annual measure and its primary purpose is to declare the rates of tax and contribution payable for the financial year. The rates for the financial year are levied, in the case of individuals, on the income of that year, and in the case of companies, on the income of the preceding year. Thus tax for the financial year 1963-64 is levied on the income of individuals in 1963-64 and on the income of companies in 1962-63.

2. *Present Taxes.*—For individuals, a single tax known as the Income Tax and Social Services Contribution is levied. All companies are liable for primary income tax and, in addition, private companies are subject to tax on undistributed income.

3. **Assessable Income.**—Income taxes in Australia are levied, primarily, on all income derived from Australian sources by any person, rather than on income derived from all sources by Australian residents. Thus a non-resident is taxed on income derived in Australia, while a resident is, in general, not taxed on income (other than dividends) derived from overseas, if the income is taxed in the country in which it is derived.

Certain types of Australian income are exempt from tax in Australia, the more important being (i) pensions, child endowment and other payments under the *Social Services Act 1947–1963* and the *Tuberculosis Act 1948*, (ii) income from gold-mining and uranium mining, (iii) twenty per cent. of certain mining profits, (iv) dividends paid out of exempt mining profits, and (v) income received from a scholarship, bursary or other education allowance.

No amount is included in assessable income on account of a house occupied by its owner. Profits derived from the sale of property are not assessable income if such property was not purchased with a view to resale at a profit.

Expenses incurred in earning income, certain subscriptions to business associations, and trade union dues, are allowable deductions. Losses incurred in previous years may be carried forward as a deduction.

Because of uncongenial climatic conditions, isolation, and high cost of living, taxpayers living in certain areas are allowed an additional deduction. Two zones have been prescribed, and the allowances are:—Zone A, £270 plus an amount equal to one half of the total deductions allowable to the taxpayer for the maintenance of dependants; and Zone B, £45 plus an amount equal to one twelfth of the deductions allowable to the taxpayer for the maintenance of dependants. A deduction equal to the deduction allowed to residents of Zone A is also allowed to members of the defence forces serving for more than one half of the year of income at declared localities outside Australia. The boundaries of Zones A and B are as defined in the Second Schedule, *Income Tax and Social Services Assessment Act 1936–1963*.

Income Tax and Social Services Contribution is levied on the taxable income remaining after making these deductions and the concessional deductions to which reference is made in the following paragraph.

4. **Concessional Deductions.**—Concessional allowances for dependants, medical expenses, life insurance and superannuation contribution, etc., are made by way of a deduction from income. The maximum deduction allowed for each dependant or for a housekeeper employed by the taxpayer, for the financial year 1963–64, is shown in the following table.

#### CONCESSIONAL DEDUCTIONS FOR DEPENDANTS, ETC.(a)

(£)

Dependant, etc. (resident)	Maximum deduction
Spouse .. .. .	143
Daughter-housekeeper (b) .. .. .	143
Housekeeper(c) .. .. .	143
Parent or parent-in-law .. .. .	143
One child under 16 years of age .. .. .	91
Other children under 16 years of age .. .. .	65
Invalid relative (d) .. .. .	91
Child 16 to 21 years receiving full-time education .. .. .	91

(a) These deductions are allowed only if the dependant is a resident of Australia. If the dependant is maintained for part only of the year, a partial deduction is allowed. (b) Of a widower or widow.

(c) Caring for a spouse in receipt of an invalid pension, or caring for children under 16 years of age of a widower or widow. (d) Child, step-child, brother or sister over 16 years of age.



When the dependant maintained derives separate income, the amount of the concessional deduction is reduced by £1 for every £1 by which the separate net income exceeds £65. Separate net income includes age and invalid pensions but not child endowment. Scholarships are excluded except insofar as they relate to maintenance.

For the 1963-64 financial year, medical expenses paid by a taxpayer who is a resident, in respect of himself or dependants, including children under 21 years of age, are allowed as a concessional deduction. Medical expenses include payments made to a legally qualified medical practitioner, nurse or chemist, or to a hospital, in respect of an illness or operation, payments for dental services, payments for therapeutic treatment and eye tests, expenditure on medical or surgical appliances, artificial limbs or eyes, hearing aids and spectacles, the remuneration of an attendant of a person who is blind or confined to bed or invalid chair, and payments for the maintenance of a trained dog used for the guidance of a blind person.

Other concessional deductions allowed to resident taxpayers include (i) payments of life insurance premiums and contributions to superannuation funds and friendly societies, not exceeding an aggregate of £400, (ii) payments to medical or hospital benefits funds, (iii) funeral expenses of a dependant not exceeding £30 and (iv) expenditure incurred for the full-time education of children or dependants who are less than 21 years of age (maximum £150 per child or dependant).

In addition to concessional deductions, all taxpayers (resident and non-resident) are allowed a deduction from income of rates and taxes on land which are annually assessed, gifts to charitable, benevolent or patriotic funds and one-third of amounts paid as calls to certain mining, forestry and oil-prospecting companies. Resident taxpayers only are allowed a deduction from income of the full amount paid as calls and as application and allotment moneys to certain companies engaged in the search for oil in Australia and New Guinea.

5. **Effective Exemption from Tax.**—For the financial years 1950-51 to 1962-63, taxpayers without dependants were exempt from Income Tax and Social Services Contribution if their income did not exceed £104. For 1963-64 this exemption was £208. The effect of the deductions for dependants was to exempt resident taxpayers up to the incomes shown hereunder.

#### RESIDENT TAXPAYERS: EFFECTIVE EXEMPTIONS FROM TAX

(£)

Taxpayer with—	Financial years 1953-54 to 1956-57	Financial years 1957-58 to 1962-63	Financial year 1963-64
No dependants .. .. .	104	104	208
Wife .. .. .	234	247	351
Wife and one child .. .. .	312	338	442
"  "  two children .. .. .	364	403	507
"  "  three children .. .. .	416	468	572
"  "  four children .. .. .	468	533	637

For the 1963-64 financial year, an aged person (i.e., a man who has attained the age of 65 years or a woman who has attained the age of 60 years) is exempt from Income Tax and Social Services Contribution if his net income (i.e., gross income less expenses of earning that income) does not exceed £481. An aged person who contributes to the maintenance of his spouse is exempt from tax if the combined net incomes of the taxpayer and his spouse do not exceed £910.

6. **Rates of Income Tax and Social Services Contribution on Individuals.**—The following table shows the rates of income tax and social services contribution for the financial years 1953-54 to 1963-64.

**INCOME TAX AND SOCIAL SERVICES CONTRIBUTION—INDIVIDUALS: RATES  
OF INCOME TAX AND SOCIAL SERVICES CONTRIBUTION, 1953-54 TO 1963-64**

Total taxable income		1953-54		1954-55 to 1963-64(a)	
Column 1	Column 2	Tax and contribution on amount in column 1	Tax and contribution on each £1 of balance of income	Tax and contribution on amount in column 1	Tax and contribution on each £1 of balance of income
Exceeding—	Not exceeding—				
£	£	£ s. d.	d.	£ s. d.	d.
Nil	100	Nil	1	Nil	1
100	150	0 8 4	4	0 8 4	3
150	200	1 5 0	9	1 0 10	7
200	250	3 2 6	13	2 10 0	11
250	300	5 16 8	17	4 15 10	15
300	400	9 7 6	22	7 18 4	20
400	500	18 10 10	28	16 5 0	26
500	600	30 4 2	33	27 1 8	30
600	700	43 19 2	38	39 11 8	34
700	800	59 15 10	42	53 15 0	38
800	900	77 5 10	46	69 11 8	42
900	1,000	96 9 2	50	87 1 8	46
1,000	1,200	117 5 10	56	106 5 0	52
1,200	1,400	163 19 2	64	149 11 8	59
1,400	1,600	217 5 10	71	198 15 0	65
1,600	1,800	276 9 2	78	252 18 4	71
1,800	2,000	341 9 2	85	312 1 8	77
2,000	2,400	412 5 10	93	376 5 0	85
2,400	2,800	567 5 10	100	517 18 4	92
2,800	3,200	733 19 2	107	671 5 0	99
3,200	3,600	912 5 10	114	836 5 0	105
3,600	4,000	1,102 5 10	121	1,011 5 0	111
4,000	4,400	1,303 19 2	128	1,196 5 0	117
4,400	5,000	1,517 5 10	136	1,391 5 0	124
5,000	6,000	1,857 5 10	144	1,701 5 0	132
6,000	8,000	2,457 5 10	151	2,251 5 0	139
8,000	10,000	3,715 12 6	158	3,409 11 8	145
10,000	16,000	5,032 5 10	165	4,617 18 4	152
16,000	upwards	9,157 5 10	168	8,417 18 4	160

(a) For the 1959-60, 1961-62, 1962-63 and 1963-64 financial years a rebate of 5 per cent. was allowable on the tax and contribution calculated from this schedule.

For primary producers, the rate of Income Tax and Social Services Contribution for the current year is determined by the average of the taxable incomes for the five years up to and including the current year. A taxpayer may elect not to have these averaging provisions applied to his assessment, but the election, once made, is irrevocable. The application of the averaging provisions is limited to that part of the taxable income which does not exceed £4,000, and when the taxable income exceeds £4,000, the balance is taxed at the ordinary rates applicable to that part. When the taxable income is less than £4,000, the rate of tax for averaging purposes is limited to the rate on a taxable income of £4,000.

Commencing with 1953-54, the taxable income, including any abnormal receipts, of actors, artists, composers and inventors is taxed at the rate appropriate to the normal taxable income plus one-third of the abnormal receipts.

Interest on Commonwealth loans issued prior to 1st January, 1940, is subject to the condition that it shall not be taxed at rates higher than those for 1930-31. Interest on Commonwealth loans issued after 1st January, 1940, and interest on certain State semi-governmental loans issued free of State income tax are subject to a rebate of 2s. for each £1 included in the taxable income.

The minimum amount of Income Tax and Social Services Contribution payable is 10s. and the amounts payable and rebates are calculated to the nearest shilling.

7. **The Income Tax (International Agreements) Act 1953-1960.**—This Act provided relief from double taxation of income flowing between Australia and the United Kingdom, the United States of America, Canada and New Zealand.

8. **Taxes on Specified Incomes.**—The following table shows the Income Tax and Social Services Contribution payable by taxpayers, with various incomes and numbers of dependants, on income derived in each year from 1954-55 to 1963-64.

### COMMONWEALTH TAXES ON INCOME

(£)

Income(a)	Income Tax and Social Services Contribution					
	1954-55 to 1956-57	1957-58 and 1958-59	1959-60	1960-61	1961-62 and 1962-63	1963-64
<b>TAXPAYER WITH NO DEPENDANTS</b>						
150 .. ..	1.05	1.05	1.00	1.05	1.00	..
200 .. ..	2.50	2.50	2.40	2.50	2.40	..
250 .. ..	4.80	4.80	4.55	4.80	4.55	4.55
300 .. ..	7.90	7.90	7.50	7.90	7.50	7.50
350 .. ..	12.10	12.10	11.50	12.10	11.50	11.50
400 .. ..	16.25	16.25	15.45	16.25	15.45	15.45
500 .. ..	27.10	27.10	25.75	27.10	25.75	25.75
600 .. ..	39.60	39.60	37.60	39.60	37.60	37.60
800 .. ..	69.60	69.60	66.10	69.60	66.10	66.10
1,000 .. ..	106.25	106.25	100.95	106.25	100.95	100.95
1,500 .. ..	225.85	225.85	214.55	225.85	214.55	214.55
2,000 .. ..	376.25	376.25	357.45	376.25	357.45	357.45
3,000 .. ..	753.75	753.75	716.05	753.75	716.05	716.05
5,000 .. ..	1,701.25	1,701.25	1,616.20	1,701.25	1,616.20	1,616.20

(a) Income remaining after allowing all deductions other than deductions for dependants.

COMMONWEALTH TAXES ON INCOME—continued  
(£)

Income(a)	Income Tax and Social Services Contribution						
	1954-55 to 1956-57	1957-58 and 1958-59	1959-60	1960-61	1961-62 and 1962-63	1963-64	
<b>TAXPAYER WITH DEPENDENT WIFE</b>							
150 .. ..	..	..	..	..	..	..	..
200 .. ..	..	..	..	..	..	..	..
250 .. ..	0.65	0.50	0.50	0.50	0.50	..	..
300 .. ..	1.60	1.25	1.20	1.25	1.20	..	..
350 .. ..	3.60	2.80	2.65	2.80	2.65	..	..
400 .. ..	6.05	5.25	5.00	5.25	5.00	5.00	5.00
500 .. ..	13.75	12.65	12.00	12.65	12.00	12.00	12.00
600 .. ..	23.85	22.40	21.30	22.40	21.30	21.30	21.30
800 .. ..	49.50	47.65	45.25	47.65	45.25	45.25	45.25
1,000 .. ..	81.85	79.55	75.55	79.55	75.55	75.55	75.55
1,500 .. ..	191.35	188.20	178.80	188.20	178.80	178.80	178.80
2,000 .. ..	334.55	330.35	313.85	330.35	313.85	313.85	313.85
3,000 .. ..	700.10	694.75	660.00	694.75	660.00	660.00	660.00
5,000 .. ..	1,634.10	1,627.35	1,546.00	1,627.35	1,546.00	1,546.00	1,546.00
<b>TAXPAYER WITH DEPENDENT WIFE AND ONE CHILD</b>							
150 .. ..	..	..	..	..	..	..	..
200 .. ..	..	..	..	..	..	..	..
250 .. ..	..	..	..	..	..	..	..
300 .. ..	..	..	..	..	..	..	..
350 .. ..	0.95	0.60	0.55	0.60	0.55	..	..
400 .. ..	2.25	1.50	1.45	1.50	1.45	..	..
500 .. ..	7.40	5.80	5.50	5.80	5.50	5.50	5.50
600 .. ..	15.60	13.40	12.75	13.40	12.75	12.75	12.75
800 .. ..	38.60	35.35	33.60	35.35	33.60	33.60	33.60
1,000 .. ..	68.30	64.20	61.00	64.20	61.00	61.00	61.00
1,500 .. ..	172.20	165.80	157.50	165.80	157.50	157.50	157.50
2,000 .. ..	309.70	302.00	286.90	302.00	286.90	286.90	286.90
3,000 .. ..	668.20	658.20	625.30	658.20	625.30	625.30	625.30
5,000 .. ..	1,593.80	1,580.35	1,501.35	1,580.35	1,501.35	1,501.35	1,501.35
<b>TAXPAYER WITH DEPENDENT WIFE AND TWO CHILDREN</b>							
150 .. ..	..	..	..	..	..	..	..
200 .. ..	..	..	..	..	..	..	..
250 .. ..	..	..	..	..	..	..	..
300 .. ..	..	..	..	..	..	..	..
350 .. ..	..	..	..	..	..	..	..
400 .. ..	0.90	..	..	..	..	..	..
500 .. ..	4.35	2.55	2.40	2.55	2.40	..	..
600 .. ..	11.25	8.00	7.60	8.00	7.60	7.60	7.60
800 .. ..	32.10	27.20	25.85	27.20	25.85	25.85	25.85
1,000 .. ..	60.10	53.90	51.20	53.90	51.20	51.20	51.20
1,500 .. ..	159.40	149.85	142.35	149.85	142.35	142.35	142.35
2,000 .. ..	294.35	282.80	268.65	282.80	268.65	268.65	268.65
3,000 .. ..	648.25	633.30	601.65	633.30	601.65	601.65	601.65
5,000 .. ..	1,566.90	1,546.75	1,469.40	1,546.75	1,469.40	1,469.40	1,469.40

(a) Income remaining after allowing all deductions other than deductions for dependants.

**9. Pay-as-you-earn.**—(i) *Salary and Wage Earners.* Salary and wage earners are subject to instalment deductions for payment of tax at current rates out of weekly (or fortnightly) earnings. Employers are required to deduct tax and contribution from each payment of wages or salary to an employee at the appropriate rate, in accordance with a prescribed instalment scale. This scale shows the amount to be deducted according to the income and number of dependants of the employee.

Under the group scheme of deduction, which covers most employers of more than ten persons, the amount deducted is remitted to the Taxation Department, and after 30th June each year each employee is given a group certificate by his employer showing the amount of deductions made during the year. This certificate is forwarded to the Taxation Department with the employee's return of income for the year. If the tax assessed on the basis of this return is less than the amount shown on the group certificate, a refund is forwarded to the employee with his assessment. If the tax assessed is greater than the amount shown on the group certificate, the employee is required to pay the balance.

Under the stamp scheme used by small employers, a stamp deduction sheet in two parts is used. Each four weeks, the employer purchases stamps (also in two parts) for the amount of the deductions made each pay day and sticks one part on each half of the sheet. At the end of the year, the employer gives the employee one half of the sheet and sends the other half to the Taxation Department. The employee's half is then used in the same way as a group certificate.

(ii) *Taxpayers with Income other than Salary and Wages.* These taxpayers pay provisional tax in respect of income other than salary and wages. Collection of tax and contribution for the current year are made at the same time as collection and assessment for the previous year are adjusted. The notice of assessment shows an amount of provisional tax and contribution for the current year. This provisional amount is an approximation to the tax and contribution which will be payable after the return of income for the current year has been lodged. It is ascertained by assuming that the income of the current year will be the same as that for the previous year (for which a return has already been lodged), but the rates for the current year are applied to the income and not the rates for the year in which it was derived. The assessment notice shows the provisional tax and contribution paid in the previous year as a credit against the tax and contribution assessed on the basis of the return for that year. On receipt of his assessment, the taxpayer may elect to substitute his own estimate of income for the current year and pay tax on the basis of this estimate. To protect the revenue, a penalty is imposed if the taxpayer elects to pay provisional tax on an estimate of income more than 20 per cent. lower than the income of the previous year and he underestimates his income by more than 20 per cent.

An employee with income of £100 or more from sources other than salaries or wages is required to pay provisional tax in respect of that income.

**10. Lodgment of Returns and Assessment of Tax.**—All persons with assessable income in excess of £208 are required to lodge returns by 31st July each year (31st August for business incomes). The Income Tax and Social Services Contribution payable is assessed, and assessment notices showing the amounts payable are issued during the year following the year of income. The approximate amount payable, however, has already been collected during the income year from employees by deductions from wages and from non-employees by a provisional tax. The amount shown on the assessment notice is therefore adjusted against the amount already paid and any difference either collected or refunded.

**11. Company Income Taxes.**—(i) *General.* For taxation purposes, companies are divided into two main groups—public and private. A private company is defined as a company in which all the issued shares are held by not more than twenty persons or which is capable of being controlled by not more than seven persons, and which is not a company in which the public is substantially interested or a subsidiary of a public company. All other companies are regarded as public companies. Both public and private companies pay primary Income Tax and Social Services Contribution assessed on a taxable income ascertained on the same principles as for individuals.

Dividends received are assessable income, but resident companies receive a rebate at the average rate on the amount of dividends included in the taxable income. This rebate is not allowed to non-resident companies.

(ii) *Rates of Tax.* The rates of Primary Tax, in the case of public companies, and Primary and Additional Tax for private companies, for the financial years 1956-57 to 1963-64 are shown in the table below.

Super Tax and Undistributed Income Tax ceased to be levied on public companies in the 1951-52 financial year and Additional Income Tax and Social Services Contribution ceased in the 1953-54 financial year. For details, see Year Book No. 39, page 846 and No. 40, page 743.

**RATES OF TAX: COMPANIES, 1956-57 TO 1963-64 FINANCIAL YEARS**

(Pence per £)

Type of company	Rate of Income Tax and Social Services Contribution—						Rate of Additional Tax on undistributed income
	1956-57		1957-58 to 1959-60		1960-61 to 1963-64		1953-54 to 1963-64
	Up to £5,000	On remainder of taxable income	Up to £5,000	On remainder of taxable income	Up to £5,000	On remainder of taxable income	Undistributed amount—additional tax
Private .. .. .	60	84	54	78	60	84	120
Co-operative .. .. .	72	96	66	90	72	96	..
Non-profit(a)(b)—							
Friendly society dispensa-							
ries .. .. .	72	96	66	66	72	72	..
Other .. .. .	72	96	66	90	72	96	..
Life insurance—							
Mutual .. .. .	60	84	54	78	60	84	..
Other—							
(1) Mutual income ..	60	84	54	78	60	84	..
(2) Other income(c) ..	(d) 84	96	(d) 78	90	(d) 84	96	..
Other .. .. .	(d) 84	96	(d) 78	90	(d) 84	96	..
Interest paid to a non-resident(e) .. .. .	96	96	90	90	96	96	..

(a) Incomes not exceeding £104 (1956-57 to 1962-63) or £208 (1963-64) are exempt from tax.  
 (b) Where the taxable income does not exceed £228 (1956-57), £231 (1957-58 to 1959-60), £260 (1960-61 to 1962-63), or £520 (1963-64) the tax may not exceed eleven-twentieths (1956-57) or one-half (1957-58 to 1963-64) of the amount by which the taxable income exceeds £104 (1956-57 to 1962-63) or £208 (1963-64).  
 (c) The rate of 84d. (1956-57, 1960-61 to 1963-64) or 78d. (1957-58 to 1959-60) is levied on the amount of £5,000 less the mutual income.  
 (d) For non-resident companies, dividends included in this part of taxable income are taxed at 72d. (1956-57, 1960-61 to 1963-64) or 66d. per £1 (1957-58 to 1959-60). (A resident company is allowed a rebate of tax in respect of dividends received.)  
 (e) If the non-resident is not a company, tax is paid only on income in excess of £104 (1956-57 to 1962-63) or £208 (1963-64).

A private company incurs liability for additional tax on its undistributed income if it fails to make a sufficient distribution of income within a specified period after the close of the year of income. The tax is levied on the undistributed amount which, for practical purposes, is the taxable income less—(a) primary income tax and social services contribution payable; (b) retention allowance (i.e., the proportion of the reduced distributable income which a company may retain without incurring liability for undistributed income tax); and (c) certain dividends paid by the company.

For the financial years 1953-54 to 1958-59, the retention allowance was the following proportion of the reduced distributable income:—on the first £1,000 or part, 50 per cent.; on the next £1,000 or part, 40 per cent.; on the next £1,000 or part, 35 per cent.; on the next £1,000 or part, 30 per cent.; on the balance, 25 per cent.; and 10 per cent. of distributable income from property, except dividends from other private companies.

For 1959-60 to 1962-63, the minimum retention allowance from business profits was 35 per cent. The rates were:—on the first £1,000 or part, 50 per cent.; on the next £1,000 or part, 40 per cent.; on the balance, 35 per cent.; and 10 per cent. of distributable income from property, except dividends from other private companies.

For 1963-64, the minimum retention allowance from business profits is 40 per cent. The rates are:—on the first £5,000 or part, 50 per cent.; on the next £5,000 or part, 45 per cent.; on the balance 40 per cent.; and 10 per cent. of distributable income from property, except dividends from other private companies.

For the financial years 1953-54 to 1963-64, the reduced distributable income is calculated by deducting from the taxable income the primary tax payable and the amount of all property income included in taxable income. The additional tax on undistributed income was imposed at a flat rate of 10s. in the £1 on the undistributed amount.

12. Yield of Income Taxes.—(i) *Collections from Income Taxes.* The following table shows the collections of taxes imposed on income for the years 1958-59 to 1962-63.

**INCOME TAX COLLECTIONS**  
(£'000)

Year	Total		
	Commonwealth	State(a)	Total
1958-59 .. .. .	608,660	15	608,675
1959-60 .. .. .	671,294	8	671,302
1960-61 .. .. .	807,266	7	807,273
1961-62 .. .. .	828,150	..	828,150
1962-63 .. .. .	810,590	..	810,590

(a) Amounts shown are arrears of State income taxes existing prior to the introduction of the uniform tax arrangement.

(ii) *Commonwealth Income Tax Assessed.* The amounts of Commonwealth taxes assessed on the income of recent years are shown in the following table. The amounts are shown under the year in which most of the assessments were made, i.e., the year following the income year. Income taxes assessed on income for past years and for the years shown after the close of the normal assessing period are not included.

**COMMONWEALTH INCOME TAXES ASSESSED**  
(£'000)

Tax	1957-58	1958-59	1959-60	1960-61	1961-62
Individuals— Income Tax and Social Services Contribution .. .. .	(a) 401,427	355,064	378,219	426,476	486,701
Companies— Income Tax .. .. .	212,707	214,683	231,610	292,856	276,477
Additional Tax on Undistributed Income of Private Companies .. .. .	2,512	1,835	1,274	1,460	1,301
<b>Total .. .. .</b>	<b>616,646</b>	<b>571,582</b>	<b>611,103</b>	<b>720,792</b>	<b>764,479</b>

(a) Includes assessments issued to 30th June, 1961.

13. *Commonwealth Income Tax and Social Services Contribution Assessments.*—(i) 1961-62 *Assessment Year.* The following tables show, for the 1961-62 assessment year, the number of taxpayers, income, and net income tax and social services contribution assessed for individuals and resident and non-resident companies. For further information of this nature, see the annual bulletin *Commonwealth Taxation* issued by this Bureau.

**COMMONWEALTH INCOME TAX AND SOCIAL SERVICES CONTRIBUTION  
1961-62 ASSESSMENT(a): NUMBER OF TAXPAYERS, ACTUAL INCOME(b),  
TAXABLE INCOME(c) AND NET INCOME TAX AND SOCIAL SERVICES  
CONTRIBUTION ASSESSED—INDIVIDUALS**

(Income derived in the year 1960-61)

Grade of actual income(b) and State or Territory of assessment		Number of taxpayers			Actual income (b)	Taxable income (c)			Net Income Tax and Social Services Contribution assessed
		Males	Females	Total	Total	Salary and wages	Other income	Total	
£	£	No.	No.	No.	£'000	£'000	£'000	£'000	£'000
105- 199 ..	55,594	103,947	159,541	24,862	19,624	4,074	23,698	197	
200- 299 ..	62,746	122,483	185,229	46,266	34,654	8,071	42,725	770	
300- 399 ..	80,090	135,378	215,468	75,564	56,384	11,893	68,277	2,100	
400- 499 ..	93,978	150,409	244,387	109,978	80,463	17,316	97,779	4,134	
500- 599 ..	102,212	163,096	265,308	145,996	104,982	23,389	128,371	6,903	
600- 699 ..	110,705	181,255	291,960	189,547	136,916	27,876	164,792	10,486	
700- 799 ..	133,672	148,200	281,872	211,274	147,383	31,434	178,817	12,853	
800- 899 ..	200,696	102,038	302,734	257,629	173,321	34,861	208,182	16,285	
900- 999 ..	275,172	66,898	342,070	325,041	216,257	36,820	253,077	21,267	
1,000- 1,099 ..	310,209	42,970	353,179	370,714	241,822	38,493	280,315	25,227	
1,100- 1,199 ..	284,449	27,794	312,243	358,684	229,405	37,732	267,137	25,688	
1,200- 1,299 ..	246,957	19,583	266,540	332,821	210,601	37,372	247,973	25,518	
1,300- 1,399 ..	201,229	15,300	216,529	291,689	182,215	35,335	217,550	23,821	
1,400- 1,499 ..	155,332	11,924	167,256	242,151	147,460	33,450	180,910	21,009	
1,500- 1,999 ..	398,930	34,555	433,485	737,247	417,648	139,810	557,458	74,346	
2,000- 2,999 ..	185,046	23,490	208,536	493,926	211,981	175,804	387,785	67,925	
3,000- 3,999 ..	48,226	7,591	55,817	190,724	58,266	99,738	158,004	36,735	
4,000- 4,999 ..	20,334	3,270	23,604	104,624	26,675	62,886	89,161	24,841	
5,000- 9,999 ..	22,689	3,478	26,167	170,276	36,236	113,566	149,802	54,686	
10,000-14,999 ..	2,571	443	3,014	35,723	6,941	25,305	32,246	15,245	
15,000 and over	1,229	212	1,441	33,294	5,422	23,771	29,193	16,188	
Central Office	8,648	6,169	14,817	43,049	8,886	28,021	36,907	11,763	
New South Wales	1,122,877	519,065	1,641,942	1,828,099	1,109,074	344,017	1,453,091	188,653	
Victoria ..	849,044	422,937	1,271,981	1,388,160	817,050	298,335	1,115,385	145,872	
Queensland ..	409,629	161,297	570,926	587,807	306,101	144,786	450,887	54,937	
South Australia	279,216	123,206	402,422	418,990	233,865	97,749	331,614	39,480	
Western Australia	203,098	82,542	285,640	301,425	161,081	75,205	236,286	28,645	
Tasmania ..	94,820	38,720	133,540	135,788	79,864	25,081	104,945	12,099	
Nor. Territory ..	6,818	2,135	8,953	12,007	6,492	1,409	7,901	1,002	
Aust. Cap. Ter.	17,916	8,243	26,159	32,705	22,243	3,993	26,236	3,773	
<b>Total, Residents</b>	<b>2,992,066</b>	<b>1,364,314</b>	<b>4,356,380</b>	<b>4,748,030</b>	<b>2,744,656</b>	<b>1,018,596</b>	<b>3,763,252</b>	<b>486,224</b>	
<i>Total, Non-residents ..</i>	<i>936</i>	<i>489</i>	<i>1,425</i>	<i>2,525</i>	<i>1,290</i>	<i>974</i>	<i>2,264</i>	<i>477</i>	
<b>Total, Residents and Non-residents ..</b>	<b>2,993,002</b>	<b>1,364,803</b>	<b>4,357,805</b>	<b>4,750,555</b>	<b>2,745,946</b>	<b>1,019,570</b>	<b>3,765,516</b>	<b>486,701</b>	

(a) Assessments in respect of 1960-61 incomes issued to 30th September, 1962. Assessments issued after that date are not included. (b) Actual income is defined briefly as "Gross income including exempt income less expenses incurred in gaining that income". (c) Taxable income is the income remaining after deducting from assessable income all allowable deductions.

**COMMONWEALTH INCOME TAX AND SOCIAL SERVICES CONTRIBUTION  
1961-62 ASSESSMENT(a): NUMBER OF TAXPAYERS, ACTUAL INCOME(b),  
TAXABLE INCOME(c) AND NET TAX ASSESSED—RESIDENT AND NON-  
RESIDENT COMPANIES**

(Income derived in the year 1960-61)

Grade of taxable income(c) and State or Territory of assessment		Number of taxpayers	Actual income(b)	Taxable income(c)	Net tax assessed(d)
£	£	No.	£'000	£'000	£'000
1- 999 ..	..	16,935	8,134	5,953	1,480
1,000- 4,999 ..	..	20,098	59,415	53,878	12,809
5,000- 9,999 ..	..	8,063	57,814	55,561	14,517
10,000- 19,999 ..	..	4,259	62,713	59,241	17,100
20,000- 49,999 ..	..	2,869	95,351	88,546	26,681
50,000- 99,999 ..	..	1,107	80,338	76,221	23,552
100,000-199,999 ..	..	648	91,952	89,938	28,649
200,000-499,999 ..	..	341	106,278	102,946	30,915
500,000-999,999 ..	..	104	76,622	74,058	22,822
1,000,000 and over	..	102	340,047	297,113	98,132

For footnotes see end of table.



**COMMONWEALTH INCOME TAX AND SOCIAL SERVICES CONTRIBUTION  
1961-62 ASSESSMENT(a): NUMBER OF TAXPAYERS, ACTUAL INCOME(b),  
TAXABLE INCOME(c) AND NET TAX ASSESSED—RESIDENT AND NON-  
RESIDENT COMPANIES—continued**

Grade of taxable income(c) and State or Territory of assessment	Number of taxpayers	Actual income(b)	Taxable income(c)	Net tax assessed(d)
	No.	£'000	£'000	£'000
Central Office . . . . .	3,099	477,667	418,982	138,917
New South Wales . . . . .	22,380	210,758	204,595	57,984
Victoria . . . . .	15,631	147,828	143,259	39,595
Queensland . . . . .	4,400	49,533	48,393	15,013
South Australia . . . . .	4,977	43,848	42,712	12,357
Western Australia . . . . .	1,904	24,100	21,839	7,104
Tasmania . . . . .	1,083	11,973	11,812	3,620
Northern Territory . . . . .	123	1,770	1,281	380
Australian Capital Territory . . . . .	929	11,187	10,582	1,507
<b>Total</b> . . . . .	<b>54,526</b>	<b>978,664</b>	<b>903,455</b>	<b>276,477</b>

(a) Assessments in respect of 1960-61 incomes issued to 31st December, 1962. Assessments issued after that date are not included. (b) Actual income is defined briefly as "Gross income including exempt income less expenses incurred in gaining that income". (c) Taxable income is the income remaining after deducting from assessable income all allowable deductions. (d) Excludes additional tax levied on the undistributed income of private companies, £1,301,000.

(ii) *Commonwealth Income Tax on Residents—Grades of Income.* Individual income taxes assessed on residents are distributed according to grades of actual income in the following table. The year shown in each case refers to the year in which assessment was made, i.e., the year following the income year. The figures relate only to assessments made on the income of the previous year during the normal assessing period. Assessments issued after the normal assessing period are not included.

**COMMONWEALTH INCOME TAXES AND SOCIAL SERVICE CONTRIBUTIONS:  
RESIDENT INDIVIDUALS, BY GRADES OF ACTUAL INCOME(a)**

Grade of actual income	1958-59		1959-60		1960-61		1961-62	
	No. of taxpayers	Tax	No. of taxpayers	Tax	No. of taxpayers	Tax	No. of taxpayers	Tax
£		£'000		£'000		£'000		£'000
105- 199 ..	158,213	202	157,786	194	159,479	187	159,541	197
200- 299 ..	188,743	827	185,069	786	183,675	732	185,229	770
300- 399 ..	228,533	2,285	225,492	2,208	215,557	1,999	215,468	2,100
400- 499 ..	256,931	4,427	250,645	4,245	237,864	3,818	244,387	4,134
500- 599 ..	306,044	8,090	296,189	7,774	261,256	6,468	265,308	6,903
600- 699 ..	295,996	10,366	297,370	10,500	288,149	9,849	291,960	10,486
700- 799 ..	318,592	13,413	303,738	13,066	284,299	12,187	281,872	12,853
800- 899 ..	388,292	18,856	376,967	18,902	321,739	16,069	302,734	16,285
900- 999 ..	391,561	22,865	395,366	23,259	360,892	20,933	342,070	21,267
1,000- 1,099 ..	327,691	22,593	346,733	23,456	355,821	24,046	353,179	25,227
1,100- 1,199 ..	244,267	19,903	266,226	21,424	307,052	24,193	312,243	25,688
1,200- 1,299 ..	177,799	16,857	198,622	18,526	247,214	22,453	266,540	23,821
1,300- 1,399 ..	133,529	14,750	149,980	16,100	191,397	19,921	216,529	21,009
1,400- 1,499 ..	94,540	12,148	110,477	13,701	146,275	17,480	167,256	17,346
1,500- 1,999 ..	224,489	39,708	265,013	45,733	364,735	59,128	433,485	67,925
2,000- 2,999 ..	109,571	38,476	127,985	43,667	171,906	53,851	208,536	55,817
3,000- 3,999 ..	34,207	23,975	38,367	26,194	48,000	30,186	55,817	36,735
4,000- 4,999 ..	15,512	17,199	17,297	18,706	21,205	24,441	23,604	24,841
5,000- 9,999 ..	18,403	40,127	19,669	41,721	24,441	48,805	26,674	54,686
10,000-14,999 ..	2,553	13,114	2,487	12,721	3,100	15,038	3,014	15,245
15,000-29,000 ..	988	9,319	971	9,377	1,269	11,424	1,237	11,396
30,000-49,999 ..	130	2,522	123	2,384	144	2,808	152	2,944
50,000 and over	44	1,947	43	2,020	57	2,395	52	1,848
<b>Total</b> ..	<b>3,916,718</b>	<b>353,969</b>	<b>4,032,615</b>	<b>376,876</b>	<b>4,195,526</b>	<b>425,414</b>	<b>4,356,380</b>	<b>486,224</b>

(a) Actual income is defined briefly as "Gross income including exempt income less expenses incurred in gaining that income".

## CHAPTER XXIII

### RURAL INDUSTRY

**NOTE.**—This chapter is divided into four major parts:—

- Introduction, dealing with general rural activity in Australia;
- Agricultural Production;
- Pastoral Production; and
- Other Rural Industries, which includes the dairying, poultry and bee industries.

For greater detail on the subjects dealt with in this chapter, see the annual bulletins *Primary Industries, Part I.—Rural Industries, Part II.—Non-Rural Industries and Value of Production*, and *Secondary Industries* (butter, cheese, etc., factories) issued by this Bureau. Current information on commodities produced is obtainable in the *Quarterly Summary of Australian Statistics, Monthly Review of Business Statistics, Monthly Bulletin of Production Statistics* and *Digest of Current Economic Statistics* (monthly). The series of bulletins *Classification of Rural Holdings by Size and Type of Activity, 1959–60*, shows particulars of rural holdings classified by size, nature and area of crops, and numbers of livestock, and also according to main type of activity. The mimeographed annual *Report on Food Production and the Apparent Consumption of Foodstuffs in Australia* contains details of the production and utilization of foodstuffs. The following mimeographed publications also contain considerable detail on the particular subjects dealt with.

**General.**—*Value of Production and Indexes of Price and Quantum of Farm Production* (annual), *Value of Primary Production (Preliminary Statement)* (annual), *Farm Machinery on Rural Holdings* (annual), *Tractors on Rural Holdings, 31st March, 1960* (detailed information), *New Tractors: Receipts, Sales and Stocks* (quarterly), and *New Agricultural Machinery* (quarterly).

**Agricultural Production.**—*Rural Land Use and Crop Production* (annual), *Agricultural Statistics (Preliminary Statement)* (annual), *The Wheat Industry* (two a year), *The Fruit Growing Industry* (annual), and *Fruit Statistics (Preliminary Statement)* (annual).

**Pastoral Production.**—*Livestock Statistics* (annual), *Livestock Numbers* (annual), *The Meat Industry* (monthly), *Wool Production* (annual), and *Wool Production and Utilization* (annual).

**Other Rural Production.**—*The Dairying Industry* (monthly and half-yearly), *Livestock Statistics* (annual), *Livestock Numbers* (annual), *Manufacturing Industries No. 20.—Bacon Curing and No. 21.—Butter, Cheese and Condensed, Concentrated, etc., Milk* (annual), *Production Summaries No. 36.—Preserved Milk Products and No. 55.—Butter and Cheese* (monthly), and *Bee-farming* (annual).

Values of Australian overseas trade shown throughout this chapter are expressed as £A. f.o.b. port of shipment.

#### INTRODUCTION: RURAL ACTIVITY.

##### § 1. Number and Area of Rural Holdings.

**1. Number and Area.**—A holding in Australia has been defined by statisticians on a more or less uniform basis, and discrepancies which exist are not of sufficient importance to prevent comparisons. For the purpose of these statistics, a holding has been defined as land of one acre or more in extent, used in the production of agricultural produce, the raising of livestock or the products of livestock.

There are considerable fluctuations from time to time in the numbers of very small holdings, and it is very difficult to determine in some cases whether or not they are rural holdings within the definition.

In addition, in the very dry parts, such as the far west of New South Wales and Queensland and the remoter parts of South Australia and Western Australia, there are large areas of marginal lands sporadically occupied for extensive grazing under short-term lease or other arrangement, and the areas so occupied tend to fluctuate with the seasons. Similarly, there are rugged areas in the mountain country of some States which are also occasionally occupied.

The following table shows the recorded number and area of the holdings in each State for the seasons 1958–59 to 1962–63.

## RURAL HOLDINGS: NUMBER AND AREA

Season	N.S.W.	Vic.	Q'land	S. Aust.	W. Aust.	Tas.	N.T.	A.C.T.	Aust.
NUMBER OF RURAL HOLDINGS									
1958-59	77,857	69,770	43,290	28,105	21,563	11,374	243	221	252,423
1959-60	77,499	69,778	42,912	28,527	21,832	11,202	269	224	252,243
1960-61	76,871	69,623	43,155	28,711	21,922	11,201	275	224	251,982
1961-62	76,949	69,866	43,287	28,886	22,082	11,117	284	217	252,688
1962-63	76,294	69,700	43,284	28,922	22,554	10,974	281	217	252,226

TOTAL AREA OF RURAL HOLDINGS ( <sup>0</sup> 000 acres)									
1958-59	172,978	37,755	370,240	152,312	238,264	6,573	156,897	381	1,135,400
1959-60	172,721	37,737	371,794	155,437	244,619	6,511	158,806	382	1,148,007
1960-61	172,697	37,934	373,995	156,456	247,737	6,510	161,099	374	1,156,802
1961-62	172,327	37,754	374,501	156,897	252,783	6,551	171,245	377	1,172,435
1962-63	172,038	37,709	376,788	156,697	262,660	6,422	164,955	376	1,177,645

2. *Classification by Size and Type of Activity.*—Some of the information obtained from the 1959-60 Agricultural and Pastoral Census was classified by size of principal characteristics (area of holdings, area of sown grasses and clovers, area of selected crops and numbers of livestock). In addition, all holdings were classified according to type of activity. Tables showing this information, for statistical divisions and States, and an outline of the methods used have been published in a series of bulletins, *Classification of Rural Holdings by Size and Type of Activity, 1959-60*. Similar information on size classification for each State was published in a series of bulletins for the year 1955-56.

## § 2. Employment on Rural Holdings

1. *Persons Engaged.*—The following table shows, for each State except Victoria, the recorded number of males working on rural holdings. Particulars for females are not available except for New South Wales. Additional particulars relating to the number of males employed in agriculture up to 1941-42 are shown in Year Book No. 36, page 852, and previous issues. Similar details for later years are not available.

MALES<sup>(a)</sup> ENGAGED ON RURAL HOLDINGS AT 31st MARCH, 1963

Particulars	N.S.W.	Vic.	Qld	S.A.	W.A.	Tas.	N.T. <sup>(b)</sup>	A.C.T.	Aust.
Permanent—									
Owners, lessees or share-farmers .. ..	64,214	(c)	44,994	23,748	20,537	7,457	232	162	} n.a.
Relatives of owner, lessee or share-farmer over 14 years of age, not receiving wages or salary .. ..	4,064		3,244	1,696	1,285	111	36	9	
Employees, including managers and relatives working for wages or salary .. ..	27,988		18,515	7,890	8,758	4,053	672	140	
<i>Total, Permanent Males</i> .. ..	96,266		66,753	33,334	30,580	11,621	940	311	
Temporary .. ..	24,965		10,699	14,106	3,387	5,135	1,414	42	
<i>Total, Males</i> .. ..	121,231	77,452	47,440	33,967	16,756	2,354	353		

(a) Details for females not available except for New South Wales. (b) 1,303 male full-blood Aborigines employed are included as temporary employees. (c) Not available; subject to investigation.

The next table shows the number of persons working full-time on rural holdings in Australia at 31st March of the five years 1954 to 1958. Data for subsequent years are the subject of investigation and are not available at this stage.

**PERSONS ENGAGED ON RURAL HOLDINGS: AUSTRALIA(a)**

Particulars	31st March—				
	1954(b)	1955(b)	1956	1957	1958
<b>Permanent—</b>					
<b>Males—</b>					
Owners, lessees or share-farmers ..	241,149	240,879	245,621	244,111	241,247
Relatives of owner, lessee or share-farmer over 14 years of age, not receiving wages or salary ..	22,736	23,529	21,232	21,734	21,535
Employees, including managers and relatives working for wages or salary	93,748	91,479	89,334	90,599	91,308
<b>Total, Males</b> .. ..	357,633	355,887	356,187	356,444	354,090
" Females .. ..	49,782	46,656	42,104	41,373	39,763
<b>Total, Permanent</b> ..	407,415	402,543	398,291	397,817	393,853
<b>Temporary—</b>					
<b>Total, Males</b> .. ..	86,644	87,400	84,607	86,267	93,142
" Females .. ..	8,365	9,238	9,638	11,324	12,986
<b>Total, Temporary</b> ..	95,009	96,638	94,245	97,591	106,128
<b>Grand Total</b> .. ..	502,424	499,181	492,536	495,408	499,981

(a) Australian totals for years subsequent to 1958 are not available. (b) Excludes Northern Territory.

2. Salaries and Wages Paid.—Particulars of salaries and wages paid to employees (including amounts paid to contractors) working full-time on rural holdings are shown below for the year 1962-63. Data for New South Wales and Victoria, and hence Australia, are not available.

**EMPLOYEES ON RURAL HOLDINGS: SALARIES AND WAGES(a) PAID, 1962-63 (£'000)**

Particulars	N.S.W.	Vic.	Qld	S.A.	W.A.	Tas.	N.T.	A.C.T.	Aust.	
Permanent—Males ..	(b)	(b)	14,982	6,054	6,943	3,242	612	182	n.a.	
Females ..			1,169	230						79
Temporary(c)—Males ..			20,406	4,366	4,770	1,801	387	75		5
Females ..				417						
<b>Total</b> .. ..			36,557	11,067	11,713	5,524	1,051	281		

(a) Includes value of keep. (b) Not available; subject to investigation. (c) Includes amounts paid to contractors.

Similar information for Australia is given below for the years 1953-54 to 1957-58. Particulars for subsequent years are the subject of investigation and are not available at this stage.

**EMPLOYEES ON RURAL HOLDINGS: SALARIES AND WAGES(a) PAID,  
AUSTRALIA(b)  
(£'000)**

Particulars	1953-54(c)	1954-55(c)	1955-56	1956-57	1957-58
Permanent—Males .. ..	52,240	53,951	55,752	58,707	63,397
Females .. ..	2,406	2,468	2,456	2,456	2,793
Temporary(d)—Males .. ..	51,282	53,855	53,200	54,431	59,982
Females .. ..	1,190	1,323	1,476	1,498	1,656
<b>Total .. ..</b>	<b>107,118</b>	<b>111,597</b>	<b>112,884</b>	<b>117,092</b>	<b>127,828</b>

(a) Includes value of keep. (b) Australian totals for years subsequent to 1957-58 are not available. (c) Excludes Northern Territory. (d) Includes amounts paid to contractors.

3. Persons Residing Permanently on Holdings.—Particulars of persons (of all ages) residing permanently on rural holdings at 31st March, 1963, are shown below.

**PERSONS (OF ALL AGES) RESIDING PERMANENTLY ON RURAL HOLDINGS,  
31st MARCH, 1963**

Particulars	N.S.W.	Vic.	Qld	S.A.	W.A.	Tas.	N.T.	A.C.T.	Aust.
Males .. ..	157,446	141,706	105,531	58,668	49,256	26,488	1,301	497	540,893
Females .. ..	136,025	124,822	86,270	51,825	40,375	23,673	621	437	464,048
<b>Total .. ..</b>	<b>293,471</b>	<b>266,528</b>	<b>191,801</b>	<b>110,493</b>	<b>89,631</b>	<b>50,161</b>	<b>1,922</b>	<b>934</b>	<b>1,004,941</b>

Similar particulars for Australia as a whole for the years 1959 to 1963 are shown below.

**PERSONS (OF ALL AGES) RESIDING PERMANENTLY ON RURAL HOLDINGS,  
AUSTRALIA**

Particulars	31st March—				
	1959	1960	1961	1962	1963
Males .. ..	554,479	551,800	547,594	544,709	540,893
Females .. ..	470,177	469,601	467,539	465,238	464,048
<b>Total .. ..</b>	<b>1,024,656</b>	<b>1,021,401</b>	<b>1,015,133</b>	<b>1,009,947</b>	<b>1,004,941</b>

### § 3. Technical Aspects of Rural Industry

1. Farm Machinery on Rural Holdings.—The history of the development of large-scale field crops and sown pastures in Australia is essentially also the history of the mechanization of the rural industries. This may be divided into four phases.

The first phase extended from initial settlement to the mid-nineteenth century, when agriculture was primarily local and non-commercial, and confined by hand methods to small areas and low production per farm worker.

The invention of an effective wheat stripper in South Australia in 1843, and the extension of its use into Victoria and New South Wales, however, greatly increased the area which could be harvested in a season. This initiated the second phase, which continued with the development of stump-jump implements in the 1870's, and the scrub roller and mullenizer in the 1890's. These later developments made possible an extension of the wheat belt into the drier mallee lands of Victoria and South Australia. By the turn of the century, machinery had thus been developed to conduct all cropping operations on an extensive basis.

The third major change in farm machinery followed the 1914-18 War, when tractor power became increasingly available in a variety of models and sizes. The increase in numbers of tractors on rural holdings and higher operating speeds led in turn to new and improved types of farm machinery drawn by tractors. These trends were interrupted by the economic depression of the 1930's.

After the 1939-45 War, there was a widespread expansion of labour-saving machinery and devices in all sectors of rural industry. Clearing methods were extended with the bulldozer, log, chain and hi-ball units, and cultivation was improved by means of large disc ploughs and disc harrows, and seeding and harvesting machinery. These methods were extended to crops for which methods involving greater use of manpower (manual labour) had previously been employed. Milking machines almost entirely replaced hand milking on dairy farms, and labour-saving machinery was introduced into farm and station development and maintenance operations. These operations included fencing, bulk transport of grain and fodder, pasture treatments, fodder conservation and pasture improvement.

The table below shows data for the principal types of farm machinery on rural holdings in the several States and Territories at 31st March, 1963. A more detailed analysis of tractors on rural holdings according to horse-power, type of fuel used and age of tractor was published in the Statistical Bulletin: *Tractors on Rural Holdings—Australia, 31st March, 1960*, issued on 8th September, 1961.

FARM MACHINERY ON RURAL HOLDINGS, 31st MARCH, 1963

Particulars	N.S.W.	Vic.	Qld	S.A.	W.A.	Tas.	N.T.	A.C.T.	Aust.		
Cultivating—											
Ploughs (all types including disc cultivator ploughs) .. ..	(a)	(a)	(a)	(a)	27,464	(a)	(b) 202	(a)	(a)		
Rotary hoes—											
Self-contained power unit .. ..	9,591	6,254	3,728	4,001	1,880	1,127	} (b) 66	{ 37	} 38,896		
Tractor-drawn .. ..	4,049	3,645	1,657	988	1,247	610					
Seeding and planting—											
Grain drills—											
Combine type .. ..	26,356	19,155	11,536	15,251	12,804	1,265	..	70	86,437		
Other types .. ..	5,914	10,016	2,221	5,065	4,015	2,619	..	43	29,893		
Maize and cotton planters .. ..	8,215	(a)	7,261	..	..	..	(b) 27	6(c)	15,509		
Fertilizer distributors and broadcasters .. ..	20,514	29,188	11,112	8,213	9,096	5,255	(a)	121	83,499		
Harvesting—											
Grain and seed headers, strippers and harvesters .. ..	19,031	14,646	7,183	12,677	11,374	687	..	30	65,628		
Mowers—											
Power-driven .. ..	} (a)	} (a)	{ 8,316	} (a)	{ 6,566	4,592	} (a)	} (a)	} (a)		
Ground-drive .. ..										{ 5,654	{ 1,324
Hay rakes—											
Side delivery .. ..	} (a)	} (a)	{ 3,086	} (a)	} (a)	{ 2,121	} (a)	} (a)	} (a)		
Buck .. ..										{ 3,199	{ 1,005
Dump .. ..										{ 6,014	{ 1,161
Hay presses and balers—											
Stationary hay presses .. ..	(a)	(a)	383	(a)	(a)	(a)	} (a) 42	} (a)	(a)		
Pick-up balers .. ..	8,510	10,107	1,876	3,791	2,994	1,405					
Potato diggers .. ..	(a)	(a)	1,160	(a)	(a)	995	..	(a)	(a)		
Forage harvesters .. ..	1,749	1,289	740	645	434	216	(a)	10	5,083		
Peanut pickers .. ..	(a)	..	254	..	..	..	(a)	..	(a)		
Corn pickers .. ..	(a)	(a)	896	..	..	..	..	..	(a)		
Other—											
Shearing machines (number of stands) .. ..	68,708	39,162	18,977	27,528	19,868	4,249	(d) 15	298	178,805		
Milking machines (number of units) .. ..	43,089	97,372	46,674	18,836	10,514	12,701	(a)	84	229,270		
Tractors—											
Wheel .. ..	68,020	66,479	51,202	28,472	25,612	9,605	172	196	249,758		
Crawler .. ..	4,785	1,936	6,684	3,183	3,606	1,022	65	5	21,286		
Hammer mills .. ..	(a)	(a)	6,250	(a)	(a)	343	..	(a)	(a)		

(a) Not available.  
June, 1963.

(b) At 30th September, 1962.

(c) Excludes Victoria.

(d) At 30th

The next table shows particulars of farm machinery on rural holdings in Australia at 31st March, 1959 to 1963.

### FARM MACHINERY ON RURAL HOLDINGS: AUSTRALIA

Particulars	31st March—				
	1959	1960	1961	1962	1963
<b>Cultivating—</b>					
Ploughs (all types including disc cultivator ploughs)(a) ..	(b)	(b)	323,602	(b)	(b)
Rotary hoes .. ..	36,611	34,159	36,896	38,868	38,896
<b>Seeding and planting—</b>					
<b>Grain drills—</b>					
Combine type .. ..	81,493	81,795	82,277	84,743	86,437
Other types .. ..	27,422	29,394	28,776	29,191	29,893
Maize and cotton planters ..	17,970	17,081	(c) 15,567	(c) 16,050	(c) 15,509
Fertilizer distributors and broadcasters .. ..	76,714	78,181	80,654	82,821	83,499
<b>Harvesting—</b>					
Grain and seed headers, strippers and harvesters .. ..	61,361	64,070	63,158	64,891	65,628
<b>Mowers(a)—</b>					
Power-driven .. ..	58,624	} (b)	(b)	{ 71,585	} (b)
Ground drive .. ..	26,695			{ 23,076	
<b>Hay rakes(a)—</b>					
Side delivery .. ..	28,105	} (b)	(b)	{ 35,777	} (b)
Buck .. ..	11,613			{ 12,347	
Dump .. ..	22,472			{ 20,267	
<b>Hay presses and balers—</b>					
Stationery hay presses .. ..	8,734	7,769	7,411	6,611	(b)
Pick-up balers .. ..	(d) 20,472	22,496	25,264	26,647	28,725
Potato diggers(a) .. ..	5,739	} (b)	(b)	6,223	(b)
Forage harvesters .. ..	(d) 1,807			{ 4,073	5,083
Peanut pickers(a) .. ..	192			{ 255	(b)
Corn pickers(a) .. ..	(b)			{ 1,264	(b)
<b>Other—</b>					
Shearing machines (number of stands) .. ..	167,767	170,847	172,697	177,579	178,805
Milking machines (number of units) .. ..	216,287	221,260	223,815	228,228	229,270
<b>Tractors—</b>					
Wheel .. ..	212,996	221,886	} 253,515	264,069	{ 249,758
Crawler .. ..	19,823	20,462			
Hammer mills(a) .. ..	10,591	(b)	(b)	17,508	(b)

(a) Details for all States are collected at triennial intervals only. (b) Not available. (c) Incomplete; particulars for Victoria are not available. (d) Details of pick-up balers and forage harvesters for each State classified according to type, mode of operation and age were published in the bulletin *Primary Industries* No. 53, 1958-59, Part I.—*Rural Industries*.

2. Fertilizers.—(i) *General*. In the early days of settlement in Australia, the principles of scientific cultivation were little understood. It was common for the land to be cropped continuously until the natural fertility was almost exhausted. More scientific methods have been adopted in recent decades, much of the improvement in this regard being due to the assistance and guidance offered to farmers by various State and Commonwealth departments and authorities.

Fertilizer is generally applied to pastures at the time of sowing, and periodical (usually annual) top-dressings are carried out afterwards to keep the pastures in good condition. The introduction of the modern seed-drill, acting also as a fertilizer-distributor, has greatly facilitated the use of artificial manures, and much land formerly regarded as useless for cultivation has now been brought into production. With the rapid increase in the area of sown pastures, particularly since the 1939-45 War, large quantities of artificial fertilizers

have been used. In addition, increasing areas of native pastures have been top-dressed. The utilization of aircraft, in particular, has enabled the fertilizing of some areas which would otherwise be inaccessible. In 1962-63, pastures (sown and native) accounted for nearly 60 per cent. of both the total area fertilized and the total quantity of fertilizer used.

(ii) *Local Production.* The Australian output of prepared fertilizers is derived chiefly from imported rock phosphate. Complete information regarding local production of fertilizers is not available. The number of firms engaged in the manufacture of chemical fertilizers in Australia for the year 1962-63 was 48, made up as follows:—New South Wales, 11; Victoria, 6; Queensland, 4; South Australia, 11; Western Australia, 8; and Tasmania, 8. The production of superphosphate in Australia during 1962-63 amounted to 2,861,580 tons.

(iii) *Quantities Used Locally.* Information regarding the area treated with artificial fertilizers and the quantity of artificial fertilizers (superphosphate, bonedust, nitrates, etc.) used in each State during the 1962-63 season is given in the following table.

**AREA FERTILIZED AND QUANTITY OF ARTIFICIAL FERTILIZERS USED, 1962-63**

State or Territory	Crops			Pastures			Total		
	Area fertilized	Super-phosphate used	Other artificial fertilizers used	Area fertilized	Super-phosphate used	Other artificial fertilizers used	Area fertilized	Super-phosphate used	Other artificial fertilizers used
	'000 acres	tons	tons	'000 acres	tons	tons	'000 acres	tons	tons
New South Wales ..	4,498	152,883	35,008	7,381	379,813	8,857	11,879	532,696	43,865
Victoria ..	4,530	184,610	42,302	9,940	561,333	34,243	14,470	745,943	76,545
Queensland ..	602	20,383	112,133	33	2,365	1,015	635	22,748	113,148
South Australia ..	4,415	209,135	11,875	3,750	207,519	2,032	8,165	416,654	13,907
Western Australia ..	7,308	348,693	23,348	7,002	335,459	5,567	14,310	684,152	28,915
Tasmania ..	205	19,890	9,389	1,165	91,914	3,330	1,370	111,804	12,719
Northern Territory ..	1	78	80	2	45	23	3	123	103
Australian Capital Territory ..	4	248	37	78	4,179	37	82	4,427	74
<b>Total ..</b>	<b>21,563</b>	<b>935,920</b>	<b>234,172</b>	<b>29,351</b>	<b>1,582,627</b>	<b>55,104</b>	<b>50,914</b>	<b>2,518,547</b>	<b>289,276</b>

Particulars of the quantity of artificial fertilizers used in each State and Territory during each of the seasons 1958-59 to 1962-63 are shown in the next table. These details include the quantity used for the top-dressing of pasture lands.

**QUANTITY OF ARTIFICIAL FERTILIZERS USED (Tons)**

Season	N.S.W.	Vic.	Q'land	S. Aust.	W. Aust.	Tas.	N.T.	A.C.T.	Total
1958-59 ..	344,490	730,868	111,741	410,896	560,091	102,280	144	2,724	2,263,234
1959-60 ..	400,701	740,035	101,642	391,628	581,230	105,966	205	2,533	2,323,940
1960-61 ..	497,492	745,522	108,220	399,091	621,435	107,027	209	3,798	2,482,794
1961-62 ..	512,201	777,429	126,301	404,233	649,323	112,785	216	4,492	2,586,980
1962-63 ..	576,561	822,488	135,896	430,561	713,067	124,523	226	4,501	2,807,823

(iv) *Imports and Exports.* The chief sources of Australia's supplies of rock phosphate are Nauru, Christmas Island (Indian Ocean) and the Gilbert and Ellice Islands. Sodium nitrate is obtained chiefly from Chile.

The imports of artificial fertilizers during the five years ended 1962-63 are shown in the following table.



## ARTIFICIAL FERTILIZERS: IMPORTS INTO AUSTRALIA

Fertilizer	1958-59	1959-60	1960-61	1961-62	1962-63
QUANTITY (Tons)					
Ammonium sulphate ..	19,979	11	110	18,636	37,458
Potassium fertilizers ..	43,912	36,204	52,212	74,789	58,327
Rock phosphate ..	1,353,739	1,322,173	1,647,928	1,950,834	1,694,916
Sodium nitrate ..	7,505	6,837	5,670	7,709	7,193
Other ..	16,951	17,282	26,361	37,888	35,001
VALUE (£A.'000 f.o.b.)					
Ammonium sulphate ..	497	(a)	3	381	622
Potassium fertilizers ..	710	499	756	1,277	924
Rock phosphate ..	3,750	3,654	4,315	4,975	4,937
Sodium nitrate ..	152	139	134	155	168
Other ..	496	519	745	1,048	921
<b>Total ..</b>	<b>5,605</b>	<b>4,811</b>	<b>5,953</b>	<b>7,836</b>	<b>7,572</b>

(a) Less than £500.

Exports of fertilizers (practically all of which were manufactured locally) amounted to 7,345 tons valued at £150,942 in 1962-63 compared with 1,955 tons valued at £56,054 in 1961-62.

3. Aerial Agriculture.—During recent years, an increasing use has been made of aircraft for top-dressing and seeding, for spraying and dusting of crops and pastures, and for pest and vermin extermination. For 1956-57 (the first year for which data are available), the total area treated was 1,466,000 acres; in 1962-63 the total area treated was 8,763,000 acres; almost six times as great.

The following table shows details of area treated and materials used for each State for the year ended 31st March, 1963.

## AERIAL AGRICULTURE: OPERATIONS DURING 1962-63

Particulars	N.S.W.	Vic.	Q'land	S. Aust.	W. Aust.	Tas.	Total (a)
<b>Top-dressing and seeding—</b>							
Area treated with—							
Superphosphate alone acres	4,778,255	654,975	2,900	377,453	241,490	72,530	6,127,603
Seed alone .. ..	147,089	..	390,906	11,776	776	..	550,547
Superphosphate and seed together .. ..	56,410	3,200	..	..	101,050	13,480	174,140
Gypsum .. ..	193,420	..	..	..	1,680	..	195,100
Other .. ..	55,965	1,800	332	30	24,625	..	82,752
<b>Total(a) .. ..</b>	<b>5,078,579</b>	<b>659,975</b>	<b>394,138</b>	<b>389,259</b>	<b>357,258</b>	<b>86,010</b>	<b>6,965,219</b>
<b>Materials used—</b>							
Superphosphate .. tons	239,264	44,403	150	21,133	18,001	5,695	328,646
Seed on—							
Pasture .. .. lb.	303,593	2,128	531,783	55,807	75,177	3,580	972,068
Other .. ..	2,400	..	37,345	..	..	..	39,745
<b>Spraying and dusting—</b>							
Area treated—							
Pasture .. .. acres	30,822	28,580	13,387	2,426	10,594	..	85,809
Crops .. ..	357,003	172,634	124,563	78,270	894,494	140	1,627,104
Other .. ..	12,422	5,497	7,626	521	..	..	26,066
<b>Total .. ..</b>	<b>400,247</b>	<b>206,711</b>	<b>145,576</b>	<b>81,217</b>	<b>905,088</b>	<b>140</b>	<b>1,738,979</b>
<b>Total Area Treated(a) .. ..</b>	<b>5,480,999</b>	<b>923,776</b>	<b>539,714</b>	<b>470,476</b>	<b>1,262,346</b>	<b>86,150</b>	<b>8,763,461</b>
	(b)	(c)					(d)

(a) Areas treated with more than one type of material in one operation are counted once only.  
 (b) Includes 2,400 acres baited for rabbit destruction. (c) Includes 57,090 acres baited for rabbit destruction. (d) Includes 59,490 acres baited for rabbit destruction. See footnotes (b) and (c).

NOTE.—The information contained in this table was collected by the Department of Civil Aviation.

4. **Pasture Improvement.**—An article on pasture improvement, which includes notes on indigenous and introduced species of grasses, and which traced the development of pasture research in Australia, appears on pp. 1001–2 of Year Book No. 49.

5. **Soil Conservation.**—Year Book No. 49 contained an article (pp.1003–4) on soil conservation which dealt with the following matters: land use and soil erosion, agents of erosion, prevention and control, and the activities of various Commonwealth and State authorities which promote and co-ordinate research into the problems of soil erosion and the initiation of preventive measures.

## AGRICULTURAL PRODUCTION

**NOTE.**—In general, statistics in this chapter relating to agricultural production are derived from "census" returns supplied by approximately 250,000 farmers who utilize one acre or more of land for agricultural or pastoral purposes. The latest figures available are those for the year 1962–63. The returns are collected on a substantially uniform basis in all States at 31st March each year, and relate to areas sown and crops produced in the previous twelve months. Where harvests are not completed by March (e.g. potatoes), provision is made in some States for a special collection after the harvest is completed and in others for the inclusion of the total estimated yield expected from the complete harvest. In cases where additional data are available from marketing authorities or other sources, these are used in conjunction with the "census" returns. The statistics published in this chapter are therefore shown in "agricultural" years. For most purposes, there will be little error involved in considering them as applying to years ending 30th June.

Details of the weights and measures used in recording production of agricultural commodities appear in the introduction to the bulletin *Primary Industries, Part I.—Rural Industries*.

### § 1. Progress, Assistance and Control

1. **Early Development.**—The coastal districts of southern Australia are characterized to a large degree by leached soils of low fertility, with limited areas suitable for intensive crop cultivation. This, combined with an unfamiliar climate and problems associated with the clearance of scrub-land, severely checked early attempts to establish crops.

A brief reference to these attempts at cultivation by the first settlers in New South Wales and to the discovery of suitable agricultural land on the Parramatta and Hawkesbury Rivers prior to the year 1813 and west of the Blue Mountains thereafter is contained in early issues of the Year Book. (See No. 22, p. 670.)

In an *Account of Live Stock and Ground under Crop in New South Wales, 19th August, 1797*, Governor Hunter gives the acreage of crops as follows:—wheat, 3,361 acres; maize, 1,527 acres; barley, 26 acres; potatoes, 11 acres; and vines, 8 acres.

The following details of crops were collected in 1808:—wheat, 6,874 acres; maize, 3,389 acres; barley, 544 acres; oats, 92 acres; peas and beans, 100 acres; potatoes, 301 acres; turnips, 13 acres; orchards, 546 acres; and flax and hemp, 37 acres.

By the year 1850, the area of crops had increased to 491,000 acres, of which 198,000 acres were cultivated in what is now the State of New South Wales, and 169,000 acres in Tasmania. At the end of 1850, the area under cultivation in Victoria, which was then the Port Phillip District of New South Wales, was 52,190 acres. The bulk of the arable land in this part of the colony was devoted to the extensive grazing of sheep.

The gold discoveries of 1851 (at Bathurst in New South Wales and later at Ballarat and Bendigo in Victoria) had at first a very disturbing effect on agricultural progress. The area of crops declined from 491,000 acres in 1850 to 458,000 acres in 1854, as landowners and rural labourers joined in the various gold rushes. The demand for agricultural products occasioned by the large influx of population was, however, soon reflected in the increased area cultivated, for at the end of 1858 the land under crop in Australia exceeded a million acres. There was still a shortage of rural labour, and the increased acreage was due largely to the increasing mechanization of crop operations.

2. **Progress of Cultivation.**—The following table shows the area of crops in each of the States and Territories of Australia at ten-yearly intervals since 1860-61 and during each of the ten seasons 1953-54 to 1962-63. On page 993 of Year Book No. 49. there is a graph showing the area of crops in Australia from 1900-01 onward.

**AREA OF CROPS**  
(<sup>'000 acres</sup>)

Season	N.S.W.	Vic.	Q'land	S. Aust.	W. Aust.	Tas.	N.T.	A.C.T.	Aust.
1860-61	246	387	4	359	25	153	..	..	1,174
1870-71	385	693	52	802	55	157	..	..	2,144
1880-81	606	1,549	114	2,087	64	141	..	..	4,561
1890-91	853	2,032	225	2,093	70	157	..	..	5,430
1900-01	2,447	3,114	458	2,370	201	224	..	..	8,814
1910-11	3,386	3,952	667	2,747	855	287	..	..	11,894
1920-21	4,465	4,490	780	3,231	1,805	297	..	2	15,070
1930-31	6,811	6,716	1,144	5,426	4,792	268	2	5	25,164
1940-41	6,375	4,467	1,734	4,255	4,027	254	..	6	21,118
1950-51	4,761	4,537	2,077	3,812	4,650	290	n.a.	6	20,133
1953-54	5,425	4,737	2,361	4,034	4,633	330	n.a.	7	21,527
1954-55	5,394	4,704	2,593	4,229	5,112	301	1	5	22,339
1955-56	5,660	4,812	2,604	4,220	5,342	327	1	7	22,973
1956-57	3,789	3,904	2,469	4,273	5,233	288	1	5	19,962
1957-58	5,000	4,431	2,600	4,233	5,615	292	1	5	22,177
1958-59	6,820	5,040	2,852	4,436	6,135	339	1	8	25,631
1959-60	7,137	4,817	2,926	4,400	6,495	322	1	7	26,105
1960-61	8,044	5,838	3,057	5,399	6,871	357	2	8	29,576
1961-62	8,288	5,626	3,216	5,024	7,112	364	2	7	29,639
1962-63	8,903	6,318	3,490	5,495	7,482	395	2	7	32,092

The progress of agriculture was practically uninterrupted from 1860-61 to 1915-16, when, as the result of a special effort to increase wheat production during the 1914-18 War, 18.5 million acres were cultivated in Australia. There was a temporary setback in later war years, but after the end of the war the area continued to expand, and increased steadily to the record area of 25.2 million acres in 1930-31. In the following years, the slump in wheat prices seriously depressed incomes in the agricultural industry, and the area of crops decreased to just under 20 million acres in 1935-36.

By 1938-39, the industry was recovering from the depression, and the total area under cultivation reached the high level of 23.5 million acres. Thereafter, as a result of war-time man-power shortages and shipping difficulties, the area declined to less than 16 million acres in 1943-44. After that year, production gradually increased again until, in 1947-48, 22.5 million acres were sown to crops. This upward trend was reversed after 1948-49, largely because many primary producers transferred from wheat to wool production as a result of the high prices of wool. Since 1951-52, however, when the area sown was 20.0 million acres, the area under crops has increased steadily, except for 1956-57, when excessively wet conditions caused reductions in the area sown to wheat. Since that year, the area of all crops has shown an upward trend in each year, reaching a record level of 32.1 million acres in 1962-63. As the area under wheat in Australia constitutes a large proportion of the total area cropped (47 per cent. during the five years ended 1962-63), fluctuations in the former have in the past been largely responsible for year to year variation in total crop area.

3. **Control and Assistance by Governmental Authorities.**—(i) *General.* The influence of governmental and semi-governmental authorities on Australian rural industry is most apparent in the fields of guaranteed prices, subsidies and controlled marketing. Many of these aspects of intervention at the national level take place indirectly through the Australian Agricultural Council.

(ii) *Australian Agricultural Council.* Arising out of a conference of Commonwealth and State Ministers on agricultural and marketing matters, held at Canberra in December, 1934, a permanent organization known as the Australian Agricultural Council was formed. The Council consists of the Commonwealth Ministers for Primary Industry and Territories and the State Ministers of Agriculture, with power to co-opt the services of other Commonwealth and State Ministers as required. The principal functions of the Council

are:—the promotion of the welfare and development of agricultural industries generally; the exchange of information on agricultural production and marketing; the improvement of the quality of agricultural products and the maintenance of high grade standards; to ensure, as far as possible, balance between production and available markets; and organized marketing.

In addition, a permanent Standing Committee on Agriculture was formed to advise the Council, to secure co-operation and co-ordination in agricultural research, to advise State and Commonwealth Governments on the initiation and development of agricultural research, and to secure co-operation between all Governments in respect of quarantine measures against pests and diseases of plants and animals.

(iii) *Bounties paid to Producers.* Direct financial assistance to primary producers by the Commonwealth Government takes the form of bounties, subsidies and other financial assistance. Brief details of some of the more important payments are given below.

(a) *Cotton Bounty.* The *Cotton Bounty Act 1951–1958* providing for payment of a bounty on seed cotton of a grade higher than “strict good ordinary” expired on 31st December, 1963. Under the *Raw Cotton Bounty Act 1963* which came into effect from 1st January, 1964, to operate for a period of five years, the Commonwealth will pay a bounty on raw cotton produced and sold for use in Australia. The level of bounty is 16.125d. per lb. for Middling 1” White raw cotton with premiums and discounts for grades and staple lengths above and below Middling 1” White. There is a ceiling on bounty payments of £2,000,000 in any one year.

(b) *Flax Fibre Bounty.* The period covered by the bounty terminated on 31st October, 1960. (See Year Book No. 47, p. 939, and previous issues, for details of the bounty.)

(iv) *Other Financial Assistance.* Other forms of assistance to producers include payments for cattle tick control, the Commonwealth Dairy Industry Extension Grant, Commonwealth Extension Service Grant, flood, drought and bush fire relief, fisheries research and farm mechanization research.

Over recent years, legislative research schemes, financed by matching contributions from the Commonwealth and industry and/or States, have been initiated in regard to wheat, wool, tobacco, dairy produce, beef cattle and wine. Non-legislative schemes, on a similar financial basis, have been operative in relation to brown rot, Australian plague locusts, tractor testing, peanut drying, sugar-cane harvesting mechanization, barley research, banana research and fruit fly research.

For further information on these matters, see Chapter XXII. Public Finance, pages 921–2 and 925–32.

(v) *Agricultural Training and Research.* Agricultural colleges have been established in all States except Tasmania. The primary function of these colleges is the training of students in the various phases of agriculture and livestock husbandry. Students are required to undertake a considerable amount of practical work in addition to lectures and theory. A secondary function of the colleges is agricultural research and experimentation. To a lesser degree, they carry out extension work in the form of public field days. Upon graduation, students receive diplomas in agriculture, dairying, etc., according to the course undertaken.

Experimental farms have been set up by State Departments of Agriculture in all States. They are primarily concerned with agricultural research and experimentation, each farm concentrating on problems specific to the district in which it is located. The results of the work undertaken are passed on to farmers at field days which are held at regular intervals, through publication in various agricultural or scientific journals, and through the agricultural extension services of the State Departments of Agriculture.

The Commonwealth Scientific and Industrial Research Organization has field stations in many parts of Australia, and sometimes undertakes research jointly with the appropriate State authorities. It also has regional laboratories in several States, conducting research into agronomic and livestock problems as they occur in each particular region (see also Chapter XIX. Education, Cultural Activities and Research). The State Departments of Agriculture study problems of particular significance within their own boundaries. In addition, the universities carry out valuable work in their laboratories and on their experimental farms.

## § 2. Distribution, Production and Value of Crops

1. **Distribution.**—(i) *General.* The wide range of climatic and soil conditions over the agricultural regions of Australia has resulted in a diversity of crops being grown throughout the Commonwealth. Generally, cereal crops (excluding rice and sorghum) are grown in all States over wide areas, while industrial crops are confined to specific locations in a few States.

(ii) *Area of Crops in States and Territories.* The following table shows the areas in the several States and Territories of each of the crops for the season 1962-63.

## AREA OF CROPS, 1962-63

(Acres)

Crop	N.S.W.	Vic.	Q'land	S. Aust.	W. Aust.	Tas.	N.T.	A.C.T.	Aust.
<b>Cereals for grain—</b>									
<b>Barley—</b>									
2-row .. .. .	139,705	180,275	134,240	1,019,482	60,135	19,371	..	..	1,553,208
6-row .. .. .	80,770	14,021	15,543	33,404	330,147	380	..	..	474,265
Maize .. .. .	46,537	3,634	159,285	(a)	34	..	..	..	(b) 209,490
Oats .. .. .	707,855	932,168	27,221	415,613	1,177,491	31,104	..	663	3,292,115
Panicum, millet and setaria .. .. .	2,688	2,250	76,353	(a)	(a)	..	..	..	(b) 81,291
Rice .. .. .	54,929 <sup>i</sup>	..	..	..	(a)	..	(c)	..	(b) 54,929
Rye .. .. .	1,747	17,551	588	29,254	8,765	149	..	..	58,054
Sorghum .. .. .	80,255	(a)	311,068	..	11	..	(a)	..	(b) 391,334
Wheat .. .. .	5,008,210	3,124,790	918,915	2,595,145	4,803,797	15,340	..	2,406	16,468,603
Hay .. .. .	587,229	1,250,541	86,666	287,443	339,833	165,442	586	2,518	2,720,258
Green fodder ..	1,900,130	477,432	912,018	927,807	667,890	64,940	(d)	314	4,951,637
Other stock fodder ..	6,993	40,803	6,766	35,194	4,918	32,370	(e)	..	127,044
<b>Grass seed—</b>									
Lucerne .. .. .	11,359	(f)	656	20,633	4	3	(a)	..	(b) 32,655
Clover .. .. .	21,953	3,005	32	5,073	27,574	1,497	..	..	59,134
Other .. .. .	12,414	20,178	16,225	8,515	8,773	(g)	3,797	(a)	597
<b>Industrial crops—</b>									
Broom millet ..	2,437	583	348	..	..	..	..	..	3,368
Canary seed ..	1,138	..	67,603	65	..	..	..	..	68,806
Cotton .. .. .	2,359	(a)	35,330	..	(a)	..	(a)	..	(b) 37,689
<b>Flax—</b>									
For fibre .. ..	..	419	..	..	871	..	..	..	1,290
For linseed ..	11,493	25,232	58,493	1,220	626	..	..	..	97,064
Hops .. .. .	..	547	..	..	(a)	(h)	1,519	..	(b) 2,066
Peanuts .. .. .	395	..	35,552	..	(a)	..	(a)	..	(b) 35,947
<b>Sugar cane—</b>									
For crushing ..	14,109	..	387,477	..	..	..	..	..	401,586
Stand-over and cut for plants ..	13,151	..	91,751	..	..	..	..	..	104,902
Sunflower seed ..	216	152	9,360	..	..	..	..	..	9,728
Tobacco .. .. .	3,163	9,844	16,346	..	28	..	..	..	29,381
Other .. .. .	(a)	903	5,929	306	(a)	419	..	..	(b) 7,357
<b>Vegetables for human consumption—</b>									
Onions .. .. .	800	4,634	3,796	944	509	79	3	(f)	(b) 10,765
Potatoes .. ..	27,420	43,024	16,994	5,918	6,499	13,839	6	42	113,742
Other .. .. .	44,951	40,017	39,666	10,225	8,071	20,809	140	110	163,989
<b>Vineyards—</b>									
Bearing .. .. .	15,953	42,734	2,870	52,692	7,731	..	..	..	(b) 121,980
Not bearing ..	1,751	2,928	367	5,574	954	..	..	..	11,574
<b>Fruit—</b>									
Bearing .. .. .	77,204	55,243	29,955	28,280	18,666	19,614	78	42	229,082
Not bearing ..	20,828	20,612	13,287	12,164	6,538	2,329	58	13	75,829
<b>Nurseries and cut flowers .. .. .</b>	661	2,500	544	244	291	91	..	8	4,339
<b>All other crops ..</b>	1,965	2,224	8,820	46	1,473	1,595	565	7	16,693
<b>Total Area .. ..</b>	<b>8,902,768</b>	<b>6,318,244</b>	<b>3,490,064</b>	<b>5,495,241</b>	<b>7,481,629</b>	<b>394,687</b>	<b>1,750</b>	<b>7,512</b>	<b>32,091,895</b>

(a) Not available for publication. Included in All other crops. (b) Incomplete. See footnotes to individual States. (c) Not available for publication. Excluded from totals. (d) Not comparable with statistics for earlier years. (e) Less than half an acre. (f) Not available separately. Included in All other crops. (g) Excludes area sown simultaneously to oats. (h) Includes 67 acres not bearing. (i) Not available for publication. Included with Other vegetables.

(iii) *Relative Areas of Crops in States and Territories.* The proportion of each of the major crops cultivated in the various States and Territories to the total area of crops for the season 1962-63 is shown in the next table.

RELATIVE AREAS OF CROPS, 1962-63  
(Per cent.)

Crop	N.S.W.	Vic.	Qld	S.A.	W.A.	Tas.	N.T.	A.C.T.	Aust.
Wheat (grain) ..	56.2	49.4	26.3	47.2	64.2	3.9	..	32.1	51.3
Green fodder ..	21.3	7.6	26.1	16.9	8.9	16.5	17.9	14.7	15.4
Oats (grain) ..	8.0	14.8	0.8	7.6	15.7	7.9	..	8.8	10.3
Hay ..	6.6	19.8	2.5	5.2	4.5	41.9	33.5	33.5	8.5
Barley (grain)..	2.5	3.1	3.0	19.2	5.2	5.0	..	..	6.3
Sugar cane, crushed ..	0.2	..	11.1	..	..	..	..	..	1.3
Sorghum ..	0.9	(a)	8.9	..	(b)	..	(a)	..	c 1.2
Total, fruit ..	1.1	1.2	1.2	0.7	0.3	5.6	7.8	0.7	1.0
Maize (grain) ..	0.5	0.5	4.6	(a)	(b)	..	..	..	c 0.7
Total, vineyards ..	0.2	0.7	0.1	1.1	0.1	..	(a)	..	c 0.4
Potatoes ..	0.3	0.7	0.5	0.1	0.1	3.5	0.3	0.6	0.4
All other ..	2.2	2.2	14.9	2.0	1.0	15.7	40.5	9.6	3.2
<b>Total ..</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>

(a) Not available for publication. Included in All other. (b) Less than 0.05 per cent.  
(c) Incomplete. See footnotes to individual States.

(iv) *Area of Crops in Australia.* The area of crops during each of the five seasons ended 1962-63 is shown hereunder.

AREA OF CROPS: AUSTRALIA  
('000 acres)

Crop	1958-59	1959-60	1960-61	1961-62	1962-63
<b>Cereals for grain—</b>					
Barley, 2- and 6- row ..	2,381	2,379	2,830	2,383	2,027
Maize ..	180	185	185	211	209
Oats ..	3,974	3,030	3,637	3,097	3,292
Rice ..	47	49	46	50	55
Wheat ..	10,399	12,172	13,439	14,723	16,469
Hay ..	3,018	2,105	2,973	2,274	2,720
Green fodder ..	3,578	4,094	4,408	4,702	4,952
<b>Industrial crops—</b>					
Cotton ..	10	20	37	29	38
Hops ..	2	2	2	2	2
Sugar cane ..	511	487	475	499	506
Tobacco ..	15	20	29	27	29
<b>Vegetables for human consumption—</b>					
Onions ..	9	9	9	9	11
Potatoes ..	105	108	92	94	114
Other vegetables ..	153	147	155	163	164
Vineyards ..	131	130	131	133	134
Fruit ..	287	289	289	294	305
All other crops ..	831	879	839	949	1,065
<b>Total ..</b>	<b>25,631</b>	<b>26,105</b>	<b>29,576</b>	<b>29,639</b>	<b>32,092</b>

(v) *Size Classification of Principal Crops.* In Australia there is, in many cases, a close correlation between the type of crop and the size of holdings upon which it is usually grown. A special series of tabulations relating to rural holdings in Australia was compiled for 1959-60 and has been published in full detail in a series of bulletins, *Classification of Rural Holdings by Size and Type of Activity, 1959-60.* Tables in these bulletins show a classification by area of holding and area of crop for wheat, oats and barley by States and statistical divisions. These tables thus provide a guide to the regional distribution of the holdings growing the major crops, sown grasses and clovers. Classifications of holdings according to major crops grown, livestock carried and type of activity are also shown.

2. *Production.*—(i) *Production of Crops in States and Territories.* The following table shows production of crops in the various States and Territories for the season 1962-63.

PRODUCTION OF CROPS, 1962-63

Crop	N.S.W.	Vic.	Qld	S.A.	W.A.	Tas.	N.T.	A.C.T.	Aust.
<b>Cereals for grain—</b>									
Barley—									
2-row .. .. . '000 bus.	3,328	5,129	3,696	17,479	1,120	618	..	..	31,370
6-row .. .. . " "	2,003	340	392	525	4,936	13	..	..	8,209
Maize .. .. . " "	2,145	216	5,096	(a)	(b)	..	..	..	7,457
Oats .. .. . " "	16,035	27,042	545	5,770	18,572	828	..	..	68,809
Panicum, millet and setaria .. .. . " "	43	43	1,305	(a)	(a)	..	..	..	1,391
Rice .. .. . " "	7,129	..	..	8	(a)	..	(a)	..	7,129
Rye .. .. . " "	31	115	..	144	57	..	..	..	357
Sorghum .. .. . " "	1,891	(a)	8,361	..	(b)	..	(a)	..	10,252
Wheat .. .. . " "	109,002	67,899	18,683	38,339	72,500	419	..	70	306,912
Hay .. .. . '000 tons	965	2,376	197	406	453	313	1	6	4,717
<b>Grass seed—</b>									
Lucerne .. .. . cwt.	7,593	n.a.	525	24,831	1	1	(a)	..	(c) 32,951
Clover .. .. . " "	36,154	2,929	3	4,784	58,288	961	..	..	103,119
Other .. .. . " "	9,926	31,842	22,551	8,902	13,633	9,588	..	157	96,599
<b>Industrial crops—</b>									
<b>Broom millet—</b>									
Fibre .. .. . cwt.	13,651	2,985	1,195	..	..	..	..	..	17,831
Grain .. .. . bushels	23,100	1,601	n.a.	..	..	..	..	..	(c) 24,701
Canary seed .. .. . '000 bus.	16	..	714	(b)	..	..	..	..	730
Cotton, unginned .. .. . '000 lb.	2,993	(a)	12,769	..	(a)	..	(a)	..	(c) 15,762
<b>Flax—</b>									
Fibre .. .. . tons	..	648	..	..	2,152	..	..	..	2,800
Linseed .. .. . " "	2,634	8,108	14,577	290	136	..	..	..	25,745
Hops (dry weight) .. .. . cwt.	..	8,079	..	..	(a)	25,550	..	..	(c) 33,629
Peanuts .. .. . " "	4,258	..	315,144	..	(a)	..	(a)	..	(c) 319,402
Sugar cane for crushing .. .. . '000 tons	637	..	12,099	..	..	..	..	..	12,736
Sunflower seed .. .. . cwt.	1,208	750	50,540	..	..	..	..	..	52,498
Tobacco, dried leaf .. .. . '000 lb.	2,885	9,447	14,787	..	29	..	..	..	27,148
<b>Vegetables for human consumption—</b>									
Onions .. .. . tons	5,185	26,175	21,184	8,531	6,622	515	7	(a)	(c) 68,219
Potatoes .. .. . " "	132,969	254,473	86,239	53,253	56,900	82,545	5	212	666,596
<b>Vineyards—</b>									
<b>Grapes—</b>									
For drying .. .. . " "	36,092	192,669	..	47,688	5,100	..	..	..	281,549
" table .. .. . " "	6,537	7,573	3,977	1,078	2,188	..	(a)	..	(c) 21,353
" wine .. .. . " "	34,028	13,293	140	116,081	5,019	..	..	..	168,561

(a) Not available for publication.

(b) Less than 500 bushels.

(c) Incomplete; see footnotes to individual States.

(ii) *Production of Principal Crops in Australia.* The following table shows the production of the principal crops for the five years ended 1962-63.

PRODUCTION OF PRINCIPAL CROPS: AUSTRALIA

Crop	1958-59	1959-60	1960-61	1961-62	1962-63
<b>Cereals for grain—</b>					
Barley, 2- and 6-row .. .. '000 bus.	62,976	34,179	67,970	41,504	39,579
Maize .. .. .. .. .. "	6,717	6,725	6,245	7,307	7,457
Oats .. .. .. .. .. "	86,905	46,841	76,107	55,130	68,809
Rice .. .. .. .. .. "	6,619	6,732	6,001	7,045	7,129
Wheat .. .. .. .. .. "	215,121	198,501	273,716	247,178	306,912
Hay .. .. .. .. .. '000 tons	5,090	3,177	5,079	3,693	4,717
<b>Industrial crops—</b>					
Cotton, unginned .. .. '000 lb.	4,004	9,463	15,544	10,948	15,762
Hops (dry weight)(a) .. .. cwt.	36,499	31,790	33,099	32,936	33,629
Sugar cane for crushing .. '000 tons	10,213	9,002	9,166	9,577	12,736
Tobacco (dried leaf) .. .. '000 lb.	13,970	19,357	29,862	22,578	27,148
<b>Vegetables for human consumption—</b>					
Onions .. .. .. .. .. '000 tons	55	57	54	58	68
Potatoes .. .. .. .. .. "	575	579	451	526	667
<b>Vineyards—</b>					
Grapes .. .. .. .. .. "	537	445	527	628	471
Wine made(b) .. .. .. '000 gals.	32,538	28,396	33,762	41,736	29,893
Dried vine fruits .. .. .. '000 tons	87	70	82	96	71

(a) Excludes Western Australia. (b) Net factory and farm production of beverage and distillation wine. This excludes the liquid gallonage of spirits added in wine fortifying.

(iii) *Yield per Acre of Principal Crops in Australia.* The following table shows the yield per acre of the principal crops for Australia during the five years ended 1962-63.

YIELD PER ACRE OF PRINCIPAL CROPS: AUSTRALIA

Crop	1958-59	1959-60	1960-61	1961-62	1962-63
<b>Cereals for grain—</b>					
Barley, 2- and 6-row .. .. bushels	26.5	14.3	24.0	17.4	19.5
Maize .. .. .. .. .. "	37.4	36.4	33.8	34.7	35.6
Oats .. .. .. .. .. "	21.9	15.5	20.9	17.8	20.9
Rice .. .. .. .. .. "	141	138	130	140	130
Wheat .. .. .. .. .. "	20.7	16.3	20.4	16.8	18.6
Hay .. .. .. .. .. tons	1.69	1.51	1.71	1.62	1.73
<b>Industrial crops—</b>					
Cotton, unginned .. .. .. lb.	382	468	420	380	418
Hops (dry weight)(a) .. .. cwt.	19.5	16.7	17.8	17.1	16.8
Sugar cane for crushing(a) .. tons	27.6	28.7	26.9	24.8	31.7
Tobacco (dried leaf) .. .. lb.	922	985	1,022	848	924
<b>Vegetables for human consumption—</b>					
Onions .. .. .. .. .. tons	6.22	6.10	5.87	6.20	6.34
Potatoes .. .. .. .. .. "	5.49	5.34	4.91	5.57	5.86
<b>Vineyards—</b>					
Grapes(a) .. .. .. .. .. "	4.33	3.62	4.32	5.14	3.86

(a) Per acre of productive crops.

3. Value of Agricultural Production.—(i) *Gross Value of Agricultural Production in Australia.* The following table shows the gross value of principal crops and of total agricultural production in Australia for the five years ended 1962-63.



Further reference to the value of production of agriculture and other industries in Australia as well as a brief explanation of the terms used may be found in Chapter XXX. Miscellaneous.

**GROSS VALUE<sup>(a)</sup> OF AGRICULTURAL PRODUCTION: AUSTRALIA**  
(£'000)

Crop	1958-59	1959-60	1960-61	1961-62	1962-63
<b>Cereals for grain—</b>					
Barley .. .. .	33,304	16,623	31,072	21,933	21,328
Maize .. .. .	4,629	4,029	5,264	5,285	4,762
Oats .. .. .	30,964	18,396	25,535	20,001	25,629
Rice .. .. .	4,731	4,450	4,125	3,832	3,838
Wheat .. .. .	144,087	137,762	195,678	186,172	224,532
Hay .. .. .	46,503	34,433	50,181	37,746	46,479
Green fodder .. .. .	6,966	7,572	9,647	8,743	9,612
<b>Industrial crops—</b>					
Cotton, unginned .. .. .	249	556	917	647	938
Hops .. .. .	1,273	1,159	1,179	1,242	1,285
Sugar-cane .. .. .	47,276	44,774	50,580	49,608	65,519
Tobacco (dried leaf) .. .. .	7,920	11,215	13,051	12,122	15,011
<b>Vegetables for human consumption—</b>					
Onions .. .. .	1,920	2,841	1,833	2,547	1,814
Potatoes .. .. .	13,109	13,460	19,365	20,697	13,980
Other vegetables for human consumption .. .. .	25,243	26,611	29,718	28,743	28,776
Grapes .. .. .	18,496	14,698	17,868	19,815	16,024
Fruit and nuts .. .. .	54,025	51,763	59,773	63,363	64,430
All other crops .. .. .	19,197	20,012	19,895	21,676	24,356
<b>Total .. .. .</b>	<b>459,892</b>	<b>410,354</b>	<b>535,681</b>	<b>504,172</b>	<b>568,313</b>

(a) Includes amounts paid as bounty, relief, etc.

(ii) *Gross, Farm and Net Values in States and Territories.* Values of agricultural production in the various States and Territories are shown for 1962-63 in the following table.

In computing the net value of production, no deduction has been made for the cost of maintenance of farm buildings and fences, nor for the depreciation of farm plant.

**GROSS, FARM AND NET VALUES OF AGRICULTURAL PRODUCTION, 1962-63**  
(£'000)

State	Gross production valued at principal markets	Marketing costs	Gross production valued at farm	Value of materials used in process of production	Net value of production (a)
New South Wales .. .. .	154,130	30,935	123,195	(b) 10,159	113,036
Victoria .. .. .	126,734	18,860	107,874	10,888	96,986
Queensland .. .. .	126,239	15,230	111,009	18,145	92,864
South Australia .. .. .	64,209	7,468	56,741	10,062	46,679
Western Australia .. .. .	78,974	10,106	68,868	14,615	54,253
Tasmania .. .. .	17,775	3,564	14,211	3,055	11,156
Northern Territory .. .. .	84	n. a.	84	n. a.	84
Australian Capital Territory .. .. .	168	12	156	7	149
<b>Australia .. .. .</b>	<b>568,313</b>	<b>86,175</b>	<b>482,138</b>	<b>66,931</b>	<b>415,207</b>

(a) No deduction has been made for depreciation and maintenance.

(b) No allowance has been made for costs of power, power kerosene, petrol and other oils.

(iii) *Net Values of Agricultural Production, 1958-59 to 1962-63.* In the following table, the net value of agricultural production and the net value per head of population are shown by States for the years 1958-59 to 1962-63.

## NET VALUE OF AGRICULTURAL PRODUCTION(a)

Year	N.S.W.	Vic.	Q'land	S. Aust.	W. Aust.	Tas.	N.T.	A.C.T.	Aust.
NET VALUE (£'000)									
1958-59	82,472	73,661	68,716	50,571	42,746	10,496	59	222	328,943
1959-60	78,518	68,912	65,357	24,246	44,044	10,645	79	150	291,951
1960-61	98,171	104,031	73,471	58,323	46,708	10,939	80	138	391,861
1961-62	93,858	88,245	75,076	45,467	51,325	12,345	75	112	366,503
1962-63	113,036	96,986	92,864	46,679	54,253	11,156	84	149	415,207

## NET VALUE PER HEAD OF POPULATION (£)

1958-59	22.1	26.8	47.4	55.7	60.6	31.0	2.6	5.1	33.1
1959-60	20.7	24.4	44.2	26.0	61.4	30.9	3.2	3.0	28.7
1960-61	25.4	36.0	48.9	60.9	64.0	31.2	3.1	2.5	37.7
1961-62	23.8	29.8	49.1	46.4	68.8	34.6	2.8	1.8	34.6
1962-63	28.2	32.1	59.9	46.7	71.0	30.8	3.0	2.2	38.4

(a) No deduction has been made for depreciation and maintenance.

4. *Indexes of Quantum and Price of Agricultural Production.*—Indexes of quantum and price of agricultural production are shown in the following table. The quantum indexes relate to gross output of farm products valued at constant prices. The quantities of each farm product produced each year have been re-valued at the unit gross value for the period 1936-37 to 1938-39. The price indexes relate to average "prices" of farm products realized at the principal markets of Australia. Average quantities of each product marketed in the period 1946-47 to 1950-51 have been used as fixed weights. Further details on weights used, etc., are to be found in Chapter XXX. Miscellaneous.

## INDEXES OF QUANTUM(a) AND PRICE OF AGRICULTURAL PRODUCTION

(Base: Average 3 years ended June, 1939 = 100)

Particulars	1958-59	1959-60	1960-61	1961-62	1962-63
<b>Quantum Produced—</b>					
Wheat .. .. .	131	121	166	150	186
Other crops .. .. .	187	152	184	171	194
<i>Total, All Crops</i> .. .. .	<i>165</i>	<i>140</i>	<i>177</i>	<i>163</i>	<i>191</i>
<i>Per head of population</i>	<i>114</i>	<i>95</i>	<i>117</i>	<i>106</i>	<i>121</i>
<b>Price—</b>					
Wheat .. .. .	337	350	355	380	366
Other crops .. .. .	310	313	344	323	309
<i>Total, All Crops</i> .. .. .	<i>322</i>	<i>329</i>	<i>349</i>	<i>348</i>	<i>334</i>

(a) Indexes of value at constant prices, i.e. quantities revalued at average unit values of the base years (1936-37 to 1938-39).

### § 3. Cereal Crops

1. **Wheat.**—(i) *General.* Wheat is grown on a large scale in all States except Tasmania, and is the most important crop in Australia in terms of area, production and exports. The present limits of the wheat belt have been established after considerable fluctuation over the last four decades.

In January, 1934, a Royal Commission was appointed to inquire into and report upon the economic condition of the growing, handling and marketing of wheat, and the manufacturing, distributing and selling of flour and bread. The Report of this Royal Commission provides an authoritative description of all aspects of the industry up to that time.

Two of the aspects of governmental and semi-governmental assistance and control which have contributed to the development of the industry are the organization of oversea marketing and of research.

(ii) *The Australian Wheat Board.* The Australian Wheat Board was constituted in September, 1939, under National Security (Wheat Acquisition) Regulations, to purchase, sell, or dispose of, wheat or wheat products, and to manage and control all matters connected with the handling, storage, protection, shipment, etc. of wheat acquired, and such other matters as were necessary to give effect to the regulations.

Details of the operations of the Wheat Stabilization Board in licensing wheat grown during the seasons 1941–42 to 1948–49 will be found in Year Book No. 38, pages 940–1. The Board ceased to function on 31st December, 1948.

The Board was reconstituted for five years, with similar powers, under the *Wheat Stabilization Act 1948*, to administer the stabilization plan. The new Board commenced to function on 18th December, 1948. The Board has been continued in existence by the *Wheat Industry Stabilization Acts 1954, 1958 and 1963* for the purpose of administering the second, third and fourth five-year stabilization plans.

(iii) *Marketing of Wheat.* (a) *Stabilized Marketing.* As a large proportion of the Australian wheat crop is normally exported, the marketing of wheat occupies an important part in the industry. A detailed survey of legislation relating to stabilization of the wheat industry, including controls exercised during the 1914–18 and 1939–45 Wars and legislation establishing the Wheat Stabilization Plan in 1948, is given in the Appendix to Year Book No. 37, pages 1295–9.

Details of more recent plans were published in Year Book No. 40, pages 841 and 842 (1947–48 to 1952–53 Plan), No. 44, page 861 (1953–54 to 1957–58), and No. 48, pages 903 and 904 (1958–59 to 1962–63).

(b) *Fourth Post-war Wheat Industry Stabilization Plan.* Following negotiations during 1962 and 1963, the fourth post-war Wheat Industry Stabilization Plan was enacted by the Commonwealth and States towards the end of 1963. The new plan will operate on very much the same lines as the previous ones. However, there are some important changes in detail to which reference is made in the main features of the plan set out below.

*Period of the Plan.* The plan will operate for five years. It commenced with the 1963–64 wheat crop and will end with the marketing of the 1967–68 crop.

*Commonwealth Guarantee.* The Commonwealth will guarantee a return of 14s. 5d. per bushel bulk basis f.o.r. ports to growers on up to 150 million bushels (previously 100 million bushels) of wheat exported from the crop in the first year of the plan. The guaranteed return of 14s. 5d. is based on the findings of a survey of the economic structure of the wheat industry conducted by the Bureau of Agricultural Economics. It will be adjusted in each of the following years of the plan in accordance with the movements in costs based on a cost index established from the survey.

*Australian Wheat Board.* The Australian Wheat Board will be maintained as the sole constituted authority for the marketing of wheat within Australia and for the marketing of wheat and flour for export from Australia for the period of the plan.

*Stabilization Fund.*

*Export Tax.* A tax will be collected on wheat exported which will be equivalent to the excess of the returns from export sales over the guaranteed return. However, the maximum rate of export tax will be 1s. 6d. per bushel.

*Size of Fund.* The ceiling of the Stabilization Fund is established at £30 million (previously £20 million); any excess beyond this figure will be returned to growers on the "first-in-first-out" principle.

*Use of the Stabilization Fund.* When the average export realizations fall below the guaranteed return, the deficiency will be made up, first by drawing upon the stabilization fund, in respect of up to 150 million bushels of wheat from each crop. When the fund is exhausted, the Commonwealth will meet its obligations under the guarantee.

*Home Consumption Price.* The home consumption base price for 1963-64, the first year of the new plan, was established at 14s. 5d. per bushel, bulk basis, f.o.r. ports plus 2d. per bushel loading to cover the cost of transporting wheat to Tasmania as outlined below. There is provision in the plan for annual adjustments in the following years in accordance with the guaranteed price as outlined above.

*Freight on Wheat to Tasmania.* Provision is made for a loading on the price of all wheat sold for consumption in Australia to the extent necessary to cover the cost of transporting wheat from the mainland to Tasmania in each season of the plan.

*Premium on Western Australian Wheat.* A premium will be paid from export realizations on wheat grown in Western Australia and exported from that State in recognition of the natural freight advantage enjoyed by Western Australia owing to its proximity to the principal overseas markets for wheat. In accordance with the terms of the new plan the premium has been altered from the previous flat rate of 3d. per bushel to the amount of the actual freight advantage enjoyed by Western Australia up to a maximum of 3d. per bushel.

(c) *Cost of Production.* The cost of production of wheat for the first season of the current Wheat Stabilization Plan, 1963-64, was fixed at 14s. 5d. a bushel by the legislation. The guaranteed price for the season 1963-64 was therefore 14s. 5d. per bushel, while the home consumption price was 14s. 7d. a bushel (see above). The guaranteed price for 1963-64 was a reduction of 1s. 5d. per bushel compared with the guaranteed price of 15s. 10d. for the 1962-63 season, the last year of the previous wheat stabilization plan.

(d) *F.A.Q. Standard of Wheat.* Sales and shipments of grain in bulk overseas are made on a "fair average quality" (f.a.q.) basis. Samples of wheat are obtained each year from the different wheat districts, and mixed to give a representative sample of the whole crop in each State. From this representative sample, the f.a.q. weight for each State is determined by the use of the Schopper 1-litre scale chondrometer. This standard is used as a basis for sales of each crop and it varies from year to year and from State to State. F.a.q. is an Australian term, and the method of selling differs from that of other countries, which sell according to sample, or (as in Canada) according to grades, which are fixed and do not vary from year to year. The f.a.q. method does not, however, take protein quantity and quality into account, and it gives no indication therefore of the baking strength of the resulting flour.

The f.a.q. weight of a bushel of wheat in each of the four main wheat-producing States for the 1962-63 season's crop was as follows:—New South Wales, north (predominantly semi-hard), 64½ lb., south and west (predominantly soft), 63½ lb.; Victoria, 64½ lb.; South Australia, semi-hard, 63½ lb., soft, 62½ lb.; and Western Australia, 65½ lb.

(e) *Bulk Handling and Storage of Wheat.* A detailed description of the bulk handling system, including its advantages and disadvantages compared with other methods of handling, appears on pages 954-8 of Year Book No. 39.

New South Wales, Victoria and Western Australia have operated bulk handling systems for a number of years, and in more recent years other States have also introduced bulk systems. The bodies concerned with the administration of bulk handling in the various States are:—Grain Elevators Board of New South Wales, Victorian Grain Elevators Board, State Wheat Board (Queensland), South Australian Co-operative Bulk Handling Ltd., Co-operative Bulk Handling Ltd. (Western Australia), and the Tasmanian Government.

The table below sets out the bulk handling capacities of the several States for the years 1959-60 to 1963-64.

**WHEAT: TOTAL CAPACITY OF BULK HANDLING FACILITIES<sup>(a)</sup>**  
(<sup>'000</sup> bushels)

State	1959-60	1960-61	1961-62	1962-63	1963-64
New South Wales .. ..	73,420	73,440	75,270	79,486	85,246
Victoria .. ..	71,870	72,206	72,808	78,219	84,761
Queensland .. ..	4,196	6,216	7,486	8,730	10,606
South Australia .. ..	12,950	14,290	17,380	25,600	28,370
Western Australia .. ..	82,236	94,257	97,356	105,384	104,536
Tasmania .. ..	960	960	960	960	960
<b>Australia .. ..</b>	<b>245,632</b>	<b>261,369</b>	<b>271,260</b>	<b>298,379</b>	<b>314,479</b>

(a) Includes terminals, sub-terminals and country installations.

Particulars of the operation of the bulk handling and storage systems in each State are set out on pages 916 and 917 of Year Book No. 48.

(f) *International Wheat Agreements.* Details of the first and second International Wheat Agreements operative from 1st August, 1949, to 31st July, 1953, and from 1st August, 1953, to 31st July, 1956, respectively, were published in Year Book No. 42 (see pp. 840-1) and previous issues. Details of the third and fourth International Wheat Agreements which covered the period from 1st August, 1956, to 31st July, 1959, and 1st August, 1959, to 31st July, 1962, were published in Year Books Nos. 43 (p. 836) and 48 (p. 906), respectively.

A fifth International Wheat Agreement, ratified by the required number of wheat exporting and importing countries, came into force on 1st August, 1962. The new Agreement covers the three-year period from 1st August, 1962, to 31st July, 1965.

The new Agreement, negotiated at an international conference convened by the United Nations, continues the basic arrangements covered by previous Agreements. The Agreement seeks to obtain an element of stability in world wheat marketing by providing that a significant proportion of wheat entering international trade will be bought and sold at prices within a prescribed price range. The maximum and minimum prices fixed under the Agreement are expressed in terms of "Canadian currency per bushel, at the parity of the Canadian dollar determined for the purposes of the International Monetary Fund as at 1st March, 1949". Member exporting countries compete to supply at prices within the prescribed range, which is from 202.5 cents or about 18s. 3½d. Australian currency to 162.5 cents, or about 14s. 6d. per bushel. The maximum of the range is based on the price of Canada's No. 1 Northern Manitoba wheat in bulk in store at Fort William/Port Arthur. The minimum f.o.b. price for each exporter is the equivalent of the c. and f. price in the United Kingdom of the minimum price of Canada's No. 1 Northern Manitoba wheat in bulk in store at Fort William/Port Arthur, using currently prevailing transportation costs and exchange rates. In determining these prices, allowance is made for such differences in quality as may be agreed between the exporting and importing countries concerned.

Member importing countries have undertaken to buy each year from member exporting countries a stated percentage of their total commercial requirements at prices within the agreed range. For their part, exporting countries are obliged to make wheat available for purchase by importing countries in any crop year at prices within the price range in quantities sufficient to satisfy the commercial requirements of those countries; if the price goes to the maximum, exporters have undertaken to make available, at that maximum price, specified (datum) quantities based on their past trading record with member importers.

The new Agreement empowers the International Wheat Council to make an annual review of the world wheat situation, including the international implications of national policies in respect of wheat production, stocks and marketing, and the disposal of wheat surpluses on non-commercial terms.

Provision has also been made for the right of appeal against excessive discounts from the minimum price on the basis of differences in quality between the basic wheat—Canada's No. 1 Northern Manitoba wheat—and the wheat supplied by other member importing countries.

Member countries of the fifth International Wheat Agreement are as follows.

*Exporters.* Argentina, Australia, Canada, France, Italy, Mexico, Spain, Sweden, Union of Soviet Socialist Republics, and the United States of America.

*Importers.* Austria, Belgium and Luxembourg, Brazil, Costa Rica, Cuba, Dominican Republic, El Salvador, Federal Republic of Germany, Finland, Greece, Iceland, India, Indonesia, Ireland, Israel, Japan, Liberia, Libya, the Netherlands, New Zealand, Nigeria, Norway, Peru, Philippines, Portugal, Republic of Korea, Saudi Arabia, Sierra Leone, South Africa, Switzerland, Tunisia, United Arab Republic, United Kingdom, Vatican City, Venezuela, and Western Samoa.

(iv) *Research into the Wheat Industry.* The extension and growth of the wheat industry in the past has been made possible to a large extent through research into new varieties of seed, crop rotation and fertilizer treatments by governmental, university and private research organizations. In recent years, there has been a growing awareness of the value of this research, and funds are being raised by a direct levy on the growers' returns.

In 1957, the Commonwealth Parliament passed legislation providing for a levy of a farthing a bushel on wheat handled by the Australian Wheat Board. This money, contributed by the growers, is being spent by the Wheat Industry Research Committees set up in the wheat-growing States. These Committees, which consist of representatives of wheatgrowers, universities and State Departments of Agriculture, also received a total of £284,000 under the provisions of the *Wheat Acquisition (Undistributed Moneys) Act 1958*.

The Commonwealth Government has undertaken to supply additional funds for research (with a maximum of £1 for £1 against the growers' contribution) and has set up the Wheat Industry Research Council to make recommendations on the appropriate expenditure of the Commonwealth contribution.

The Council, at its inaugural meeting in February, 1958, considered that possible avenues of research would include the breeding of better varieties, cereal chemistry, soil fertility, mechanization, the industry's cost structure and marketing problems.

Up to the end of June, 1963, the Council and the State Committees have spent £1,852,446 including grants to the Commonwealth Scientific and Industrial Research Organization, State Departments of Agriculture, universities and agricultural colleges.

(v) *Wheat Farms: Number and Classification by Activity.* (a) *Number.* Particulars of the number of farms growing 20 acres and upwards of wheat for grain during each of the years 1958-59 to 1962-63, are shown in the following table. A farm worked on the share system or as a partnership is included as one holding only.

**NUMBER OF FARMS GROWING 20 ACRES AND UPWARDS OF WHEAT FOR GRAIN**

State or Territory	1958-59	1959-60	1960-61	1961-62	1962-63
New South Wales .. ..	14,997	16,798	16,959	17,489	18,286
Victoria .. ..	9,074	10,555	10,625	11,648	12,166
Queensland .. ..	4,791	4,526	4,257	4,483	5,095
South Australia .. ..	7,774	7,895	8,913	9,434	9,881
Western Australia .. ..	8,060	8,444	8,614	8,722	8,966
Tasmania .. ..	104	154	121	222	243
Australian Capital Territory	19	23	14	25	27
<b>Australia .. ..</b>	<b>44,819</b>	<b>48,395</b>	<b>49,503</b>	<b>52,023</b>	<b>54,664</b>

(b) *Size Classification of Wheat Holdings.* There is in Australia a widespread combination of wheat growing with other rural activities. This is illustrated, for the 1959-60 season, by a table on pages 1016 and 1017 of Year Book No. 49. The table, which provides a classification of rural holdings by the area of wheat grown and by type of activity, was derived from information published in the bulletin *Classification of Rural Holdings by Size and Type of Activity, 1959-60, No. 7*.

(vi) *Varieties of Wheat Sown.* (a) *General.* The breeding of wheat suitable to local conditions has long been established in Australia. Farrer (1845-1905) did invaluable work in pioneering this field, and the results of his labour and the continued efforts of those who have followed him have proved of immense benefit to the industry. Their efforts have resulted in the development of disease-resistant varieties, better average yields, and a greater uniformity of sample, with which have accrued certain marketing advantages, as well as an improvement in the quality of wheat grown. More than 1,000 different varieties of Australian wheats have been catalogued by the Commonwealth Scientific and Industrial Research Organization, but the number of principal varieties grown in any one season is restricted to about 45.

(b) *States, 1962-63.* The principal varieties of wheat sown and the percentage of each to the total area sown in the five main wheat-producing States of Australia in 1962-63 were as follows:—New South Wales, Glenwari (13.1), Olympic (9.2), Heron (9.1); Victoria, Insignia (48.0), Pinnacle (24.2), Olympic (14.8); Queensland, Mengavi (30.7), Spica (24.5); South Australia, Insignia (35.0), Gabo (18.9), Sabre (13.4); and Western Australia, Gabo (38.9), Insignia (16.0), Insignia 49 (11.2). A detailed table of wheat varieties sown appears in the annual bulletin: *The Wheat Industry*, No. 104, January, 1964.

(vii) *Area, Production and Yield per Acre. (a) Summary.* Prominent factors in the early development were the increase in population following the discovery of gold and the redistribution of labour after the surface gold had been won. The economic depression of 1893 interrupted its progress, but its subsequent recovery was assisted by the invention of mechanical appliances, the use of superphosphates as an aid to production, and the introduction of new and more suitable varieties of wheat for Australian conditions. The establishment of closer settlement schemes and the settling of returned soldiers and others on the land were additional factors in its expansion.

The area, production and yield per acre of wheat for grain in each State are shown below for the years 1958-59 to 1962-63 in comparison with the averages for the three-year periods ended 1938-39, 1948-49 and 1958-59.

#### WHEAT FOR GRAIN: AREA, PRODUCTION AND YIELD PER ACRE

Period	N.S.W.	Vic.	Q'land	S. Aust.	W. Aust.	Tas.	A.C.T.	Aust.
AREA ('000 ACRES)								
Average for three years ended—								
1938-39 .. ..	4,366	2,609	366	3,100	3,005	18	2	13,466
1948-49 .. ..	4,519	3,241	439	2,319	2,685	7	4	13,214
1958-59 .. ..	2,392	1,737	508	1,392	3,005	5	1	9,040
Year—								
1958-59 .. ..	3,178	1,810	704	1,407	3,292	7	1	10,399
1959-60 .. ..	3,950	2,261	683	1,549	3,719	8	2	12,172
1960-61 .. ..	4,076	2,672	693	1,969	4,021	7	1	13,439
1961-62 .. ..	4,498	2,849	750	2,229	4,380	16	1	14,723
1962-63 .. ..	5,008	3,125	919	2,595	4,804	15	3	16,469
PRODUCTION ('000 BUSHELS)(a)								
Average for three years ended—								
1938-39 .. ..	56,890	36,374	4,783	34,606	31,539	434	45	164,671
1948-49 .. ..	58,537	48,332	8,569	28,856	31,517	138	78	176,027
1958-59 .. ..	35,178	36,705	9,938	26,126	40,950	135	15	149,047
Year—								
1958-59 .. ..	66,441	42,697	16,097	32,032	57,650	164	40	215,121
1959-60 .. ..	75,358	38,793	13,522	11,929	58,670	182	47	198,501
1960-61 .. ..	84,657	67,587	10,999	46,395	63,900	148	30	273,716
1961-62 .. ..	78,350	56,879	12,018	33,854	65,700	345	32	247,178
1962-63 .. ..	109,002	67,899	18,683	38,339	72,500	419	70	306,912
YIELD PER ACRE (BUSHELS) (a)								
Average for three years ended—								
1938-39 .. ..	13.0	13.9	13.1	11.2	10.5	24.1	22.5	12.2
1948-49 .. ..	13.0	14.9	19.5	12.4	11.7	19.7	19.5	13.3
1958-59 .. ..	14.7	21.1	19.6	18.8	13.6	24.7	15.0	16.5
Year—								
1958-59 .. ..	20.9	23.6	22.9	22.8	17.5	25.4	28.1	20.7
1959-60 .. ..	19.1	17.2	19.8	7.7	15.8	22.0	26.8	16.3
1960-61 .. ..	20.8	25.3	15.9	23.6	15.9	21.4	28.5	20.4
1961-62 .. ..	17.4	20.0	16.0	15.2	15.0	22.2	22.7	16.8
1962-63 .. ..	21.8	21.7	20.3	14.8	15.1	27.3	29.3	18.6

(a) 60 lb. per bushel.

A graph showing the area sown to wheat for grain in Australia since 1900-1 appears in Year Book No. 49, and a map showing the distribution of areas growing wheat for grain throughout Australia in 1962-63 appears on page 1013. Similar maps showing the distribution of wheat areas in 1924-25, 1938-39, 1947-48 and 1954-55 appeared respectively in Year Books No. 22, page 695, No. 34, page 451, No. 39, pages 977-8, and No. 43, page 883.

(b) *Production.* Apart from the variations in the area sown, the size of the wheat harvest in Australia is largely determined by the nature of the season, resulting in considerable year-to-year fluctuations in production.

The main wheat-producing States of Australia are New South Wales, Victoria, South Australia and Western Australia. Queensland production normally approaches local demands, but Tasmania imports wheat from the mainland to satisfy its needs, though it exports flour made from local wheat which is particularly suitable for biscuits.

Production of wheat in 1962-63, 306,912,000 bushels, was a record, exceeding the previous record harvest of 1960-61 by 33,196,000 bushels (12 per cent.) and the production in 1961-62 by 59,734,000 bushels (24 per cent.). Compared with the previous season, the highest absolute increases were recorded in New South Wales, 30,652,000 bushels (39 per cent.) and Victoria, 11,020,000 bushels (19 per cent.). All States except South Australia and Tasmania had record harvests.

(c) *Yield per Acre.* Short-term variations in yield per acre are due chiefly to seasonal influences. High yields per acre for Australia for single seasons since 1901 were obtained in 1920-21, 16.1 bushels; in 1942-43, 16.8 bushels; in 1949-50, 17.8 bushels; in 1952-53, 19.1 bushels; in 1953-54, 18.4 bushels; in 1955-56, 19.2 bushels; in 1958-59, 20.7 bushels (a record); in 1959-60, 16.3 bushels; in 1960-61, 20.4 bushels; and in 1961-62, 16.8 bushels. The yield per acre in 1962-63 was 18.6 bushels.

(d) *Decennial Averages, 1861-70 to 1951-60.* The following table shows the average area, production and yield per acre for decennial periods since 1861 together with similar details for the latest season, 1962-63. Repeated cropping and short rotations (mainly in the eastern States) are believed to have led to the decline in yield to 1900, while fallowing and the widespread use of artificial fertilizers contributed to the increased yields in the decade following. The increase in yield since 1950 has been generally ascribed to the impact of improved pastures and ley-farming (broadly, the alternation of crops and pastures) upon soil fertility in wheat-growing areas.

#### WHEAT FOR GRAIN: AVERAGE AREA AND PRODUCTION, AUSTRALIA

Period	Area	Production	Yield per acre
	'000 acres	'000 bushels	bushels
Yearly average—			
1861-70 .. .. .	831	10,622	12.8
1871-80 .. .. .	1,646	17,711	10.8
1881-90 .. .. .	3,258	26,992	8.3
1891-1900 .. .. .	4,087	29,934	7.3
1901-10 .. .. .	5,711	56,058	9.8
1911-20 .. .. .	8,928	95,480	10.7
1921-30 .. .. .	11,291	135,400	12.0
1931-40 .. .. .	14,176	177,758	12.5
1941-50 .. .. .	11,358	145,599	12.8
1951-60 .. .. .	10,164	173,622	17.1
Year—			
1962-63 .. .. .	16,469	306,912	18.6

(viii) *Price of Wheat.* (a) *Home Consumption.* The prices charged by the Australian Wheat Board for wheat sold to millers for gristing into flour for consumption in Australia and for wheat sold as stock feed were as follows:—year ended 30th November, 1960, 15s. 0d.; 1961, 15s. 4d.; 1962, 15s. 10d.; 1963, 15s. 11½d.; and 1964, 14s. 7d. These prices include a loading to meet freight charges incurred on wheat shipped to Tasmania (2d. in 1960 and 1961; 1d. in 1962; 1½d. in 1963; and 2d. in 1964).

(b) *Export Wheat Prices.* The Wheat Board's monthly basic export selling prices for f.a.q. bulk wheat f.o.b. basis, both for wheat sold under the International Wheat Agreement and for "free" wheat sold on the open market, fell in the following ranges:—season ended 31st July, 1960, 13s. 3d. to 13s. 6d.; 1961, 13s. 5d. to 13s. 9d.; 1962, 13s. 10½d. to 14s. 10½d.; 1963, 14s. 2d. to 14s. 10½d. Actual selling prices have been lower than the basic prices in some cases, particularly where other exporting countries enjoy a geographical freight advantage.



The 1959 International Wheat Agreement set the maximum price at 200 cents a bushel and the minimum at 150 cents for f.a.q. wheat sold under the Agreement. Under the current 1962 Agreement operative from 1st August, 1962 (see paragraph 1 (iii) (f), p. 1004), the agreed price range is between 202.5 cents and 162.5 cents. Directly converted into Australian currency these limits are approximately 18s. 3½d. and 14s. 6d. a bushel respectively

Details of export wheat prices in previous years, including those received for wheat sold under the terms of the 1949-1953 International Wheat Agreement, are given in Year Book No. 40, pages 849-50, and statistical bulletin: *The Wheat Industry, Australia*, No. 99, March, 1961, and in previous issues of these publications.

(ix) *Value of the Wheat Crop.* The estimated gross value of the wheat crop in each State and in Australia during the season 1962-63 and the value per acre are shown below.

#### WHEAT FOR GRAIN: VALUE OF CROPS(a), 1962-63

Particulars		N.S.W.	Victoria	Q'land	S. Aust.	W. Aust.	Tas.	A.C.T.	Aust.
Aggregate value	£'000	79,290	49,455	13,775	28,143	53,512	308	49	224,532
Value per acre	£	15.8	15.8	15.0	10.8	11.1	20.1	20.4	13.6

(a) Gross value of total crop, including wheat used for seed and for stock feed on farms. Also includes payment of £11,317,000 by the Commonwealth Government.

(x) *Production and Disposal of Wheat in Australia.* In the following tables, details are given of Australian Wheat Board transactions and of total production and disposal of wheat during each of the years ended 30th November, 1959 to 1963. (For particulars of production and yield from 1935-36 see graphs, p. 994 of Year Book No. 49.)

(a) *Wheat Acquired.* Particulars of wheat acquired by the Australian Wheat Board from the 1958-59 to 1962-63 harvests are shown in the following table.

#### AUSTRALIAN WHEAT BOARD: WHEAT ACQUIRED

(\*000 bushels)

Pool	Harvest	New South Wales	Victoria	Queensland	South Australia	Western Australia	Tasmania	Australia
22 .. ..	1958-59	59,990	41,216	15,206	29,548	53,348	82	199,390
23 .. ..	1959-60	67,073	37,099	11,832	9,112	54,132	91	179,339
24 .. ..	1960-61	72,984	66,881	8,821	43,706	59,012	63	251,467
25 .. ..	1961-62	67,784	55,121	9,981	30,737	60,459	208	224,290
26 .. ..	1962-63	98,673	67,215	17,537	35,120	66,897	275	285,717

(b) *Stocks of Wheat and Flour.* Stocks of wheat (including flour in terms of wheat) held by the Australian Wheat Board in each State at 30th November for the years 1959 to 1963 are shown in the following table. These data relate to stocks held at mills, sidings, ports and depots as recorded by the Australian Wheat Board.

#### AUSTRALIAN WHEAT BOARD: STOCKS(a) OF WHEAT (INCLUDING FLOUR IN TERMS OF WHEAT), 30th NOVEMBER

(\*000 bushels)

Year	N.S.W.	Victoria	Q'land	S. Aust.	W. Aust.	Tas.	Australia
1959 .. ..	19,934	16,390	987	5,951	21,657	447	65,366
1960 .. ..	19,878	16,639	451	2,203	20,995	535	60,701
1961 .. ..	7,701	8,780	965	3,122	3,338	452	24,358
1962 .. ..	5,574	6,021	1,333	1,831	2,449	491	17,699
1963 .. ..	10,879	6,999	775	1,775	2,221	625	23,274

(a) Held at mills, sidings, ports and depots.

NOTE.—One short ton (2,000 lb.) of flour is taken to be equivalent to 46.3 bushels of wheat.

(c) *Wheat Disposal.* Particulars of the disposal of wheat during the years ended 30th November, 1959 to 1963, as recorded by the Australian Wheat Board, are shown in the following table.

**AUSTRALIAN WHEAT BOARD: DISPOSAL OF WHEAT**

('000 bushels)

Particulars	Year ended 30th November—				
	1959	1960	1961	1962	1963
Exported as wheat .. .. .	70,940	97,645	202,027	152,818	203,707
Exported as flour(a) .. .. .	25,248	26,147	29,438	25,123	24,907
Sold for local consumption as flour .. .. .	40,174	42,713	39,814	40,736	40,389
Sold for other purposes .. .. .	13,484	16,635	15,107	11,635	10,791

(a) Includes wheat equivalent of manufactured wheat products exported.

(d) *Production and Disposal.* A summary of all transactions in wheat for Australia, as distinct from those recorded for the Wheat Board above, appears in the following table. The particulars for local consumption are based on sales made by the Australian Wheat Board, whilst those relating to exports represent actual shipments.

**WHEAT: PRODUCTION AND DISPOSAL, AUSTRALIA**

(Million bushels)

Particulars	Year ended 30th November—				
	1959	1960	1961	1962	1963
Opening stocks (including flour)(a) ..	16.5	65.4	60.7	24.4	17.7
Production .. .. .	215.1	198.5	273.7	247.2	306.9
Imports .. .. .	..	..	..	..	..
<b>Total Available Supplies</b> ..	<b>231.6</b>	<b>263.9</b>	<b>334.4</b>	<b>271.6</b>	<b>324.6</b>
<b>Exports—</b>					
Wheat .. .. .	71.7	98.1	205.1	154.7	200.1
Flour(a) .. .. .	26.8	26.7	31.6	26.6	25.1
Breakfast foods and other products(a) ..	0.4	0.6	0.5	0.6	0.7
<b>Local consumption—</b>					
Flour(a) .. .. .	40.2	41.3	41.2	40.7	40.4
Stock feed .. .. .	11.6	14.7	13.2	10.0	9.1
Seed .. .. .	12.0	12.6	13.8	15.4	15.6
Breakfast foods and other products(a) ..	1.9	1.9	1.9	1.6	1.7
Balance retained on farm (excluding seed)	3.7	6.6	8.4	7.4	5.6
Closing stocks (including flour)(a) ..	65.4	60.7	24.4	17.7	23.3
<b>Total Disposals</b> .. .. .	<b>233.7</b>	<b>263.2</b>	<b>340.1</b>	<b>274.7</b>	<b>321.6</b>
<b>Excess (+) or Deficiency (-) of Disposals in respect of Available Supplies(b) ..</b>	<b>+2.1</b>	<b>-0.7</b>	<b>+5.7</b>	<b>+3.1</b>	<b>-3.0</b>

(a) In terms of wheat. (b) Includes allowance for unrecorded movements in stocks, gain or loss in out-turn, etc.

NOTE.—One short ton (2,000 lb.) of flour is taken to be equivalent to 46.3 bushels of wheat.

(e) *Finance.* The *Wheat Industry Stabilization Act 1948* empowered the Minister to arrange with the Commonwealth Bank for advances to the Board, the advances being guaranteed by the Commonwealth Government. These provisions have been continued in the subsequent legislation, with the exception that advances are now arranged through the Reserve Bank.

**AUSTRALIAN WHEAT BOARD: FINANCIAL OPERATIONS, POOLS Nos. 22 to 26**  
(£'000)

Particulars	No. 22 Pool	No. 23 Pool	No. 24 Pool	No. 25 Pool	No. 26 Pool(a)
	(1958-59 Harvest)	(1959-60 Harvest)	(1960-61 Harvest)	(1961-62 Harvest)	(1962-63 Harvest)
Paid to growers .. ..	117,336	108,641	152,685	144,207	135,295
Rail freight .. ..	13,687	12,999	18,715	16,943	22,686
Expenses .. ..	8,868	9,384	9,326	8,360	9,490
<b>Total Payments</b> ..	<b>139,891</b>	<b>131,024</b>	<b>180,726</b>	<b>169,510</b>	<b>167,471</b>
Value of sales delivered ..	(b) 133,598	(c) 123,187	(d) 172,103	(e) 162,455	(f) 199,167

(a) Incomplete. (b) Subject to additional £6,532,000 withdrawn from Wheat Prices Stabilization Fund and payment of £207,000 to Wheat Industry Research Fund. (c) Subject to additional £8,024,000 (of which the Commonwealth Government provided £3,022,000) withdrawn from Wheat Prices Stabilization Fund and payment of £187,000 to Wheat Industry Research Fund. (d) Subject to additional £8,884,000 provided by the Commonwealth Government and payment of £261,000 to Wheat Industry Research Fund. (e) Subject to additional £7,288,000 provided by the Commonwealth Government and payment of £233,000 to Wheat Industry Research Fund. (f) Subject to additional £11,317,000 provided by the Commonwealth Government and payment of £220,000 to Wheat Industry Research Fund.

NOTE.—Details of earlier pools will be found in previous issues of the Year Book.

(xi) *Imports of Wheat.* Wheat and flour have been imported in substantial quantities on three occasions since 1900; in 1902-3, the wheat harvest was only 12,378,000 bushels, and wheat and flour equivalent to 12,468,000 bushels of wheat were imported. An equivalent of 7,279,000 bushels was imported in 1914-15 to supplement the yield of 25 million bushels produced in that season. Owing to drought conditions in 1957-58, wheat supplies were insufficient for local requirements and, as a result, 1,485,000 bushels were imported from Canada in 1958. No wheat has since been imported.

(xii) *Exports of Wheat and Flour.* Statistics in this sub-paragraph relate to years ended 30th June. Export figures relate to the exports of Australian produce only.

(a) *Quantity and Value.* The following table shows particulars of the exports of wheat and flour and the total of both, in terms of wheat, for each of the years 1958-59 to 1962-63.

**WHEAT AND FLOUR: EXPORTS FROM AUSTRALIA**

Year	Quantity				Value		
	Wheat	Flour		Total (in terms of wheat)	Wheat	Flour(a)	Total
		As flour (a)	In terms of wheat				
	'000 bushels	short tons	'000 bushels	'000 bushels	£A.'000 f.o.b.	£A.'000 f.o.b.	£A.'000 f.o.b.
1958-59 .. ..	54,626	467,697	21,654	76,280	38,381	14,001	52,382
1959-60 .. ..	91,244	557,999	25,835	117,079	61,680	15,811	77,491
1960-61 .. ..	152,981	679,179	31,446	184,427	102,426	19,637	122,063
1961-62 .. ..	203,137	602,665	27,903	231,040	142,446	18,164	160,610
1962-63 .. ..	151,971	544,441	25,208	177,179	108,452	16,330	124,782

(a) White flour (plain and self-raising), sharps and wheatmeal for baking.

NOTE.—One short ton (2,000 lb.) of flour is taken to be equivalent to 46.3 bushels of wheat.

(b) *Destination of Wheat.* The following table shows the exports of wheat to various countries for each of the five years ended 1962-63.

## WHEAT: EXPORTS FROM AUSTRALIA

('000 bushels)

Country to which exported	1958-59	1959-60	1960-61	1961-62	1962-63
United Kingdom .. .. .	21,225	20,983	27,408	23,280	16,318
India .. .. .	1,317	11,705	4,910	21,164	7,145
New Zealand .. .. .	8,228	7,903	6,107	6,251	6,088
Pakistan .. .. .	720	3,875	3,873	18	5,597
Other Commonwealth countries .. .. .	11,243	11,026	9,756	10,395	9,169
China (Mainland) .. .. .	317	..	40,293	71,753	76,224
Japan .. .. .	1,754	4,230	4,426	15,696	12,673
Spain .. .. .	..	..	1,258	14,482	3,031
Other foreign countries .. .. .	9,822	31,522	54,950	40,098	15,726
<b>Total .. .. .</b>	<b>54,626</b>	<b>91,244</b>	<b>152,981</b>	<b>203,137</b>	<b>151,971</b>

(c) *Destination of Flour.* The following table shows the exports of flour to various countries for each of the five years ended 1962-63. The figures relate to exports of white flour (plain and self-raising), sharps and wheatmeal for baking.

## FLOUR: EXPORTS FROM AUSTRALIA

(Short tons)

Country to which exported	1958-59	1959-60	1960-61	1961-62	1962-63
United Kingdom .. .. .	45,837	46,256	56,135	66,560	66,641
Aden .. .. .	34,867	25,689	32,874	34,969	38,914
Ceylon .. .. .	61,382	142,339	117,563	178,503	103,485
Fiji .. .. .	24,972	27,995	28,071	30,157	28,987
Malaya .. .. .	92,427	112,417	107,304	83,139	84,700
Singapore .. .. .	40,735	36,658	41,790	52,872	51,756
Other Commonwealth countries .. .. .	63,519	68,021	69,602	64,128	66,363
Saudi Arabia .. .. .	2,340	3,691	4,777	11,551	16,211
Thailand .. .. .	15,550	14,646	14,483	13,497	17,129
Other foreign countries .. .. .	86,068	80,287	206,580	67,289	70,255
<b>Total .. .. .</b>	<b>467,697</b>	<b>557,999</b>	<b>679,179</b>	<b>602,665</b>	<b>544,441</b>

(xiii) *World Area and Production of Wheat.* The figures in the following table of the world area and production of wheat by principal countries and by continents have been compiled from the statistics published by the Foreign Agricultural Service of the United States Department of Agriculture. Years shown refer to years of harvest in the northern hemisphere. Harvests of the northern hemisphere countries are combined with those of the southern hemisphere which immediately follow; thus, the crop harvested in the northern hemisphere in 1962 is combined with preliminary forecasts for the southern hemisphere harvests which began late in 1962 and ended early in 1963.

**WHEAT: AREA, PRODUCTION AND YIELD PER ACRE IN VARIOUS COUNTRIES**

*(Source: Foreign Crops and Markets—United States Department of Agriculture)*

Continent and country	Area(a)			Production			Yield per acre		
	1960	1961	1962	1960	1961	1962	1960	1961	1962
	'000 acres	'000 acres	'000 acres	'000 bushels	'000 bushels	'000 bushels	bus.	bus.	bus.
<b>North America—</b>									
Canada ..	23,198	25,316	26,817	517,624	283,394	565,554	22.3	11.2	21.1
United States ..	51,896	51,551	43,576	1,357,272	1,234,743	1,092,562	26.2	24.0	25.1
<b>Total(b) ..</b>	<b>77,030</b>	<b>78,970</b>	<b>72,300</b>	<b>1,925,000</b>	<b>1,570,000</b>	<b>1,712,000</b>	<b>24.6</b>	<b>19.9</b>	<b>23.7</b>
<b>Europe—</b>									
France ..	10,769	9,876	11,294	405,000	351,800	516,380	37.6	35.6	45.7
Italy ..	11,300	10,738	11,257	250,000	305,000	349,830	22.1	28.4	31.1
Spain ..	10,230	9,610	10,507	130,000	126,100	176,700	12.7	13.1	16.8
<b>Total(b) ..</b>	<b>70,220</b>	<b>67,600</b>	<b>71,650</b>	<b>1,915,000</b>	<b>1,865,000</b>	<b>2,225,000</b>	<b>27.3</b>	<b>27.6</b>	<b>31.1</b>
<b>U.S.S.R. (Europe and Asia)(c) ..</b>	<b>148,500</b>	<b>155,000</b>	<b>166,545</b>	<b>1,700,000</b>	<b>1,900,000</b>	<b>2,000,000</b>	<b>11.4</b>	<b>12.3</b>	<b>12.0</b>
<b>Africa(c) ..</b>	<b>18,220</b>	<b>16,850</b>	<b>16,570</b>	<b>210,000</b>	<b>160,000</b>	<b>210,000</b>	<b>11.5</b>	<b>9.5</b>	<b>12.7</b>
<b>Asia—</b>									
China (Mainland)	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
India ..	32,542	32,047	33,240	376,700	403,900	433,830	11.6	12.6	13.1
Pakistan ..	12,192	11,603	12,571	144,700	141,340	151,720	11.9	12.2	12.1
Turkey ..	15,600	15,500	16,000	260,000	225,000	250,000	16.7	14.5	15.7
<b>Total(b) ..</b>	<b>144,600</b>	<b>139,320</b>	<b>144,970</b>	<b>1,920,000</b>	<b>1,865,000</b>	<b>1,985,000</b>	<b>13.3</b>	<b>13.4</b>	<b>13.7</b>
<b>South America—</b>									
Argentina ..	8,893	10,374	n.a.	150,000	190,000	190,000	16.9	18.3	n.a.
<b>Total(b) ..</b>	<b>15,310</b>	<b>16,040</b>	<b>15,590</b>	<b>235,000</b>	<b>265,000</b>	<b>280,000</b>	<b>15.3</b>	<b>16.5</b>	<b>18.0</b>
<b>Oceania—</b>									
Australia ..	13,439	14,723	16,469	273,716	247,178	306,912	20.4	16.8	18.6
<b>Total(b) ..</b>	<b>13,626</b>	<b>14,909</b>	<b>16,600</b>	<b>283,000</b>	<b>254,000</b>	<b>317,000</b>	<b>20.8</b>	<b>17.0</b>	<b>19.3</b>
<b>World Total(b) ..</b>	<b>487,510</b>	<b>488,690</b>	<b>504,230</b>	<b>8,188,000</b>	<b>7,880,000</b>	<b>8,730,000</b>	<b>16.7</b>	<b>16.1</b>	<b>17.3</b>

(a) Figures refer to harvested areas as far as possible. For Australia, area sown is shown.  
 (b) Estimated totals, which in the case of production are rounded to millions, include allowances for any missing data for countries shown and for other producing countries not shown. (c) Estimated.

(xiv) *Principal Exporting and Importing Countries.* The following table shows the quantities of wheat traded by the chief exporting and importing countries for the years 1960-61 to 1962-63, based on statistics recently published by the Food and Agriculture Organization of the United Nations.

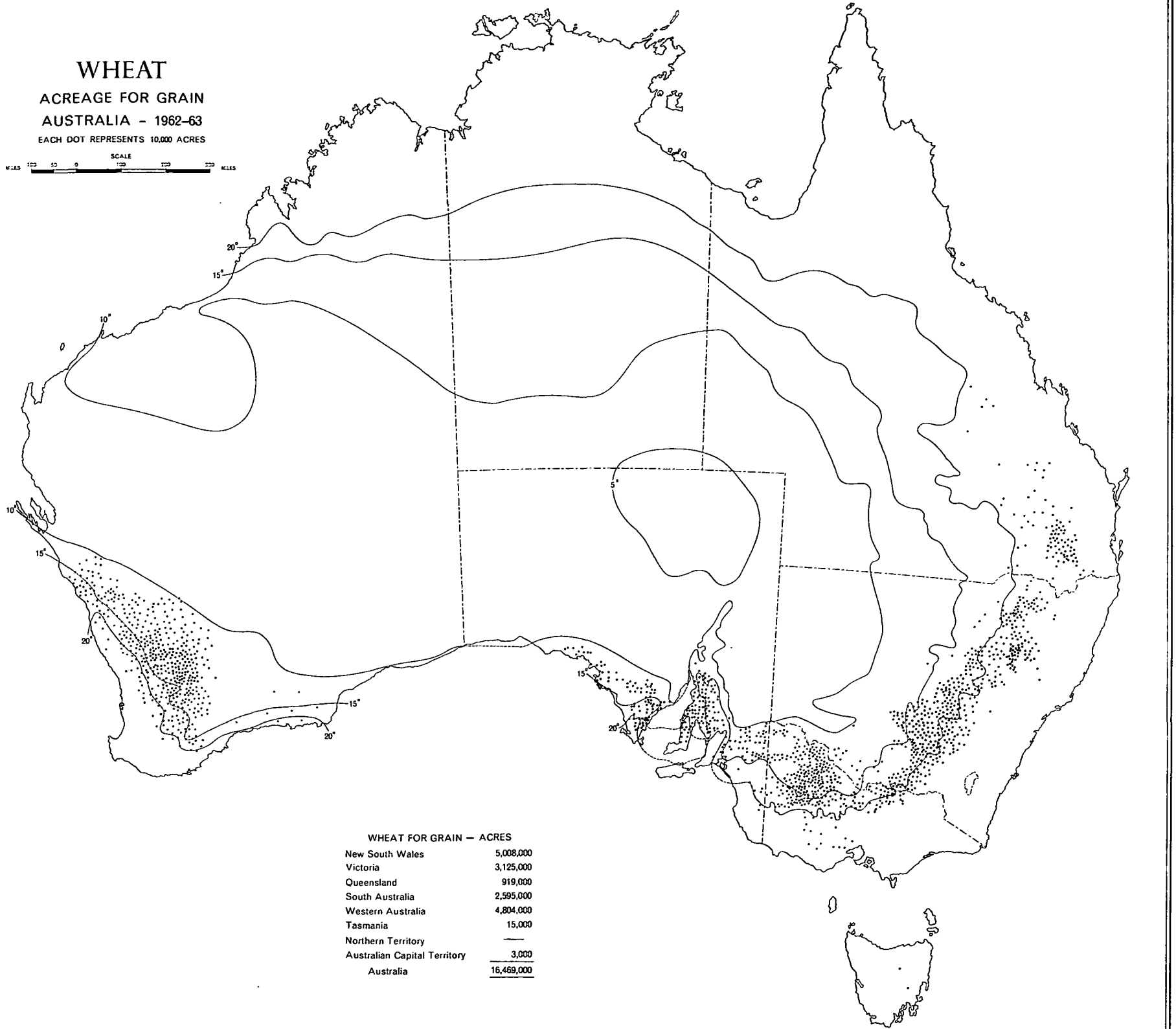
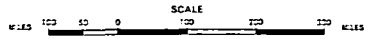
While Australia's production of wheat averages about 3 per cent. of the world' total, its exports account for a much higher proportion of the total quantities shipped. In 1962-63, for example, Australia's share of world wheat exports amounted to 12.0 per cent.

# WHEAT

ACREAGE FOR GRAIN

AUSTRALIA - 1962-63

EACH DOT REPRESENTS 10,000 ACRES



## WHEAT FOR GRAIN — ACRES

New South Wales	5,008,000
Victoria	3,125,000
Queensland	919,000
South Australia	2,595,000
Western Australia	4,804,000
Tasmania	15,000
Northern Territory	—
Australian Capital Territory	3,000
Australia	<u>16,469,000</u>

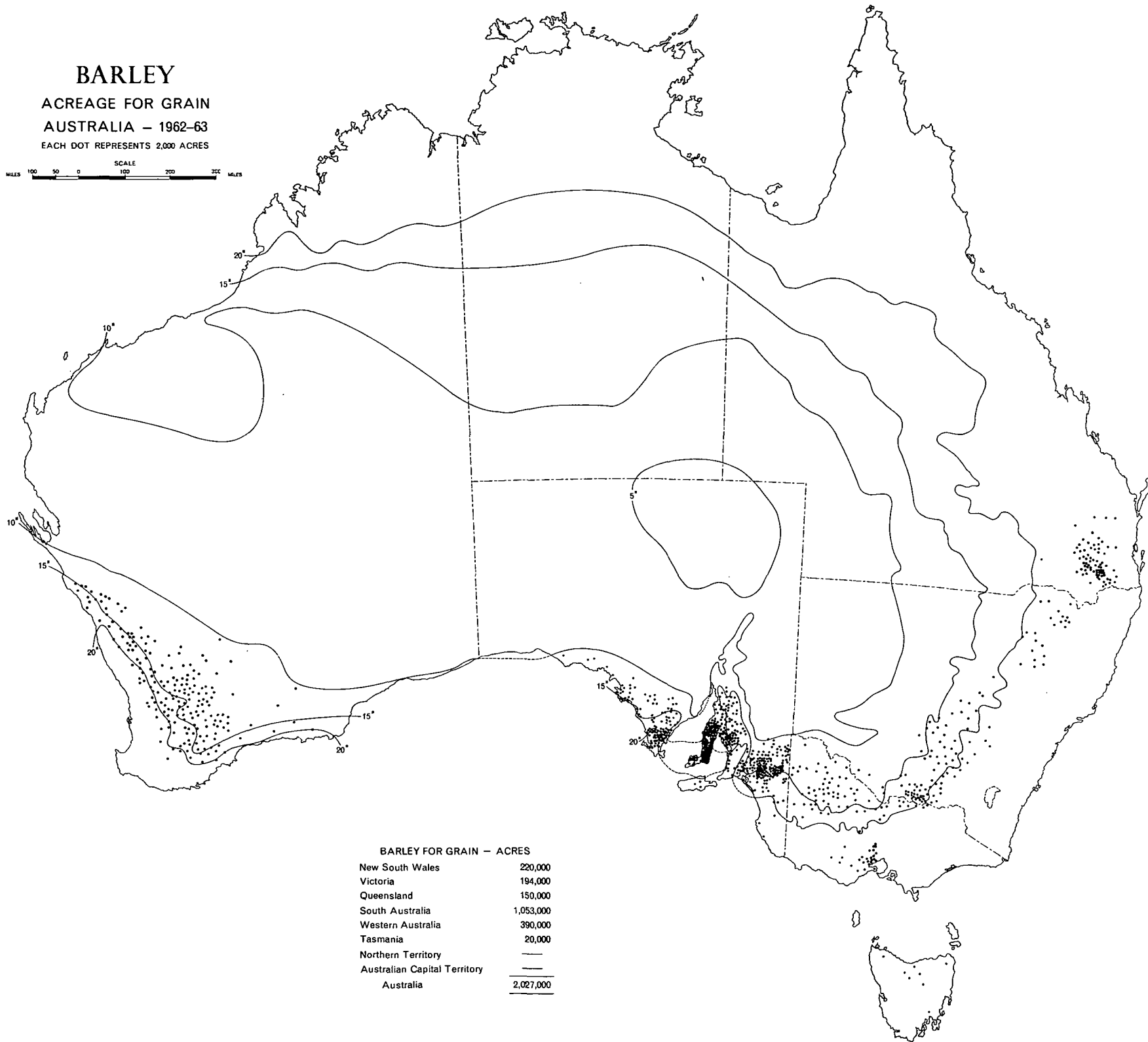
# BARLEY

ACREAGE FOR GRAIN

AUSTRALIA — 1962-63

EACH DOT REPRESENTS 2,000 ACRES

SCALE  
MILES 100 50 0 100 200 300

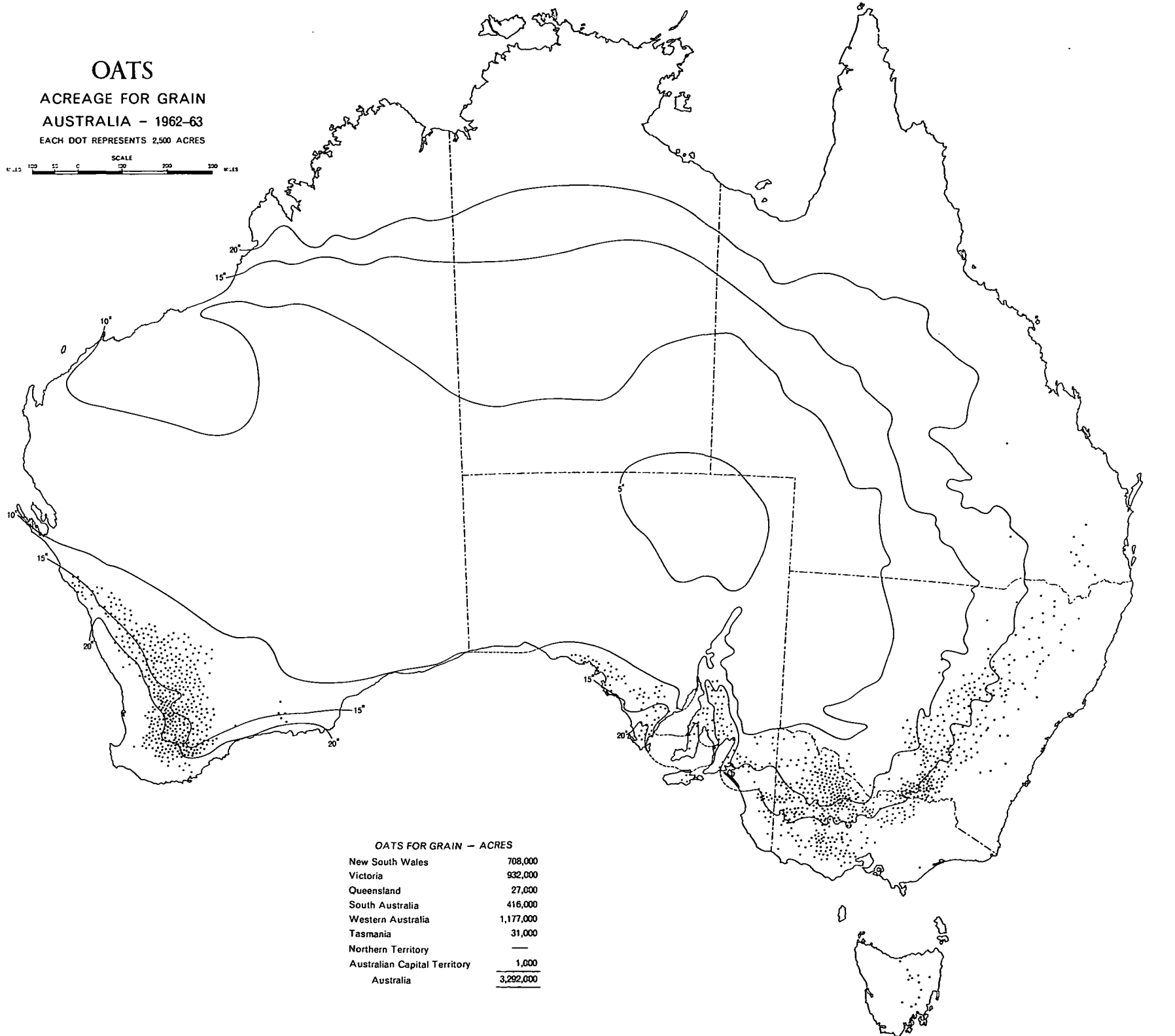


## OATS

ACREAGE FOR GRAIN

AUSTRALIA - 1962-63

EACH DOT REPRESENTS 2,500 ACRES

SCALE  
0 50 100 150 200 250 300

## OATS FOR GRAIN - ACRES

New South Wales	708,000
Victoria	932,000
Queensland	27,000
South Australia	416,000
Western Australia	1,177,000
Tasmania	31,000
Northern Territory	—
Australian Capital Territory	1,000
Australia	<u>3,292,000</u>





**WHEAT (INCLUDING FLOUR IN TERMS OF WHEAT): PRINCIPAL  
EXPORTING AND IMPORTING COUNTRIES**

*(Source: World Grain Trade Statistics—Food and Agriculture Organization of the United Nations)*

Country	1960-61		1961-62		1962-63(a)	
	Quantity	Proportion of world total	Quantity	Proportion of world total	Quantity	Proportion of world total

**EXPORTING COUNTRIES**

	million bushels	per cent.	million bushels	per cent.	million bushels	per cent.
United States of America .. .. .	660.9	46.3	717.8	44.9	637.5	43.3
Canada .. .. .	342.0	24.0	365.1	22.9	331.2	22.5
Australia .. .. .	184.4	12.9	231.0	14.5	177.2	12.0
France .. .. .	57.3	4.0	67.4	4.2	114.1	7.8
U.S.S.R.(b) .. .. .	45.7	3.2	45.6	2.9	71.6	4.9
Argentina .. .. .	71.5	5.0	87.4	5.5	66.3	4.5
Germany, Federal Republic of ..	30.3	2.1	43.3	2.7	23.1	1.6
All other .. .. .	36.1	2.5	40.0	2.4	51.0	3.4
<i>Total(c)</i> .. .. .	<i>1,428.2</i>	<i>100.0</i>	<i>1,597.6</i>	<i>100.0</i>	<i>1,472.0</i>	<i>100.0</i>

**IMPORTING COUNTRIES**

	million bushels	per cent.	million bushels	per cent.	million bushels	per cent.
China (Mainland)(b) .. .. .	72.8	5.3	169.0	11.0	181.9	12.3
United Kingdom .. .. .	173.1	12.5	172.4	11.2	156.5	10.6
India .. .. .	140.5	10.2	105.5	6.8	142.4	9.6
Japan .. .. .	104.1	7.5	101.9	6.6	97.8	6.6
Brazil .. .. .	73.9	5.3	83.9	5.4	78.6	5.3
Germany, Federal Republic of ..	81.0	5.9	129.1	8.4	78.3	5.3
United Arab Republic .. .. .	36.5	2.6	62.8	4.1	63.2	4.3
Pakistan .. .. .	37.7	2.7	42.0	2.7	57.1	3.9
Yugoslavia .. .. .	13.0	0.9	39.2	2.5	43.0	2.9
Korea, Republic of .. .. .	11.0	0.8	10.7	0.7	33.5	2.3
Turkey .. .. .	9.7	0.7	44.3	2.9	24.6	1.7
Netherlands .. .. .	34.5	2.5	50.0	3.2	20.0	1.4
All other .. .. .	593.8	43.1	531.7	34.5	500.9	33.8
<i>Total(c)</i> .. .. .	<i>1,381.6</i>	<i>100.0</i>	<i>1,542.5</i>	<i>100.0</i>	<i>1,477.8</i>	<i>100.0</i>

(a) Preliminary. (b) Unofficial estimate. (c) Total exports do not necessarily agree with total imports because of the time lag between shipments and arrivals.

NOTE.—One short ton (2,000 lb.) of flour is taken to be equivalent to 46.3 bushels of wheat.

Estimates of exports to, and imports from, the U.S.S.R. and Mainland China in the table above are based entirely on available trade returns of the trading partners outside the Sino-Soviet bloc. No account is taken of trade within this bloc because of the incomplete nature of the data.

2. Oats.—(i) *General.* This cereal is widely grown in all agricultural areas which have autumn, winter and spring rainfall, and is tolerant of wet conditions and heavy soils. It has excellent feed value, and produces a higher yielding crop than other winter cereals. It needs less cultivation, but requires ample fertilizer. Oats has a variety of uses—as a pasture plant when rough sown into stubble or heavy clover pastures, as silage if cut before maturity, as a hay crop when mown and baled or cut for chaff, or as a grain when stripped (the stubble then being grazed off). The grain is sold on a “fair average quality” basis through voluntary pools in Victoria, South Australia and Western Australia. Excessive bulk in the husk and a fluctuating export price limit the extent of oversea trade.

(ii) *Area, Production and Yield per Acre.* Oats is usually next in importance to wheat among the grain crops cultivated in Australia. However, while wheat grown for grain in 1962-63 accounted for 51 per cent. of the area of all crops, oats grown for grain represented only 10 per cent. The area, production and yield per acre of oats in each State are shown below for the years 1958-59 to 1962-63 in comparison with the averages for the three-year periods ended 1938-39, 1948-49 and 1958-59.

### OATS FOR GRAIN: AREA, PRODUCTION AND YIELD PER ACRE

Period	N.S.W.	Victoria	Q'land	S. Aust.	W. Aust.	Tas.	A.C.T.	Aust.
AREA ('000 ACRES)								
Average for three years ended—								
1938-39 .. ..	297	478	8	338	425	26	(a)	1,572
1948-49 .. ..	515	548	21	282	484	17	1	1,868
1958-59 .. ..	756	735	29	445	1,178	20	(a)	3,163
Year—								
1958-59 .. ..	1,130	971	39	481	1,330	22	1	3,974
1959-60 .. ..	567	673	22	506	1,240	22	(a)	3,030
1960-61 .. ..	917	835	19	512	1,330	23	1	3,637
1961-62 .. ..	713	774	27	324	1,231	27	1	3,097
1962-63 .. ..	708	932	27	416	1,177	31	1	3,292

### PRODUCTION ('000 BUSHELS) (b)

Average for three years ended—								
1938-39 .. ..	4,065	4,781	65	2,575	4,159	810	6	16,461
1948-49 .. ..	7,166	9,757	324	3,606	5,355	406	7	26,621
1958-59 .. ..	12,619	14,140	547	7,911	15,606	409	10	51,242
Year—								
1958-59 .. ..	27,638	23,339	832	11,992	22,585	491	28	86,905
1959-60 .. ..	11,125	12,701	394	2,504	19,599	512	6	46,841
1960-61 .. ..	21,466	20,666	285	11,478	21,810	391	11	76,107
1961-62 .. ..	13,225	16,312	412	4,391	20,187	587	16	55,130
1962-63 .. ..	16,035	27,042	545	5,770	18,572	828	17	68,809

### YIELD PER ACRE (BUSHELS) (b)

Average for three years ended—								
1938-39 .. ..	13.7	10.0	8.1	7.6	9.8	3.1	24.3	10.5
1948-49 .. ..	13.9	17.8	15.4	12.8	11.1	2.4	11.8	14.3
1958-59 .. ..	16.7	19.2	18.9	17.8	13.3	20.5	22.5	16.2
Year—								
1958-59 .. ..	24.5	24.0	21.3	24.9	17.0	22.1	26.6	21.9
1959-60 .. ..	19.6	18.9	18.4	5.0	15.8	23.2	24.8	15.5
1960-61 .. ..	23.5	24.7	15.0	22.4	16.4	16.8	20.9	20.9
1961-62 .. ..	18.5	21.1	15.4	13.6	16.4	21.8	18.7	17.8
1962-63 .. ..	22.7	29.0	20.0	13.9	15.8	26.6	25.6	20.9

(a) Less than 500 acres.

(b) 40 lb. per bushel.

Graphs showing the area sown to oats and production of oats in Australia appear on pages 993 and 995 of Year Book No. 49, and a map showing the distribution of areas growing oats for grain throughout Australia in 1962-63 appears on page 1015.

In 1962-63, the production of oats was 68,809,000 bushels, 18,096,000 bushels (21 per cent.) below the record harvest of 86,905,000 bushels in 1958-59.

The yield per acre in 1962-63 was 20.9 bushels, compared with the record yield of 21.9 bushels per acre established in 1958-59. The lowest yield recorded was 4.4 bushels per acre in the abnormally dry season of 1944-45.

(iii) *Price of Oats.* The average wholesale price in the Melbourne market for oats of good milling quality was 7s. 4d. a bushel in 1962-63, compared with 7s. 0½d. in 1961-62.

(iv) *Value of Oat Crop.* The estimated gross value of the oat crop in each State for the 1962-63 season and the value per acre were as follows.

#### OATS: VALUE OF CROP, 1962-63

Particulars	N.S.W.	Victoria	Q'land	S. Aust.	W. Aust.	Tas.	A.C.T.	Aust.
Aggregate value £'000	6,882	9,205	279	1,969	6,976	313	5	25,629
Value per acre .. £	9.7	9.9	10.2	4.7	5.9	10.1	7.5	7.8

(v) *Exports.* The production of oats in Australia is sufficient to allow for an export trade which fluctuates with the incentive offered by overseas prices. The quantities and values of Australian-produced oats exported from Australia during the years 1958-59 to 1962-63 are shown below.

#### OATS: EXPORTS, AUSTRALIA

Particulars	1958-59	1959-60	1960-61	1961-62	1962-63
Quantity .. .. '000 bus.	17,557	11,969	19,005	19,064	17,744
Value .. .. £A.'000 f.o.b.	6,512	5,031	6,854	7,479	7,076

In 1962-63, the principal countries of destination were the Federal Republic of Germany (8,525,000 bushels), the Netherlands (3,153,000 bushels), China (Mainland) (1,481,000 bushels), and the United Kingdom (1,235,000 bushels). Imports of oats into Australia are not recorded separately.

(vi) *Oatmeal and Other Oat Products.* In 1962-63, the production of oatmeal was 15,098 tons for porridge and 21,442 tons for other purposes. This was equivalent to about 4,092,000 bushels of oats.

(vii) *World Production.* The world's production of oats for the year 1962, according to figures issued by the United States Department of Agriculture, amounted to 3,435 million bushels, harvested from 86.4 million acres, resulting in an average yield of 39.8 bushels an acre. This compared with an estimated production in the previous year of 3,410 million bushels from an area of 95.8 million acres and an average yield of 35.6 bushels an acre.

3. **Barley.**—(i) *General.* This cereal contains two main groups of varieties: 2-row and 6-row. The former is generally, but not exclusively, preferred for malting purposes.

Barley was formerly stubble-sown, but is now grown principally on pasture land worked up early in the year of sowing. In this way, it forms an important phase in the rotation of the land. Like oats, it may also be sown for fodder production or for grain. When sown for fodder, sowing may take place either early or late in the season, as it has a short growing period. It may thus provide grazing or fodder supplies when other sources are not available. Barley grain may be crushed to meal for stock (especially pigs) or sold for malting. Crops sown for malting purposes require well-worked, weed-free paddocks of even soil, and are thus restricted to specific districts.

The main barley-growing areas in Australia are situated in Victoria (Mallee, North Wimmera, Mt. Gambier region and Geelong) and South Australia (Eyre and Yorke Peninsulas). In Western Australia, it is grown in the higher rainfall areas on the western edge of the wheat belt.

(ii) *Barley Boards.* The bulk of the barley crop in the various States is acquired and marketed by grower-controlled boards. Pooled returns from sales are distributed to growers at standard rates for the individual grades and varieties delivered. The Victorian and South Australian crops are marketed by the Australian Barley Board (a joint board established by the two State Governments), and the Queensland and Western Australian Barley Boards, handle the crops of their respective States.

(iii) *Australian Barley Board Operations.* Particulars of the proportion of barley production which was received by the Australian Barley Board (for Victoria and South Australia), together with details of quantity sold, advances and total payments to growers, are presented below.

#### AUSTRALIAN BARLEY BOARD: BARLEY RECEIVED, SOLD, ETC.

Pool		Quantity received	Quantity sold(a)	Total advances made per bushel on 2-row No. 1 Grade less freight	Total net payments to growers
		'000 bushels	'000 bushels	s. d.	£'000
No. 20 (1958-59 Crop)	.. ..	42,550	42,560	10 10.1	19,617
„ 21 (1959-60 „ )	.. ..	11,773	11,797	10 0.51	4,904
„ 22 (1960-61 „ )	.. ..	44,624	44,680	9 3.26	16,989
„ 23 (1961-62 „ )	.. ..	20,081	20,059	11 7.28	9,707
„ 24 (1962-63 „ )	.. ..	17,195	17,285	11 6.76	8,333

(a) Includes surplus or shortage in out-turn.

(iv) *Area, Production and Yield per Acre.* There was a substantial increase in the area of barley sown for grain (particularly in Western Australia and Queensland) in the years up to 1960-61, and in that year the area sown reached the record level of 2,830,000 acres. However, the area sown in 1962-63, 2,027,000 acres, was 15 per cent. less than the area in 1961-62, and 28 per cent. less than the area in 1960-61. The production of barley for grain in 1962-63, 39,579,000 bushels, was 5 per cent. less than production in 1961-62, and 42 per cent. less than the record production of 67,970,000 bushels in 1960-61. The area, production and yield per acre of barley for grain in the several States for the years 1958-59 to 1962-63, compared with the averages for the three-year periods ended 1938-39, 1948-49 and 1958-59 are shown in the following table.

BARLEY FOR GRAIN: AREA, PRODUCTION AND YIELD PER ACRE

Period	N.S.W.	Vic.	Q'land	S. Aust.	W. Aust.	Tas.	A.C.T.	Aust.
AREA ('000 ACRES)								
Average for three years ended—								
1938-39 ..	13	138	10	391	53	8	(a)	613
1948-49 ..	23	166	18	587	65	7	(a)	866
1958-59 ..	73	354	184	1,255	324	8	..	2,198
Year—								
1958-59 ..	106	363	249	1,332	322	9	..	2,381
1959-60 ..	118	278	260	1,290	421	12	..	2,379
1960-61 ..	190	309	219	1,556	541	15	..	2,830
1961-62 ..	201	225	177	1,271	490	19	..	2,383
1962-63—								
2-row ..	140	180	134	1,020	60	19	..	1,553
6-row ..	81	14	16	33	330	(a)	..	474
Total ..	221	194	150	1,053	390	19	..	2,027

PRODUCTION ('000 BUSHELS)(b)								
Average for three years ended—								
1938-39 ..	197	2,174	135	6,816	660	252	(c)	10,234
1948-49 ..	316	3,149	375	11,964	748	194	(c)	16,746
1958-59 ..	1,463	7,192	4,673	29,740	4,239	267	..	47,574
Year—								
1958-59 ..	2,922	8,581	8,103	37,665	5,410	295	..	62,976
1959-60 ..	2,581	5,593	6,650	11,857	7,080	418	..	34,179
1960-61 ..	4,786	7,718	4,393	42,233	8,496	344	..	67,970
1961-62 ..	4,137	4,654	3,532	21,292	7,282	607	..	41,504
1962-63—								
2-row ..	3,328	5,129	3,696	17,479	1,120	618	..	31,370
6-row ..	2,003	340	392	525	4,936	13	..	8,209
Total ..	5,331	5,469	4,088	18,004	6,056	631	..	39,579

YIELD PER ACRE (BUSHELS)(b)								
Average for three years ended—								
1938-39 ..	15.2	15.7	13.5	17.4	12.5	31.5	52.3	16.7
1948-49 ..	13.7	19.0	20.8	20.4	11.5	27.7	19.5	19.3
1958-59 ..	20.0	20.3	25.4	23.7	13.1	33.4	..	20.7
Year—								
1958-59 ..	27.6	23.6	32.6	28.3	16.8	31.6	..	26.5
1959-60 ..	21.8	20.1	25.6	9.2	16.8	33.8	..	14.3
1960-61 ..	25.3	25.0	20.0	27.1	15.7	22.5	..	24.0
1961-62 ..	20.6	26.6	20.0	16.8	14.8	32.4	..	17.4
1962-63—								
2-row ..	23.8	28.4	27.5	17.1	18.6	31.9	..	20.2
6-row ..	24.8	24.2	25.2	15.7	15.0	34.2	..	17.3
Total ..	24.2	28.1	27.3	17.1	15.5	31.9	..	19.5

(a) Less than 500 acres.

(b) 50 lb. per bushel.

(c) Less than 500 bushels.

For Australia, 77 per cent. of the area of barley for grain in 1962-63 was sown with 2-row barley, while the remainder consisted of 6-row varieties. The proportion, however, varied considerably in the several States. The utilization of barley during the season ended November, 1963, was as follows:—exports, 12,069,000 bushels; malting and distilling, 9,500,000 bushels; pearl barley, 150,000 bushels; seed and stock feed, 16,089,000 bushels.

The following table sets out the acreage and production of 2- and 6-row barley in Australia during the seasons 1958-59 to 1962-63 and the averages for the three years ended 1938-39, 1948-49 and 1958-59.

## BARLEY, 2- AND 6-ROW: AREA AND PRODUCTION, AUSTRALIA

Period	Area ('000 acres)			Production ('000 bushels)(a)			Yield per acre (bushels)(a)		
	2-row	6-row	Total	2-row	6-row	Total	2-row	6-row	Total
<b>Average for three years ended—</b>									
1938-39 ..	523	90	613	8,963	1,271	10,234	17.1	14.1	16.7
1948-49 ..	769	97	866	15,142	1,604	16,746	19.7	16.5	19.3
1958-59 ..	1,809	389	2,198	41,633	5,941	47,574	23.0	15.3	20.7
<b>Year—</b>									
1958-59 ..	1,965	416	2,381	54,624	8,352	62,976	27.8	20.1	26.5
1959-60 ..	(b)1,868	(b) 499	2,379	b 25,676	(b)8,085	34,179	(b) 13.7	(b) 16.2	14.3
1960-61 ..	(b)2,157	(b) 658	2,830	b 55,691	b 11,935	67,970	(b) 25.8	(b) 18.1	24.0
1961-62 ..	(b)1,777	(b) 587	2,383	b 31,739	(b)9,158	41,504	(b) 17.9	(b) 15.6	17.4
1962-63 ..	1,553	474	2,027	31,370	8,209	39,579	20.2	17.3	19.5

(a) 50 lb. per bushel.

(b) Excludes Tasmania.

A graph showing the production of barley in Australia since 1935-36 appears on page 995 of Year Book No. 49, and a map showing the distribution of barley growing areas throughout Australia in 1962-63 appears on page 1014.

(v) *Prices.* The average wholesale price for 2-row English malting barley in the Melbourne market during 1962-63 was 15s. 1d. compared with 14s. 9d. in 1961-62.

(vi) *Value of Barley Crop.* The estimated gross value of the barley crop in each State for the 1962-63 season and the value per acre are shown in the following table.

## BARLEY FOR GRAIN: VALUE OF CROP, 1962-63

Particulars		N.S.W.	Vic.	Q'land	S. Aust.	W. Aust.	Tas.	Aust.
Aggregate value ..	£'000	3,236	2,655	2,385	9,576	3,038	438	21,328
Value per acre ..	£	14.7	13.7	15.9	9.1	7.8	22.2	10.5

(vii) *Exports.* South Australia was the principal exporting State in 1962-63, while the United Kingdom, Italy, the Netherlands and Greece were the principal countries to which barley was shipped. There was a substantial fall in exports in 1962-63 compared with 1961-62. Exports to China (Mainland) fell to zero, while there were also significant decreases in exports to the Federal Republic of Germany and the United Kingdom. Particulars of exports of Australian produced barley for the years 1958-59 to 1962-63 are shown in the following table.

## BARLEY: EXPORTS, AUSTRALIA

Particulars		1958-59	1959-60	1960-61	1961-62	1962-63
Quantity ..	'000 bus.	29,924	25,013	33,900	31,435	10,322
Value ..	£A.'000 f.o.b.	16,898	11,541	14,329	14,954	5,229

Imports of barley into Australia are not recorded separately, but are considered to be negligible.

In addition to exports of barley grain, there are also exports of Australian pearl and Scotch barley, the total for 1962-63 amounting to 283,286 lb., valued at £9,951, consigned mainly to Malaya.

(viii) *Malt.* (a) *Production.* Details of the quantity of grain used and the production of barley malt in the years 1958-59 to 1962-63 are given in the following table.

## BARLEY MALT: GRAIN USED AND MALT PRODUCED, AUSTRALIA

Particulars		1958-59	1959-60	1960-61	1961-62	1962-63
Grain used ..	'000 bus.(a)	8,198	8,539	9,020	10,312	10,338
Malt produced ..	'000 bus.(b)	8,108	8,435	9,015	10,207	10,209

(a) 50 lb. per bushel.

(b) 40 lb. per bushel.

(b) *Exports.* Since 1952-53, the production of malt in Australia has been sufficient to meet local requirements and to provide a margin for export. Exports of Australian produce amounting to 2,871,668 bushels (value £2,712,157) and 2,980,125 bushels (value £2,882,936) were recorded in 1961-62 and 1962-63 respectively.

(ix) *World Production.* In comparison with the barley production of other countries, that of Australia is extremely small. The main producers in 1962 were the United States of America, France, and the United Kingdom. China is also normally a major producer, but details for 1962 are not available. Australian production in that year was approximately one per cent. of the world total.

According to estimates made by the United States Department of Agriculture, world production of barley in the year 1962 amounted to 3,875 million bushels harvested from 149.0 million acres, equivalent to a yield per acre of 26.0 bushels. This compared with the production of 3,455 million bushels in the previous year from 141.8 million acres, and a yield per acre of 24.4 bushels.

4. *Sorghum for Grain.*—Grain sorghum is a summer-growing annual palatable to stock, and more drought- and frost-resistant than maize. It requires a summer rainfall. The growing of this crop for grain on an extensive scale is a comparatively recent development in Australia and, as with other cereals, operations are highly mechanized.

The climatic conditions of Queensland and northern New South Wales are particularly suited to the growing of sorghum, and development has so far been restricted mainly to these areas, more particularly to Queensland. The grain produced is fed to livestock and has become an important source for supplementing other coarse grains for this purpose. Other sorghums are grown in Australia mainly as green fodder, hay and silage (sweet sorghums and Sudan grass) and for the production of brush for broom manufacture (broom millet).

In Queensland, the growing of grain sorghum is concentrated in the Burnett, Dawson-Callide areas and in the central highlands. In New South Wales, the north western slopes and Murrumbidgee Irrigation Area are the main areas. This crop is also suitable for the semi-tropical areas of the Northern Territory and the Kimberleys.

Particulars of the area and production of sorghum grown for grain in recent years are given in the following table.

GRAIN SORGHUM: AREA, PRODUCTION AND YIELD PER ACRE

Season	Area			Production(a)			Yield per acre(a)		
	N.S.W.	Q'land	Aust. (b)	N.S.W.	Q'land	Aust. (b)	N.S.W.	Q'land	Aust. (b)
	Acres	Acres	Acres	Bushels	Bushels	Bushels	Bushels	Bushels	Bushels
1958-59 ..	41,899	210,371	252,419	943,359	6,365,880	7,309,645	22.5	30.3	29.0
1959-60 ..	51,195	220,094	271,553	1,451,967	6,630,369	8,086,405	28.4	30.1	29.8
1960-61 ..	41,145	213,761	255,109	577,473	5,417,571	5,996,101	14.0	25.3	23.5
1961-62 ..	70,134	292,397	362,666	1,307,508	8,053,590	9,361,244	18.6	27.5	25.8
1962-63 ..	80,255	311,068	391,334	1,890,849	8,360,715	10,251,577	23.6	26.9	26.2

(a) 60 lb. per bushel.

(b) Includes small areas sown and quantities produced in other States.

5. *Maize for Grain.*—(i) *General.* Like sorghum, maize is a summer cereal demanding specific soil and climatic conditions. It is grown for grain, chiefly in the south-east and Atherton Tablelands of Queensland and the north coast and northern tablelands of New South Wales. The area so cropped in these States during the 1962-63 season was 98 per cent. of the total for Australia. On the Atherton Tablelands in Queensland, and generally in New South Wales and Victoria, it provides a stock feed for dairy cattle, fat stock and pigs. In times of drought, it is also used as a sheep feed. In all States, except South Australia, however, this crop is grown to some extent for green fodder and silage, particularly in connexion with the dairying industry. There is practically no difference between grain and fodder varieties.

There has been a considerable increase in recent years in the growing of maize from hybrid strains of seed. Varieties have been developed which are capable of producing yields per acre considerably in excess of the older open pollinated types. The expansion in areas sown to hybrid maize has led to a parallel development in the specialized industry of growing hybrid strains for seed.

(ii) *Area, Production and Yield per Acre.* The area, production and yield per acre of maize for grain in each State for the years 1958-59 to 1962-63 compared with the averages for the three-year periods ended 1938-39, 1948-49 and 1958-59 are given in the following table. Separate details for hybrid and other varieties are shown for all States except Western Australia for 1962-63.



## MAIZE FOR GRAIN: AREA, PRODUCTION AND YIELD PER ACRE

Period	N.S.W.	Vic.	Q'land	S. Aust.	W. Aust.	Tas.	A.C.T.	Aust.
AREA (ACRES)								
Average for three years ended—								
1938-39 ..	121,178	19,826	179,641	20	16	..	6	320,687
1948-49 ..	91,612	7,511	122,263	1	87	6	1	221,481
1958-59 ..	57,662	3,629	120,417	(a)	13	1	2	(b)181,724
Year—								
1958-59 ..	62,249	3,881	113,402	(a)	10	..	..	(b)179,542
1959-60 ..	51,738	3,383	129,803	(a)	4	..	..	(b)184,928
1960-61 ..	49,269	2,985	132,382	(a)	6	..	..	(b)184,642
1961-62 ..	51,434	3,309	155,780	..	17	..	..	210,540
1962-63—								
Hybrid ..	37,601	3,138	120,286	..	} 34	..	..	(b)209,490
Other ..	8,936	496	38,999	(a)		..	..	(b)209,490
Total ..	46,537	3,634	159,285	(a)	34	..	..	(b)209,490

## PRODUCTION ('000 BUSHELS)(c)

Period	N.S.W.	Vic.	Q'land	S. Aust.	W. Aust.	Tas.	A.C.T.	Aust.
PRODUCTION ('000 BUSHELS)(c)								
Average for three years ended—								
1938-39 ..	3,204	665	3,170	1	(d)	..	(d)	7,040
1948-49 ..	2,446	314	2,960	(d)	1	(d)	(d)	5,721
1958-59 ..	2,347	175	3,428	(a)	(d)	(d)	(d)	(b) 5,950
Year—								
1958-59 ..	2,860	203	3,654	(a)	(d)	..	..	(b) 6,717
1959-60 ..	2,485	180	4,060	(a)	(d)	..	..	(b) 6,725
1960-61 ..	2,227	171	3,847	(a)	(d)	..	..	(b) 6,245
1961-62 ..	2,349	192	4,766	..	(d)	..	..	7,307
1962-63—								
Hybrid ..	1,834	197	4,033	..	} (d)	..	..	(b) 7,457
Other ..	311	19	1,063	(a)		..	..	(b) 7,457
Total ..	2,145	216	5,096	(a)	(d)	..	..	(b) 7,457

## YIELD PER ACRE (BUSHELS)(c)

Period	N.S.W.	Vic.	Q'land	S. Aust.	W. Aust.	Tas.	A.C.T.	Aust.
YIELD PER ACRE (BUSHELS)(c)								
Average for three years ended—								
1938-39 ..	26.4	33.5	17.6	43.7	12.3	..	10.2	22.0
1948-49 ..	26.7	41.8	24.2	6.7	7.2	14.8	13.7	25.8
1958-59 ..	40.7	48.2	28.5	(a)	16.8	30.0	..	(b) 32.7
Year—								
1958-59 ..	45.9	52.4	32.2	(a)	25.5	..	..	(b) 37.4
1959-60 ..	48.0	53.3	31.3	(a)	25.5	..	..	(b) 36.4
1960-61 ..	45.2	57.3	29.1	(a)	1.0	..	..	(b) 33.8
1961-62 ..	45.7	58.0	30.6	..	21.9	..	..	34.7
1962-63—								
Hybrid ..	48.8	62.9	33.5	..	} 12.2	..	..	(b) 35.6
Other ..	34.9	37.9	27.2	(a)		..	..	(b) 35.6
Total ..	46.1	59.5	32.0	(a)	12.2	..	..	(b) 35.6

(a) Not available for publication. (b) Incomplete. See footnote (a). (c) 56 lb. per bushel. (d) Less than 500 bushels.

The average yield for Australia for the five-year period ended 1962-63 was 35.5 bushels per acre. Among principal producing countries, the United States of America averaged 64.2 bushels per acre and Italy 43.2 bushels for 1962.

(iii) *Price of Maize.* The average wholesale price of maize in the Melbourne market in 1962-63 was 16s. 10½d. a bushel compared with 18s. 1½d. in 1961-62.

(iv) *Value of Crop.* The estimated gross value of the crop in each State for the 1962-63 season and the value per acre were as follows.

## MAIZE FOR GRAIN: VALUE OF CROP, 1962-63

Particulars	N.S.W.	Vic.	Q'land	S. Aust.	W. Aust.	Tas.	Aust.
Aggregate value .. £'000	1,600	143	3,018	(a)	1	..	4,762
Value per acre .. £	34.4	39.4	18.9	(a)	15.6	..	22.7

(a) Not available for publication.

(v) *Exports of Maize and Maize Products.* Details of exports of Australian-produced maize for the five years ended 1962-63 are shown on the next page.

## MAIZE: EXPORTS, AUSTRALIA

Particulars			1958-59	1959-60	1960-61	1961-62	1962-63
Quantity	..	.. '000 bus.	15	22	3	2	552
Value..	..	.. £A.'000 f.o.b.	10	15	4	3	240

The increase in exports of maize in 1962-63 was due principally to the shipment of 474,000 bushels to Japan, a country to which there had been no previous exports.

Imports of maize into Australia are not recorded separately, but are considered to be negligible.

Exports of cornflour in 1962-63 were 130,100 lb., valued at £2,686, compared with 16,100 lb. valued at £1,033 in 1961-62. These figures include some quantities of "cornflour" made from wheat. Imports of cornflour into Australia are not recorded separately.

(vi) *World Production.* According to figures issued by the United States Department of Agriculture, world production of maize in the year 1962 amounted to 7,485 million bushels, harvested from 241 million acres, giving an average yield per acre of 31.1 bushels. This compared with production in the previous year of 7,460 million bushels from 240 million acres, and an average yield of 31.1 bushels per acre.

The United States of America is the most important maize-producing country in the world, and during the three years ended 1962 the area sown to maize in that country averaged 62 million acres or 26 per cent. of the world total. During the same period, production averaged 3,723 million bushels or about 50 per cent. of the world total.

6. Rice.—(i) *General.* The principal rice-growing areas of the world are confined almost entirely to Asia, although limited quantities are grown in other countries. In Australia, rice was first cultivated at the Yanco Experimental Farm in New South Wales, but it was not grown commercially until 1924-25, when 16,240 bushels were produced from 153 acres. Favoured by high average yields and protected by tariff, rice culture made rapid progress in the Murrumbidgee Irrigation Area until local requirements were met and a surplus became available for export. The acreage sown in this area is controlled, as the quantity of water available is limited.

Until recent years, rice-growing in Australia was practically confined to the Murrumbidgee Irrigation Area in New South Wales. However, there is now some experimental rice-growing in Western Australia and the Northern Territory, but particulars are not available for publication. Small quantities have also been produced in Queensland in some years.

(ii) *Area, Production and Exports.* Details relating to area, production, and Australian-produced exports for the years 1958-59 to 1962-63 are shown in the following table.

## RICE: AREA, PRODUCTION AND EXPORTS, AUSTRALIA(a)

Season	No. of holdings growing rice(b)	Area	Production (paddy rice)		Average yield (paddy) per acre	Exports(c)	
			Quantity	Gross value(d)		Un-cleaned	Cleaned
			Acres	'000 bushels (e)	£'000	Bushels (e)	Cwt.
1958-59 .. ..	775	47,054	6,619	4,731	140.7	182,583	704,360
1959-60 .. ..	852	48,950	6,732	4,450	137.5	265,449	1,055,821
1960-61 .. ..	787	46,117	6,001	4,125	130.1	359,441	876,175
1961-62 .. ..	878	50,185	7,045	3,832	140.4	280,540	748,920
1962-63 .. ..	956	54,929	7,129	3,838	129.8	239,820	905,580

(a) Particulars of area and production for Western Australia and Northern Territory are not available for publication, and are excluded. (b) Twenty acres or more in area. (c) Imports into Australia are not recorded separately, but are considered to be negligible. (d) Excludes the value of straw. (e) 42 lb. per bushel.

The bulk of Australia's exports of rice in 1962-63 was shipped to Papua and New Guinea, the Pacific Islands and the United Kingdom.

### § 4. Fodder Crops

1. Hay.—(i) *General.* Because of the comparatively unreliable nature of rainfall in Australian agricultural and pastoral areas, hay as a fodder crop occupies a position of importance. In 1962-63, hay represented 8 per cent. of the total area of crops.

Up to 1946-47, hay, in terms of area, was second only to wheat for grain, but in more recent years it has been supplanted by green fodder (for feeding-off) and oats for grain.

Hay is generally considered to include cereal hay, meadow hay and lucerne hay. Cereal crops cut early for hay contain a higher level of protein than those cut late.

In most European countries, hay is made almost entirely from meadow pastures, but in Australia a very large proportion is made from cereals and lucerne, the hay being stored loose, in sheaves or baled. Because of its bulk, hay is usually produced for individual or local use, except in times of drought, when large inter-regional transfers may take place.

Meadow hay requires greater care in preparation than cereal hay. Baling must be spaced carefully behind mowing to ensure that the bales are dry enough to prevent moulding, but not so dry as to result in excessive leaf loss. The leaves contain the bulk of the protein. Lucerne hay requires similar attention.

(ii) *Area and Production.* For a number of reasons, particularly the variations in the relative prices of grain and hay and whether the season is favourable or not for a grain crop, the area of hay is apt to fluctuate considerably. The area, production and yield per acre of hay of all kinds in the several States during the years 1958-59 to 1962-63 and the averages for the three-year periods ended 1938-39, 1948-49 and 1958-59 are shown below.

#### HAY: AREA, PRODUCTION AND YIELD PER ACRE

Season	N.S.W.	Vic.	Qld	S.A.	W.A.	Tas.	N.T.	A.C.T.	Aust.
<b>AREA ('000 ACRES)</b>									
Average for three years ended—									
1938-39 ..	859	1,122	67	540	439	81	..	3	3,111
1948-49 ..	516	642	66	287	245	93	..	3	1,852
1958-59 ..	556	978	64	336	305	129	(a)	4	4,372
Year—									
1958-59 ..	747	1,282	78	419	333	154	(a)	5	3,018
1959-60 ..	482	848	81	245	319	127	(a)	3	2,105
1960-61 ..	750	1,286	84	393	284	171	1	4	2,973
1961-62 ..	594	922	95	209	294	157	1	2	2,274
1962-63 ..	587	1,251	87	287	340	165	1	2	2,720
<b>PRODUCTION ('000 TONS)</b>									
Average for three years ended—									
1938-39 ..	975	1,181	94	591	434	120	..	3	3,398
1948-49 ..	618	987	119	396	275	153	..	4	2,552
1958-59 ..	752	1,712	129	476	377	248	(b)	7	3,701
Year—									
1958-59 ..	1,183	2,299	169	672	455	302	(b)	10	5,090
1959-60 ..	779	1,351	179	207	433	221	(b)	7	3,177
1960-61 ..	1,243	2,338	167	616	380	326	1	8	5,079
1961-62 ..	923	1,585	212	286	396	286	(b)	5	3,693
1962-63 ..	965	2,376	197	406	453	313	1	6	4,717
<b>YIELD PER ACRE (TONS)</b>									
Average for three years ended—									
1938-39 ..	1.14	1.05	1.40	1.09	0.99	1.48	..	1.00	1.09
1948-49 ..	1.20	1.54	1.80	1.38	1.12	1.65	..	1.33	1.38
1958-59 ..	1.35	1.75	2.02	1.42	1.24	1.92	0.54	1.75	1.56
Year—									
1958-59 ..	1.58	1.79	2.17	1.60	1.37	1.96	0.47	1.98	1.69
1959-60 ..	1.62	1.59	2.21	0.84	1.36	1.75	0.91	2.15	1.51
1960-61 ..	1.66	1.82	1.98	1.57	1.34	1.91	0.78	2.12	1.71
1961-62 ..	1.55	1.72	2.22	1.37	1.35	1.82	0.76	2.17	1.62
1962-63 ..	1.64	1.90	2.27	1.41	1.33	1.89	1.21	2.38	1.73

(a) Less than 500 acres.

(b) Less than 500 tons.

A graph showing the area under hay since 1900-01 appears on page 993 of Year Book No. 49.

(iii) *Varieties Grown.* Information regarding areas cut for hay in 1962-63 is given in the following table.

**HAY: AREA OF VARIOUS KINDS GROWN, 1962-63**  
(Acres)

State or Territory	Wheaten	Oaten	Lucerne	Other	Total
New South Wales .. ..	85,360	65,096	208,574	228,199	587,229
Victoria .. ..	37,139	217,328	75,897	920,177	1,250,541
Queensland .. ..	7,676	3,110	68,736	7,144	86,666
South Australia .. ..	44,278	116,351	30,224	96,590	287,443
Western Australia .. ..	43,915	170,892	1,197	123,829	339,833
Tasmania .. ..	302	14,113	635	150,392	165,442
Northern Territory .. ..	..	..	..	586	586
Australian Capital Territory ..	35	464	1,552	467	2,518
<b>Australia .. ..</b>	<b>218,705</b>	<b>587,354</b>	<b>386,815</b>	<b>1,527,384</b>	<b>2,720,258</b>

For all States and the Territories combined, the proportions of the areas sown to the principal kinds of hay in 1962-63 were 21.6 per cent. for oaten, 14.2 per cent. for lucerne, 8.0 per cent. for wheaten, and 56.2 per cent. for other hay.

(iv) *Value of Hay Crop.* The following table shows the estimated gross value, and the value per acre, of the hay crop of the several States for the 1962-63 season.

**HAY: VALUE OF CROP, 1962-63**

Particulars	N.S.W.	Vic.	Q'land	S. Aust.	W. Aust.	Tas.	A.C.T.	Aust.
Aggregate value .. £'000	10,197	22,434	3,395	3,518	4,647	2,216	60	46,479
Value per acre .. £	17.4	17.9	39.2	12.2	13.7	13.4	23.8	17.1

(a) Includes £12,000 in the Northern Territory.

(v) *Farm Stocks of Hay.* Particulars of stocks of hay held on farms at 31st March in each year 1959 to 1963 are given in the table below.

**STOCKS OF HAY HELD ON FARMS**  
(Tons)

31st March—	N.S.W.	Vic.	Q'land	S. Aust.	W. Aust.	Tas.	A.C.T.	Aust. (a)
1959 ..	1,463,334	2,464,050	166,657	679,003	290,988	311,825	9,323	5,385,180
1960 ..	1,535,252	1,766,857	203,675	304,227	292,086	255,471	10,778	4,368,346
1961 ..	1,704,486	2,640,249	155,209	648,267	258,859	327,696	12,338	5,747,104
1962 ..	1,775,977	1,847,725	231,335	496,564	254,377	305,108	12,241	4,923,327
1963 ..	1,609,639	2,197,725	194,948	470,202	273,500	333,650	6,896	5,086,560

(a) Excludes the Northern Territory, for which particulars are not available.

(vi) *Exports.* Under normal conditions, hay, whether whole or in the form of chaff, is somewhat bulky for overseas trade, and consequently does not figure largely among Australian exports. During 1962-63, exports amounting to 2,386 tons, valued at £48,596, were made principally to Singapore, the Federation of Malaya, and Hong Kong. There were no imports of hay in 1962-63.

2. Green Fodder.—(i) *General.* Considerable areas are devoted to the growing of green fodder, usually as an adjunct to cereal operations or as a minor crop in irrigation areas. The areas recorded in respect of green fodder include areas of crops cut for feeding to live-stock as green fodder or ensilage, together with areas fed off to stock as green forage.

Statistics of green fodder exclude areas which may have been sown with the intention of harvesting for grain, but which, owing to adverse conditions, showed no promise of producing grain or even hay and were fed off to live-stock. The principal crops cut for green fodder are oats, wheat and lucerne, while small quantities of barley, sorghum, maize, rye and sugar cane are also used in this way. In 1962-63, the area under green fodder (4,951,637 acres) consisted of oats (2,072,287 acres), lucerne (1,915,126 acres), wheat (220,681 acres), barley (158,180 acres), sorghum (124,372 acres), maize (39,146 acres), rye (22,124 acres), sugar cane (1,249 acres) and other crops (398,472 acres). Particulars concerning the area of green fodder in the several States during each of the years 1958-59 to 1962-63 are given in the following table.

**GREEN FODDER: AREA**  
(Acres)

Season	N.S.W.	Vic.	Q'land	S. Aust.	W. Aust.	Tas.	N.T.	A.C.T.	Aust.
1958-59 ..	1,238,314	319,150	638,667	550,366	769,199	61,322	273	667	3,577,958
1959-60 ..	1,578,759	422,237	725,155	595,713	708,793	62,229	240	968	4,094,094
1960-61 ..	1,691,408	430,920	874,702	743,538	606,039	59,563	144	1,247	4,407,561
1961-62 ..	1,829,867	539,020	864,461	787,388	622,067	57,000	588	1,197	4,701,388
1962-63 ..	1,900,130	477,432	912,018	927,807	667,890	64,940 (a)	314	1,105	4,951,637

(a) Not comparable with statistics for earlier years.

In the 1962-63 season, green fodder ranked second to wheat in area of crops throughout Australia. A graph showing the area sown to green fodder appears on page 993 of Year Book No. 49.

(ii) *Value of Green Fodder Crops.* The value of these crops is variously estimated in the several States, but the Australian total, excluding Western Australia, may be taken as approximately £8,700,000 for the 1961-62 season and £9,600,000 for the 1962-63 season.

3. *Ensilage.*—(i) *General.* Ensilage is produced from herbage compacted tightly to exclude air and kept from contact with air and extraneous moisture to avoid moulding. Fermentation results in a dark mass of high protein and lactic acid content. Molasses may be added to hasten fermentation. Ensilage may be stored in pits or stacks or in constructed silos. In recent years, production of ensilage has increased substantially.

(ii) *Government Assistance.* The several State Governments devote a considerable amount of attention to the education of the farming community with regard to the value of ensilage. Monetary aid is afforded in the erection of silos, and expert advice is supplied in connexion with the design of the silos and the cutting and packing of the ensilage.

(iii) *Production and Stocks.* Information regarding production and farm stocks of ensilage for the years ended 31st March, 1959 to 1963, is given in the following table.

**ENSILAGE: PRODUCTION AND FARM STOCKS**  
(Tons)

Period	N.S.W.	Vic.	Q'land	S. Aust.	W. Aust.	Tas.	A.C.T.	Total
<b>Production during—</b>								
1958-59 season ..	243,990	301,839	73,365	68,988	76,997	63,974	410	829,563
1959-60 ..	202,821	281,566	60,129	19,744	73,265	46,933	90	684,548
1960-61 ..	256,459	303,198	51,198	100,727	50,911	72,344	80	834,917
1961-62 ..	196,625	261,884	73,838	52,451	51,364	77,781	700	714,643
1962-63 ..	210,653	295,914	63,489	64,206	48,806	68,117	290	751,475
<b>Farm stocks, at—</b>								
31st March, 1959 ..	333,178	254,695	126,693	50,170	53,549	62,758	435	881,478
.. .. 1960 ..	404,777	201,584	136,317	21,773	51,807	50,671	330	867,259
.. .. 1961 ..	499,244	231,315	117,749	79,269	43,518	46,570	80	1,017,745
.. .. 1962 ..	567,801	181,383	139,788	68,614	37,224	60,157	1,305	1,056,272
.. .. 1963 ..	602,585	263,440	146,286	63,315	37,415	61,110	1,768	1,175,919

## § 5. Industrial Crops

1. **Sugar Cane.**—(i) *General.* The growing of sugar cane is restricted to those coastal areas in Queensland and northern New South Wales which have suitable climatic and soil conditions. Considerable areas in more southern coastal districts of New South Wales previously devoted to this crop are now used for dairying owing to the uncertainty of rainfall.

The Bureau of Sugar Experiment Stations in Queensland renders useful service to the sugar industry by advocating and demonstrating better methods of cultivation and the more scientific use of fertilizers, lime, etc., and by producing and distributing improved varieties of cane.

(ii) *Sugar Agreements and Marketing Arrangements.* (a) *In Australia.* Reference was made in Year Book No. 37, pages 940–1, to the agreement operating between the Commonwealth and Queensland Governments in respect of the sugar industry in Australia. Briefly, the agreement places an embargo on sugar importations and fixes the price of sugar consumed in Australia. The current agreement is for the period from 1st September, 1961 to 31st August, 1967. The Commonwealth Government appointed a Committee of Enquiry in 1960 to investigate all facets of the sugar and canned fruits industries. The Committee presented its report, publication of which was restricted to a summary of conclusions and recommendations, in 1961. There was no variation of the consequent Agreement.

Production is regulated by the limited export quotas allocated under the International Sugar Agreement (*see (b) below*). At the mill level, this is established by means of mill peaks. The central collecting system used considerably assists in controlling the industry.

The Queensland Government acquires the whole of the sugar production of that State and of New South Wales by legislation and private agreement respectively. The net proceeds of all sugar sold are pooled and a uniform price paid to mills.

(b) *International Sugar Agreement.* The International Sugar Agreement of 1937 was superseded by the International Sugar Agreements of 1953 and 1958. Details of the 1937 and 1953 Agreements were given in Year Books No. 40, pages 881–2, and No. 48, page 936, respectively.

The 1958 Agreement, which came into operation on 1st January, 1959, establishes basic export quotas for exporting countries. The British Commonwealth is allocated a total quota, the distribution of which remains a matter for internal arrangement by the countries and territories concerned (*see (c) below*). The Australian quota for 1960 and 1961 was approximately 651,000 tons.

The quota and price provisions of the International Sugar Agreement cover only the first three years to 31st December, 1961. A conference in Geneva in 1961 failed to reach agreement on quota provisions for 1962 and 1963. The conference adjourned with a resolution that it be reconvened if circumstances became favourable for an agreement on quotas.

The principal practical effect of the adjournment of the 1961 conference is that former export limitations on participating exporting countries, including Australia, do not apply until such time as agreement on this question is again reached at a resumed session of that conference, or at a newly convened conference.

The question of convening a United Nations conference to consider re-introduction of an Agreement with quota provisions was deferred at a meeting of the International Sugar Council in April, 1963. A preparatory committee is now studying the bases and possible framework of a new Agreement.

(c) *British Commonwealth Sugar Agreement.* On 1st January, 1953, the British Commonwealth Sugar Agreement became effective. This agreement, which has been extended to 1971, provides for Australia to export a maximum of 600,000 tons per annum, subject to annual review. Of the 600,000 tons, 315,000 tons are purchased by the United Kingdom Government at an annually negotiated price and the balance is sold at world market prices plus tariff preferences where applicable. The negotiated prices for 1962 and 1963 were £Stg.45 15s. 3d. and £Stg.46 0s. 10d. In 1960 and 1961, Australia had an additional quota of 51,000 tons as its share of the increased allocation to Commonwealth exporters under the current International Sugar Agreement. This tonnage was not to receive the benefit of tariff preferences. Export limitations under the International Sugar Agreement are not applicable from 1962 onwards (*see (b) above*).

(iii) *Fruit Industry Sugar Concession Committee and Sugar Rebates.* The Fruit Industry Sugar Concession Committee was established by agreement between the Commonwealth and Queensland Governments and administers a fund contributed by the Queensland Government on behalf of the sugar industry.

Until 15th May, 1960, a rebate of £2 4s. per ton of refined sugar used in processing approved fruit products was paid to Australian manufacturers, provided they bought the fresh fruit at prices not lower than those declared by the Committee as reasonable. This was increased to £5 per ton from 16th May, 1960.

An export sugar rebate is also paid by the Committee to exporters of approved fruit products to ensure that manufacturers do not pay higher prices for Australian sugar than the price for which the cheapest imported sugar could be landed duty free in Australia.

Under the Sugar Agreement for 1961-67, the Queensland Government contributes to the fund £264,000 annually and also reimburses the Committee for the actual expenditure on export sugar rebates. Any money remaining in the fund after the payment of rebates and administrative expenses may be used by the Committee for the promotion of the use and sale of fruit products, or for scientific research for the purpose of increasing the yield per acre of Australian fruit.

(iv) *Bulk Handling of Sugar.* The conversion of the Australian sugar industry to bulk handling and mechanized loading and unloading of raw sugar is well advanced. About 95 per cent. of raw sugar in Australia is now handled in bulk without being bagged at any stage.

Terminals for the bulk loading of sugar were opened at Mackay in 1957, at Lucinda and Bundaberg in 1958, at Townsville in 1959, and at Mourilyan in 1960. A second storage shed has been completed at Mackay, and additions have been commenced at Bundaberg. At Cairns, a new terminal was brought into operation in June, 1964. Approval has been given for the erection of a third storage shed at Mackay and second sheds at Townsville and Bundaberg.

Bulk receiving facilities are in operation at all Australian refineries.

(v) *Area.* A brief outline of the development of the industry was included in earlier issues of the Year Book (*see* No. 38, p. 985). The area of sugar cane in Australia for the seasons 1958-59 to 1962-63 and the averages for the three-year periods ended 1938-39, 1948-49 and 1958-59 are shown in the following table.

SUGAR CANE: AREA(a)  
(Acres)

Season	New South Wales			Queensland			Australia			Total
	Area crushed	Area of stand-over and newly-planted cane	Area cut for plants	Area crushed	Area of stand-over and newly-planted cane	Area cut for plants	Area crushed	Area of stand-over and newly-planted cane	Area cut for plants	
Average for three years ended—										
1938-39	10,468	10,366	n.a.	247,632	89,690	n.a.	258,100	100,056	n.a.	n.a.
1948-49	7,687	8,666	338	230,905	90,448	12,891	238,592	99,114	13,229	350,935
1958-59	11,094	9,462	619	360,709	110,786	12,596	371,803	120,248	13,215	505,266
Year—										
1958-59	13,368	9,727	616	356,210	118,200	12,391	369,578	127,927	13,007	510,512
1959-60	14,248	10,510	392	299,732	151,114	11,039	313,980	161,624	11,431	487,035
1960-61	13,657	11,385	568	327,246	110,704	11,574	340,903	122,089	12,142	475,134
1961-62	14,655	11,299	482	372,223	87,831	12,339	386,878	99,130	12,821	498,829
1962-63	14,109	12,656	495	387,477	80,438	11,313	401,586	93,094	11,808	506,488

(a) Excludes areas cut for green fodder.

The areas shown in the preceding table do not include the small acreage cut for green fodder, which in 1962-63 amounted to 1,249 acres. The whole area planted is not cut for crushing during any one season, there being always a considerable amount of young and "stand-over" cane as well as a small quantity required for plants.

(vi) *Production of Cane and Sugar.* The production of sugar cane in 1962-63 was at the record level of 12.7 million tons, which was 33 per cent. higher than production in 1961-62, and 25 per cent. higher than the previous record production, that for the 1958-59 season. A graph showing the production of sugar appears on page 995 of Year Book No. 49.

In the following table, production data relating to cane and raw sugar are shown for the seasons 1958-59 to 1962-63 together with averages for the three-year periods ended 1938-39, 1948-49 and 1958-59.

**SUGAR CANE: PRODUCTION OF CANE AND RAW SUGAR**  
(Tons)

Season	New South Wales		Queensland		Australia	
	Cane	Sugar(a)	Cane	Sugar(a)	Cane	Sugar(a)
Average for three years ended—						
1938-39 .. ..	324,531	43,419	5,215,217	760,994	5,539,748	804,413
1948-49 .. ..	283,613	35,444	4,767,291	700,053	5,050,904	735,497
1958-59 .. ..	356,324	43,881	9,221,497	1,260,564	9,577,821	1,304,445
Year—						
1958-59 .. ..	471,798	58,870	9,740,795	1,353,543	10,212,593	1,412,413
1959-60 .. ..	574,527	70,677	8,427,731	1,217,803	9,002,258	1,288,480
1960-61 .. ..	480,147	62,978	8,685,426	1,319,633	9,165,573	1,382,611
1961-62 .. ..	555,858	67,448	9,020,734	1,315,393	9,576,592	1,382,841
1962-63 .. ..	637,310	79,733	12,098,582	1,770,084	12,735,892	1,849,817

(a) Raw sugar at 94 net titre.

(vii) *Average Production of Cane Sugar.* Owing to climatic variations, the crop in New South Wales matures in from 20 to 24 months, whereas in Queensland a period of from 12 to 16 months is sufficient. The average yields of cane and sugar per acre for the years 1958-59 to 1962-63 and for the three-year periods ended 1938-39, 1948-49 and 1958-59 are shown below. Allowance should be made in interpreting these figures for the disparity in maturing periods noted above.

**SUGAR CANE AND SUGAR: YIELD PER ACRE**  
(Tons)

Season	New South Wales			Queensland			Australia		
	Cane per acre crushed	Sugar per acre crushed	Cane to each ton of sugar	Cane per acre crushed	Sugar per acre crushed	Cane to each ton of sugar	Cane per acre crushed	Sugar per acre crushed	Cane to each ton of sugar
Average for three years ended—									
1938-39 .. ..	31.00	4.15	7.47	21.06	3.07	6.85	21.46	3.12	6.89
1948-49 .. ..	36.90	4.61	8.00	20.65	3.03	6.81	21.17	3.08	6.87
1958-59 .. ..	32.12	3.96	8.12	25.57	3.49	7.32	25.76	3.52	7.34
Year—									
1958-59 .. ..	35.29	4.40	8.01	27.35	3.80	7.20	27.63	3.82	7.23
1959-60 .. ..	40.32	4.96	8.13	28.12	4.06	6.92	28.67	4.10	6.99
1960-61 .. ..	35.16	4.61	7.62	26.54	4.03	6.58	26.89	4.06	6.63
1961-62 .. ..	37.93	4.60	8.24	24.23	3.53	6.86	24.75	3.57	6.93
1962-63 .. ..	45.17	5.65	7.99	31.22	4.57	6.84	31.71	4.61	6.88



(viii) *Production and Utilization.* Details of the production and utilization of sugar for the years 1958-59 to 1962-63 are shown below. Consumption is shown in terms of refined sugar, including that consumed in manufactured products.

### SUGAR: PRODUCTION AND UTILIZATION, AUSTRALIA

Year	Changes in stocks (a)	Pro-duction (raw)	Exports (b)	Miscel-laneous uses(c)	Consumption in Australia(d)	
					Total	Per head
	'000 tons	'000 tons	'000 tons	'000 tons	'000 tons	lb.
1958-59 .. ..	+10.3	1,353.4	827.4	18.4	497.3	112.0
1959-60 .. ..	+25.6	1,270.6	725.2	18.6	501.2	110.4
1960-61 .. ..	-10.3	1,324.8	815.6	21.0	498.5	107.4
1961-62 .. ..	-2.4	1,404.2	862.5	18.0	526.1	111.1
1962-63 .. ..	+110.4	1,831.6	1,175.8	17.8	527.6	109.3

(a) Includes allowance for estimated sugar content of imported foodstuffs. (b) Includes sugar content of manufactured products exported. (c) Includes refining losses and quantities used in golden syrup and treacle. (d) Includes sugar content of manufactured products consumed.

(ix) *Consumption in Factories.* The quantity of refined sugar used in factories in 1962-63 amounted to 308,665 tons compared with 309,577 tons in 1961-62 and 307,000 tons in 1960-61. Particulars of sugar used in establishments not classified as factories are not available, and consequently these quantities are deficient to that extent. In 1962-63, consumption by factories engaged in the production of jams, jellies and preserved fruit amounted to 99,307 tons, by those producing confectionery, ice cream, etc., to 34,368 tons, by breweries to 46,361 tons, and by factories producing aerated waters, cordials, etc., to 47,819 tons.

(x) *Sugar By-products.* Industrial chemicals, together with large quantities of molasses, are produced as by-products in sugar mills. Further, during the period 1939 to 1960, building boards were made from the residue of crushed fibre after removal of the sugar content from sugar cane. These boards possessed high insulating and sound absorbing properties which made them particularly suitable for use in walls and ceilings. Early in the period referred to, the boards were manufactured almost entirely from crushed fibre residue, the remaining component being non-millable pine, but gradually the pine content was increased until by 1960 fibre residue was no longer being used. The main purpose for which crushed cane fibre residue is now used is furnace fuel in sugar mills.

(xi) *Sugar Prices and Returns.* The prices of sugar in Australia, from 1958 to 1962 in the case of raw sugar, and from 1956 to 1963 in the case of refined sugar (as determined under the Sugar Agreement in Australia—see para. ii (a), p. 1029), are shown in the following table.

### SUGAR: PRICES IN AUSTRALIA

Year	Raw sugar, 94 net titre			Refined sugar		
	Average return per ton received by millers and growers for—			Date of determination	Wholesale price to retailer per ton	Retail price, capital cities per lb.
	Home consumption	Exports(a)	Whole crop (a)			
	£ s. d.	£ s. d.	£ s. d.	£ s. d.	d.	
1958 ..	54 15 0	39 8 2	45 9 11	14.5.56 to 15.5.60	82 1 0	10
1959 ..	56 8 6	40 6 2	47 9 11	16.5.60 to 31.12.63	90 5 2	11
1960 ..	62 10 6	39 19 6	49 2 1			
1961 ..	62 9 6	37 15 0	48 4 4			
1962 ..	62 11 0	41 1 10	47 19 10			

(a) Includes "excess" sugar.

Details of the disposal of the crop, net value of exports and the average price realized during each of the years 1958-59 to 1962-63 are shown in the following table.

**RAW SUGAR(a): NET RETURNS, AUSTRALIA**  
(Source: The Queensland Sugar Board.)

Year	Proportion exported	Net value of exports per ton	Average price per ton for whole crop	Estimated value of crop
	Per cent.	£ s. d.	£ s. d.	£'000
1958-59 .. ..	60.53	39 8 2	45 9 11	64,263
1959-60 .. ..	55.42	40 6 2	47 9 11	61,131
1960-61 .. ..	59.53	39 19 6	49 2 1	67,869
1961-62 .. ..	57.66	37 15 0	48 4 4	66,653
1962-63 .. ..	67.85	41 1 10	47 19 10	88,748

(a) 94 net titre.

The estimated value of the raw sugar produced has been based upon details taken from the audited accounts of the Queensland Sugar Board. The values stated comprise the gross receipts from sales in Australia and overseas, less refining costs, freight, administrative charges, etc., and export charges, but including concessions to the fruit industry and other rebates which in 1962-63 amounted to £1,280,000. The value thus obtained represents the net market value of all raw sugar sold, which, less the rebates, is divided between the growers and millers in the approximate proportions of 70 per cent. and 30 per cent. respectively.

(xii) *Exports of Sugar.* Particulars of the exports of Australian-produced cane sugar (raw and refined) for each year from 1958-59 to 1962-63 are as follows.

**SUGAR: EXPORTS, AUSTRALIA**

Particulars	1958-59	1959-60	1960-61	1961-62	1962-63
Quantity .. .. tons	802,971	701,319	796,496	843,528	1,145,958
Value .. .. £A.'000 f.o.b.	32,163	26,671	35,071	33,894	45,520

2. Peanuts.—(i) *General.* Peanuts, or groundnuts, are a sub-tropical legume (and hence summer growers), the pods of which mature beneath the surface of the soil. They thus require well drained, light textured soils. At harvest, the plant is pulled, wind-rowed, field-cured for two to four weeks and then threshed to recover the pods. The main products of the industry are nuts, peanut oil, oil cake and synthetic protein fibre.

The production of peanuts in Australia is confined mainly to Queensland, although small quantities are grown in New South Wales, Western Australia and the Northern Territory.

(ii) *Area and Production.* Details of the area and production of peanuts are given in the table below for the years 1958-59 to 1962-63.

**PEANUTS: AREA AND PRODUCTION**

Season	Area (acres)				Production (cwt.)			
	N.S.W.	Q'land	N.T.	Aust.(a)	N.S.W.	Q'land	N.T.	Aust.(a)
1958-59 .. ..	867	59,279	211	60,357	11,623	621,687	2,412	635,722
1959-60 .. ..	837	41,547	388	42,772	10,639	360,314	4,306	375,259
1960-61 .. ..	788	41,659	335	42,782	9,578	446,215	1,215	457,008
1961-62 .. ..	573	33,131	307	34,011	6,003	292,267	1,343	299,613
1962-63 .. ..	395	35,552	(b)	c 35,947	4,258	315,144	(b)	c 319,402

(a) Excludes Western Australia, for which details are not available for publication.

(b) Not available for publication.

(c) Incomplete; excludes Northern Territory.

(iii) *Value, Consumption and Trade.* The gross value of the 1962-63 crop was £1,557,000 which was approximately £216,000 more than in 1961-62. All production is consumed in Australia.

In recent years, considerable quantities of peanut kernels have been imported, chiefly from India, for the extraction of oil. Total supplies available for consumption in Australia in 1962-63 were 513,100 cwt. (shell equivalent), after allowing for a decrease of 296,420 cwt. in stocks held by the Peanut Marketing Board. Supplies were made up of 139,500 cwt. from Australian production received into store by the Board and 77,180 cwt. imported.

3. **Hops.**—(i) *General.* Hops are grown from perennial rootstocks over deep, well-drained soils in localities sheltered from the wind. The hop-bearing vine shoots are carried upon wire and coir trellises, from which they are later harvested, principally by hand. The green hops are kiln-dried and bleached with sulphur dioxide fumes, following which the cured hops are pressed into bales.

Hop growing in Australia is confined to the Derwent, Huon and Channel areas of Tasmania and the Ovens and King Valleys in Victoria. A small area is also under hops in Western Australia, near Manjimup, but the details are not available for publication.

(ii) *Production and Imports.* The production of hops in Australia is insufficient to meet local requirements, and additional supplies are imported to meet the needs of the brewing industry. In the following table, details of the production and imports of hops and the quantity of hops used in breweries are shown for each of the years 1958-59 to 1962-63. Exports of hops are not recorded separately, but are negligible.

#### HOPS: PRODUCTION AND DISPOSAL, AUSTRALIA

Year	Production(a)		Imports	Net available supplies (b)	Quantity used in breweries
	Quantity	Gross value			
	Cwt.	£'000	Cwt.	Cwt.	Cwt.
1958-59 .. .. .	36,499	1,273	8,471	44,970	38,664
1959-60 .. .. .	31,790	1,159	..	31,790	40,357
1960-61 .. .. .	33,099	1,179	991	34,090	40,018
1961-62 .. .. .	32,936	1,242	5,569	38,505	39,000
1962-63 .. .. .	33,629	1,285	1,337	34,966	38,202

(a) Excludes production in Western Australia, for which details are not available for publication.  
 (b) Disregards movements in stocks.

4. **Flax.**—(i) *Flax for Fibre.* This crop has a winter-growing season in Australia. The whole plant, after harvesting, is retted and scutched at local mills to recover the linen fibre and tow. The seeds may be sold to oil mills and the refuse used for stock feed.

Details of the area under flax and the production of fibre are given in the following table.

#### FLAX FOR FIBRE: AREA AND PRODUCTION

Season	Victoria	W. Aust.	Australia
AREA (ACRES)			
1958-59 .. .. .	..	2,015	2,015
1959-60 .. .. .	..	1,307	1,307
1960-61 .. .. .	430	736	1,166
1961-62 .. .. .	323	91	414
1962-63 .. .. .	419	871	1,290

FLAX FOR FIBRE: AREA AND PRODUCTION—*continued*

Season	Victoria	W. Aust.	Australia
PRODUCTION (TONS OF FIBRE)			
1958-59 .. .. .	..	3,665	3,665
1959-60 .. .. .	..	2,723	2,723
1960-61 .. .. .	592	1,176	1,768
1961-62 .. .. .	514	183	697
1962-63 .. .. .	648	2,152	2,800

(ii) *Flax for Linseed.* Fibre varieties are uneconomic for seed production, and prior to 1948-49, the growing of flax for linseed oil had not been developed extensively in Australia. Since then, however, action has been taken to develop this industry, the ultimate objective being the production of sufficient linseed to meet Australia's total oil requirements.

The question of assistance to the industry was investigated by the Commonwealth Tariff Board in 1953, and its conclusions are contained in its Report on *Linseed and Linseed Products* dated 23rd October, 1953.

The main producing areas are the Darling Downs in Queensland, the wheat belt of New South Wales, and the western and north-eastern districts of Victoria.

Details of the area and production of flax for linseed are shown in the following table for the seasons 1958-59 to 1962-63.

## FLAX FOR LINSEED: AREA AND PRODUCTION

Season	N.S.W.	Vic.	Q'land	S. Aust.	W. Aust.	Aust.
AREA (ACRES)						
1958-59 .. .. .	4,622	8,817	22,839	703	244	37,225
1959-60 .. .. .	11,933	24,850	60,837	1,687	186	99,493
1960-61 .. .. .	11,823	6,179	75,088	2,115	483	95,688
1961-62 .. .. .	7,266	17,711	34,390	1,513	1,253	62,133
1962-63 .. .. .	11,493	25,232	58,493	1,220	626	97,064
PRODUCTION (TONS OF LINSEED)						
1958-59 .. .. .	1,196	2,769	6,510	151	42	10,668
1959-60 .. .. .	2,922	7,391	16,247	191	48	26,799
1960-61 .. .. .	1,870	1,013	10,394	218	70	13,565
1961-62 .. .. .	856	6,093	5,187	275	178	12,589
1962-63 .. .. .	2,634	8,108	14,577	290	136	25,745

5. *Cotton.*—(i) *General.* This annual shrub requires a hot climate and inter-row weed control. Lint (long fibres) is extracted from the seed cotton in the ginneries, and is used for yarn. The residue, consisting of *linters* (short fibres), kernels and hulls (outer seed coat), is treated in oil mills. From linters and kernels are produced such items as short-fibred cotton, cotton-seed oil for human consumption and industrial purposes, and meal cakes for stock feed. The hulls may be used as fuel.

The production of cotton in Australia has, until recently, been restricted mainly to the coastal river valleys of Queensland. In recent years, however, it has been grown in some other States, namely along the Murray river in New South Wales and Victoria, at Narrabri in New South Wales, and in the Kimberleys in Western Australia.

Cotton spinning and weaving industries are referred to in Chapter VI. Manufacturing Industry.

(ii) *Cotton Bounty.* For particulars of the *Cotton Bounty Act* 1951, and amendments of 1952, 1955 and 1957, see page 1044 of Year Book No. 49.

Under the *Raw Cotton Bounty Act* 1963, the Commonwealth pays a bounty on raw cotton produced and sold for use in Australia at the rate of 16.125d. per lb. for Middling 1" white, with premiums and discounts on grades and staples above and below. The bounty is for a period of five years from 1st January, 1964.

(iii) *Area and Production.* In the five seasons 1958-59 to 1962-63, the area sown and quantity of unginned cotton produced have increased more than threefold. The yield per acre in the same period has risen by 9 per cent.

The area under cultivation and the production in Australia for the years 1958-59 to 1962-63 are shown hereunder.

#### COTTON: AREA AND PRODUCTION, AUSTRALIA(a)

Season	Area sown	Production of cotton			Average yield per acre sown	
		Unginned		Ginned(b)	Unginned	Ginned
		Quantity	Gross value			
	Acres	'000 lb.	£'000	'000 lb.	lb.	lb.
1958-59.. ..	10,493	4,004	249	1,492	382	142
1959-60.. ..	20,229	9,463	556	3,592	468	178
1960-61.. ..	37,048	15,544	917	5,540	420	150
1961-62.. ..	28,844	10,948	647	3,830	380	133
1962-63.. ..	37,689	15,762	938	5,403	418	143

(a) Incomplete; excludes Victoria, Western Australia and Northern Territory, for which particulars are not available for publication. (b) Source: Queensland Cotton Marketing Board.

(iv) *Consumption of Raw Cotton.* The following table shows details of the availability and actual consumption of raw cotton in Australian factories during each of the five years ended 1962-63.

#### RAW COTTON: PRODUCTION, IMPORTS AND CONSUMPTION, AUSTRALIA ('000 lb.)

Year	Production(a)	Imports	Total	Consumption of raw cotton
1958-59 .. ..	1,492	43,984	45,476	47,323
1959-60 .. ..	3,592	41,519	45,111	51,689
1960-61 .. ..	5,540	41,842	47,382	45,432
1961-62 .. ..	3,830	37,735	41,565	44,543
1962-63 .. ..	5,403	42,543	47,946	47,930

(a) Source: Queensland Cotton Marketing Board.

6. *Tobacco.*—(i) *General.* This summer-growing annual requires a temperate to tropical climate, adequate soil moisture and a frost-free period of approximately five months. These requirements necessarily restrict its growth to particular areas. These include the Mareeba area (northern Queensland), the neighbourhood of Texas (Queensland and New South Wales border), and near Myrtleford (Victoria). Smaller quantities are grown also near Manjimup in Western Australia. The best quality Australian tobaccos are grown in Queensland.

In Australia, flue-curing is the main method of drying used.

(ii) *Marketing.* Between 9th May, 1941, and 24th September, 1948, all leaf was under the direct control of the Australian Tobacco Board, and prices were paid on leaf appraisal. Subsequently, sales have been by open auction through the Tobacco Leaf Marketing Board (Queensland and northern New South Wales) and the Victorian Tobacco Growers Association Ltd. (southern New South Wales and Victoria). The 1962-63 Western Australian crop was also marketed through the Victorian Association.

(iii) *Central Tobacco Advisory Committee.* The Australian Agricultural Council formed the Standing Advisory Committee on Tobacco during 1950. This Committee consisted of representatives of tobacco growers, tobacco manufacturers and the Commonwealth and State Governments. Its main functions were to review the industry and make recommendations on its problems.

The Committee was reconstituted by the Agricultural Council during 1952-53. The terms of reference of this committee are given in Year Book No. 47, page 935.

In 1955, the Committee formulated a programme for increased research and advisory activities. The capital costs of establishing this programme were estimated at £168,000, of which the Commonwealth Government and tobacco manufacturers each agreed to contribute half. Annual contributions are made to the fund by the Commonwealth and State Governments, tobacco growers and manufacturers. A Tobacco Industry Trust Account was established to receive these contributions. This programme commenced in 1956. During the first seven years of the operation of the Trust Account, £1,229,139 was paid to State and Commonwealth Departments. The allocation for 1963-64 was £237,158.

A sub-committee on curing was formed in 1960 to investigate new curing methods. A grant of up to £10,000 was made available for initial investigations. In 1961, a Research Sub-Committee was established to review annually scientific programmes and finance in relation to the Tobacco Industry Trust Account and make recommendations to the Central Tobacco Advisory Committee.

(iv) *Other Assistance and Research.* Details of the recommendations by the Tobacco Inquiry Committee and grants periodically approved by the Commonwealth Government up to 30th June, 1953, are given in Year Book No. 40, pages 895-6, and in previous issues. In 1962, the Commonwealth Government agreed to make available a further annual grant of £24,000 for additional tobacco extension services by State Departments of Agriculture.

The Commonwealth Scientific and Industrial Research Organization has been investigating many fundamental problems connected with tobacco culture. One of the major achievements of this organization was the development in the mid-1930's of a technique to control blue mould in the seed bed. State Departments of Agriculture are also carrying out investigations over a wide range of problems, being concerned mainly with variety trials, irrigation, disease and pest control, crop rotation and cultural practices.

(v) *Tobacco Factories.* Manufacturers of Australian cigarettes and tobacco are granted a lower rate of duty on imported tobacco leaf, provided it is blended with a prescribed minimum percentage of Australian leaf. These percentages were increased from 3 per cent. for cigarettes and 5 per cent. for tobacco in November, 1946, to 43 per cent. and 40 per cent. respectively from 1st July, 1962. The percentage to apply to both cigarettes and tobacco from 1st July, 1963, is 40 per cent. and from 1st July, 1964 to 30th June, 1966, is 41.5 per cent. In 1962-63, the quantity of cured leaf used in tobacco factories in Australia amounted to 51.0 million lb., of which 20.3 million lb. was of local origin. The balance was imported, chiefly from the United States of America and Rhodesia.

(vi) *Area and Production.* Both area and production of tobacco in 1962-63 were considerably higher than those in the previous year. Area, at 29,381 acres, was a record, exceeding by 0.6 per cent. the previous record established in 1960-61.

In the following table, particulars of the area and production of tobacco are given by States for each of the seasons 1958-59 to 1962-63, together with averages for the three-year periods ended 1938-39, 1948-49 and 1958-59.

## TOBACCO: AREA AND PRODUCTION

Season	N.S.W.	Vic.	Q'land	S. Aust.	W. Aust.	Tas.	N.T.	Aust.
AREA (ACRES)								
Average for three years ended—								
1938-39 ..	697	4,262	3,842	77	1,055	134	(a)	10,067
1948-49 ..	415	1,046	1,948	..	609	..	..	4,018
1958-59 ..	1,257	3,478	7,479	..	1,295	..	(a)	13,509
Year—								
1958-59 ..	1,543	4,248	7,916	..	1,444	..	..	15,151
1959-60 ..	2,142	6,424	9,527	..	1,561	..	..	19,654
1960-61 ..	3,408	9,932	14,395	..	1,478	..	..	29,213
1961-62 ..	3,078	9,286	14,069	..	194	..	..	26,627
1962-63 ..	3,163	9,844	16,346	..	28	..	..	29,381

## PRODUCTION OF DRIED LEAF ('000 lb.)

Average for three years ended—								
1938-39 ..	471	1,603	2,173	17	741	104	(b)	5,109
1948-49 ..	380	670	1,725	..	523	..	..	3,298
1958-59 ..	1,066	3,770	5,563	..	1,016	..	(b)	11,415
Year—								
1958-59 ..	1,158	4,885	6,729	..	1,198	..	..	13,970
1959-60 ..	1,437	7,401	9,149	..	1,370	..	..	19,357
1960-61 ..	3,538	9,728	15,308	..	1,288	..	..	29,862
1961-62 ..	3,116	6,515	12,751	..	196	..	..	22,578
1962-63 ..	2,885	9,447	14,787	..	29	..	..	27,148

(a) Less than half an acre.

(b) Less than 500 lb.

(vii) *Oversea Trade.* Imports of tobacco and tobacco manufactures into Australia during 1962-63 were valued at £12.1 million. This included 27.4 million lb. of unmanufactured tobacco valued at £9.7 million. Exports of tobacco and tobacco manufactures, including the re-exports of imported tobacco, during 1962-63 were valued at £801,906.

## § 6. Vegetables for Human Consumption

1. *Area, Production and Trade.*—(i) *General.* Vegetables were initially grown on a large scale near the main cities, where there was ready access to reliable water supplies and to markets. More recently, the expansion of irrigation areas and improvement in transport services have resulted in their production being extended into many other areas. At present, because of the wide diversity of climatic conditions across Australia, supplies for main city markets are drawn from widely different areas, depending upon the times of maturity of the various crops. Apart from potatoes and onions, which are sold in some States through marketing boards, the bulk of vegetable trading takes place at the metropolitan markets of the cities concerned.

(ii) *Area and Production of Fresh Vegetables.* Details of the areas planted and production of individual kinds of vegetables are shown below for the seasons 1960-61 to 1962-63. Certain particulars shown are incomplete in that details for specific vegetables in some States are either not available, or are not available for publication. For further information, see the bulletin *Primary Industries, Part I.—Rural Industries.*

## FRESH VEGETABLES FOR HUMAN CONSUMPTION: AUSTRALIA

Vegetable	1960-61		1961-62		1962-63	
	Area sown	Production	Area sown	Production	Area sown	Production
	acres	tons	acres	tons	acres	tons
Asparagus .. ..	3,085	4,329	3,263	5,179	3,523	5,503
Beans, French and runner	17,493	26,774	18,239	30,641	18,429	32,373
Beans, navy .. ..	2,290	501	1,930	440	2,488	876
Beetroot .. ..	1,935	13,825	2,102	14,811	1,992	15,882
Cabbages and brussels sprouts .. ..	5,846	69,953	5,585	58,472	5,867	62,748
Carrots .. ..	4,810	47,887	5,212	51,796	5,204	55,380
Cauliflowers .. ..	6,382	77,002	6,404	72,786	6,659	76,811
Celery .. ..	637	9,017	679	9,987	735	10,849
Cucumbers .. ..	1,462	5,969	1,501	6,507	1,725	7,428
Lettuces .. ..	4,616	19,384	4,636	20,904	4,799	21,390
Onions .. ..	9,110	53,515	9,412	58,323	10,765	68,219
Parsnips .. ..	1,483	13,201	1,491	13,374	1,354	12,682
Peas, blue .. ..	3,365	1,228	3,956	2,830	5,710	3,407
Peas, green .. ..	52,286	53,984	58,399	88,025	52,926	79,046
Potatoes .. ..	91,805	450,793	94,443	525,981	113,742	666,596
Tomatoes .. ..	16,850	140,803	17,305	140,339	16,506	129,044
Turnips, swede and white	1,759	8,701	1,859	12,269	1,268	9,116
All other .. ..	30,939	..	30,734	..	34,804	..
<b>Total .. ..</b>	<b>256,153</b>	<b>..</b>	<b>267,150</b>	<b>..</b>	<b>288,496</b>	<b>..</b>

(iii) *Processed Vegetables.* Total production of canned vegetables in 1962-63 amounted to 129,236,000 lb., the principal types produced being green peas (including mint-pro peas), 30,780,000 lb.; green beans, 8,561,000 lb.; baked beans (including pork and bean), 27,350,000 lb.; asparagus, 9,146,000 lb.; beetroot, 18,026,000 lb.; and mushrooms, 5,456,000 lb.

The production of dehydrated vegetables during 1962-63 amounted to 612,000 lb., while the production of potato crisps, chips and flakes was 10,827,000 lb.

There has been rapid development in the quick-frozen vegetable industry. Data were collected for the first time in 1957-58, when 13,846,000 lb. of frozen vegetables were produced, made up primarily of 10,131,000 lb. of peas and 2,540,000 lb. of beans. In 1962-63, production had risen to 47,234,000 lb., of which 33,116,000 lb. were peas and 9,920,000 lb. were beans.

(iv) *Consumption of Vegetables.* Details of the estimated consumption of vegetables for a series of years ending 1962-63 are shown in Chapter XXX. Miscellaneous.

(v) *Imports and Exports of Vegetables (values in £A. f.o.b.).* The quantity and value of oversea exports of pulse and fresh vegetables during 1962-63 were respectively:—pulse, 12,452 tons, £462,454; onions, 7,097 tons, £208,328; potatoes, 15,819 tons, £424,523; other vegetables, 3,486 tons, £292,618. Imports of pulse amounted to 7,496 tons, valued at £539,760, while imports of fresh vegetables in total were 1,175 tons, valued at £212,944.

In 1962-63, exports of vegetables preserved in liquid consisted of:—asparagus, 2,056,295 lb., £273,157; beans (including baked), 166,113 lb., £12,476; peas, 227,312 lb., £17,550; tomatoes, 131,374 lb., £9,316; other vegetables, 544,606 lb., £51,091.

2. *Potatoes.*—(i) *General.* This crop requires deep friable soils, which in Australia are usually basaltic, alluvial, or swampy in origin. Fertilizer requirements, which are generally high, vary with the type of soil. Potatoes are killed by heavy frost, but require only moderate temperatures for growth. Mechanical planters and diggers are used to a variable extent depending upon a variety of factors including terrain, state of the soil and scale of operations.

Seed certification schemes, which operate in all States except Queensland, provide a supply of seed which is free from viral, fungal and bacterial diseases.

In Australia, potatoes are used almost entirely for human consumption and not for the production of starch or alcohol. They are rarely used as stock feed.



(ii) *Marketing.* Potato marketing boards were established in all States except Tasmania under separate State legislation after Commonwealth control of potato marketing under war-time legislation ceased at the end of 1948. The life of the Queensland Board was not extended when its term ended in 1954. The New South Wales Board was voted out by growers in 1956, and the Victorian Board also ceased functioning in that year. The boards in South Australia and Western Australia are the only statutory boards still in operation.

(iii) *Area, Production, and Yield per Acre.* Victoria possesses particular advantages for the growing of potatoes, as the rainfall is generally satisfactory and the climate is unfavourable to the spread of Irish blight; consequently, the crop is widely grown. The principal areas of that State are the central highlands and the south-western and Gippsland districts. Until 1958-59, Tasmania (where production is mainly in the north-west) came next in order of acreage sown, although production exceeded that of Victoria in some of the war years. Since 1958-59, however, New South Wales, which had previously occupied third position, has supplanted Tasmania as the second most important State in area sown. New South Wales production is chiefly in the tablelands districts.

The area sown, production, and yield per acre of potatoes in each State during the years 1958-59 to 1962-63 and the averages for the three-year periods ended 1938-39, 1948-49 and 1958-59 are shown hereunder. A graph showing production since 1935-36 appears on page 996 of Year Book No. 49.

#### POTATOES: AREA, PRODUCTION AND YIELD PER ACRE

Season	N.S.W.	Vic.	Q'land	S. Aust.	W. Aust.	Tas.	N.T.	A.C.T.	Aust.
<b>AREA (ACRES)</b>									
Average for three years ended—									
1938-39 ..	21,049	40,376	11,551	4,445	4,627	32,044	..	59	114,151
1948-49 ..	20,440	53,862	10,795	6,084	6,753	38,643	..	103	136,680
1958-59 ..	16,589	45,225	12,980	6,035	7,977	19,002	4	94	107,906
Year—									
1958-59 ..	17,482	46,122	11,614	6,168	7,051	16,186	..	90	104,713
1959-60 ..	19,159	48,506	12,311	5,872	6,964	15,525	(a)	67	b 108,404
1960-61 ..	18,365	38,672	11,992	5,209	6,656	10,875	(a)	36	b 91,805
1961-62 ..	20,209	36,469	14,466	5,316	6,824	11,129	(a)	30	b 94,443
1962-63 ..	27,420	43,024	16,994	5,918	6,499	13,839	6	42	113,742
<b>PRODUCTION (TONS)</b>									
Average for three years ended—									
1938-39 ..	52,158	137,583	17,191	20,342	23,678	109,285	..	143	360,380
1948-49 ..	62,701	191,590	26,470	32,149	38,722	148,389	..	598	500,619
1958-59 ..	68,533	245,937	50,989	48,072	50,024	92,367	5	391	556,318
Year—									
1958-59 ..	84,450	259,346	46,999	50,587	47,103	85,900	..	152	574,537
1959-60 ..	81,908	242,548	51,468	48,923	56,000	98,000	(a)	360	b 579,207
1960-61 ..	85,182	180,819	59,311	40,797	45,500	39,050	(a)	134	b 450,793
1961-62 ..	83,301	196,032	70,675	48,479	55,700	71,560	(a)	234	b 525,981
1962-63 ..	132,969	254,473	86,239	53,253	56,900	82,545	5	212	666,596
<b>YIELD PER ACRE (TONS)</b>									
Average for three years ended—									
1938-39 ..	2.48	3.41	1.49	4.58	5.12	3.41	..	2.42	3.16
1948-49 ..	3.07	3.56	2.45	5.28	5.73	3.84	..	5.81	3.66
1958-59 ..	4.13	5.44	3.93	7.97	6.27	4.86	1.25	4.16	5.16
Year—									
1958-59 ..	4.83	5.62	4.05	8.20	6.68	5.31	..	1.69	5.49
1959-60 ..	4.28	5.00	4.18	8.33	8.04	6.31	(a)	5.37	(b) 5.34
1960-61 ..	4.64	4.68	4.95	7.83	6.84	3.59	(a)	3.72	(b) 4.91
1961-62 ..	4.12	5.38	4.89	9.12	8.16	6.43	(a)	7.80	(b) 5.57
1962-63 ..	4.85	5.91	5.07	9.00	8.76	5.96	0.83	5.05	5.86

(a) Not available for publication.

(b) Incomplete; excludes Northern Territory.

(iv) *Gross Value.* The estimated gross value of the potato crop of each State for the 1962-63 season and the value per acre are shown in the following table.

#### POTATOES: VALUE OF CROP, 1962-63

Particulars	N.S.W.	Vic.	Q'land	S. Aust.	W. Aust.	Tas.	A.C.T.	Aust.
Aggregate value £'000	4,614	3,306	2,027	1,195	1,795	1,039	4	13,980
Value per acre £	168	77	119	202	276	75	103	123

(v) *Consumption.* The annual consumption of potatoes in Australia during each of the three years 1960-61 to 1962-63 amounted to 400,713 tons, 459,572 tons and 590,511 tons respectively, or 86.4 lb., 97.1 lb. and 122.4 lb. respectively per head of population. These figures exclude the quantities used for seed, which averaged about 53,000 tons annually over this period.

(vi) *Exports.* Details showing exports for the years 1958-59 to 1962-63 are given in the following table.

## POTATOES: EXPORTS, AUSTRALIA

Particulars	1958-59	1959-60	1960-61	1961-62	1962-63
Quantity .. .. tons	4,470	4,742	5,219	4,121	15,819
Value .. .. £A.'000 f.o.b.	151	134	195	160	425

The increase in exports in 1962-63 was due principally to an increase in shipments to Singapore and Ceylon. There were no imports of potatoes into Australia in 1962-63.

3. *Onions.*—(i) *Area, Production, and Yield.* Until recently Australia's onion supply came chiefly from Victoria. However, during the last five years, Victorian production has decreased until in one season, 1960-61, it was exceeded by that of Queensland. The Victorian crop consists almost entirely of brown onions, and the bulk of the crop is grown in a small section of the Western Division of the State, where the volcanic ash soils have been found to be particularly suitable for onion growing on a commercial scale. Most of Queensland's onion production is grown in the Lockyer Valley, and consists mainly of brown varieties. Details of the area, production and yield per acre are given in the following table for the years 1958-59 to 1962-63 together with averages for the three-year periods ended 1938-39, 1948-49 and 1958-59. A graph showing production since 1935-36 appears on page 996 of Year Book No. 49.

## ONIONS: AREA, PRODUCTION AND AVERAGE YIELD

Season	N.S.W.	Vic.	Q'land	S. Aust.	W. Aust.	Tas.	A.C.T.	Aust.
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## AREA (ACRES)

Average for three years ended—								
1938-39 ..	126	5,634	1,187	521	122	8	6	7,604
1948-49 ..	433	6,245	2,234	534	468	26	4	9,944
1958-59 ..	491	4,614	3,655	635	413	29	9	9,846
Year—								
1958-59 ..	444	3,971	3,412	602	397	21	13	8,860
1959-60 ..	697	3,994	3,550	641	392	29	12	9,315
1960-61 ..	624	3,532	3,763	657	465	59	10	9,110
1961-62 ..	490	4,456	3,173	753	479	60	(a)	(b) 9,412
1962-63 ..	800	4,634	3,796	944	509	79	(a)	(b) 10,765

## PRODUCTION (TONS)

Average for three years ended—								
1938-39 ..	324	34,039	3,040	3,904	915	42	21	42,285
1948-49 ..	1,703	41,156	10,489	5,032	3,831	153	24	62,388
1958-59 ..	2,496	31,982	15,505	5,625	4,599	132	71	60,410
Year—								
1958-59 ..	2,476	28,456	13,584	5,318	5,043	97	106	55,080
1959-60 ..	3,658	27,808	14,708	5,644	4,830	135	39	56,822
1960-61 ..	3,935	16,286	21,156	5,947	5,826	285	80	53,515
1961-62 ..	3,082	23,784	17,921	6,915	6,290	327	(a)	(b) 58,323
1962-63 ..	5,185	26,175	21,184	8,531	6,622	515	(a)	(b) 68,219

## YIELD PER ACRE (TONS)

Average for three years ended—								
1938-39 ..	2.57	6.04	2.56	7.49	7.50	5.25	3.50	5.56
1948-49 ..	3.93	6.59	4.70	9.42	8.19	5.88	6.00	6.27
1958-59 ..	5.08	6.93	4.24	8.86	11.14	4.55	7.89	6.14
Year—								
1958-59 ..	5.58	7.17	3.98	8.83	12.70	4.62	8.15	6.22
1959-60 ..	5.25	6.96	4.14	8.80	12.32	4.66	3.25	6.10
1960-61 ..	6.31	4.61	5.62	9.05	12.52	4.83	8.00	5.87
1961-62 ..	6.29	5.34	5.65	9.18	13.13	5.45	(a)	(b) 6.20
1962-63 ..	6.48	5.65	5.58	9.04	13.01	6.52	(a)	(b) 6.34

(a) Not available for publication.

(b) Includes a small area and production in Northern Territory but excludes Australian Capital Territory.

(ii) *Gross Value.* The estimated gross value of the onion crop and the value per acre are shown in the following table for the 1962-63 season.

**ONIONS: VALUE OF CROP, 1962-63**

Particulars	N.S.W.	Vic.	Q'land	S. Aust.	W. Aust.	Tas.	N.T.	A.C.T.	Aust.
Aggregate value £'000	205	695	456	263	169	25	1	(a)	(b)1,814
Value per acre £	256	150	120	279	332	316	223	(a)	(b) 169

(a) Not available for publication.

(b) Incomplete; excludes Australian Capital Territory.

(iii) *Consumption.* The annual consumption of onions in Australia averaged 57,840 tons or 12.1 lb. per head of population during the three years ended 1962-63.

(iv) *Exports.* Onions are the only root crop, other than potatoes, in which any considerable overseas trade is carried on by Australia. In 1962-63, exports amounted to 7,097 tons, valued at £208,328, and were shipped mainly to Singapore, Hong Kong and Japan. The quantity of exports in 1961-62 was 2,370 tons, valued at £108,660. Imports of onions amounted to 260 tons, valued at £7,866 in 1961-62, and 59 tons, valued at £2,276 in 1962-63.

## § 7. Fruit and Vineyards

1. *Fruit.*—(i) *General.* The varieties of fruit grown differ in various parts of the States, ranging from pineapples, papaws and mangoes in the tropics, to strawberries, raspberries and currants in the colder parts of the temperate zone. In New South Wales, citrus fruit (oranges, lemons, etc.) and bananas are the principal crops, although apples, peaches, plums, pears and cherries are grown extensively. The principal varieties grown in Victoria are apples, pears, peaches, oranges and apricots. In Queensland, apples, pineapples, bananas, oranges, mandarins, peaches and plums are the varieties most largely cultivated. In South Australia, in addition to oranges, apples, peaches, apricots and pears, almonds and olives are grown extensively. In Western Australia, apples, oranges, plums and pears are the chief varieties. In Tasmania, apples occupy over three-quarters of the fruit-growing area, but small fruit, such as currants, raspberries and gooseberries, are grown extensively, the balance of the area being mainly taken up with pears and apricots.

(ii) *Overseas Marketing of Fruit.* (a) *Apples and Pears.* The *Apple and Pear Organization Act 1938-1960* provides for the establishment of an Australian Apple and Pear Board comprising representatives of growers, exporters, employees and the Commonwealth Government. A representative in London has also been appointed by the Board. An export levy to meet the expenses of the Board is provided for in the *Apple and Pear Export Charges Act 1938-1960*.

The function of the Board is the organization and control of exports of fresh apples and pears, and it has the power to regulate shipments, determine export quotas, allocate consignments from each State and recommend the licensing of exporters. The Board contributes to apple and pear publicity activities overseas.

(b) *Canned Fruit.* The *Canned Fruits Marketing Act 1963*, which was introduced in January, 1964, replaced the *Canned Fruits Export Control Act 1926-1959* under which the overseas marketing of canned fruit was initially organized (see Year Book No. 49, p. 1050). The Australian Canned Fruits Board, which is constituted under the Act, determines the terms and conditions for overseas sales. The Board exercises this control through a system of export licences. The Board, whose membership was increased from five to eleven members and which was granted greater powers under the 1963 Act, comprises representatives of the Commonwealth Government (one), canners of deciduous fruit (six), growers of deciduous fruit (three), and pineapple interests (one). The Board maintains a London office. The *Canned Fruits Export Charges Act 1926-1956* provides for a levy on exports to meet the Board's expenses, which include contributions to overseas publicity connected with the canned fruit industry. In 1963, an excise duty was imposed by the *Canned Fruits Excise Act 1963* on canned deciduous fruit entered for domestic consumption, and the proceeds of the duty are made available to the Board to assist in the promotion of overseas sales of deciduous fruit.

In 1959, the Australian Canned Fruits Sales Promotion Committee was established to promote the sale of canned deciduous fruits on the home market and overseas. The operations of the Committee are financed by a levy on fruit accepted by the canneries for the production of canned fruit. The Committee comprises representatives of growers and processors of canning fruit and a representative of the Commonwealth Government.

(iii) *Area and Production of Fruit.* The area under fruit in Australia has been increasing steadily in recent years, until record levels were reached in 1961-62 and again in 1962-63. Increases were recorded in all States in 1962-63. The following table sets out the area under fruit in the several States for the seasons 1958-59 to 1962-63.

## FRUIT: AREA

(Acres)

Season	N.S.W.	Vic.	Q'land	S. Aust.	W. Aust.	Tas.	N.T.	A.C.T.	Aust.
1958-59 ..	92,780	66,746	43,911	37,237	22,903	23,168	86	89	286,920
1959-60 ..	93,870	68,567	42,587	37,355	23,757	22,713	98	57	289,004
1960-61 ..	92,962	71,415	41,067	37,711	23,913	22,194	120	55	289,437
1961-62 ..	94,246	72,712	41,872	38,548	24,487	21,859	136	65	293,925
1962-63 ..	98,032	75,855	43,242	40,444	25,204	21,943	136	55	304,911

The next table shows the acreage (bearing and not-bearing) of the principal kinds of fruit and the quantities produced in the 1962-63 season.

## FRUIT, 1962-63

Fruit	N.S.W.	Vic.	Q'land	S. Aust.	W. Aust.	Tas.	N.T.	A.C.T.	Aust.
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## AREA, BEARING AND NOT-BEARING (ACRES)

Apples ..	18,193	22,726	12,299	5,879	14,849	17,383	..	51	91,380
Apricots ..	2,069	4,028	415	4,455	344	536	..	..	11,847
Bananas ..	24,191	..	5,861	..	305	..	35	..	30,392
Cherries ..	4,713	1,782	4	560	38	46	..	..	5,143
Citrus—									
Oranges ..	27,601	6,488	3,707	14,814	4,631	..	60	..	57,301
Mandarins ..	2,243	393	1,920	480	399	..	5	..	5,440
Lemons and limes ..	2,372	1,258	486	437	704	..	7	..	5,264
Other ..	536	305	73	432	131	..	5	..	1,482
Nuts ..	167	429	211	3,305	128	..	..	..	4,240
Peaches ..	8,068	14,464	1,891	4,803	940	60	..	(a)	(b)30,226
Pears ..	3,401	16,900	887	2,059	1,074	1,624	..	(a)	(b)25,945
Pineapples ..	163	..	10,321	..	..	..	11	..	10,495
Plums and prunes	4,808	2,205	1,438	1,209	1,084	84	..	(a)	(b)10,828
Small fruit ..	36	1,029	291	120	12	2,184	..	..	3,672
Other fruit ..	1,471	3,848	3,438	1,891	565	26	13	4	11,256
<b>Total ..</b>	<b>98,032</b>	<b>75,855</b>	<b>43,242</b>	<b>40,444</b>	<b>25,204</b>	<b>21,943</b>	<b>136</b>	<b>55</b>	<b>304,911</b>

## PRODUCTION

Apples '000 bus.	3,246	4,059	1,305	1,496	1,977	6,262	..	4	18,349
Apricots " "	397	535	28	868	35	50	..	..	1,913
Bananas " "	4,024	..	730	..	76	..	2	..	4,832
Cherries " "	149	117	(c)	35	1	4	..	..	306
Citrus—									
Oranges ..	4,591	1,164	627	2,509	414	..	2	..	9,307
Mandarins ..	193	41	271	57	25	..	(c)	..	587
Lemons and limes ..	486	213	107	48	107	..	1	..	962
Peaches " "	1,154	1,812	114	841	79	3	..	(d)	(b) 4,003
Pears " "	724	3,849	95	412	172	415	..	(d)	(b) 5,667
Pineapples " "	24	..	4,101	..	..	..	1	..	4,126
Plums and prunes ..	586	166	88	102	90	11	..	(d)	(b) 1,043

(a) Not available for publication; included with Other fruit.  
 Australian Capital Territory.

(c) Less than 500 bushels.

(b) Incomplete; excludes the  
 (d) Not available for publication.

(iv) *Principal Fruit Crops.* The area and production of the principal fruit crops and the gross value of production during the seasons 1958-59 to 1962-63 are shown hereunder.

**PRINCIPAL FRUIT CROPS: AREA, PRODUCTION AND GROSS VALUE OF PRODUCTION**

Season	Apples	Apricots	Bananas	Oranges	Peaches	Pears	Plums and prunes
AREA, BEARING AND NOT-BEARING (ACRES)							
1958-59 .. ..	83,614	12,103	31,798	48,453	25,215	23,014	10,385
1959-60 .. ..	85,269	12,059	31,708	49,328	26,376	23,684	10,569
1960-61 .. ..	86,882	11,945	29,870	50,626	26,883	23,935	10,665
1961-62 .. ..	87,571	11,461	29,180	53,623	29,627	25,338	10,839
1962-63 .. ..	91,380	11,847	30,392	57,301	30,226	25,945	10,828

PRODUCTION ('000 BUSHELS)							
1958-59 .. ..	13,044	1,430	4,504	5,904	2,592	4,738	802
1959-60 .. ..	14,069	1,546	4,915	7,450	2,916	5,268	904
1960-61 .. ..	15,487	1,323	4,830	6,244	2,471	5,360	930
1961-62 .. ..	17,127	1,859	4,876	8,168	3,962	6,567	961
1962-63 .. ..	18,349	1,913	4,832	9,307	4,003	5,667	1,043

GROSS VALUE OF PRODUCTION (£'000)							
1958-59 .. ..	16,539	2,054	8,588	8,918	3,194	4,916	1,479
1959-60 .. ..	17,174	2,013	7,613	7,407	3,293	5,361	1,579
1960-61 .. ..	20,643	1,935	7,715	9,470	3,470	6,592	1,828
1961-62 .. ..	20,003	2,877	8,631	9,597	4,767	7,204	1,661
1962-63 .. ..	21,003	2,648	9,177	9,876	4,774	6,380	1,613

(v) *Production of Jams and Jellies and Preserved Fruit.* In Australia, considerable quantities of fruit are used in the production of jams and jellies and for preserving. During 1962-63, output of jams, conserves, fruit spreads, etc., amounted to 92,175,000 lb., while output of preserved fruit amounted to 430,639,000 lb. Of the latter figure, pears accounted for 122,313,000 lb., peaches 154,262,000 lb. and pineapples 41,063,000 lb.

The recorded consumption of fruit in factories for all purposes, including that used for juice and cordial manufacture and for drying, was 287,000 tons in 1962-63.

(vi) *Consumption of Fruit and Fruit Products.* Details of the estimated consumption of fruit and fruit products per head of population for a series of years ending 1962-63 are shown in Chapter XXX. Miscellaneous.

(vii) *Imports and Exports of Fruit.* (a) *General.* The imports of fresh fruit into Australia are negligible, while those of dried fruit consist mainly of dates.

A considerable export trade in both fresh and dried fruit is carried on by Australia with overseas countries. The values (£A. f.o.b.) of the shipments in 1962-63 amounted to £14,985,000 and £9,552,000 respectively. Apples constitute the bulk of the fresh fruit exported, although exports of pears and citrus fruit are considerable.

(b) *Fresh Fruit.* Particulars of the Australian export trade in fresh and frozen fruit for each of the years 1958-59 to 1962-63 are shown in the following table.

## FRESH AND FROZEN FRUIT: EXPORTS, AUSTRALIA

Year	Apples		Pears		Citrus		Total value(a)
	Quantity	Value	Quantity	Value	Quantity	Value	
	'000 bus.	£A.'000 f.o.b.	'000 bus.	£A.'000 f.o.b.	'000 bus.	£A.'000 f.o.b.	£A.'000 f.o.b.
1958-59 .. ..	4,948	6,625	1,100	1,783	415	664	9,413
1959-60 .. ..	4,889	6,123	1,328	1,970	589	918	9,294
1960-61 .. ..	5,729	7,321	1,235	2,080	419	664	10,369
1961-62 .. ..	7,083	9,396	1,639	2,575	673	1,086	13,363
1962-63 .. ..	7,206	11,645	1,071	1,750	861	1,283	14,985

(a) Includes exports of all other fresh and frozen fruit.

(c) *Dried Tree Fruit.* The quantity and value of oversea imports and exports of dried fruit, other than raisins and currants, for the years 1958-59 to 1962-63 are shown below. Normally, the bulk of the imports consists of dates obtained almost entirely from Iraq and Iran. The export figures include particulars of some re-exported dried fruit.

## DRIED TREE FRUIT(a): IMPORTS AND EXPORTS, AUSTRALIA

Year	Imports(b)		Exports	
	Quantity	Value	Quantity	Value
	'000 lb.	£A.'000 f.o.b.	'000 lb.	£A.'000 f.o.b.
1958-59 .. ..	8,411	203	3,352	482
1959-60 .. ..	10,791	310	6,221	703
1960-61 .. ..	9,178	303	8,199	932
1961-62 .. ..	8,266	314	5,961	782
1962-63 .. ..	8,939	296	6,611	952

(a) Excludes raisins and currants dealt with separately under Vineyards (see p. 1048). (b) Dates and figs only.

(d) *James and Jellies.* Exports of jams and jellies in 1962-63 were 10,160,000 lb., valued at £A.705,000 f.o.b., compared with 6,671,000 lb., valued at £A.473,000 f.o.b. in 1961-62. Imports of jams and jellies in 1962-63 were 1,581,000 lb., valued at £A.138,000, compared with 1,617,000 lb. valued at £A.133,000 in 1961-62.

(e) *Preserved Fruit (values in £A. f.o.b.).* The total value of fruit preserved in tins or other airtight containers, or pulped, imported into Australia during 1962-63 was £141,652. Large quantities of fruit preserved in tins or other airtight containers are normally exported from Australia, the quantity recorded in 1962-63 being 76,830 tons valued at £10,632,932. Exports in 1962-63 were made up principally of pears (34,221 tons), peaches (24,098 tons), pineapples (7,012 tons) and apricots (4,039 tons). In addition, the exports of pulped fruits during 1962-63 amounted to 1,782 tons valued at £309,607.

2. *Vineyards.*—(i) *General.* Grapes require a warm to hot climate and a predominantly winter rainfall of seventeen inches or more. Freedom from late spring frosts is essential.

Grapes are grown for wine-making, table use and drying. In Australia, wine is generally produced from non-irrigated crops, and dried fruits from the inland irrigation areas, but table grapes and grapes for fortified wines may be produced in both areas. The main wine producing areas are the Barossa valley (South Australia), Hunter valley (New South Wales), Rutherglen and Stawell districts in Victoria, and the Swan valley (Western Australia). Nearly all the dried fruit is produced along the River Murray and its tributaries, with small localized areas in the other States.

(ii) *Area of Vineyards.* The area under vineyards in the 1962-63 season in Victoria and South Australia constituted 78 per cent. of the total area of vineyards. The total area of vines in the several States during each of the years 1958-59 to 1962-63 and the averages for the three-year periods ended 1938-39, 1948-49 and 1958-59 are shown in the following table.

## VINEYARDS: AREA

(Acres)

Season	N.S.W.	Vic.	Q'land	S. Aust.	W. Aust.	Aust.(a)
Average for three years ended—						
1938-39 .. ..	16,824	42,071	2,670	57,185	6,197	124,947
1948-49 .. ..	16,482	44,114	3,099	58,971	9,965	132,631
1958-59 .. ..	17,210	44,823	2,926	57,199	8,967	131,125
Year—						
1958-59 .. ..	17,252	44,801	3,041	56,749	8,881	130,724
1959-60 .. ..	17,236	44,129	3,083	56,853	8,951	130,252
1960-61 .. ..	16,988	44,649	3,110	56,897	8,864	130,508
1961-62 .. ..	17,607	45,105	3,203	57,836	9,017	132,768
1962-63—						
Wine .. ..	7,648	5,302	268	44,951	3,874	62,043
Table .. ..	2,652	2,648	2,969	287	1,398	9,954
Drying .. ..	7,404	37,712	..	13,028	3,413	61,557
<b>Total .. ..</b>	<b>17,704</b>	<b>45,662</b>	<b>3,237</b>	<b>58,266</b>	<b>8,685</b>	<b>133,554</b>

(a) Excludes particulars for Northern Territory and Australian Capital Territory, which are not available for publication.

NOTE.—There are no vineyards in Tasmania.

(iii) *Wine Industry.* (a) *General.* A large proportion of the wines produced in Australia are of the sweet fortified Spanish and Portuguese types, the remainder including Burgundy type wines and the light table wines, such as clarets and hocks.

Details of the Wine Research Trust Fund are given in Year Book No. 47, page 927.

(b) *Overseas Marketing of Wine.* The *Wine Overseas Marketing Act* 1929-1963 was introduced to place the overseas marketing of surplus wine on an orderly basis. The Australian Wine Board, consisting of representatives from wineries and distilleries, grape-growers and the Commonwealth Government, supervises the sale and distribution of Australian wine exported and recommends conditions under which export licences should be issued. The Board also engages in wine publicity and trade promotion activities both in Australia and overseas. In London, the Board maintains an office and an Australian Wine Centre, which is both a retail outlet for Australian wines and brandy and a medium for promoting interest in these products. The *Wine Grapes Charges Act* 1929-1961 provides for the imposition of a levy on all grapes used in Australia for the manufacture of wine, brandy and spirit used for fortifying wine. The proceeds of the levy are used to defray the administrative and other expenses of the Board, and provision is made for such exemptions from the levy as the Board may recommend.

(c) *Production and Consumption.* In 1962-63, the total production of wine (beverage and distillation) in Australia was 29.9 million gallons, while total consumption of beverage wine was 12.6 million gallons (1.16 gallons per head of population). Similar particulars for 1961-62 are 41.7 million gallons and 12.0 million gallons (1.13 gallons per head of population) respectively.

The quantity of wine produced in the several States during the 1958-59 to 1962-63 seasons, together with the averages for the three-year periods ended 1938-39, 1948-49 and 1958-59, are shown in the following table.

**WINE: PRODUCTION<sup>(a)</sup>**  
(\*000 gallons)

Season	N.S.W.	Vic.	Q'land	S. Aust.	W. Aust.	Aust.
Average for three years ended—						
1938-39 .. ..	2,712	1,359	31	14,021	396	18,519
1948-49 .. ..	4,178	3,040	31	25,906	689	33,844
1958-59 .. ..	3,974	2,435	36	25,190	743	32,378
Year—						
1958-59 .. ..	4,360	2,354	49	25,131	644	32,538
1959-60 .. ..	3,835	2,147	37	21,576	801	28,396
1960-61 .. ..	4,904	3,021	32	25,061	744	33,762
1961-62 .. ..	6,442	3,605	36	30,831	822	41,736
1962-63 .. ..	5,858	2,433	28	20,785	789	29,893

(a) Net factory and farm production of beverage and distillation wine excluding the liquid gallonage of spirits added in wine fortifying.

(d) *Exports and Imports of Wine (values in £A. f.o.b.)*. Imports for 1962-63 amounted to 90,598 gallons valued at £189,968 compared with 82,153 gallons valued at £176,013 in the previous year. During 1962-63, Italy supplied 39,964 gallons valued at £50,212, France supplied 19,588 gallons valued at £74,902, and the Federal Republic of Germany supplied 9,119 gallons valued at £25,168.

Exports in 1962-63 totalled 1,614,132 gallons, of which the United Kingdom received 1,102,169 gallons, Canada 287,489 gallons, New Zealand 79,060 gallons, Hong Kong 18,123 gallons, and other countries 127,291 gallons. Exports of Australian-produced wine for the five years ended 1962-63 are shown in the following table.

**WINE: EXPORTS FROM AUSTRALIA**

Year	Quantity (gallons)			Value (£A. f.o.b.)		
	Sparkling	Other	Total	Sparkling	Other	Total
1958-59 .. ..	5,185	1,740,280	1,745,465	10,861	1,139,840	1,150,701
1959-60 .. ..	6,436	1,738,616	1,745,052	19,625	1,245,241	1,264,866
1960-61 .. ..	11,441	1,884,978	1,896,419	29,786	1,273,079	1,302,865
1961-62 .. ..	5,145	1,664,984	1,670,129	17,100	1,368,930	1,386,030
1962-63 .. ..	17,245	1,596,887	1,614,132	46,222	1,328,526	1,374,748

(iv) *Dried Vine Fruit Industry. (a) General.* The dry, frost-free November to March period of the lower Murray valley makes this an ideal area for dried vine fruit. Harvesting for drying takes place at the end of summer. The sun-drying process is often accelerated by using a dip of cold potash.

(b) *Overseas Marketing of Dried Vine Fruit. The Dried Fruits Export Control Act 1924-1953* was passed to organize overseas marketing of Australian dried vine fruit. The Dried Fruits Control Board, consisting of growers' representatives, members with commercial experience in marketing dried fruits, and a Government representative, controls the sale and distribution of dried fruit exports, recommends the licensing of exporters, and contributes to dried vine fruit publicity activity overseas. In conjunction with its London office, the Board has improved dried fruit marketing overseas by its system of appraisalment, regulation of shipments and advertising.



*The Dried Fruits Export Charges Act 1924-1929* provides for a levy on exports of dried fruit to defray costs and expenses incurred by the Board.

For details of the agreements which were negotiated between the Governments of the United Kingdom and Australia during the period 1946-1953, see Year Book No. 40, page 888. From 1st December, 1953, exports have been made on a trader to trader basis.

(c) *Production and Disposal of Dried Vine Fruit.* As the production of dried vine fruit is far in excess of Australia's requirements, considerable quantities are available for export. Total production during the 1962-63 season amounted to 70,508 tons, while exports for the year ended December, 1963, were 54,729 tons, leaving an estimated 15,779 tons available for Australian consumption from that season's production. Australian consumption includes amounts delivered to biscuit manufacturers, bakeries, etc., as well as retail sales for household consumption.

The production of dried vine fruit during each of the seasons 1958-59 to 1962-63 and the averages for the three-year periods ended 1938-39, 1948-49 and 1958-59 are shown in the following table.

**DRIED VINE FRUIT: PRODUCTION**  
(Tons)

Season	N.S. Wales		Victoria		South Aust.		Western Aust.		Australia	
	Raisins (a)	Currants	Raisins (a)	Currants	Raisins (a)	Currants	Raisins (a)	Currants	Raisins (a)	Currants
Average for three years ended—										
1938-39 ..	5,464	1,163	39,810	8,953	13,215	9,009	723	2,179	59,212	21,304
1948-49 ..	5,429	994	40,027	7,380	8,811	5,243	580	3,179	54,847	16,796
1958-59 ..	10,300	705	53,178	4,294	11,115	4,432	118	1,746	74,711	11,177
Year—										
1958-59 ..	10,914	856	52,707	4,776	12,323	4,531	94	1,055	76,038	11,218
1959-60 ..	7,722	462	44,764	3,331	9,192	2,844	73	1,402	61,751	8,039
1960-61 ..	10,777	981	51,002	5,583	6,751	4,543	51	1,984	68,581	13,091
1961-62 ..	13,089	410	64,862	2,714	10,674	2,742	66	1,941	88,691	7,807
1962-63 ..	8,560	463	44,059	2,536	11,007	2,607	51	1,225	63,677	6,831

(a) Includes sultanas and lexias.

(d) *Exports.* The following table shows the exports of dried vine fruit during each of the years 1958-59 to 1962-63.

**DRIED VINE FRUIT(a): EXPORTS, AUSTRALIA**

Year	Raisins, sultanas and lexias		Currants		Total	
	Quantity	Value	Quantity	Value	Quantity	Value
	Tons	£A.'000 f.o.b.	Tons	£A.'000 f.o.b.	Tons	£A.'000 f.o.b.
1958-59 ..	68,240	11,213	7,580	1,050	75,820	12,263
1959-60 ..	45,634	7,726	4,540	637	50,174	8,363
1960-61 ..	48,805	7,133	7,838	1,032	56,643	8,165
1961-62 ..	60,169	8,955	4,564	620	64,733	9,575
1962-63 ..	56,696	8,029	4,208	571	60,904	8,600

(a) Excludes quantities exported as mincemeat.

The chief countries importing Australian dried vine fruit are the United Kingdom, Canada, New Zealand, and Japan. The quantities exported to these countries in 1962-63 were 29,145 tons, 18,806 tons, 5,203 tons, and 3,584 tons respectively.

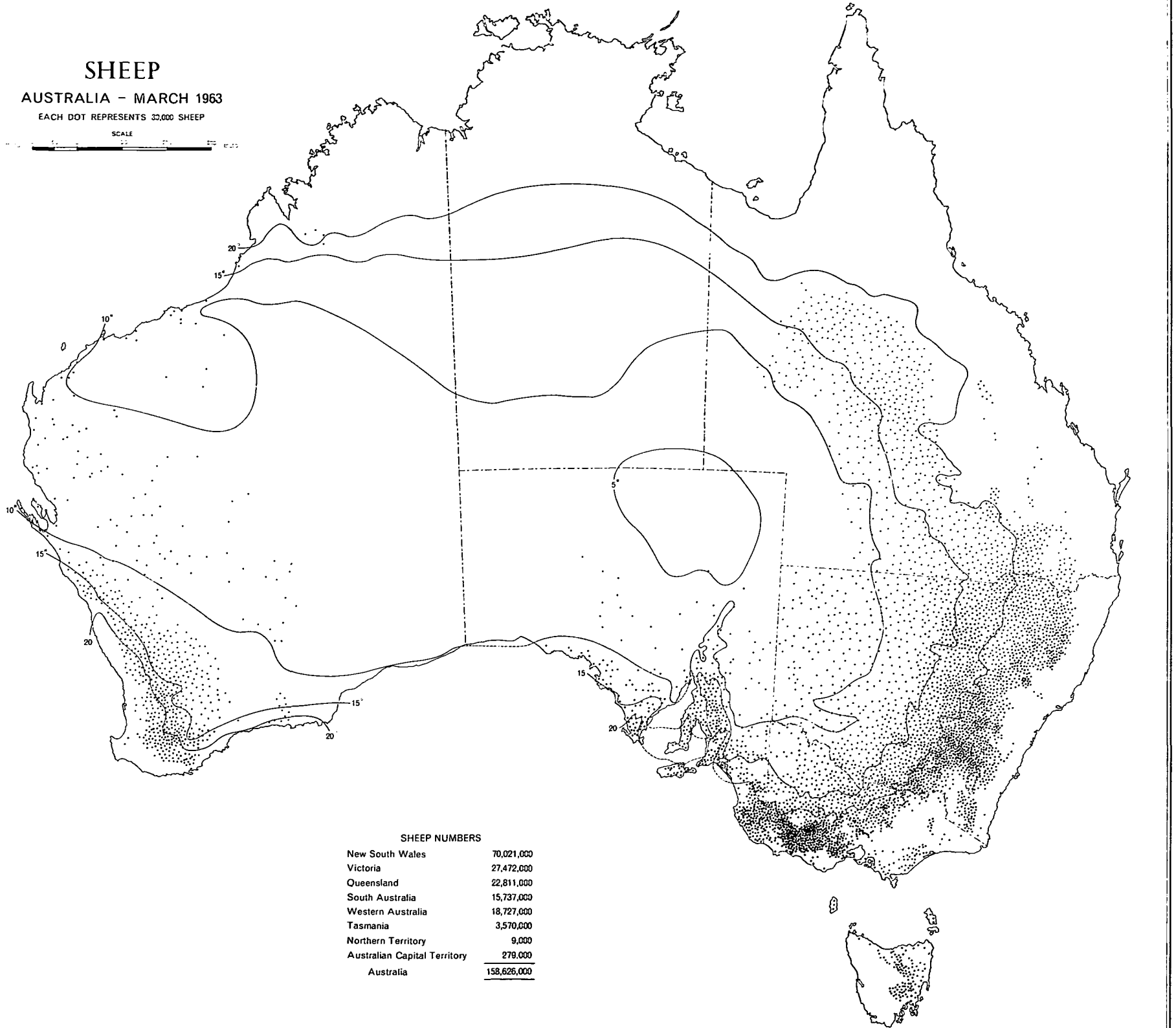
(v) *Table Grapes.* Grapes for table use are grown in all States except Tasmania, but the area of this type was only about 7 per cent. of the productive area of vines in 1962-63. The quantities of table grapes produced during the season 1962-63 in each State are shown in § 2, paragraph 2 (see p. 998).

## SHEEP

AUSTRALIA - MARCH 1963

EACH DOT REPRESENTS 33,000 SHEEP

SCALE



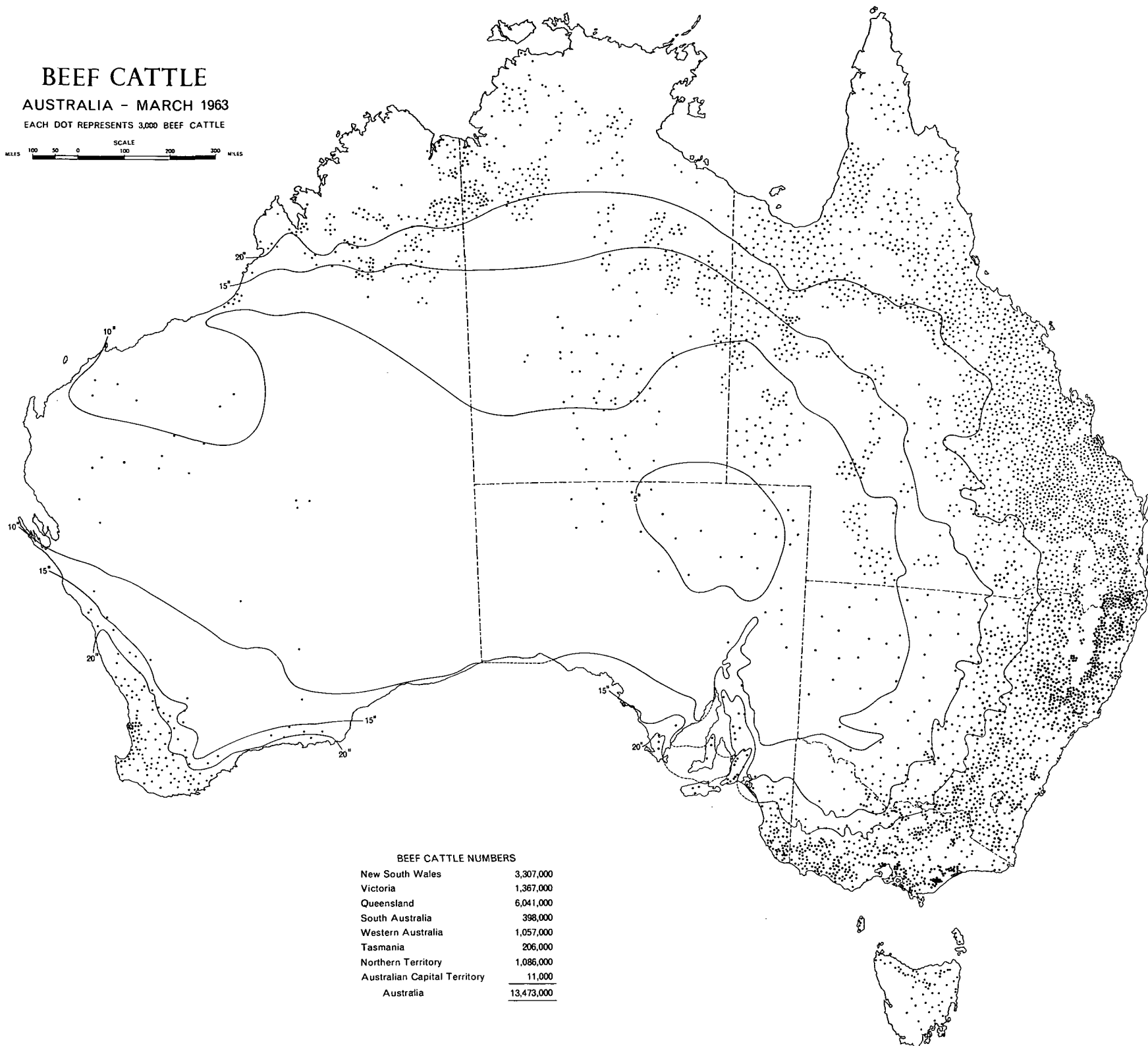
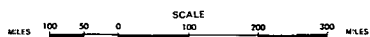
## SHEEP NUMBERS

New South Wales	70,021,000
Victoria	27,472,000
Queensland	22,811,000
South Australia	15,737,000
Western Australia	18,727,000
Tasmania	3,570,000
Northern Territory	9,000
Australian Capital Territory	279,000
Australia	<u>158,626,000</u>

# BEEF CATTLE

AUSTRALIA - MARCH 1963

EACH DOT REPRESENTS 3,000 BEEF CATTLE



## BEEF CATTLE NUMBERS

New South Wales	3,307,000
Victoria	1,367,000
Queensland	6,041,000
South Australia	398,000
Western Australia	1,057,000
Tasmania	206,000
Northern Territory	1,086,000
Australian Capital Territory	11,000
Australia	<u>13,473,000</u>

## PASTORAL PRODUCTION

## § 1. Introduction

1. **Livestock Numbers.**—A detailed account of the various enumerations of livestock in Australia made prior to 1860 was given on page 748 of Year Book No. 35. Since 1860, annual enumerations have been made, based, with few exceptions, on actual collections made through the agency of the State police or by post. Particulars concerning the numbers of each of the principal kinds of livestock in Australia at decennial intervals from 1860 to 1950, and from 1959 onwards in single years, are given in the following table, and are shown continuously since 1870 on the graph on page 1061 of Year Book No. 49.

LIVESTOCK: AUSTRALIA  
(’000)

Year	Horses	Cattle	Sheep	Pigs	Year	Horses	Cattle	Sheep	Pigs
1860 ..	432	3,958	20,135	351	1940 ..	1,699	13,080	119,305	1,455
1870 ..	717	4,276	41,594	543	1950 ..	1,057	14,640	112,891	1,123
1880 ..	1,069	7,527	62,184	816					
1890 ..	1,522	10,300	97,881	891	1959 ..	671	16,257	152,685	1,289
1900 ..	1,610	8,640	70,603	950	1960 ..	640	16,503	155,174	1,424
1910 ..	2,166	11,745	98,066	1,026	1961 ..	598	17,332	152,679	1,615
1920 ..	2,416	13,500	81,796	764	1962 ..	562	18,033	157,712	1,652
1930 ..	1,793	11,721	110,568	1,072	1963 ..	547	18,549	158,626	1,440

While livestock numbers (particularly sheep) have increased substantially since 1860, marked fluctuations have taken place during the period, mainly on account of widespread droughts which have from time to time left their impressions on the pastoral history of Australia. These occurred in 1868, 1877, 1883–84, 1892, 1893, 1895, 1901–02, 1912, 1914, 1918, 1919, 1922–23, 1925–26, 1927–28, 1929–30, 1940–41 and 1944–45 to 1946–47.

The years in which the numbers of livestock attained their peaks are as follows:—horses, 1919 (2,527,000); cattle, 1963 (18,549,000); sheep, 1963 (158,626,000); and pigs, 1941 (1,797,000).

The distribution throughout Australia of sheep, beef cattle, dairy cattle and pigs at 31st March, 1963, is shown in the maps on pages 1049, 1050 and facing pages 1082 and 1083.

The numbers of horses, beef cattle and sheep in each State and Territory are shown later in this chapter; similar information for dairy cattle and pigs appears in the division Other Rural Industries of this chapter.

2. **Carrying Capacity of Pastoral Holdings.**—The carrying capacity of pastoral holdings has been increased in recent years, owing in some measure to the succession of good seasons experienced since 1946 (with the exception of the 1957–58 season, when prevailing dry conditions caused a slight decline in cattle and sheep numbers). Other important factors contributing to the progressive increase over this period have been the increased attention given to pasture improvement and the reduction of rabbit infestation, principally due to the introduction, in 1950, of the disease myxomatosis. Some information on pasture improvement in Australia was given on pages 1001–2 of Year Book No. 49.

3. **Size Classification of Cattle Herds and Sheep Flocks.**—A special series of tabulations relating to rural holdings in Australia was compiled for 1959–60 and has been published in full detail in a series of bulletins, *Classification of Rural Holdings by Size and Type of Activity, 1959–60*. Tables in these bulletins relating to beef, dairy cattle, and sheep, show classifications according to size of herd or flock, area of holding, area of wheat for grain, area of sown pastures, and type of activity. These data are presented by statistical division. An earlier series, prepared for the year 1955–56, presents similar data, but only by State.

4. **Value of Pastoral Production.**—(i) *Gross, Local and Net Values, 1962–63.* Values of pastoral production for each State are shown for 1962–63 in the following table. Further details of the source of the information and an explanation of the terms used in this compilation will be found in Chapter XXX. Miscellaneous. Maintenance costs and depreciation have not been deducted; consequently the net values are inflated to the extent of these amounts.

**GROSS, LOCAL AND NET VALUES OF PASTORAL PRODUCTION, 1962-63**  
(£'000)

State or Territory	Gross production valued at principal markets	Marketing costs	Gross production valued at farm	Value of materials used in process of production	Net value of production (a)
New South Wales .. ..	239,225	19,174	220,051	(b) 18,221	201,830
Victoria .. ..	159,457	16,868	142,589	10,026	132,563
Queensland .. ..	120,608	9,900	110,708	10,447	100,261
South Australia .. ..	63,693	4,183	59,510	7,515	51,995
Western Australia .. ..	53,640	4,059	49,581	8,291	41,290
Tasmania .. ..	13,768	933	12,835	5,293	7,542
Northern Territory .. ..	3,478	482	2,996	n.a.	2,996
Australian Capital Territory	1,011	63	948	76	872
<b>Australia .. ..</b>	<b>654,880</b>	<b>55,662</b>	<b>599,218</b>	<b>59,869</b>	<b>539,349</b>

(a) No deduction has been made for depreciation and maintenance. (b) No allowance has been made for costs of power, power kerosene, petrol and other oils.

(ii) *Net Values, 1958-59 to 1962-63.* The net value of pastoral production by State and the net value per head of population are shown below.

**NET VALUE OF PASTORAL PRODUCTION(a)**

Year	N.S.W.(b)	Vic.	O'land	S. Aust.	W. Austr.	Tas.	Aust.(c)
------	-----------	------	--------	----------	-----------	------	----------

NET VALUE  
(£'000)

1958-59 ..	162,366	110,392	90,760	38,425	30,582	6,652	443,622
1959-60 ..	198,380	135,630	99,884	50,067	39,659	7,846	536,215
1960-61 ..	159,960	116,181	94,346	36,119	39,978	6,403	458,169
1961-62 ..	183,002	115,528	86,449	45,628	41,328	5,854	481,338
1962-63 ..	201,830	132,563	100,261	51,995	41,290	7,542	539,349

NET VALUE PER HEAD OF POPULATION  
(£)

1958-59 ..	43.5	40.1	62.6	42.3	43.3	19.6	44.6
1959-60 ..	52.3	48.1	67.6	53.6	55.3	22.8	52.8
1960-61 ..	41.3	40.2	62.7	37.7	54.8	18.3	44.1
1961-62 ..	46.4	39.1	56.6	46.6	55.4	16.4	45.4
1962-63 ..	50.3	43.9	64.7	52.1	54.0	20.9	49.9

(a) No deduction has been made for depreciation and maintenance. Payments to woolgrowers of profits from the war-time wool disposal plan, which were virtually completed by 30th June, 1959, have been excluded. (b) No allowance has been made for costs of power, power kerosene, petrol and other oils. (c) Includes Northern Territory and Australian Capital Territory.

5. *Indexes of Quantum and Price of Pastoral Production, 1958-59 to 1962-63.*—The quantum indexes relate to gross output of farm products valued at constant prices. The quantities of each farm product produced each year have been re-valued at the unit gross value for the period 1936-37 to 1939. The price indexes relate to average "prices"

of farm products realized in the principal markets of Australia. Average quantities of each product marketed in the period 1946-47 to 1950-51 have been used as fixed weights. For further details of the methods of calculating these indexes and of the weights used, see Chapter XXX. Miscellaneous.

### INDEXES OF QUANTUM(a) AND PRICE OF PASTORAL PRODUCTION: AUSTRALIA

(Base: Average 3 years ended June, 1939 = 100)

Particulars	1958-59	1959-60	1960-61	1961-62	1962-63
<b>QUANTUM(a) PRODUCED</b>					
Wool .. .. .	164	172	165	174	170
Other products .. .. .	152	153	136	144	154
<i>Total, Pastoral</i> .. .. .	<i>159</i>	<i>163</i>	<i>152</i>	<i>160</i>	<i>163</i>
Per head of population	110	110	100	104	104
<b>PRICE</b>					
Wool .. .. .	370	440	397	412	449
Other products .. .. .	435	500	513	433	451
<i>Total, Pastoral</i> .. .. .	<i>396</i>	<i>464</i>	<i>443</i>	<i>421</i>	<i>450</i>

(a) Index of value at constant prices, i.e. quantities revalued at average unit values of base years, 1936-37 to 1938-39.

## § 2. Sheep

1. *Distribution throughout Australia.*—With the exception of a short period in the early eighteen-sixties, when the flocks of Victoria outnumbered those of New South Wales, the latter State has occupied the premier position in sheep-raising, depasturing nearly one-half of the sheep of Australia.

A map showing the distribution of sheep in Australia at 31st March, 1963, appears on page 1049. Maps showing distribution in earlier years were published in previous issues of the Year Book (see No. 43, p. 911, for 1955; No. 39, p. 907, for 1948; No. 34, p. 452, for 1938-39; and No. 22, p. 659, for 1924-25). Graphs showing the number of sheep in Australia from 1870 onwards appear on pages 1061-2 of Year Book No. 49.

The numbers of sheep in the several States and Territories at 31st March of each year 1959 to 1963 compared with average numbers for the three-year periods ended 1939, 1949 and 1959 are shown in the following table.

### SHEEP: NUMBER (‘000)

Period	N.S.W.	Vic.	Q'land	S. Aust.	W. Aust.	Tas.	N.T.	A.C.T.	Aust.
<i>Average for three years ended—</i>									
1939 ..	51,202	17,845	21,889	8,916	8,972	2,460	23	251	111,558
1949 ..	46,525	17,900	16,442	8,793	10,368	2,060	24	227	102,339
1959 ..	67,006	26,615	22,537	15,285	15,609	3,259	25	265	150,601
<i>Year—</i>									
1959 ..	67,936	26,925	22,148	15,634	16,215	3,536	19	272	152,685
1960 ..	71,000	26,597	23,332	14,025	16,412	3,494	15	299	155,174
1961 ..	68,087	26,620	22,135	14,952	17,152	3,439	16	278	152,679
1962 ..	69,498	27,533	22,125	16,415	18,314	3,531	10	286	157,712
1963 ..	70,021	27,472	22,811	15,737	18,727	3,570	9	279	158,626

Except when affected by drought, the relative numbers of sheep in the different States have remained fairly constant in recent years. The percentage distribution in 1963 was:— New South Wales, 44; Victoria, 18; Queensland, 14; South Australia, 10; Western Australia, 12; and Tasmania, 2.

2. Numbers of Sheep on Rural Holdings.—(i) *Size of Sheep Flocks.* Details of the size of sheep flocks on rural holdings in Australia for 1959–60 have been published in a series of publications entitled *Classification of Rural Holdings by Size and Type of Activity, 1959–60.*

(ii) *Sheep Numbers.* A record level of 158.6 million sheep was reached at 31st March, 1963. This figure is 0.9 million more than the previous maximum in 1962.

The following table shows the approximate movement in sheep numbers in Australia in each year 1958–59 to 1962–63.

#### SHEEP AND LAMBS: ANALYSIS OF MOVEMENT IN NUMBERS, AUSTRALIA

('000)

Season	Lambs marked	Excess of exports	Sheep and lambs slaughtered	Estimated number of deaths from disease, drought, etc.(a)	Number at 31st March (end of season)	Annual net increase (+) or decrease(—)
1958–59.. ..	38,748	136	26,963	8,279	152,685	+ 3,370
1959–60.. ..	44,150	(b) 226	32,088	9,347	155,174	+ 2,489
1960–61.. ..	39,792	(b) 148	32,582	9,557	152,679	— 2,495
1961–62.. ..	45,596	(b) 201	33,317	7,045	157,712	+ 5,033
1962–63.. ..	45,146	(b) 263	33,944	10,025	158,626	+ 914

(a) Balance figure.

(b) No imports in this year.

3. Classification of Sheep According to Age, Sex and Breed.—In the following table, numbers of sheep in Australia are classified according to age and sex at 31st March.

#### SHEEP: AGE AND SEX, AUSTRALIA

('000)

Description	1959	1960	1961	1962	1963
Rams, 1 year and over ..	1,919	1,898	1,934	1,956	1,979
Breeding ewes (including ewes intended for mating) ..	69,470	68,455	69,662	70,693	70,936
Other ewes, 1 year and over ..	8,295	9,276	8,951	8,729	8,878
Wethers, 1 year and over ..	43,578	43,046	42,912	43,021	44,267
Lambs and hoggets, under 1 year .. .. .	29,423	32,499	29,220	33,313	32,566
<b>Total, Sheep and Lambs</b>	<b>152,685</b>	<b>155,174</b>	<b>152,679</b>	<b>157,712</b>	<b>158,626</b>

Particulars of the principal breeds of sheep at 31st March, 1962, the latest date for which these data are available (details are collected on a triennial basis), are shown in the following table.

**SHEEP: PRINCIPAL BREEDS, 31st MARCH, 1962**  
( '000)

Breed	N.S.W.	Vic.	Q'land	S. Aust.	W. Aust.	Tas.	N.T.	A.C.T.	Aust.
Merino ..	54,096	12,116	21,754	13,772	16,902	337	10	247	119,234
Other recognized breeds ..	7,203	6,990	48	1,149	587	1,959	..	11	17,947
Merino come-backs(a) ..	1,865	2,570	74	307	215	429	..	7	5,467
Crossbreds(b) ..	6,334	5,857	249	1,187	610	806	..	21	15,064
<b>Total ..</b>	<b>69,498</b>	<b>27,533</b>	<b>22,125</b>	<b>16,415</b>	<b>18,314</b>	<b>3,531</b>	<b>10</b>	<b>286</b>	<b>157,712</b>

(a) Merino comeback is the progeny of a crossbred Merino ewe and a Merino ram, i.e. finer than half-bred. (b) Half-bred and coarser.

4. Imports and Exports of Sheep.—The oversea exports of live sheep from Australia are of comparatively minor importance. On 27th November, 1929, the export of stud Merino sheep was prohibited, except with the approval of the Minister for Primary Industry. Exports of sheep are now principally for slaughter overseas. Consignments for this purpose in recent years were made chiefly from Western Australia to Singapore. Since June, 1958, an embargo has been imposed on the import of sheep in order to prevent the introduction of the disease blue-tongue. The following table shows the imports and exports of all sheep for the years 1958–59 to 1962–63.

**SHEEP: IMPORTS AND EXPORTS, AUSTRALIA**

Year	Imports		Exports	
	No.	Value	No.	Value
		£A. '000 f.o.b.		£A. '000 f.o.b.
1958–59 .. ..	5	1	135,720	393
1959–60 .. ..	(a)	(a)	225,757	805
1960–61 .. ..	(a)	(a)	147,592	461
1961–62 .. ..	(a)	(a)	200,883	697
1962–63 .. ..	(a)	(a)	263,145	892

(a) An embargo was placed on the import of sheep in June, 1958; see text above.

5. Comparison with other Countries.—In 1962–63, Australian flocks numbered 159 million sheep, compared with an estimate of 243 million for the U.S.S.R., China, and eastern Europe combined, about 50 million in New Zealand, and about 45 million in Argentina. World sheep numbers were estimated at about 912 million in 1962–63. These figures relate only to woolled sheep, non-woolled sheep accounting for about 5 per cent. of the world total of all types of sheep. Further details of sheep numbers in the principal wool producing countries of the world are given in the table on page 1067.

### § 3. Cattle

1. Objects of Cattle-raising.—Cattle-raising is carried out in all the States, the main object in certain districts being the production of stock suitable for slaughtering purposes, and in others the raising of profitable dairy herds. While dairy cattle are restricted mainly to coastal districts, beef cattle are more widely distributed, particularly in the eastern States, and are raised in areas unsuitable for dairy cattle, such as the tropical area of northern Queensland, the Northern Territory, and the Kimberley district in the north of Western Australia.

2. Distribution throughout Australia.—Although cattle numbers declined after 1957 because of drought conditions and heavy slaughterings, they began to rise again in 1960, and in 1963 reached a record level of 18,549,000.

A graph showing the number of cattle in Australia from 1870 onwards appears on page 1061 of Year Book No. 49.



The numbers of cattle (beef and dairy) in the several States and Territories in each year 1959 to 1963, compared with averages for the three-year periods ended 1939, 1949 and 1959, are shown below.

**CATTLE: NUMBER**  
(\*000)

Period	N.S.W.	Vic.	Q'land	S. Aust.	W. Aust.	Tas.	N.T.	A.C.T.	Aust.
Average for three years ended—									
1939 ..	3,040	1,861	6,002	324	767	260	882	8	13,144
1949 ..	3,122	2,153	5,971	443	830	244	1,006	9	13,778
1959 ..	3,770	2,722	7,177	598	985	367	1,173	10	16,802
Year—									
1959 ..	3,664	2,651	6,884	576	1,000	374	1,099	9	16,257
1960 ..	3,840	2,624	7,012	500	1,030	375	1,111	11	16,503
1961 ..	4,242	2,864	7,004	561	1,100	394	1,154	13	17,332
1962 ..	4,399	3,156	7,098	659	1,218	425	1,064	14	18,033
1963 ..	4,569	3,225	7,233	679	1,298	444	1,087	14	18,549

Although the proportion was not as high as it has been in some previous years, Queensland was carrying 39 per cent. of the cattle in Australia in 1963. The percentage in each State and Territory during that year was:—New South Wales, 25; Victoria, 17; Queensland, 39; South Australia, 4; Western Australia, 7; Tasmania, 2; and Northern Territory, 6.

Maps showing the distribution of beef and dairy cattle in Australia appear on pp. 1050 and 1082. Maps showing distribution in earlier years were published in previous issues of the Year Book (see No. 43, pp. 909–10, for 1955; No. 39, pp. 905–6, for 1948; No. 34, pp. 453–4, for 1938–39; and No. 22, p. 660, for 1924–25).

3. Classification of Cattle.—(i) *According to Purpose.* Of the total number of cattle in Australia in 1963, 13,473,000 (73 per cent.) were classified as beef cattle. The numbers classified as beef cattle in the several States and Territories during the years 1959 to 1963, compared with averages for the three-year periods ended 1949 and 1959, are shown in the following table.

**BEEF CATTLE: NUMBER**  
(\*000)

Period	N.S.W.	Vic.	Q'land	S. Aust.	W. Aust.	Tas.	N.T.	A.C.T.	Aust.
Average for three years ended—									
1949 ..	1,832	686	4,592	171	604	100	1,006	6	8,997
1959 ..	2,462	1,023	5,882	341	763	165	1,173	7	11,816
Year—									
1959 ..	2,382	998	5,643	328	784	171	1,099	6	11,411
1960 ..	2,562	946	5,757	260	814	168	1,111	8	11,626
1961 ..	2,961	1,147	5,790	313	876	180	1,155	9	12,431
1962 ..	3,127	1,332	5,890	385	983	196	1,063	11	12,987
1963 ..	3,307	1,367	6,041	398	1,057	206	1,086	11	13,473

Particulars relating to dairy cattle numbers will be found in the division Other Rural Industries of this chapter. (See pp. 1078–9.)

(ii) *According to Size of Cattle Herds.* Details of size of cattle herds on rural holdings in Australia for 1959–60 have been published in a series of publications entitled *Classification of Rural Holdings by Size and Type of Activity*.

4. *Cattle and Beef Research Schemes.*—In May, 1960, legislation was enacted to provide for a Commonwealth scheme for an expanded programme of research into the scientific, technical and economic problems connected with the Australian beef industry.

Funds are raised by a levy on all cattle weighing over 200 lb. dressed which are slaughtered for human consumption, and the Commonwealth provides a matching contribution on a £1 for £1 basis to meet expenditure on new research. The scheme is administered by the Australian Cattle and Beef Research Committee, whose main function is to formulate plans for projects on which the funds may be expended. The research is undertaken by existing bodies such as the universities, C.S.I.R.O. and State Departments of Agriculture.

The Minister for Primary Industry has approved a research programme of just over £1,000,000 for 1964-65.

At its first meeting in June, 1960, the Committee agreed to recommend to the Minister for Primary Industry that the levy be fixed at the maximum provided in the Act, namely 2s. a head. The levy was operative from 1st July, 1960. It was suspended in October, 1960, as a result of a High Court writ being issued by certain meat operators challenging the validity of the Act. Amending legislation was enacted in October, 1961, and the levy again became operative from the 14th October, 1961. The three Acts covering the research arrangements and collection of the levy are the *Cattle and Beef Research Act 1960-1961*, the *Cattle Slaughter Levy Collection Act 1960-1961*, and the *Cattle Slaughter Levy Act 1960*. The *Cattle Slaughter Levy (Suspension) Act 1961* covers the suspension of levy from 14th October, 1960, to 13th October, 1961.

5. **Imports and Exports of Cattle.**—In 1962-63, most of the cattle exported from Australia were sent to Hong Kong for slaughtering, the number exported thereto being 6,656 head valued at £138,515. The number of cattle imported is small and consists mainly of valuable animals for stud purposes. Since June, 1958, an embargo has been imposed on the import of cattle in order to prevent the introduction of the disease blue-tongue. Details for the years 1958-59 to 1962-63 are shown in the following table.

#### CATTLE: IMPORTS AND EXPORTS, AUSTRALIA

Year	Imports		Exports	
	No.	Value	No.	Value
1958-59 .. .. .	37	£A.'000 f.o.b. 62	13,900	£A.'000 f.o.b. 493
1959-60 .. .. .	(a)	(a)	13,602	456
1960-61 .. .. .	(a)	(a)	10,159	404
1961-62 .. .. .	(a)	(a)	7,304	303
1962-63 .. .. .	(a)	(a)	8,969	283

(a) An embargo was placed on the import of cattle in June, 1958; see text above.

6. **Comparison with Other Countries.**—The following table shows the number of cattle in Australia and in some of the principal cattle-raising countries of the world at the latest available date.

#### CATTLE: NUMBER IN VARIOUS COUNTRIES

(Source: (for countries other than Australia) *World Agricultural Production and Trade*, United States Department of Agriculture)

('000)

Country	Year and Month	Number(a)
India(b) .. .. .	1962 (May) .. .. .	236,000
United States of America .. .. .	1964 (January) .. .. .	106,488
U.S.S.R. .. .. .	1964 (January) .. .. .	85,000
Brazil .. .. .	1963 (December) .. .. .	81,115
China (Mainland)(b) .. .. .	1960 (December) .. .. .	65,400
Argentina .. .. .	1964 (June) .. .. .	41,500
Pakistan(b) .. .. .	1961 (Estimate) .. .. .	30,300
Mexico .. .. .	1964 (Spring) .. .. .	24,500
Ethiopia .. .. .	1963 (Estimate) .. .. .	22,000
France .. .. .	1963 (October) .. .. .	20,249
Australia .. .. .	1963 (March) .. .. .	18,549
Colombia .. .. .	1963 (October) .. .. .	15,800
Turkey(b) .. .. .	1963 (December) .. .. .	13,150
Germany, Federal Republic of .. .. .	1963 (December) .. .. .	13,014
South Africa .. .. .	1959 (August) .. .. .	11,300

(a) Subject to revision.

(b) Includes buffaloes.

### § 4. Horses

1. **Distribution throughout Australia.**—About 80 per cent. of the horses in Australia are in the States of New South Wales, Victoria and Queensland. In the following table, figures are shown for each State and Territory for the years 1959 to 1963.

**HORSES: NUMBER**  
(’000)

Year	N.S.W.	Vic.	Q’land	S. Aust.	W. Aust.	Tas.	N.T.	A.C.T.	Aust.
1959 ..	214	91	240	33	41	12	39	1	671
1960 ..	204	81	234	30	41	11	38	1	640
1961 ..	192	65	224	27	40	9	40	1	598
1962 ..	168	61	217	25	40	9	41	1	562
1963 ..	166	58	212	25	39	8	38	1	547

The number of horses in Australia reached a peak of 2,527,000 in 1919. Since then, it has declined, because of mechanization of transport and farming, at an average rate of 45,000 a year. A graph showing the number of horses in Australia since 1870 appears in Year Book No. 49.

The percentage distribution of the number of horses in each State and Territory for 1963 was:—New South Wales, 30; Victoria, 11; Queensland, 39; South Australia, 5; Western Australia, 7; Tasmania, 1; and Northern Territory, 7.

2. **Oversea Trade in Horses.**—Exports of horses in 1962–63 numbered 452, valued at £319,530 (Australian produce 394 for £219,309; re-exports 58 for £100,221), made up of horses for breeding (58 valued at £59,052), horses for racing (285 valued at £243,645, shipped principally to Singapore) and horses for other purposes (109 valued at £16,833).

The few horses imported into Australia are mainly stud animals from the United Kingdom and racehorses from New Zealand. The total number imported in 1962–63 was 537 valued at 599,248.

### § 5. Pastoral Products: Wool

1. **General.**—With about one-sixth of the world’s woolled sheep, Australia produces more than one-quarter of the world’s wool and more than half of the world’s fine-quality Merino wool. The bulk of the production is exported, mainly as greasy wool, although substantial amounts of scoured and carbonized wool, wool on sheep skins and small quantities of semi-manufactured wool are also shipped. The remainder, which is used by Australian manufacturers, has amounted to only about 7 per cent. of the total production (greasy basis) in recent years.

The important position held by Australia among the principal sheep and wool producing countries of the world is shown in the table on page 1067.

2. **Earlier Wool Marketing Schemes.**—Details of past marketing schemes and agreements, including the 1914–18 War Imperial Purchase Scheme, the British Australian Wool Realization Association Ltd., the 1939–45 War Acquisition Scheme, Joint Organization and Minimum Reserve Price Plan, are given in previous issues of the Year Book.

3. **Auction System.**—More than ninety per cent. of the Australian wool clip is disposed of at auction. (During both world wars, however, auction selling was suspended and replaced by bulk purchase schemes.)

There are fourteen recognized wool-selling centres, namely Sydney, Goulburn, Newcastle, Albury, Melbourne, Geelong, Ballarat, Portland, Brisbane, Adelaide, Perth, Albany, Hobart and Launceston. At these centres, wool-selling brokers operate large stores where wool received from growers is held awaiting sale.

Each year a wool-selling programme is drawn up jointly by the selling brokers and wool-buyers on the basis of the expected clip. Selling dates and the quantities to be offered are then determined for each centre.

Before each sale, the selling brokers, who act as agents for the woolgrowers, display a representative portion of the wool to be sold on show floors for buyers' inspection and valuation. Auction sales are attended by buyers purchasing on behalf of wool users in over fifty countries.

4. **Wool Marketing Committee of Inquiry.**—In 1961, the Commonwealth Government appointed an independent committee to inquire into the marketing and promotion of Australian wool and related matters (*see* Year Book No. 48, page 977, for further details). The Committee presented its report to the Government in 1962. Its most important recommendation was that wool promotion, research and testing should be brought under the control of a single body, which should also act as an advisory authority on wool marketing. This recommendation was implemented under the *Wool Industry Act* 1962, which set up the Australian Wool Board.

5. **Australian Wool Board.**—This Board consists of a chairman, six woolgrower representatives, three members with special qualifications and a representative of the Commonwealth Government. The first chairman of the Board was appointed by the Minister for Primary Industry after consultation with the Australian Wool Industry Conference (*see* p. 1060) but subsequent chairmen are to be appointed on the nomination of the Board. The six woolgrower representatives are appointed by the Minister on the nomination of the Wool Industry Conference, and the three members with special qualifications are appointed from a panel of names submitted by the Conference. The Act provides that the latter members must be experienced in one of the following fields: wool marketing and manufacturing, research, finance and commerce.

When the Board came into being on 1st May, 1963, it took over the functions of the Australian Wool Bureau. On 1st July, 1963, the Australian Wool Testing Authority became part of the Board, and on 1st January, 1964, the Board took over the functions of the Wool Research Committee. Information on these three former instrumentalities appears in Year Book No. 48, pages 977–81.

Following the organizational changes carried out under the Wool Industry Act, the functions of the Board embrace the following activities.

- (i) *Wool promotion in Australia and overseas by publicity and other means.* Promotion overseas is carried out through the International Wool Secretariat, which is maintained jointly by the Wool Boards of Australia, New Zealand and South Africa.
- (ii) *Provision of a testing service for wool and wool products.* This service is administered by a subsidiary board retaining the name Australian Wool Testing Authority.
- (iii) *Administration of wool research.* The Board is responsible for preparing annual programmes of research expenditure which are subject to the approval of the Minister for Primary Industry. Two committees established by the Board, the Wool Production Research Advisory Committee and the Wool Textile Research Advisory Committee, assist in this task.
- (iv) *Investigation into all aspects of wool marketing on a continuing basis.* The Wool Marketing Committee, an ancillary body appointed by the Board, assists in carrying out this function. The Board is required to report to the Australian Wool Industry Conference on its findings and advise it on measures which should be adopted to meet changing marketing conditions. However, the Board has no executive powers over marketing.
- (v) *Maintenance and administration of the wool stores which were entrusted to the Board by the Commonwealth Government.* Further details concerning these stores appear in Year Book No. 48, page 978.
- (vi) *Other activities approved by the Minister for the benefit of the wool industry, including the operation of the Wool Statistical Service and the registration of wool classers.* The Wool Statistical Service (described in more detail in Year Book No. 48, pp. 977–8) provides comprehensive statistics on the Australian wool clip, while the registration of wool classers is designed to improve the standards of wool classing in Australia.

At present the main source of finance for the various activities of the Board is a levy paid by woolgrowers (*see* para. 7 below).

**6. The Australian Wool Industry Conference.**—This body was formed by woolgrowers in October, 1962, to meet the need for an organization with sufficient authority to speak on behalf of the woolgrowing industry as a whole. It is not a statutory body and consists at present of 50 members and an independent chairman, 25 of the members being appointed by the Australian Woolgrowers' and Graziers' Council and 25 by the Australian Wool and Meat Producers' Federation.

The Conference makes recommendations to the Commonwealth Government on policy matters concerning the wool industry. Under the Wool Industry Act, it is the responsibility of the Conference to nominate woolgrower representatives for appointment to the Australian Wool Board and to prepare panels of names from which the three Board members with special qualifications are selected. Under the Wool Tax Acts (*see* para. 7) the Conference is also responsible for recommending to the Commonwealth Government what rates of levy should be paid by woolgrowers to finance the activities of the Wool Board.

**7. Wool Levy.**—Since 1936, a statutory levy has been collected from woolgrowers to finance wool promotion activities. The initial rate was 6d. a bale and this was increased at the request of woolgrowers to 2s. a bale in 1945 and 4s. a bale in 1952, the latter rate continuing until 1960. Further details regarding the operation of this levy prior to 1957 appear in Year Book No. 48, page 978.

Under legislation passed in 1957, provision was also made for the payment by woolgrowers of a contribution for wool research which was fixed at 2s. a bale.

In 1960, the wool promotion levy was raised to 5s. a bale, and the following year it was increased further to 10s. a bale. The operation of this rate was subsequently extended for 1962-63 and 1963-64. The wool research levy has remained unchanged at 2s. a bale since 1957.

The collection of the two levies from woolgrowers is governed by three complementary Acts, the *Wool Tax Acts* (No. 1 and No. 2) 1957-1963 and the *Wool Tax Assessment Act* 1936-1963.

Since 1945, the Commonwealth Government has contributed to wool research on a statutory basis. Originally the contribution was equivalent to 2s. a bale. This was increased to 4s. a bale in 1957.

**8. Wool Production.**—(i) *General.* Wool as shorn from the sheep contains an appreciable amount of grease, dirt and other extraneous matter, and is termed "greasy wool". The quantity of grease and other matter in a fleece differs not only between countries, but between districts in the same country. It fluctuates with the vagaries of the season, and with the breed and the condition of the sheep.

To allow for this factor, the weight of greasy wool is sometimes given on a "clean" basis, i.e. minus the estimated amount of impurities. The net wool fibre content of greasy wool, expressed as a percentage, is termed "clean yield".

From 1946-47 to 1952-53, the Australian Wool Realization Commission, and from 1953-54, the Wool Statistical Service, have assessed annually the clean yield of the Australian wool clip. During the period of assessment, the clean yield has shown a continuous rise up to 1951-52, when it reached 57.5 per cent. It has since fluctuated between 55.8 per cent. and 57.7 per cent.

Wool scoured, washed and carbonized in Australia before export, however, has a clean yield somewhat lower than for the whole clip, because the grade of greasy wool treated locally for export as scoured, washed or carbonized includes a large proportion of dirty and low-grade wool. In recent years, it has approximated 54 per cent. The quantity of this wool exported during 1962-63 was about 12 per cent. of the total raw wool exports (excluding wool exported on skins) in terms of greasy.

For the clean yield of Australian scoured wools, a standard factor of 93 per cent. is taken.

(ii) *Production.* The production of wool in the States and Territories varies broadly in accordance with the number of sheep depastured and with seasonal conditions which affect clip per head (see para. 8 (iii), p. 1062). In general, however, South Australia obtains from its large-framed Merinos a much heavier fleece per sheep than the Australian average, while Tasmania generally obtains from its predominantly non-Merino flocks a lighter fleece per sheep. In addition, as a result of better management (improved pastures, fodder conservation, better breeding, control of diseases, etc.), the long-term trend has been towards higher fleece weights.

The following table shows details of total wool (i.e. shorn, dead and fellmongered, and exported on skins) produced by each of the States and Territories during the years 1958-59 to 1962-63 compared with averages for the three-year periods ended 1938-39, 1948-49 and 1958-59. A graph showing the production of wool in relation to sheep numbers from 1870 onwards appears on page 1062 of Year Book No. 49.

### PRODUCTION OF WOOL (GREASY BASIS)

('000 lb.)

Period	N.S.W.	Vic.	Q'land	S. Aust.	W. Aust.	Tas.	N.T.	A.C.T.	Aust.
Average for three years ended—									
1938-39 ..	478,595	169,256	169,325	88,699	73,141	15,728	35	1,822	996,601
1948-49 ..	439,363	200,229	151,679	108,126	95,031	16,272	305	1,927	1,012,932
1958-59 ..	633,938	298,302	217,062	187,225	160,402	30,141	277	2,371	1,529,718
Year—									
1958-59 ..	684,184	298,844	219,148	186,842	166,522	32,605	195	2,522	1,590,862
1959-60 ..	715,445	322,999	236,196	198,289	170,442	33,600	165	2,899	1,680,035
1960-61 ..	664,276	322,011	235,590	177,413	191,353	31,870	157	2,471	1,625,141
1961-62 ..	701,168	330,716	230,333	206,985	192,161	34,469	98	2,645	1,698,575
1962-63 ..	693,734	316,705	233,638	207,344	184,123	34,561	100	2,343	1,672,548

The bulk of the Australian wool production (about 91 per cent. in recent years) is shorn from live sheep. The remainder is obtained by fellmongering (about 2 per cent.), or is exported on skins (about 7 per cent.). The following table shows details of total wool production according to method of obtaining wool, and also the gross value of wool produced. Gross value is based, for shorn wool, upon the average price realized for greasy wool sold at auction, and, for skin wools, on prices recorded by fellmongers and skin exporters.

### QUANTITY (GREASY BASIS) AND VALUE OF WOOL PRODUCED: AUSTRALIA

Period	Shorn (incl. crutchings)	Dead and fell- mongered	Exported on skins	Total production	
				Quantity	Value
	'000 lb.	'000 lb.	'000 lb.	'000 lb.	£'000
Average for three years ended—					
1938-39 ..	889,338	49,280	57,983	996,601	53,425
1948-49 ..	902,007	50,660	60,265	1,012,932	152,536
1958-59 ..	1,411,424	36,804	81,490	1,529,718	394,145
Year—					
1958-59 ..	1,456,759	41,795	92,308	1,590,862	311,415
1959-60 ..	1,529,362	38,929	111,744	1,680,035	389,761
1960-61 ..	1,472,092	37,509	115,540	1,625,141	340,430
1961-62 ..	1,546,318	36,192	116,065	1,698,575	372,554
1962-63 ..	1,515,932	32,854	123,762	1,672,548	400,262

(iii) *Average Fleece Weight.* The average weights of sheep and lamb fleeces shorn in each of the States of Australia and in the Australian Capital Territory are shown in the following table for each season 1958-59 to 1962-63.

## AVERAGE WEIGHT OF FLEECES SHORN (SHEEP AND LAMBS)

(lb.)

State or Territory	1958-59	1959-60	1960-61	1961-62	1962-63
<b>SHEEP</b>					
New South Wales .. ..	9.88	10.10	9.48	10.06	9.94
Victoria .. ..	9.47	10.06	10.24	10.17	9.59
Queensland .. ..	9.75	10.09	9.93	9.89	9.83
South Australia .. ..	11.87	12.31	12.12	12.86	12.29
Western Australia .. ..	10.49	10.32	11.37	10.90	10.09
Tasmania .. ..	9.37	9.10	8.89	9.39	9.44
Northern Territory .. ..	8.74	9.39	9.00	8.50	10.94
Australian Capital Territory ..	10.41	10.53	9.18	9.87	8.88
<b>Australia .. ..</b>	<b>10.03</b>	<b>10.31</b>	<b>10.12</b>	<b>10.41</b>	<b>10.11</b>
<b>LAMBS</b>					
New South Wales .. ..	3.08	3.22	3.31	3.30	3.34
Victoria .. ..	2.70	2.73	2.95	2.92	2.82
Queensland .. ..	3.84	3.95	4.16	3.89	3.85
South Australia .. ..	3.52	3.39	3.55	3.81	3.63
Western Australia .. ..	2.60	2.56	2.84	2.84	2.55
Tasmania .. ..	2.31	2.13	2.30	2.23	2.35
Northern Territory .. ..	2.21	..	..	2.33	5.00
Australian Capital Territory ..	1.45	1.56	1.56	1.66	1.80
<b>Australia .. ..</b>	<b>3.03</b>	<b>3.10</b>	<b>3.27</b>	<b>3.25</b>	<b>3.20</b>

(iv) *Classification of Wool According to Quality.* The following table provides a detailed analysis of wool sold at auction, according to quality, for the years 1958-59 to 1962-63. These data are compiled by the Wool Statistical Service on the basis of catalogues of auction sales. "Quality" ("64's, 60's, 58's," etc.) is a measure of the fineness and texture of wool for spinning purposes. Broadly, it means the maximum number of hanks of yarn, each of 560 yards length, which can be spun from 1 lb. of combed wool. For instance, wool of 64's quality is of a fineness and texture which will produce 64 hanks, each of 560 yards, from 1 lb. of tops (combed wool) of that particular wool.

CLASSIFICATION OF GREASY WOOL SOLD AT AUCTION<sup>(a)</sup>: AUSTRALIA

(Bales of approximately 300 lb.)

Pre-dominating quality	1958-59		1959-60		1960-61		1961-62		1962-63	
	Quantity	Per cent.	Quantity	Per cent.	Quantity	Per cent.	Quantity	Per cent.	Quantity	Per cent.
70's and finer	112,966	2.5	113,234	2.4	122,534	2.7	115,434	2.4	138,238	3.0
64/70's ..	442,019	9.5	453,823	9.5	462,764	10.0	381,683	8.0	413,195	8.9
64's ..	607,653	13.1	659,126	13.8	633,919	13.8	572,549	12.1	582,315	12.5
64/60's ..	477,054	10.3	506,001	10.6	451,905	9.8	475,487	10.0	469,010	10.1
60/64's ..	1,021,139	21.9	1,071,961	22.4	947,627	20.5	1,048,912	22.1	1,043,674	22.4
60's and 60/58's ..	837,338	17.9	839,919	17.5	829,601	18.0	915,501	19.3	854,771	18.4
<b>Total, 60's and finer</b>	<b>3,498,169</b>	<b>75.2</b>	<b>3,644,064</b>	<b>76.2</b>	<b>3,448,350</b>	<b>74.8</b>	<b>3,509,566</b>	<b>73.9</b>	<b>3,501,203</b>	<b>75.3</b>
58's ..	519,238	11.2	491,277	10.3	555,237	12.0	578,588	12.2	527,493	11.3
56's ..	363,968	7.8	375,391	7.9	354,287	7.7	383,238	8.1	353,344	7.6
50's ..	149,356	3.2	152,056	3.2	140,457	3.0	146,657	3.1	135,256	2.9
Below 50's ..	44,292	1.0	46,429	1.0	43,552	0.9	49,875	1.1	45,631	1.0
Oddments ..	74,385	1.6	68,202	1.4	73,246	1.6	75,708	1.6	86,058	1.9
<b>Grand Total</b>	<b>4,649,408</b>	<b>100.0</b>	<b>4,777,419</b>	<b>100.0</b>	<b>4,615,129</b>	<b>100.0</b>	<b>4,743,632</b>	<b>100.0</b>	<b>4,648,985</b>	<b>100.0</b>

(a) All greasy wool sold at auction except "wool re-offered account buyer".

9. *Price and Value.*—(i) *Price.* During 1962-63, the price of greasy wool sold in the selling centres of Australia averaged 59.0d. per lb. compared with the average price of 54.1d. per lb. in 1961-62 and 52.1d. in 1960-61.

The prices quoted above are as compiled by the National Council of Wool Selling Brokers and represent the average price realized for all greasy wool, of whatever type or quality, marketed during the years indicated.

(ii) *Value.* Fluctuation in Australian wool prices has a marked effect on the nation's rural and national income. In 1945-46, the gross value of wool production was £58,597,000, representing 17.4 per cent. of the gross value of production of all rural industries, while in 1950-51, when prices reached a peak, wool was valued at £651,902,000 or 55.6 per cent. of the total value of production for all rural industries. The value of wool production fell in subsequent years even though the quantity produced increased substantially, and in 1962-63 was £400,262,000. This figure represented 26.6 per cent. of the gross value of production of rural industries.

Details of the value of wool production for the years 1958-59 to 1962-63 are shown in the following table.

**ESTIMATED GROSS VALUE OF TOTAL WOOL PRODUCTION(a)**  
(£'000)

Season	N.S.W.	Vic.	Q'land	S. Aust.	W. Aust.	Tas.	N.T.(b)	A.C.T.	Aust.
1958-59 ..	134,764	59,471	45,075	33,797	30,915	6,844	36	513	311,415
1959-60 ..	168,112	75,952	54,573	42,691	39,334	8,254	35	810	389,761
1960-61 ..	138,881	69,265	50,859	35,242	38,312	7,229	28	614	340,430
1961-62 ..	154,920	74,219	50,637	42,900	41,260	7,876	18	724	372,554
1962-63 ..	166,170	79,006	57,731	46,257	41,494	8,886	20	698	400,262

(a) Includes shorn, dead and fellmongered wool and wool exported on skins.

(b) Estimated.

10. *Stocks of Wool.*—Stocks of raw wool held in Australia at 30th June, 1963, amounted to 222.4 million lb. (greasy basis), of which 54.4 million lb. (35.0 million lb. as greasy and 19.4 million lb. as scoured and carbonized) were held by woollen mills, wool scourers and fellmongers, and 168.0 million lb., assumed to be all greasy, were held by brokers. Of the wool held by brokers, 50.5 million lb. were unsold wool and 117.5 million lb. were sold wool held awaiting shipment. These stocks exclude wool on skins, since this wool is not recorded as production until fellmongered in Australia or exported on skins.

11. *Consumption of Wool.*—(i) *Consumption of Raw Wool.* Statistics of raw wool consumption published in recent years for the purposes of broad international comparisons are based on the quantities of scoured or carbonized wool used on the woollen and worsted systems (mill consumption), plus quantities used in such processes as felting. Consumption estimates compiled on this basis have obvious defects, as they disregard overseas trade in semi-processed wool (e.g. tops and yarns) as well as woollen goods. Estimates of raw wool used on the woollen and worsted systems and by felt manufacturers in Australia are shown in the following table for the years 1958-59 to 1962-63.

**ESTIMATED CONSUMPTION OF RAW WOOL IN AUSTRALIA**  
(<sup>0</sup>000 lb.)

Year	Greasy basis			Clean equivalent		
	Used on woollen and worsted systems	Used for felt manufacture (including hats)	Total	Used on woollen and worsted systems	Used for felt manufacture (including hats)	Total
1958-59 ..	103,180	3,992	107,172	62,834	1,896	64,730
1959-60 ..	123,529	5,092	128,621	75,226	2,419	77,645
1960-61 ..	104,801	3,896	108,697	63,414	1,851	65,265
1961-62 ..	117,555	4,328	121,883	70,682	2,056	72,738
1962-63 ..	124,525	2,346	126,871	74,872	1,376	76,248



(ii) *Consumption of Locally Processed Wool.* As considerable quantities of tops, noils and yarn are exported from Australia, the series on raw wool consumption shown above is over-stated to this extent. The series entitled "Estimated Consumption of Locally Processed Wool in Australia" provides a more reliable indication of wool consumption in Australia, as allowance has been made for exports of wool in semi-processed form. This series is shown in the following table for the years 1958-59 to 1962-63. Briefly, the series measures consumption of wool in terms of yarn used in Australian mills and other factories to produce woollen cloth and other woollen goods, yarn used for hand knitting purposes, and scoured wool used for felt manufacture. No allowance has been made for oversea trade in woollen piece goods, clothing, etc., because of the obvious difficulties of estimating accurately the wool content of these products.

**ESTIMATED CONSUMPTION OF LOCALLY PROCESSED WOOL IN AUSTRALIA**  
(<sup>000</sup> lb.)

Year	Greasy basis				Clean equivalent			
	Worsted yarn used (a)(b)	Woollen yarn used (b)	Scoured wool used for felt manufacture (including hats)	Total	Worsted yarn used (a)(b)	Woollen yarn used (b)	Scoured wool used for felt manufacture (including hats)	Total
1958-59 ..	37,972	29,272	3,992	71,236	22,811	18,520	1,896	43,227
1959-60 ..	44,314	36,327	5,092	85,733	26,390	22,723	2,419	51,532
1960-61 ..	40,315	32,268	3,896	76,479	24,516	20,034	1,851	46,401
1961-62 ..	45,173	28,885	4,328	78,386	26,543	17,876	2,056	46,475
1962-63 ..	46,875	34,980	2,346	84,201	27,541	21,646	1,376	50,563

(a) Includes hand knitting yarns used.

(b) Includes wool content of yarns containing a mixture of wool and other fibres.

12. *Exports of Wool.*—(i) *Quantities.* (a) *Greasy.* Of the total shipments in 1962-63 30 per cent. went to Japan, 16 per cent. to the United Kingdom, 10 per cent. to France, 9 per cent. to Italy, and 8 per cent. to Belgium-Luxembourg. The following table shows the quantities of greasy and slip wool exported, and the principal countries of consignment.

**EXPORTS OF GREASY AND SLIPE WOOL: AUSTRALIA**  
(<sup>000</sup> lb. actual weight)

Country of consignment	1958-59	1959-60	1960-61	1961-62	1962-63
Japan .. .. .	273,503	335,296	411,782	416,970	386,956
United Kingdom .. .. .	305,888	266,297	217,318	207,675	204,412
France .. .. .	157,871	161,844	155,378	138,483	131,769
Italy .. .. .	113,156	130,516	105,790	146,369	119,409
Belgium-Luxembourg .. .. .	103,261	105,974	105,023	108,699	98,572
Germany, Fed. Rep. of .. .. .	60,070	70,223	60,931	66,773	74,474
U.S.S.R. .. .. .	325	39,254	1,212	38,753	49,445
United States of America .. .. .	28,299	24,323	17,234	35,024	46,314
Other .. .. .	144,616	160,623	184,472	169,389	167,617
<b>Total .. .. .</b>	<b>1,186,989</b>	<b>1,294,350</b>	<b>1,259,140</b>	<b>1,328,135</b>	<b>1,278,968</b>

(b) *Scoured and Washed and Carbonized.* The exports of "scoured and washed" wool, whether carbonized or not, are shown in the following table according to principal countries of destination.

**EXPORTS OF WOOL—SCOURED AND WASHED AND CARBONIZED:  
AUSTRALIA**

('000 lb. actual weight)

Country of consignment	1958-59	1959-60	1960-61	1961-62	1962-63
United States of America ..	14,815	14,482	19,345	20,564	25,469
United Kingdom ..	24,597	24,661	20,234	15,344	17,497
Italy ..	7,117	8,668	7,691	9,640	8,582
Germany, Fed. Rep. of ..	8,692	9,406	8,470	8,267	7,314
Japan ..	4,325	4,345	6,105	7,055	5,796
China (Mainland) ..	4,942	10,268	4,588	7,814	4,524
India ..	1,313	1,520	1,186	2,221	4,292
France ..	3,732	3,842	4,659	5,089	4,251
Turkey ..	760	3,091	3,602	2,533	3,232
Canada ..	4,803	5,375	5,339	5,470	2,981
Other ..	15,455	14,868	16,053	15,307	17,975
<b>Total ..</b>	<b>90,551</b>	<b>100,526</b>	<b>97,272</b>	<b>99,304</b>	<b>101,913</b>

(c) *Tops, Noils and Waste.* Particulars of the exports of tops, noils and waste are shown in the following table.

**EXPORTS OF WOOL TOPS, NOILS AND WASTE: AUSTRALIA**

('000 lb. actual weight)

Particulars	1958-59	1959-60	1960-61	1961-62	1962-63
Tops .. ..	20,203	22,743	16,694	21,438	21,641
Noils .. ..	4,355	4,017	4,372	3,957	4,794
Waste—Soft wool .. ..	7,742	5,607	2,322	2,580	3,121
Hard wool .. ..	4,388	3,193	3,088	2,154	3,181

(d) *Total Quantity of Exports.* The following table shows the estimated greasy and clean weights of exports of raw and semi-processed wool for the years 1958-59 to 1962-63. As the figures in the following table are in terms of "greasy" or "clean" basis, they differ from those in the preceding tables which represent actual weight shipped.

**EXPORTS OF WOOL—GREASY AND CLEAN BASES: AUSTRALIA**

('000 lb.)

Particulars	1958-59	1959-60	1960-61	1961-62	1962-63
<b>GREASY BASIS</b>					
Raw wool—					
Greasy and stipe .. ..	1,187,399	1,294,598	1,259,448	1,330,329	1,279,334
Scoured and washed and carbonized .. ..	169,021	186,217	182,668	184,237	189,618
Exported on skins .. ..	92,308	111,744	115,539	116,065	124,700
<b>Total .. ..</b>	<b>1,448,728</b>	<b>1,592,559</b>	<b>1,557,655</b>	<b>1,630,631</b>	<b>1,593,652</b>
Semi-processed wool—					
Tops .. ..	36,365	41,620	30,049	40,089	40,435
Yarn .. ..	128	89	340	425	420
<b>Grand Total .. ..</b>	<b>1,485,221</b>	<b>1,634,268</b>	<b>1,588,044</b>	<b>1,671,145</b>	<b>1,634,507</b>

EXPORTS OF WOOL—GREASY AND CLEAN BASES: AUSTRALIA—*continued*

('000 lb.)

Particulars	1958-59	1959-60	1960-61	1961-62	1962-63
CLEAN EQUIVALENT					
Raw wool .. .. .	827,418	911,389	892,824	935,245	913,239
Semi-processed wool .. .. .	21,690	24,841	17,890	24,039	24,242
<b>Total .. .. .</b>	<b>849,108</b>	<b>936,230</b>	<b>910,714</b>	<b>959,284</b>	<b>937,481</b>

(ii) *Total Value of Exports.* The value of wool (other than wool on sheepskins) exported from Australia during 1962-63 was 36 per cent. of the total value of exports of merchandise of Australian origin, while the proportion for the five years ended 1962-63 averaged 38 per cent. The value for the five years ended 1962-63, together with the principal countries to which wool was exported, is shown in the following table.

VALUE OF WOOL EXPORTS: AUSTRALIA<sup>(a)</sup>

(£'000)

Country of consignment	1958-59	1959-60	1960-61	1961-62	1962-63
Japan .. .. .	68,923	95,626	105,918	114,566	111,117
United Kingdom .. .. .	73,102	75,947	55,559	53,291	57,002
France .. .. .	34,162	40,040	35,125	32,451	33,269
Italy .. .. .	28,181	38,556	27,097	38,527	32,630
United States of America .. .. .	11,270	12,436	10,708	16,866	22,932
Belgium-Luxembourg .. .. .	15,417	20,733	15,916	20,294	20,470
Germany, Fed. Rep. of .. .. .	16,479	19,774	18,343	17,457	18,953
U.S.S.R. .. .. .	99	12,018	7,743	11,449	14,571
Other .. .. .	54,578	71,002	58,033	67,626	63,392
<b>Total .. .. .</b>	<b>302,211</b>	<b>386,132</b>	<b>334,442</b>	<b>372,527</b>	<b>379,356</b>

(a) Excludes wool exported on sheepskins.

13. *World Sheep Numbers, Wool Production and Trade.*—(i) *Numbers and Production.* The following table shows particulars of the woolled sheep numbers and total production of wool, in terms of greasy, in the principal wool-producing countries of the world, together with estimates of world production of Merino, crossbred, and carpet type wool for the latest available years.

In 1962-63, Australia produced 29 per cent. of the world total of all types of wool, the share of all British Commonwealth countries combined representing approximately 45 per cent. The principal wool producers, other than Australia, were New Zealand with 11 per cent. of the world total, Argentina, 7 per cent., Republic of South Africa, 6 per cent., and United States of America, 5 per cent. Production in the U.S.S.R., China and eastern European countries together amounted to 20 per cent. World production of wool (all types) in 1962-63 exceeded the pre-war average for the years 1934 to 1938 by approximately 1,862 million lb. or 49 per cent.

Australia's wool clip is predominantly Merino. New Zealand and Argentina produce mainly crossbred wool, while the clip of the U.S.S.R. is largely of the carpet type. World production of Merino wool in 1962-63 was 42 per cent. above the average for the years 1934 to 1938, and the production of crossbred types has risen by about 72 per cent. Carpet wool production has risen by about 31 per cent.

**ESTIMATED WORLD WOOLLED SHEEP NUMBERS AND PRODUCTION OF WOOL**

(Source: Reports published by Commonwealth Economic Committee, London)

Country	Sheep numbers (million)			Wool production (million lb.—greasy basis)		
	1960-61	1961-62	1962-63 (a)	1960-61	1961-62	1962-63 (a)
British Commonwealth—						
Australia .. ..	153	158	159	1,625	1,699	1,673
New Zealand .. ..	49	48	50	588	587	620
Other Commonwealth countries .. ..	81	83	82	259	269	268
<i>Total</i> .. ..	<i>283</i>	<i>289</i>	<i>291</i>	<i>2,472</i>	<i>2,555</i>	<i>2,561</i>
Foreign—						
U.S.S.R., China, eastern						
Europe(b) .. ..	235	241	243	1,120	1,144	1,147
Argentina .. ..	46	45	45	431	413	408
South Africa, Republic of (c)	34	34	34	317	337	322
United States of America ..	33	31	30	323	320	300
Uruguay .. ..	22	22	22	181	185	190
Other foreign countries ..	257	253	247	759	759	763
<i>Total</i> .. ..	<i>627</i>	<i>626</i>	<i>621</i>	<i>3,131</i>	<i>3,158</i>	<i>3,130</i>
<b>Grand Total</b> .. ..	<b>910</b>	<b>915</b>	<b>912</b>	<b>5,603</b>	<b>5,713</b>	<b>5,691</b>
Type of Wool—						
Apparel type—						
Merino .. ..				2,250	2,310	2,289
Crossbred .. ..				2,105	2,149	2,166
Carpet type .. ..				1,248	1,254	1,236

(a) Provisional. (b) Comprises Albania, Bulgaria, China and Dependencies, Czechoslovakia, East Germany, Hungary, Outer Mongolia, Poland, Romania, Tibet and U.S.S.R. (c) Basutoland and S.W. Africa Territory are excluded from sheep numbers but included in wool production.

(ii) *Principal Importing Countries and Sources of Supply.* The following table, prepared from information published by the Commonwealth Economic Committee, furnishes, in respect of the principal importing countries, details of their production and imports of wool for 1962 together with the chief sources of supply. The quantities imported refer to the actual weight of wool, without distinguishing between greasy and scoured, except in the case of the United States of America, where estimated clean content of raw wool is quoted.

**WOOL: PRINCIPAL IMPORTING COUNTRIES AND SOURCES OF SUPPLY, 1962**

(Source: Information published by Commonwealth Economic Committee, London)

(Million lb.)

Importing country	Pro-duction of importing country (a)	Quantity imported from— (b)					Total imports
		Australia	New Zealand	Republic of South Africa	Argentina	Other countries	
United Kingdom ..	131	238.1	163.4	39.6	62.6	122.5	626.2
Japan .. ..	(c)	393.9	18.8	23.5	23.5	12.2	471.9
France .. ..	56	161.8	109.6	57.8	41.0	18.0	388.2
Italy .. ..	32	141.8	40.3	36.8	25.6	65.8	310.3
United States of America(d) ..	320	52.1	65.5	30.1	57.4	64.0	269.1
Belgium .. ..	(c)	110.7	53.5	10.9	29.7	37.5	242.3
Germany, Federal Republic of ..	(c)	73.7	32.6	37.6	22.8	56.0	222.7

(a) Greasy basis, 1961-62. (b) Actual weight of greasy and scoured wool. (c) Not available. (d) Imports are in terms of estimated clean content of greasy and scoured wool. Actual weight of total United States of America imports was 362.0 million lb.

As a considerable transit trade exists between European countries, it must not be assumed that the whole of the imports recorded by these countries is retained for their own consumption. The countries chiefly concerned with the transit trade are the United Kingdom and Belgium.

## § 6. Pastoral Products: Meat

1. General.—(i) *Australian Meat Board*. The Australian Meat Board, consisting of representatives of producers, processors, exporters and the Commonwealth Government, is responsible for the control of all exports of Australian meat and meat products. Further information on the powers, etc., conferred on the Board under the *Meat Export Control Act 1935–1960* is given on page 801 of Year Book No. 40.

(ii) *United Kingdom Long-term Purchase Agreements*. Details of the long-term meat contracts with the United Kingdom Government from the outbreak of the 1939–45 War up to 30th June, 1952, and of the Fifteen Year Meat Agreement (1952–67) are given on page 710 of Year Book No. 41 and in earlier issues.

The Fifteen Year Meat Agreement (1952–67) between the United Kingdom and Australian Governments has as its objectives the promotion of meat production in Australia, enabling increased exports to be made to the United Kingdom, and the provision of a satisfactory market in the United Kingdom for such meat. It covers beef and veal, and mutton and lamb.

(iii) *Reversion to Private Trading*. Following the announcement in September, 1953, that the United Kingdom Ministry of Food would cease bulk purchasing of meat, arrangements were made between the Australian Meat Board and the Ministry for the reversion to private trading in the United Kingdom. The main features of the arrangements were given in previous issues of the Year Book (*see* No. 47, p. 960).

Details of the minimum prices operating in recent years under private trading agreements, and an outline of the Acts relevant to the administration of the scheme, appear in Year Book No. 48, page 973.

(iv) *Minimum Prices and Deficiency Payments*. From 1st October, 1955, until April, 1958, beef prices in the United Kingdom were consistently below the level of the guarantee and consequently Australia "earned" deficiency payments which enabled the Australian Meat Board to make substantial bounty payments on beef exported to the United Kingdom. The rates of payment made during the 1954–55 and 1955–56 seasons are given on pages 888–9 of Year Book No. 43 and those for 1956–57 on pages 920–1 of Year Book No. 44. No deficiency payments have been received for beef since 1956–57, but a deficiency payment was earned on lamb for the first time during the 1960–61 season, and as a result a bounty was paid at the rate of 2s. per carcass and  $\frac{3}{4}$ d. per lb. for piece lamb entered into cold stores for export to the United Kingdom during the period 1st August, 1961, to 28th April, 1962. A further deficiency payment was earned during the 1961–62 season.

During the 1962–63 and 1963–64 lamb export seasons, the Australian Meat Board guaranteed exporters a minimum price of 18d. per lb. f.o.b. on all lambs 36 lb. and under shipped to the United Kingdom during the period September to November; and 16.5d. per lb. for the following three months, December to February. The higher guaranteed price for the initial period was aimed at stimulating early shipments, because normally the most opportune time for selling Australian lamb on the United Kingdom market is early in the export season. Any commitment by the Board is payable from moneys accrued in the Lamb Deficiency Payments Account under the Fifteen Year Meat Agreement.

(v) *United States-Australia Meat Agreement*. In February, 1964, the Governments of Australia and the United States concluded an agreement for the regulation of beef, veal and mutton exports from Australia to the United States with the object of promoting the orderly development of the trade in these classes of meat between the two countries. The agreement seeks to preserve approximately the present pattern of trade in beef and mutton and permits Australia to obtain a reasonable share of the expected market growth. Under the agreement Australia is to limit its exports of beef, veal and mutton to the United States to 242,000 tons in 1964, 251,000 tons in 1965 and 260,000 tons in 1966.

The agreement is subject to review every three years and, as appropriate, the established annual rate of increase will be adjusted to apply to the succeeding three years.

2. Beef and Veal.—(i) *Cattle Slaughtered.* The numbers of cattle slaughtered during each of the years ended June, 1959 to 1963, compared with averages for the three-year periods ended June, 1939, 1949 and 1959, are shown in the following table.

**CATTLE (INCLUDING CALVES) SLAUGHTERED**  
(‘000)

Period	Slaughterings passed for human consumption									Total slaughterings including boiled down
	N.S.W.	Vic.	Qld	S.A.	W.A.	Tas.	N.T.	A.C.T.	Aust.	
Average for three years ended—										
1938–39 ..	1,169	881	1,178	163	131	49	5	3	3,579	3,628
1948–49 ..	1,094	759	1,119	168	146	42	14	4	3,346	3,378
1958–59 ..	1,745	1,313	1,689	274	216	116	24	11	5,388	5,463
Year—										
1958–59 ..	1,894	1,397	1,883	287	249	128	24	10	5,872	5,960
1959–60 ..	1,499	1,277	1,527	238	243	145	24	9	4,962	5,024
1960–61 ..	1,267	1,010	1,469	174	209	115	28	6	4,278	4,327
1961–62 ..	1,609	1,311	1,584	201	241	136	25	8	5,115	5,167
1962–63 ..	1,809	1,562	1,804	254	308	158	24	12	5,931	5,995

(ii) *Production of Beef and Veal.* Details of the production of beef and veal during each of the years ended June, 1959 to 1963, compared with averages for the three-year periods ended June, 1939, 1949 and 1959, are shown in the following table.

**PRODUCTION OF BEEF AND VEAL (CARCASS WEIGHT)**  
(‘000 tons)

Period	N.S.W.	Vic.	Qld	S.A.	W.A.	Tas.	N.T.	A.C.T.	Aust.
Average for three years ended—									
1938–39..	181	123	199	26	28	10	1	1	569
1948–49..	160	106	206	27	30	9	3	1	542
1958–59..	248	176	305	41	41	19	5	2	837
Year—									
1958–59..	275	189	328	42	45	20	5	2	906
1959–60..	217	159	267	33	46	23	5	2	752
1960–61..	168	125	247	27	42	17	6	1	633
1961–62..	234	176	278	30	47	20	4	2	791
1962–63..	263	214	314	36	56	24	5	2	914

(iii) *Consumption of Beef and Veal.* The highest post-war consumption of beef and veal was 132.7 lb. per head in 1956–57. With the buoyant overseas market for beef and the high prices ruling in Australia during the following four years, consumption per head fell substantially, and in 1960–61 amounted to only 88.3 lb. In 1962–63 there was a considerable rise in consumption per head to 104.3 lb., consisting of 100.5 lb. carcass weight and 3.8 lb. (carcass equivalent) of canned meat. There has been a marked substitution of mutton and lamb for beef in Australia since 1956–57.

The figures quoted in the preceding paragraph include the consumption of canned beef and veal, and differ on that account from the figures shown in the last column of the next table.

In the following table, details of the production and disposal of beef and veal are shown for the years 1958-59 to 1962-63, compared with the averages for the three years ended 1938-39, 1948-49 and 1958-59.

**PRODUCTION AND DISPOSAL OF BEEF AND VEAL (CARCASS WEIGHT):  
AUSTRALIA**

Period	Net change in stocks	Production	Exports (a)	For canning	Apparent consumption in Australia	
					Total	Per head per annum
	'000 tons	'000 tons	'000 tons	'000 tons	'000 tons	lb.
Average for three years ended—						
1938-39 .. ..	n.a.	569	121	18	430	140.3
1948-49 .. ..	+ 1	542	101	67	373	109.1
1958-59 .. ..	+ 5	837	209	85	538	123.8
Year—						
1958-59 .. ..	+ 8	906	296	80	522	117.6
1959-60 .. ..	- 11	752	262	55	446	98.4
1960-61 .. ..	+ 4	633	190	43	396	85.4
1961-62 .. ..	+ 6	791	299	45	441	93.1
1962-63 .. ..	(b)	914	385	44	485	100.5

(a) Includes carcass equivalent of boneless beef exported and all fresh and frozen meat shipped as ships' stores. (b) Less than 500 tons.

(iv) *Exports of Beef and Veal.* In 1962-63, chilled beef exports were 2,543,000 lb. valued at £247,000, while frozen beef exports amounted to 573,961,000 lb. valued at £77,981,000.

While beef and veal were previously shipped largely in carcass form, there has been in recent years a substantial increase in the amount of boneless beef exported. From 1958-59 to 1962-63, the quantity of boneless beef shipped exceeded that exported in carcass form. The trade in boneless beef has been developed principally with the United States of America.

Since 1958-59, the United States has surpassed the United Kingdom as the principal market for Australian beef exports, the United Kingdom now occupying second place. The total value of beef and veal shipped to these two countries during 1962-63 was £67,032,000 and £5,623,000 respectively.

The quantity and value of Australian frozen beef and veal exported from Australia in each year 1958-59 to 1962-63 are shown in the following table. Figures in this table represent actual weight shipped, not carcass equivalent.

**EXPORTS OF FROZEN AND CHILLED BEEF AND VEAL: AUSTRALIA**

Year	Exports of frozen and chilled beef		Exports of frozen veal	
	Quantity	Value	Quantity	Value
	'000 lb.	£A.'000 f.o.b.	'000 lb.	£A.'000 f.o.b.
1958-59 .. ..	499,371	54,154	10,869	1,331
1959-60 .. ..	414,749	54,568	6,827	897
1960-61 .. ..	295,686	39,447	4,506	663
1961-62 .. ..	444,762	58,086	5,834	754
1962-63 .. ..	576,504	78,228	7,624	1,037

3. **Mutton and Lamb.**—(i) *Sheep Slaughtered.* The following table shows the numbers of sheep slaughtered in the several States during each of the years ended June, 1959 to 1963, compared with averages for the three-year periods ended June, 1939, 1949 and 1959.

## SHEEP (INCLUDING LAMBS) SLAUGHTERED

('000)

Period	Slaughterings passed for human consumption									Total slaughterings including boiled down
	N.S.W.	Vic.	Qld	S.A.	W.A.	Tas.	N.T.	A.C.T.	Aust.	
<b>Average for three years ended—</b>										
1938-39 ..	6,520	7,891	1,088	1,762	1,216	364	..	25	18,866	18,925
1948-49 ..	6,367	6,413	1,066	1,863	1,458	396	3	47	17,613	17,650
1958-59 ..	7,857	9,058	1,429	2,917	2,059	775	3	71	24,169	24,278
<b>Year—</b>										
1958-59 ..	8,861	10,514	1,633	3,145	2,415	909	4	71	27,552	27,646
1959-60 ..	10,753	12,511	2,113	3,899	2,650	1,166	5	76	33,173	33,373
1960-61 ..	11,718	11,363	2,924	2,784	2,658	1,076	4	77	32,604	32,697
1961-62 ..	11,526	12,467	2,417	3,140	2,489	1,160	3	86	33,288	33,373
1962-63 ..	11,719	12,830	2,125	3,466	2,467	1,095	3	108	33,813	33,910

(ii) *Production of Mutton and Lamb.* Details of the production of mutton and lamb in each State and Territory in the years 1958-59 to 1962-63, compared with averages for the three-year periods ended June, 1939, 1949 and 1959, are shown in the following table.

## PRODUCTION OF MUTTON AND LAMB

(Tons)

Period	N.S.W.	Vic.	Q'land	S. Aust.	W. Aust.	Tas.	N.T.	A.C.T.	Aust.
<b>Average for three years ended—</b>									
1938-39 ..	103,884	136,927	20,121	30,574	20,928	6,129	2	413	318,978
1948-49 ..	109,084	111,677	18,587	34,772	23,846	7,214	64	839	306,083
1958-59 ..	135,256	164,580	25,845	50,415	35,373	14,077	77	1,240	426,863
<b>Year—</b>									
1958-59 ..	156,020	193,379	29,286	55,001	40,875	16,403	93	1,269	492,326
1959-60 ..	184,600	223,519	35,886	62,760	44,385	20,780	111	1,292	573,333
1960-61 ..	196,417	210,245	48,529	52,242	46,560	18,925	98	1,292	574,308
1961-62 ..	196,844	229,722	40,339	55,390	42,697	20,229	65	1,427	586,713
1962-63 ..	198,873	237,645	35,483	58,919	41,236	19,386	68	1,849	593,459

(iii) *Consumption of Mutton and Lamb.* In 1959-60, consumption of mutton and lamb, at 105 lb. per head of population, exceeded that of beef and veal for the first time on record. A small decline followed in 1960-61, when the amount of mutton and lamb consumed per head was estimated as 103 lb. There was a further decline in 1962-63 when the estimated consumption per head was 95 lb. This figure is about nine lb. per head less than the consumption per head of beef and veal in 1962-63. Figures quoted in this paragraph include the consumption of canned mutton, and differ on that account from the figures in the last column of the table following.

The following table gives details of the production and disposal of mutton and lamb for the years 1958-59 to 1962-63, compared with the averages for the three years ended 1938-39, 1948-49 and 1958-59.



**PRODUCTION AND DISPOSAL OF MUTTON AND LAMB (CARCASS WEIGHT):  
AUSTRALIA**

Period	Net change in stocks ( <sup>'000</sup> tons)	Pro-duction ( <sup>'000</sup> tons)	Exports ( <sup>'000</sup> tons)	For canning ( <sup>'000</sup> tons)	Apparent consumption in Australia	
					Total ( <sup>'000</sup> tons)	Per head per annum (lb.)

**MUTTON**

Average for three years ended—									
1938-39	..	..	..	201	17	..	184	60.0	
1948-49	..	..	..	177	15	8	154	45.1	
1958-59	..	..	..	268	27	19	222	51.0	
Year—									
1958-59	..	..	..	-3	310	49	19	245	55.1
1959-60	..	..	..	..	370	47	33	290	63.8
1960-61	..	..	..	+1	368	60	14	293	63.2
1961-62	..	..	..	+1	368	83	23	261	55.3
1962-63	..	..	..	-2	363	107	9	249	51.5

**LAMB**

Average for three years ended—									
1938-39	..	..	..	..	118	72	..	46	15.0
1948-49	..	..	..	-1	130	45	..	86	25.2
1958-59	..	..	..	..	159	31	..	128	29.3
Year—									
1958-59	..	..	..	-1	182	41	..	142	31.9
1959-60	..	..	..	..	203	26	..	177	39.0
1960-61	..	..	..	+1	207	29	..	177	38.2
1961-62	..	..	..	-1	219	17	..	203	43.0
1962-63	..	..	..	+1	231	27	..	203	42.1

(a) Includes carcass equivalent of boneless mutton exported.

(iv) *Exports of Frozen Mutton and Lamb.* The quantities and values of exports of Australian frozen mutton and lamb in each year from 1958-59 to 1962-63 are shown in the following table.

**EXPORTS OF FROZEN MUTTON AND LAMB: AUSTRALIA**

Year	Exports of frozen mutton		Exports of frozen lamb		Exports of frozen mutton and lamb	
	Quantity	Value	Quantity	Value	Quantity	Value
	<sup>'000</sup> lb.	£A. <sup>'000</sup> f.o.b.	<sup>'000</sup> lb.	£A. <sup>'000</sup> f.o.b.	<sup>'000</sup> lb.	£A. <sup>'000</sup> f.o.b.
1958-59	74,650	5,851	91,192	8,151	165,842	14,002
1959-60	71,763	4,719	59,264	4,389	131,027	9,108
1960-61	83,075	7,437	64,430	5,790	147,505	13,227
1961-62	109,113	8,156	37,399	2,624	146,512	10,780
1962-63	136,741	11,652	56,615	5,181	193,356	16,833

The principal customer for Australian frozen mutton and lamb was formerly the United Kingdom, although the United States of America has become a major buyer of mutton in recent years. In 1962-63, exports of mutton and lamb to the United Kingdom represented 11 per cent. and 66 per cent., respectively, of the total quantities exported. Fifty-two per cent. of the mutton exported went to the United States of America, largely in the form of boneless meat, and the proportion of lamb exported to that country was 15 per cent.

4. Consumption of Meat and Meat Products.—The apparent consumption of meat (including cured and canned meat) and edible offal per head of population in Australia is shown in the table below for the years 1958-59 to 1962-63 in comparison with the averages for the three-year periods ended 1938-39, 1948-49 and 1958-59.

**MEAT (INCLUDING CURED AND CANNED) AND EDIBLE OFFAL AVAILABLE FOR CONSUMPTION: AUSTRALIA**

(lb. per head per year)

Period	Beef and veal (a)	Mutton (a)	Lamb (a)	Pork (a)	Offal	Canned meat (b)	Bacon and ham (c)	Carcass equivalent of meat and meat products (d)
Average for three years ended—								
1938-39 ..	140.3	60.0	15.0	8.5	8.4	2.1	10.2	250.9
1948-49 ..	109.1	45.1	25.2	7.1	8.9	2.6	11.7	215.7
1958-59 ..	123.8	51.0	29.3	10.1	11.4	4.1	7.1	242.4
Year—								
1958-59 ..	117.6	55.1	31.9	10.6	12.1	4.7	7.2	245.0
1959-60 ..	98.4	63.8	39.0	10.3	11.6	4.1	7.1	238.6
1960-61 ..	85.4	63.2	38.2	11.4	10.9	4.2	6.8	224.2
1961-62 ..	93.1	55.3	43.0	13.6	11.2	3.8	6.9	231.5
1962-63 ..	100.5	51.5	42.1	11.8	12.0	3.9	7.3	234.0

(a) Carcass weight.  
offal.

(b) Canned weight.

(c) Cured carcass weight.

(d) Includes

## § 7. Other Pastoral Products

1. Tallow.—(i) *Marketing.* Reference is made in Year Book, No. 47, page 976, to the now inoperative contracts relating to the sale of tallow to the United Kingdom.

(ii) *Consumption in Factories.* Details of consumption are collected from the principal factories using tallow. Consumption of inedible tallow in these factories (soap and candle, chemical and woolscouring works) for the five years 1958-59 to 1962-63 was as follows:—1958-59, 1,216,668 cwt.; 1959-60, 1,278,546 cwt.; 1960-61, 1,196,137 cwt.; 1961-62, 1,007,627 cwt.; 1962-63, 874,128 cwt. These figures are, however, deficient to the extent that no allowance has been made for small unrecorded amounts used in other types of establishments. Details of edible tallow consumed in factories are not available.

(iii) *Exports.* Particulars of exports of edible and inedible tallow of Australian produce are shown in the following table for the five years 1958-59 to 1962-63.

## TALLOW: EXPORTS, AUSTRALIA

(cwt.)

Particulars	1958-59	1959-60	1960-61	1961-62	1962-63
Edible .. .. .	73,056	118,848	50,436	130,015	120,944
Inedible .. .. .	1,022,844	1,533,734	1,079,191	1,853,161	2,229,230
<b>Total .. .. .</b>	<b>1,095,900</b>	<b>1,652,582</b>	<b>1,129,627</b>	<b>1,983,176</b>	<b>2,350,174</b>

2. **Oversea Trade in Hides and Skins.**—(i) *Values.* The value of cattle and horse hides, sheep and other skins, and skin pieces, sent overseas during 1962-63 amounted to £36,710,000, compared with a total of £32,044,000 in 1961-62 and £27,077,000 in 1960-61.

(ii) *Sheepskins with Wool.* Of the total exports of sheepskins with wool during 1962-63, amounting to 183,045,000 lb. valued at £27,742,000, 113,595,000 lb. valued at £16,987,000 (61 per cent. of total value) were shipped to France, 25,081,000 lb. valued at £4,361,000 (16 per cent.) to Italy, and 13,148,000 lb. valued at £1,783,000 (6 per cent.) to the United Kingdom. In the previous year, France received about 66 per cent. (by value) of all sheepskins with wool exported, Italy 15 per cent. and the United Kingdom 7 per cent. The exports of sheepskins with wool during each of the years 1958-59 to 1962-63 were as follows.

## EXPORTS OF SHEEPSKINS WITH WOOL: AUSTRALIA

Particulars	1958-59	1959-60	1960-61	1961-62	1962-63
Number .. .. '000	20,180	25,560	25,883	26,237	26,796
Value .. .. £'000	14,768	23,238	21,429	24,208	27,742

(iii) *Sheepskins without Wool.* Up to 1943-44, sheepskins without wool were exported chiefly to the United States of America which, during 1943-44, accounted for 97 per cent. of the total shipments. In subsequent years, however, this proportion has declined markedly. In 1962-63, skins to the value of £87,684 (32 per cent.) were shipped to Spain; £65,975 (24 per cent.) to France; £46,215 (17 per cent.) to the United States of America; £31,876 (12 per cent.) to United Kingdom; and £10,614 (4 per cent.) to Italy. In 1962-63, a total of 1,341,000 sheepskins without wool were exported, valued at £274,000. Since 1954-55, the number exported has exceeded two million once only (in 1958-59), and the value has averaged about £350,000.

(iv) *Hides.* The export trade in cattle hides and calfskins during 1962-63 was distributed amongst the main importing countries as follows:—Japan, £4,518,000; Netherlands, £339,000; Italy, £232,000; Germany (Federal Republic), £226,000; and United Kingdom, £103,000. The total quantity exported was 91,071,000 lb., valued at £6,103,000.

(v) *Furred Skins.* The exports of furred skins in 1962-63 were valued at £1,345,000, of which rabbit and hare skins constituted £819,000. This is considerably less than the highest total value of £2,013,000, recorded in 1955-56, when rabbit and hare skins accounted for £1,711,000. In 1961-62, they accounted for £900,000 out of a total of £1,342,000.

Skins were shipped principally to the United States of America, the United Kingdom, Italy, Belgium and Luxembourg, the values shipped to each in 1962-63 being:—United States of America, £1,077,000; United Kingdom, £92,800; Italy, £73,400; and Belgium-Luxembourg, £11,300.

Imports of cattle hides and calfskins are fairly substantial, the chief sources of supply being New Zealand and the Pacific Islands. The quantity of cattle hides, including calfskins, imported into Australia during the year 1962-63 amounted to 5,883,000 lb. valued at £548,000.

## OTHER RURAL INDUSTRIES: DAIRYING, POULTRY AND BEE-FARMING

## § 1. The Dairying Industry

1. **Introduction.**—(i) *General.* The introduction of cattle into Australia and the early history of the dairying industry are treated in some detail in earlier issues of this Year Book.

Australian dairy cattle have shown steady improvement in quality, as demonstrated by yield, over the years. This is attributable to improved breeding, associated with herd recording and better feeding, resulting from the use of improved pastures. Better farming methods, arising from the development of modern farm machinery and the application of the results of research, have also played a part in the increased yields.

The Australian dairying industry is conducted under conditions ranging from tropical to temperate and Mediterranean type climates, and nowhere is it necessary to house cattle in the winter months. Most Australian dairy cattle are fed only on pasture and pasture products, and this accounts for average yields being somewhat lower than in those countries where stock are fed heavily on concentrated feed.

In general, dairy farming is confined to the coastal and near coastal regions where rainfall and topography are favourable. These conditions are found in parts of the eastern, southern and south-western coasts. Inland districts include the lower north-east of Victoria, the south-western slopes of New South Wales, the fertile Darling Downs in Queensland, and the irrigated districts of the Riverina in New South Wales and northern Victoria.

The manufacturing and processing sections of the industry are highly organized and are well advanced technologically. Certain techniques and equipment, developed in Australia, are being adopted overseas.

(ii) *Official Supervision.* Dairy experts of the various State agricultural departments give instruction in approved methods of production, and inspect animals, buildings and marketable produce, with the result that a high standard of cleanliness and technology prevails in the industry.

The export trade is regulated by the terms of the Commonwealth *Customs Act* 1901–1954 and the Commonwealth *Commerce (Trade Descriptions) Act* 1905–1950, and regulations thereunder. This legislation requires that the true trade description, etc., be marked on all produce intended for export, while official inspection ensures the maintenance of purity and quality. Upon request of the exporter, the goods are given a certificate by the inspector.

(iii) *Marketing of Dairy Products.* (a) *Dairy Produce Export Control Act* 1924–1962. Details of this Act, and of the Australian Dairy Produce Board constituted under it, were given in earlier issues of the Year Book (see No. 48, pp. 999–1000).

(b) *Dairy Produce Export Charges Act*, 1962. This Act provides for the imposition of a levy on all butter, cheese and other specified dairy produce exported from Australia to cover the administrative expenses of the Australian Dairy Produce Board and for advertising and other purposes. The rate of the levy is fixed by the Act.

(iv) *Equalization Schemes.* (a) *Butter and Cheese.* Reference is made to these schemes in Year Book No. 48, pp. 998–9.

Para. 2 (ix) on page 1085 gives particulars of the returns realized on local and oversea sales and of the average equalization rate for the years ended June, 1959 to 1963. Details are also given in para. 2 (vii) of the wholesale prices of butter and cheese for home consumption as determined by the Commonwealth Dairy Produce Equalization Committee Ltd.

(b) *Casein.* An equalization scheme for casein similar to that for butter and cheese has been operated since 1952 by the Commonwealth Dairy Produce Equalization Committee Ltd. Average realizations per cwt. under the scheme were 171s. 7.9d. in 1958-59, 175s. 7.5d. in 1959-60, 174s. 10.9d. in 1960-61 and 163s. 3.4d. in 1961-62. The interim equalization value for 1962-63 has been fixed at 159s. and for 1963-64 at 156s. per cwt.

(v) *Commonwealth Subsidies and Stabilization Plans.* (a) *Butter, Cheese and Processed Milk Products.* Under the provisions of the various Dairy Industry Assistance Acts, the first of which was passed in 1942, the Commonwealth Government has provided subsidies on milk supplied for the manufacture of butter and cheese. Subsidies were paid on a seasonal basis prior to 1st April, 1946, but from that date have been on a flat rate basis. Subsidies are distributed by the Commonwealth Dairy Produce Equalization Committee Ltd. through factories to milk producers by payments on butter and cheese manufactured. Subsidy on milk supplied for the manufacture of processed milk products was also payable from 1942 until 30th June, 1948, and again from 1st July, 1949, to 30th June, 1952. The Commonwealth Government provided, under the *Processed Milk Products Bounty Act* 1962, for the payment of a maximum amount of £350,000 as a bounty on exports of processed milk products in 1962-63. The bounty was continued for the year ended 30th June, 1964, the maximum amount being increased to £500,000.

Details of the three five-year stabilization plans which operated up to 30th June, 1962, will be found in Year Book No. 49, page 1084.

Under the five-year stabilization plan which came into operation on 1st July, 1962, a fixed bounty of £13,500,000 has been provided for each year of the plan. The bounty is payable on butter, cheese and butterfat products containing 40 per cent. or more of butterfat. Bounty is payable on the production of these commodities provided they are taken into equalization.

The Commonwealth Government extended for the full period of the plan the provision whereby it underwrites the final minimum equalized return to butter and cheese factories each year. The actual level at which returns are to be underwritten is to be decided prior to the commencement of each year of the plan. Returns to producers have been underwritten at 40d. per lb. on commercial butter each year since the inception of the underwriting arrangement in 1958. The principal value underlying this guarantee is that it enables the Commonwealth Dairy Produce Equalization Committee Ltd. to make a higher initial payment to factories than would otherwise be possible without risk of overpayment.

Under the current plan the Dairy Industry Investigation Committee has been disbanded. This Committee was responsible, during the last five-year plan, for the determination of the cost of efficient production of butterfat. However, this determination is not required for the current plan.

The Australian Dairy Industry Council assumes responsibility for determining domestic wholesale prices of butter and cheese. Under the previous plan it was the responsibility of the Minister for Primary Industry to determine local prices, after consultation with the Council.

Amounts realized on exports of butter and cheese in excess of the f.o.b. equivalent of the guaranteed return have been credited to the Dairying Industry Stabilization Fund, which was established in July, 1948, for the purpose of stabilizing returns from exports. During 1951-52, the Stabilization Fund met the deficiency in respect of all exports which did not return sufficient to meet the basic return to the factory. From 1st July, 1952, to 30th June, 1957, it was available to the industry to be used, in whatever manner it considered desirable, to make good any deficiency in respect of all exports other than the 20 per cent. provided for under the Commonwealth Government's Five-year Stabilization Plan.

The Act was amended in 1957 to enable the Board to use the fund for such other purposes as are approved by the Minister for Primary Industry. After allowing for outstanding debits, the amount standing to the credit of the Dairying Industry Stabilization Fund at 30th June, 1963, totalled approximately £1,800,000.

(b) *Whole Milk.* In addition to the subsidies referred to above, the Commonwealth Government subsidized the production of whole milk consumed directly from 1943-44 to 1948-49. Details of the amounts distributed during each year will be found in Year Book No. 38, page 1031.

(vi) *Extension, Research and Promotion.* (a) *Dairy Industry Extension Grant.* An annual grant of £250,000, to be expended by State Governments for the purpose of promoting improved farming practices in the dairying industry, was first made by the Commonwealth Government for the five years from 1st July, 1948. This assistance was continued for further periods of five years from 1st July, 1953, and from 1st July, 1958, at the same rate. For the five years from 1st July, 1963, the amount of the annual grant has been increased to £350,000.

(b) *Dairy Industry Research and Sales Promotion.* At the request of the Australian Dairy Industry Council, legislation was enacted in 1958 to provide for a sales promotion campaign for butter and cheese in Australia and also for research into industry problems. The legislation provides for a statutory levy (the Dairy Produce Levy) to be imposed on all butter and cheese manufactured in Australia. The maximum rates of levy are  $\frac{3}{8}$ d. per lb. on butter and  $\frac{3}{8}$ d. per lb. on cheese, but the initial rates which commenced in November, 1958, were  $\frac{1}{4}$ d. per lb. on butter and  $\frac{1}{8}$ d. per lb. on cheese. Until November, 1959, the proceeds from the levy were divided equally between research and sales promotion, but after that date one-third was allocated to research and two-thirds to sales promotion. The rates of levy operative from November, 1959, were increased to the maximum provided under the Act, the increase being utilized solely for the purposes of intensifying the sales promotion campaign.

The Commonwealth Government agreed to contribute one half of the costs incurred on approved projects included in the programme of research, with a maximum contribution of £1 for £1 against funds raised by way of levy and allocated to research. The sales promotion programme is financed solely by the levy. The following table lists the amounts of levies collected, and the amounts allocated to research and sales promotion, during the four years 1959-60 to 1962-63.

DAIRY PRODUCE LEVY: AMOUNTS COLLECTED AND ALLOCATED  
(£)

Particulars	1959-60	1960-61	1961-62	1962-63
Allocated to—				
Research(a) .. ..	126,519	116,591	130,000	131,750
Sales promotion .. ..	206,918	233,181	260,000	263,500
<b>Total Collected(a) ..</b>	<b>333,437</b>	<b>349,772</b>	<b>390,000</b>	<b>395,250</b>

(a) Excludes amounts contributed by the Commonwealth Government.

The scheme is administered by the Australian Dairy Produce Board, which, in respect of research, is advised by a statutory committee, the Dairy Produce Research Committee.

2. **Dairy Cattle and Dairy Products.**—(i) *Dairy Herds.* Lack of uniformity in the forms used by the various States in the collection of livestock statistics makes it impossible to measure with complete accuracy the growth of dairy herds prior to 1943. Statistics of dairy cows—which form the largest part of herds—are, however, available on a comparable basis for a much longer period of years. The number of dairy cows in Australia at 31st March, 1963, was 3,263,000, compared with 3,230,000 in the previous year. A record level of 3,451,000 was attained in 1957.

There is a preponderance of dairy cattle in Victoria and Tasmania, while in New South Wales and South Australia the proportion of dairy to all cattle is high. In Queensland, the Northern Territory, and Western Australia, other cattle predominate, the main use of cattle in these areas being for the production of beef. The numbers of dairy cattle in Australia are shown in the following tables.

#### NUMBER OF DAIRY CATTLE: AUSTRALIA

At 31st March	Dairy cows (in milk and dry)	Dairy heifers 1 year and over	Dairy calves under 1 year	Dairy bulls	Total dairy cattle
Average for three years ended—					
1939 .. .. .	3,210,324	n.a.	n.a.	n.a.	n.a.
1949 .. .. .	3,133,266	827,609	712,688	107,708	4,781,271
1959 .. .. .	3,365,390	839,048	670,956	110,656	4,986,050
Year—					
1959 .. .. .	3,283,147	830,116	628,710	104,317	4,846,290
1960 .. .. .	3,243,472	781,862	752,107	99,925	4,877,366
1961 .. .. .	3,162,449	857,642	776,829	103,852	4,900,772
1962 .. .. .	3,229,587	875,103	836,882	104,543	5,046,115
1963 .. .. .	3,263,289	897,197	813,001	102,717	5,076,204

The following table shows the total dairy cattle in each State and Territory for the same periods as in the previous table, with the exception of the three years ended 31st March, 1939, for which details are not available.

#### NUMBER OF DAIRY CATTLE: STATES

At 31st March	N.S.W.	Vic.	Qld.	S.A.	W.A.	Tas.	N.T. (a)	A.C.T.	Aust.
Average for three years ended—									
1949 .. .. .	1,289,846	1,467,100	1,379,172	272,073	226,340	143,809	n.a.	2,931	4,781,271
1959 .. .. .	1,307,834	1,699,301	1,295,141	257,569	221,694	201,383	n.a.	3,128	4,986,050
Year—									
1959 .. .. .	1,281,726	1,653,493	1,240,779	248,425	215,369	203,482	n.a.	3,016	4,846,290
1960 .. .. .	1,278,051	1,678,359	1,255,009	239,603	216,508	206,770	n.a.	3,066	4,877,366
1961 .. .. .	1,280,823	1,716,840	1,213,391	247,556	224,273	214,382	n.a.	3,507	4,900,772
1962 .. .. .	1,271,797	1,823,835	1,208,177	274,418	235,631	228,637	n.a.	3,620	5,046,115
1963 .. .. .	1,262,262	1,858,215	1,193,230	280,405	240,338	238,084	378	3,292	5,076,204

(a) At 30th September of preceding year.

A map showing the distribution of dairy cattle in Australia at 31st March, 1963, appears facing p. 1082. Maps showing distribution at 31st March, 1955 and 1948, appear on page 910 of Year Book No. 43 and page 906 of Year Book No. 39, respectively.

(ii) *Growth of the Dairying Industry.* The following table gives an indication of the growth of some features of the dairying industry since 1916-17.

DAIRYING INDUSTRY: AUSTRALIA

Period	Number of dairy cows(a)			Production of—			Milking machines (no. of units)(a)(b)
	In milk	Dry	Total	Whole milk for all purposes	Butter (factory and farm)	Cheese (factory and farm)	
Average for three years ended—				million gallons	tons	tons	
1918-19..	1,281,820	569,611	1,851,431	565.1	84,043	11,403	n.a.
1928-29..	1,689,887	626,180	2,316,067	791.2	122,750	13,159	n.a.
1938-39..	2,552,092	658,232	3,210,324	1,142.0	190,827	24,848	n.a.
1948-49..	2,278,043	855,223	3,133,266	1,153.2	157,064	42,343	135,137
1958-59..	2,333,147	1,032,243	3,365,390	1,330.9	187,393	41,567	213,555
Year—							
1958-59..	2,363,569	919,578	3,283,147	1,370.2	193,568	43,509	216,287
1959-60..		3,243,472		1,406.5	197,552	44,854	221,260
1960-61..		3,162,449		1,339.3	181,654	46,924	223,814
1961-62..		3,229,587		1,443.6	198,621	55,306	228,228
1962-63..		3,263,289		1,471.0	c 202,420	(c) 58,022	229,270

(a) Particulars are at 31st March of second year shown. (b) "Number of units" indicates the number of cows that can be milked simultaneously—i.e. the cow capacity of installed milking machines. (c) Subject to revision.

(iii) *Size of Dairy Herds.* Information on the size of dairy herds is published in a series of bulletins *Classification of Rural Holdings by Size and Type of Activity*, 1959-60.

(iv) *Production of Milk.* (a) *Production per Cow.* The quantity of milk produced by a dairy cow can be as high as 1,000 gallons a year, and varies greatly with breed, locality and season. For all dairy cows and for all seasons for the whole of Australia prior to 1916, production averaged considerably less than 300 gallons per annum. Largely owing to an improvement in the quality of the cattle, and the increased application of scientific methods, the 300-gallon average was exceeded in each year since 1924. In the last five years, an average of 433 gallons per cow per annum has been obtained. In 1962-63, the average yield was 453 gallons. The annual average yields per cow shown in the following table are obtained by dividing the total production of whole milk for the year ended June by the mean of the number of dairy cows (in milk and dry) at 31st March of that year and of the preceding year. They are, in effect, based on the approximate number of dairy cows which were in milk during any part of the year. The average shown is, therefore, less than that for cows which were yielding during the greater part of the year, but it may be accepted as sufficiently reliable to show the general trend.

AVERAGE MILK PRODUCTION PER DAIRY COW  
(Gallons)

Period	N.S.W.	Vic.	Q'land	S. Aust.	W. Aust.	Tas.	A.C.T.	Aust.(a)
Average for three years ended—								
1938-39 .. ..	315	439	298	442	353	349	349	354
1948-49 .. ..	310	506	267	565	370	419	328	371
1958-59 .. ..	322	522	267	513	406	537	420	393
Year—								
1958-59 .. ..	352	523	302	509	395	524	453	412
1959-60 .. ..	382	544	301	518	452	554	447	431
1960-61 .. ..	355	548	263	574	468	505	447	418
1961-62 .. ..	387	571	306	614	462	562	471	452
1962-63 .. ..	364	589	312	586	442	570	479	453

(a) Excludes Northern Territory, for which particulars are not available.



(b) *Total Production of Whole Milk.* In the following table, particulars of the production of whole milk in the various States are shown for the years 1958-59 to 1962-63 compared with the averages for the three years ended 1938-39, 1948-49 and 1958-59. Victoria is the principal milk-producing State, and in 1962-63 the output from that State, 670.8 million gallons, represented 46 per cent. of total production. Output from New South Wales in 1962-63 was 324.1 million gallons (22 per cent. of the total) and that of Queensland 245.1 million gallons (17 per cent.). Production in the remaining States accounted for 15 per cent.

**TOTAL PRODUCTION OF WHOLE MILK**  
(\*000 Gallons)

Period	N.S.W.	Vic.	Q'land	S. Aust.	W. Aust.	Tas.	A.C.T.	Aust.(a)
<b>Average for three years ended—</b>								
1938-39 .. ..	319,003	403,152	275,898	68,429	42,358	32,803	363	1,142,006
1948-49 .. ..	280,460	445,517	252,469	92,587	49,004	32,638	573	1,153,248
1958-59 .. ..	307,514	578,529	240,446	84,185	54,218	65,032	929	1,330,853
<b>Year—</b>								
1958-59 .. ..	327,679	582,948	258,174	82,071	52,167	66,178	980	1,370,197
1959-60 .. ..	348,389	598,323	252,562	78,483	57,549	70,226	969	1,406,501
1960-61 .. ..	319,410	596,706	212,749	87,030	58,544	63,858	1,005	1,339,302
1961-62 .. ..	344,724	630,948	239,823	95,504	58,240	73,206	1,117	1,443,562
1962-63 .. ..	324,113	670,788	245,067	95,378	56,029	78,518	1,090	1,470,983

(a) Excludes Northern Territory, for which particulars are not available.

(v) *Utilization of Whole Milk.* The utilization of whole milk and the production of butter and cheese in 1962-63 is given in the table below.

**UTILIZATION OF WHOLE MILK, PRODUCTION OF BUTTER AND CHEESE,**  
1962-63

Particulars	N.S.W.	Victoria	Q'land	S. Aust.	W. Aust.	Tas.	A.C.T.	Australia (a)
<b>MILK (*000 GALLONS)</b>								
<b>Used for—</b>								
Butter .. ..	b 176,222	c 471,600	d 162,282	31,782	32,053	61,322	6	935,267
Cheese .. ..	10,541	58,229	23,565	33,492	3,175	1,501	..	130,503
Preserved milk products ..	14,693	53,050	10,619	..	756	4,049	..	83,167
Other purposes	122,637	87,909	48,601	30,104	20,045	11,646	1,084	322,046
<b>Total ..</b>	<b>324,113</b>	<b>670,788</b>	<b>245,067</b>	<b>95,378</b>	<b>56,029</b>	<b>78,518</b>	<b>1,090</b>	<b>1,470,983</b>
<b>BUTTER (TONS)</b>								
<b>In factories(e) ..</b>	<b>f 36,006</b>	<b>g 101,429</b>	<b>(g) 36,456</b>	<b>7,319</b>	<b>6,965</b>	<b>13,097</b>	<b>..</b>	<b>201,272</b>
<b>On dairy and other farms ..</b>	<b>344</b>	<b>429</b>	<b>151</b>	<b>95</b>	<b>32</b>	<b>96</b>	<b>1</b>	<b>1,148</b>
<b>Total(e) ..</b>	<b>36,350</b>	<b>101,858</b>	<b>36,607</b>	<b>7,414</b>	<b>6,997</b>	<b>13,193</b>	<b>1</b>	<b>202,420</b>
<b>CHEESE (TONS)</b>								
<b>In factories(e) ..</b>	<b>5,304</b>	<b>25,264</b>	<b>10,200</b>	<b>15,028</b>	<b>1,467</b>	<b>643</b>	<b>..</b>	<b>57,906</b>
<b>On dairy and other farms ..</b>	<b>..</b>	<b>87</b>	<b>..</b>	<b>..</b>	<b>2</b>	<b>27</b>	<b>..</b>	<b>116</b>
<b>Total(e) ..</b>	<b>5,304</b>	<b>25,351</b>	<b>10,200</b>	<b>15,028</b>	<b>1,469</b>	<b>670</b>	<b>..</b>	<b>58,022</b>

(a) Excludes Northern Territory, for which particulars are not available. (b) Includes 7,107,000 gallons of milk, the produce of New South Wales, sent as cream to factories in Victoria and Queensland. (c) Includes 187,000 gallons of milk, the produce of Victoria, sent as cream to New South Wales. (d) Includes 180,000 gallons of milk, the produce of Queensland, sent as cream to New South Wales. (e) Subject to revision. (f) Includes butter made from cream, the produce of Victoria and Queensland. (g) Includes butter made from cream, the produce of New South Wales.

There has been a gradual decline over the years in the proportion of milk used for butter-making. In 1962-63, 63 per cent. of the total milk supply was used for butter, 9 per cent. for cheese, 6 per cent. for preserved milk products and 22 per cent. for other purposes.

Details of the production of whole milk for various purposes are shown in the following table for each of the years 1958-59 to 1962-63 compared with the averages for the three-year periods ended 1938-39, 1948-49 and 1958-59.

### PRODUCTION AND UTILIZATION OF WHOLE MILK: AUSTRALIA

('000 Gallons)

Period	Total production	Quantity used for—			
		Butter (factory and farm)	Cheese (factory and farm)	Preserved milk products	Other purposes (a)
Average for three years ended—					
1938-39 .. .. .	1,142,006	891,742	54,934	33,226	162,104
1948-49 .. .. .	1,153,248	738,377	91,642	78,739	244,490
1958-59 .. .. .	1,330,853	865,347	90,561	79,687	295,258
Year—					
1958-59 .. .. .	1,370,197	893,626	94,900	81,074	300,597
1959-60 .. .. .	1,406,501	912,271	100,856	82,636	310,738
1960-61 .. .. .	1,339,302	839,596	104,470	76,619	318,617
1961-62 .. .. .	1,443,562	919,301	122,340	78,028	323,893
1962-63 .. .. .	1,470,983	935,267	130,503	83,167	322,046

(a) Principally fluid milk for domestic purposes.

(vi) *Production of Butter, Cheese and Preserved Milk Products.* (a) *General.* The establishment of large central butter factories, either on a co-operative or independent basis, has resulted in a considerable reduction in the cost of manufacture. The product is also of a more uniform quality, and whereas formerly the average quantity of milk used per pound of hand-made butter was about three gallons, factory butter requires only about two gallons. In addition, subsidy payments by the Commonwealth Government are made only on factory-produced butter. As a result, the production of farm-made butter has declined substantially, and in 1962-63 represented only about 0.6 per cent. of all butter made. A similar position exists in the cheese-making industry where a negligible amount is now made on farms.

In 1962-63, factories in Australia engaged in the processing of milk into butter or cheese or the various preserved milk products numbered 348 and were distributed among the States as follows:—New South Wales, 72; Victoria, 126; Queensland, 70; South Australia, 41; Western Australia, 18; and Tasmania, 21. More details regarding numbers of factories, output, etc., are given in Chapter VI. Manufacturing Industry (*see* p. 201).

(b) *Production of Butter.* Production in 1962-63 at 202,420 tons was 3,799 tons (1.9 per cent.) more than the amount produced in 1961-62, but 6,491 tons (3.1 per cent.) less than the record post-war production of 1955-56. The foregoing figures include butter produced on farms, which has shown a steady decline from about 4,000 tons in the early 1950's to 1,148 tons in 1962-63.

The following table shows production of butter in factories and on farms in each State for the years 1958-59 to 1962-63 compared with the averages for the three-year periods ended 1938-39, 1948-49 and 1958-59.

**BUTTER PRODUCTION IN FACTORIES AND ON FARMS**  
(Tons)

Period	Factory production							Factory and farm production, Aust.(a)
	N.S.W.	Vic.	Q'land	S. Aust.	W. Aust.	Tas.	Aust.	
Average for three years ended—								
1938-39 .. ..	49,665	61,566	52,637	7,977	5,803	3,934	181,582	190,827
1948-49 .. ..	31,394	58,715	42,243	9,028	6,632	4,484	152,496	157,064
1958-59 .. ..	33,832	87,659	38,131	7,509	6,812	10,618	184,561	187,393
Year—								
1958-59 .. ..	37,733	88,143	41,022	7,054	6,166	10,805	190,923	193,568
1959-60 .. ..	41,373	89,388	38,932	6,194	7,376	11,744	195,007	197,552
1960-61 .. ..	33,996	89,356	31,081	6,858	7,661	10,256	179,208	181,653
1961-62 .. ..	38,994	95,649	35,643	7,424	7,483	12,063	197,256	198,621
1962-63(b) .. ..	36,006	101,429	36,456	7,319	6,965	13,097	201,272	202,420

(a) Includes small quantities produced in the A.C.T. There is no recorded production in the Northern Territory. (b) Subject to revision.

(c) *Production of Cheese.* In 1962-63, production reached a record figure of 58,022 tons which was 2,495 tons (4.5 per cent.) greater than the previous record of 55,527 tons in 1961-62.

The following table shows production of cheese in factories and on farms in each State in the years 1958-59 to 1962-63 compared with the averages for the three years ended 1938-39, 1948-49 and 1958-59.

**CHEESE PRODUCTION IN FACTORIES AND ON FARMS**  
(Tons)

Period	Factory production							Factory and farm production, Aust.(a)
	N.S.W.	Vic.	Q'land	S. Aust.	W. Aust.	Tas.	Aust.	
Average for three years ended—								
1938-39 .. ..	3,280	7,206	5,277	6,866	427	1,424	24,480	24,848
1948-49 .. ..	2,385	17,378	8,916	11,984	969	641	42,273	42,343
1958-59 .. ..	4,368	17,607	6,844	11,218	1,127	335	41,499	41,567
Year—								
1958-59 .. ..	5,044	17,441	8,220	11,200	1,181	345	43,431	43,509
1959-60 .. ..	4,348	19,217	8,492	10,930	1,443	328	44,758	44,854
1960-61 .. ..	5,296	19,978	7,222	12,609	1,351	348	46,804	46,924
1961-62 .. ..	5,953	23,919	8,973	14,659	1,364	605	55,473	55,306
1962-63(b) .. ..	5,304	25,264	10,200	15,028	1,467	643	57,906	58,022

(a) Northern Territory and Australian Capital Territory: nil. (b) Subject to revision.

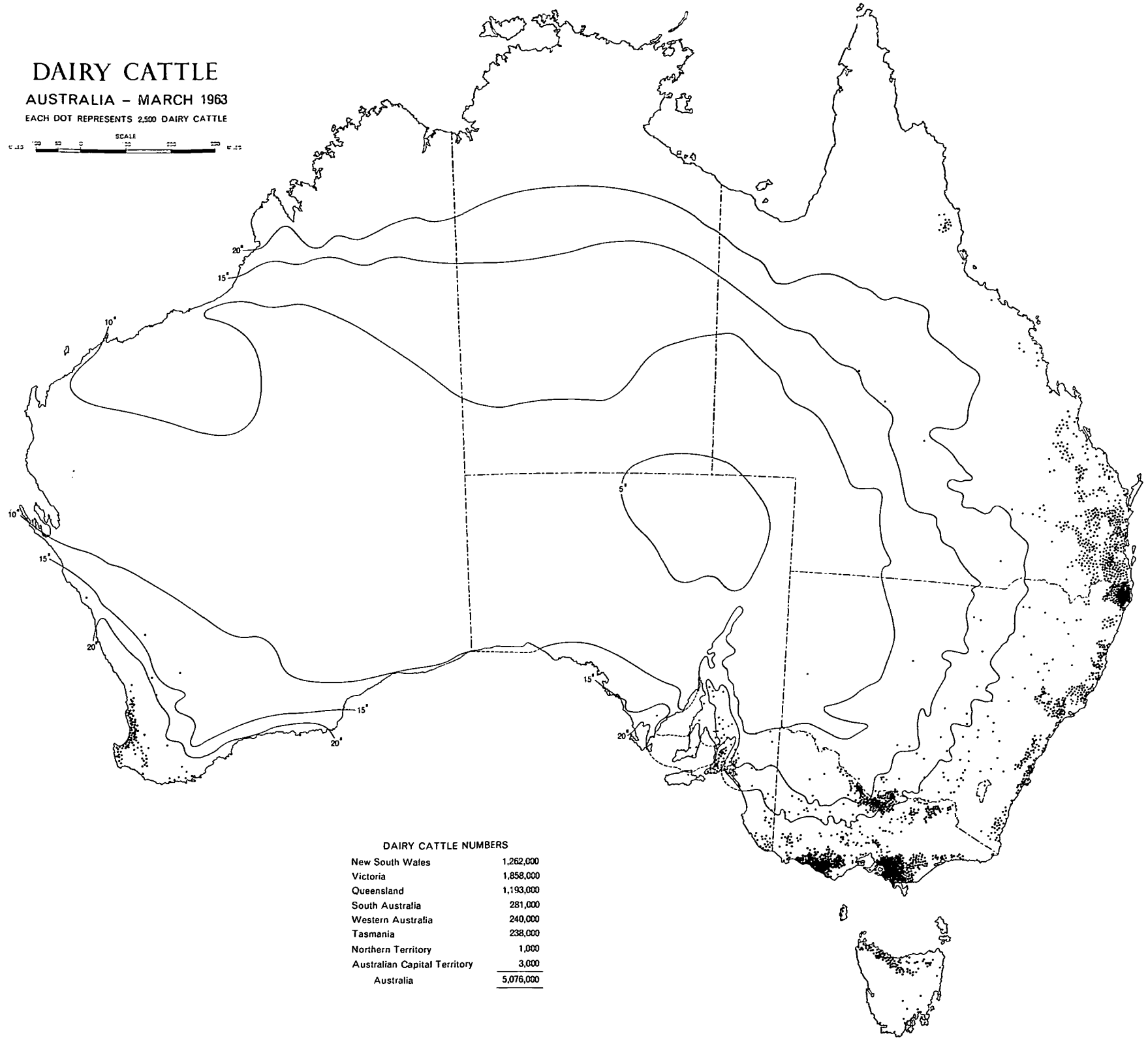
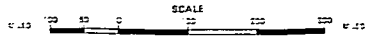
(d) *Production of Preserved Milk Products.* The production in 1962-63 of all full-cream milk products and milk by-products, with the exception of condensed, concentrated and evaporated unsweetened full-cream milk, and powdered full-cream milk, increased in comparison with 1961-62. Between the same years the quantity of whole milk used in the manufacture of preserved milk products increased from 78.0 million gallons in 1961-62 to 83.2 million gallons in 1962-63.

Preserved milk products are manufactured mainly in Victoria, which produced 63.8 per cent. of the total (in terms of whole milk equivalent) in 1962-63. New South Wales accounted for 17.7 per cent. and the remaining States for 18.5 per cent.

# DAIRY CATTLE

AUSTRALIA - MARCH 1963

EACH DOT REPRESENTS 2,500 DAIRY CATTLE



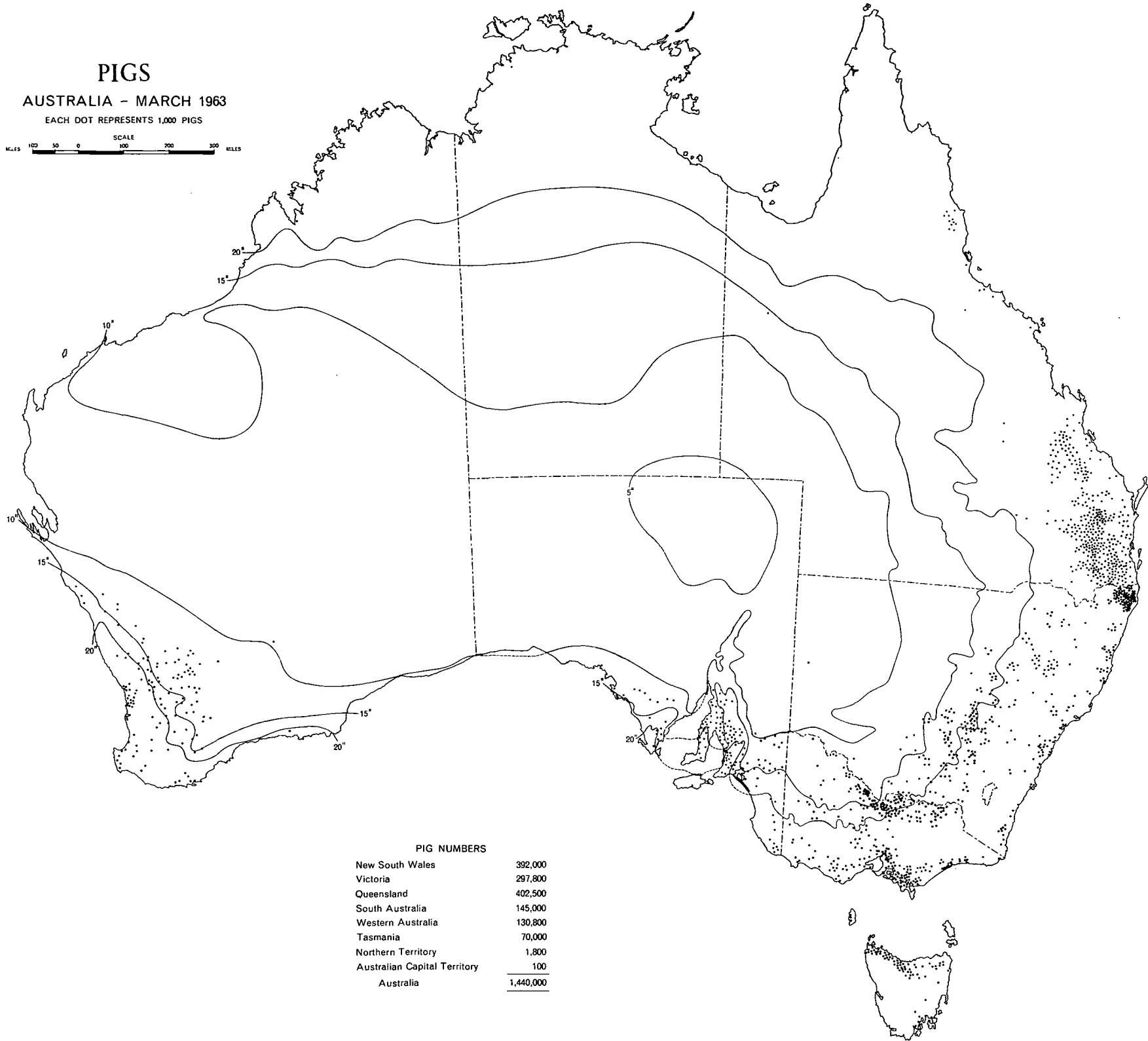
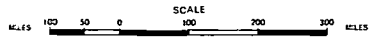
## DAIRY CATTLE NUMBERS

New South Wales	1,262,000
Victoria	1,858,000
Queensland	1,193,000
South Australia	281,000
Western Australia	240,000
Tasmania	238,000
Northern Territory	1,000
Australian Capital Territory	3,000
Australia	<u>5,076,000</u>

# PIGS

AUSTRALIA - MARCH 1963

EACH DOT REPRESENTS 1,000 PIGS



### PIG NUMBERS

New South Wales	392,000
Victoria	297,800
Queensland	402,500
South Australia	145,000
Western Australia	130,800
Tasmania	70,000
Northern Territory	1,800
Australian Capital Territory	100
Australia	<u>1,440,000</u>

The following table shows details of the output of preserved milk products during the years 1958-59 to 1962-63, compared with the averages for the three years ended 1938-39, 1948-49 and 1958-59.

**PRODUCTION OF PRESERVED MILK PRODUCTS: AUSTRALIA**

Particulars	Average for three years ended—			1958-59	1959-60	1960-61	1961-62	1962-63 (a)
	1938-39	1948-49	1958-59					
<b>PRODUCTION (TONS)</b>								
Full cream milk products—								
Condensed, concentrated and evaporated full cream milk—								
Sweetened(h) ..	} 18,702	28,452	36,322	31,627	33,867	29,534	28,125	35,076
Unsweetened(c) ..			29,137	30,872	33,074	32,067	34,328	34,256
Powdered full cream milk ..	9,464	16,650	18,373	19,183	19,592	18,555	19,855	17,578
Infants' and invalids' foods(d) ..	1,131	10,182	13,846	13,993	15,985	16,257	17,050	18,192
Milk by-products—								
Condensed, concentrated and evaporated skim milk ..	(e)	(f)	5,649	4,943	4,689	4,651	5,861	8,594
Powdered skim milk ..	(f)	4,782	29,758	34,128	41,204	36,952	37,618	42,580
Powdered buttermilk, mixed skim and buttermilk and whey	(g) 701	3,078	5,748	6,024	7,215	7,828	8,139	9,052
Casein ..	(h)	(h)	9,907	11,328	10,433	11,761	13,552	15,715

**WHOLE MILK EQUIVALENT (f) ('000 GALLONS)**

Preserved milk products ..	33,226	78,739	79,687	81,074	82,636	76,619	78,028	83,167
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(a) Subject to revision. (b) Includes coffee and milk. (c) Includes (i) whole (10% butterfat or more), (ii) less than 10% butterfat, and (iii) liquid ice-cream mix. (d) Includes malted milk and milk sugar (lactose). (e) Not available separately—included in condensed, concentrated, and evaporated full cream milk. (f) Not available separately—included in powdered full cream milk. (g) Excludes powdered whey. (h) Not available. (i) That is, the estimated quantity of whole milk used to produce preserved milk products. Quantities of milk used to produce two or more products (for example, initially as full cream milk and subsequently as skim milk) are counted once only.

(vii) *Wholesale Prices of Butter and Cheese in Australia.* Details of prices operating in each of the States since 1st July, 1952, are shown in the following table. The prices presented are those determined by the Commonwealth Dairy Produce Equalization Committee Ltd. for choicest grade bulk butter and cheese.

**WHOLESALE PRICES OF BUTTER AND CHEESE: AUSTRALIA**

(s. d. per cwt.)

Date from which prices became effective	New South Wales	Victoria	Queensland	South Australia	Western Australia	Tasmania
<b>BUTTER</b>						
26th July, 1955 ..	452 8	452 8	451 6	450 4	452 8	452 8
1st July, 1956 ..	466 8	466 8	465 6	464 4	466 8	466 8
1st July, 1958 ..	485 4	485 4	484 2	484 2	485 4	485 4
1st July, 1960 ..	501 8	501 8	500 6	501 8	501 8	501 8
19th June, 1964 ..	518 0	518 0	518 0	518 0	518 0	518 0

**WHOLESALE PRICES OF BUTTER AND CHEESE: AUSTRALIA—continued**  
(s. d. per cwt.)

Date from which prices became effective	New South Wales	Victoria	Queensland	South Australia	Western Australia	Tasmania
<b>CHEESE</b>						
26th July, 1955 ..	275 4	275 4	275 4	274 2	275 4	275 4
1st July, 1956 ..	282 4	282 4	282 4	281 2	282 4	282 4
1st July, 1958 ..	291 8	291 8	291 8	291 8	291 8	291 8
1st July, 1960 ..	296 4	296 4	296 4	296 4	296 4	296 4
19th June, 1964 ..	305 8	305 8	305 8	305 8	305 8	305 8

(viii) *Local Consumption of Butter and Cheese.* Following the cessation of butter rationing after the 1939-45 War, consumption per head rose to 31.2 lb. in 1951-52. However, in later years it gradually declined, and in 1961-62, and again in 1962-63, it reached its lowest level since the war. At 24.0 lb. per head in both of these years, it was 4 per cent. below the level of 1960-61.

Consumption of cheese per head in 1962-63 was 6.6 lb., the third highest figure recorded. The highest figure recorded was 6.8 lb. per head in 1957-58.

The following table shows details of the production and disposal of butter and cheese for each of the years 1958-59 to 1962-63 compared with the averages for the three years ended 1938-39, 1948-49 and 1958-59.

**PRODUCTION AND DISPOSAL OF BUTTER AND CHEESE: AUSTRALIA**

Period	Change in stocks (a)	Production	Exports (b)	Apparent consumption in Australia	
				Total (c)	Per head per annum (lb.)
<b>BUTTER</b>					
Average for three years ended—					
1938-39 .. .. .	..	190.8	90.0	100.8	32.9
1948-49 .. .. .	-3.5	157.1	75.9	84.7	24.8
1958-59 .. .. .	-0.7	187.4	69.7	118.4	27.2
Year—					
1958-59 .. .. .	-0.4	193.6	78.9	115.1	25.9
1959-60 .. .. .	+0.2	197.6	78.7	118.7	26.2
1960-61 .. .. .	+2.0	181.7	63.4	116.3	25.1
1961-62 .. .. .	+4.7	198.6	80.1	113.8	24.0
1962-63 .. .. .	+6.2	202.4	80.6	115.6	24.0
<b>CHEESE</b>					
Average for three years ended—					
1938-39 .. .. .	..	24.9	11.5	13.4	4.4
1948-49 .. .. .	-0.8	42.3	24.3	18.8	5.5
1958-59 .. .. .	+2.8	41.6	13.8	25.0	5.7
Year—					
1958-59 .. .. .	+6.1	43.5	14.4	23.0	5.2
1959-60 .. .. .	-2.4	44.9	18.5	28.8	6.4
1960-61 .. .. .	-1.0	46.9	18.1	29.8	6.4
1961-62 .. .. .	+2.2	55.3	22.4	30.7	6.5
1962-63 .. .. .	(c)	58.0	26.0	32.0	6.6

(a) Balance figure. (b) Includes ships' stores; figures for butter include ghee and butter concentrate expressed as butter. (c) Less than 50 tons.

(ix) *Average Returns from Butter and Cheese Sold.* The table below shows rates realized on local, interstate and oversea sales and the average equalization and subsidy rates in operation for the years ended June, 1959 to 1963.

**BUTTER AND CHEESE: RATES REALIZED ON SALES, AVERAGE EQUALIZATION RATES AND RATES OF COMMONWEALTH SUBSIDY UNDER DAIRY INDUSTRY ASSISTANCE ACTS**

(Source: Commonwealth Dairy Produce Equalization Committee Ltd.)

(s. d. per cwt.)

Year	Rates realized on sales			Average equalization rate	Rate of subsidy	Rate of overall return to manufacturers
	Local	Interstate	Overseas			
<b>BUTTER</b>						
1958-59.. ..	468 8.1	448 7.3	334 3.2	412 11.1	64 10.9	477 10.0
1959-60.. ..	468 8.8	453 3.8	343 6.9	417 5.5	63 6.0	480 11.5
1960-61.. ..	481 4.5	462 7.9	261 11.7	399 8.3	68 11.3	468 7.6
1961-62.. ..	479 4.9	466 8.0	290 11.8	398 5.2	62 6.7	460 11.9
1962-63.. ..	(a)	(a)	(a)	b395 6.0	61 6.0	b457 0.0

**CHEESE**

1958-59.. ..	279 0.2	274 0.4	277 1.1	29 7.5	306 8.6
1959-60.. ..	279 7.9	204 11.1	247 10.7	29 1.4	277 0.1
1960-61.. ..	283 10.9	211 6.0	256 1.2	28 5.6	284 6.8
1961-62.. ..	283 10.7	189 6.0	241 2.7	24 4.6	265 7.3
1962-63.. ..	(a)	(a)	b236 4.0	23 4.0	b259 8.0

(a) Not yet available. (b) Interim rates.

The distribution between factory and farm of the overall return to manufacturers for butter is shown in the following table.

**COMMERCIAL BUTTER: AVERAGE OVERALL RETURNS**

(Source: Commonwealth Dairy Produce Equalization Committee Ltd.)

(Pence per lb.)

Year	Average overall returns on commercial butter		
	Rate of overall return to manufacturer	Estimated manufacturing cost	Return to dairy farmer
1958-59 .. ..	51.196	4.826	46.370
1959-60 .. ..	51.531	4.965	46.566
1960-61 .. ..	50.210	5.339	44.871
1961-62 .. ..	49.392	5.339	44.053
1962-63 .. ..	(a) 48.964	5.339	43.625

(a) Interim rates.



(x) *Oversea Trade in Dairy Products. (a) General.* The production of butter and cheese in Australia is considerably in excess of local requirements, and consequently a substantial surplus is available for export overseas. In normal circumstances, the extent of this surplus is chiefly dependent upon seasonal conditions.

Exports of butter in 1962-63 amounted to 77,413 tons, compared with 78,005 tons in 1961-62. Exports of cheese in these years were 25,939 tons and 22,378 tons respectively. As in previous years, the principal importing country for Australian butter and cheese was the United Kingdom. In 1962-63, 84 per cent. of butter and 53 per cent. of cheese exported was consigned to the United Kingdom.

Total quantities and values of exports of butter, cheese and preserved milk products of Australian origin are shown in the table at the foot of the page.

(b) *Butter and Cheese Exports graded according to Quality.* All butter and cheese exported comes under the provisions of the Exports (Dairy Produce) Regulations and is subject to supervision, inspection and examination by officers appointed for that purpose. These commodities are graded according to quality which has been fixed by regulation as follows:—flavour and aroma, 50 points; texture, 30 points; and condition, 20 points. Butter and cheese graded at 93 to 100 points is of choicest quality; at 90 to 92 points, first quality; at 86 to 89 points, second quality; and at 80 to 85 points, pastry or cooking quality or, in the case of cheese, third quality.

In the following table, particulars are given of the relative proportions of butter and cheese graded for export according to quality. Further details, which include actual quantities by States, are to be found in *Primary Industries, Part I.—Rural Industries, 1961-62, Bulletin No. 56.*

**BULK BUTTER AND CHEESE GRADED FOR EXPORT: AUSTRALIA**  
(Per cent.)

Grade	Butter			Cheese		
	1960-61	1961-62	1962-63	1960-61	1961-62	1962-63
Choicest .. .. .	66.0	65.4	70.7	11.8	8.4	5.9
First quality .. .. .	25.9	26.0	21.4	76.7	82.6	82.1
Second and third quality(a) .. .. .	8.1	8.6	7.9	11.5	9.0	12.0
<b>Total .. .. .</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>

(a) Includes rejected.

(c) *Exports of Dairy Products.* Exports of butter, cheese and other milk products of Australian origin are shown in the following table.

**EXPORTS OF DAIRY PRODUCTS: AUSTRALIA**

Particulars	Quantity ('000 lb.)			Value (£A.'000 f.o.b.)		
	1960-61	1961-62	1962-63	1960-61	1961-62	1962-63
Butter .. .. .	136,948	174,731	173,405	19,651	23,537	23,594
Cheese .. .. .	40,400	50,124	58,101	4,607	5,203	6,094
Milk—						
Condensed, preserved, etc.—						
Sweetened full cream .. .. .	38,188	36,028	54,432	2,553	2,378	3,426
Unsweetened .. .. .	5,637	4,327	5,077	319	258	304
Dried or powdered—						
Full cream .. .. .	15,690	13,043	14,263	2,608	2,148	2,226
Skim .. .. .	33,734	35,311	55,467	1,363	1,263	1,942
Malted .. .. .	6,759	7,647	7,414	1,012	1,177	1,125
Infants' and invalids' foods—						
Essentially of milk .. .. .	8,545	6,980	7,633	1,297	1,082	1,214
Other .. .. .	8,147	9,573	9,059	1,539	1,774	1,763

3. Pigs and Pig Products.—(i) *Pig Numbers.* At 31st March, 1963, 1,440,000 pigs were recorded, representing a decrease of 212,000 (12.9 per cent.) on numbers a year earlier. The number of pigs in each State and Territory at 31st March for each of the years 1959 to 1963 compared with the averages for the three-year periods ended 31st March, 1939, 1949 and 1959, are given in the following table.

## NUMBER OF PIGS

At 31st March	N.S.W.	Vic.	Q'land	S. Aust.	W. Aust.	Tas.	N.T.	A.C.T.	Aust.
Average for three years ended—									
1939 ..	374,963	285,465	299,707	74,329	74,657	42,802	404	481	1,152,808
1949 ..	366,267	261,922	375,191	101,934	91,862	43,184	424	554	1,241,338
1959 ..	377,510	263,363	405,702	99,632	135,404	61,389	2,543	160	1,345,703
Year—									
1959 ..	348,730	253,125	399,875	98,374	115,446	69,215	3,802	175	1,288,742
1960 ..	398,959	284,505	429,034	108,696	130,933	67,118	4,400	151	1,423,796
1961 ..	455,345	318,523	448,279	143,645	175,675	70,882	2,845	109	1,615,303
1962 ..	471,579	325,120	432,609	170,133	174,182	75,754	2,762	184	1,652,323
1963 ..	391,999	297,791	402,498	144,976	130,791	70,002	1,842	92	1,439,991

A long-term comparison of pig numbers is given in the division Pastoral Production of this chapter (see page 1051). A map showing the distribution of pigs in Australia at 31st March, 1963, faces p. 1083. Maps showing the distribution at 31st March, 1955 and 1948, appear on page 912 of Year Book No. 43 and on page 908 of Year Book No. 39, respectively.

(ii) *Size of Pig Herds.* Details of the size of pig herds have been published in a series of bulletins entitled *Classification of Rural Holdings by Size and Type of Activity, 1959-60.*

(iii) *Pigs Slaughtered.* The number of pigs slaughtered during each of the years 1958-59 to 1962-63, compared with the averages for the three-year periods ended 1938-39, 1948-49 and 1958-59, is shown in the following table. A graph showing the number of pigs in Australia from 1870 onwards appears on page 1061 of Year Book No. 49.

## PIGS SLAUGHTERED

('000)

Period	Slaughtering passed for human consumption									Total slaughtering (including boiled down)
	N.S.W.	Vic.	Qld	S.A.	W.A.	Tas.	N.T.	A.C.T.	Aust.	
Average for three years ended—										
1938-39 ..	562	503	530	155	109	65	1		1,925	1,961
1948-59 ..	440	371	448	154	138	54	1		1,606	1,615
1958-59 ..	594	439	474	159	191	94	5		1,956	1,968
Year—										
1958-59 ..	604	462	521	179	197	107	7		2,077	2,087
1959-60 ..	584	458	530	171	168	115	7		2,033	2,043
1960-61 ..	655	513	554	183	194	111	9		2,219	2,229
1961-62 ..	755	587	597	232	264	120	2	7	2,564	2,573
1962-63 ..	688	528	604	234	237	116	2	7	2,416	2,424

(iv) *Production.* (a) *Pigmeat.* In the following table, details of the production of pigmeat in each State are shown for the years 1958-59 to 1962-63, together with the averages for the three-year periods ended 1938-39, 1948-49 and 1958-59.

## PRODUCTION OF PIGMEAT (CARCASS WEIGHT)

(Tons)

Period	N.S.W.	Vic.	Q'land	S. Aust.	W. Aust.	Tas.	N.T.	A.C.T.	Aust.
<b>Average for three years ended—</b>									
1938-39 ..	25,558	24,569	23,522	7,538	4,322	2,893	5	43	(a)88,450
1948-49 ..	27,182	22,308	22,856	8,993	8,500	2,916	24	36	92,815
1958-59 ..	28,272	23,097	23,180	8,778	9,624	4,156	84	209	97,400
<b>Year—</b>									
1958-59 ..	27,253	23,770	26,210	9,451	9,991	4,911	113	187	101,886
1959-60 ..	26,252	23,383	27,106	9,161	9,029	5,352	103	208	100,594
1960-61 ..	29,048	25,350	27,289	9,574	10,550	5,057	150	240	107,458
1961-62 ..	32,677	27,406	29,802	11,558	13,180	5,428	86	326	120,463
1962-63 ..	30,283	25,086	29,619	11,810	11,731	5,461	69	328	114,387

(a) Excludes trimmings from baconer carcasses.

(b) *Bacon and Ham.* Production of bacon and ham amounted to 41,436 tons in 1962-63. This amount is 3.9 per cent. above the amount of 39,868 tons produced in 1961-62. The record output of 56,246 tons was attained in 1944-45.

Details of production are shown by States in the following table for each year from 1958-59 to 1962-63, compared with the averages for the three-year periods ended 1938-39, 1948-49 and 1958-59.

## PRODUCTION OF BACON AND HAM (CURED CARCASS WEIGHT) (a)

(Tons)

Period	N.S.W.	Victoria	Q'land	S. Aust.	W. Aust.	Tas.	Australia
<b>Average for three years ended—</b>							
1938-39 ..	10,396	7,556	8,759	2,940	1,838	1,022	32,511
1948-49 ..	14,436	10,787	9,846	4,580	4,209	1,196	45,054
1958-59 ..	11,132	8,302	10,294	3,275	2,987	1,078	37,068
<b>Year—</b>							
1958-59 ..	11,606	8,852	11,299	3,069	2,955	1,126	38,907
1959-60 ..	11,012	8,634	9,948	3,115	3,061	1,144	36,914
1960-61 ..	11,328	9,211	9,442	3,141	3,169	1,120	37,411
1961-62 ..	11,145	9,102	12,221	2,757	3,512	1,131	39,868
1962-63 ..	b 12,739	9,004	11,449	3,218	3,844	1,182	b 41,436

(a) Pressed and canned bacon and ham have been converted to cured carcass weight for periods subsequent to 1948-49.

(b) Subject to revision.

(v) *Consumption.*(a) *Pork.* Apparent consumption of pork per head in 1962-63 was 11.8 lb., compared with 13.6 lb. per head in 1961-62. The 1961-62 level was the highest since the war. In recent years, annual consumption of pork per head has not fallen below 10 lb.

In the following table, details of the production and disposal of pigmeat are shown for the years 1958-59 to 1962-63 compared with the averages for the three-year periods ended 1938-39, 1948-49 and 1958-59.

## PRODUCTION AND DISPOSAL OF PIGMEAT (CARCASS WEIGHT): AUSTRALIA

Period	Change in stocks	Production	Exports	Curing and canning	Apparent consumption (as pork or smallgoods) in Australia	
					Total	Per head per annum
	'000 tons	'000 tons	'000 tons	'000 tons	'000 tons	lb.
Average for three years ended—						
1938-39 .. ..	..	88.5	13.7	48.6	26.2	8.5
1948-49 .. ..	-1.2	92.8	6.3	63.4	24.3	7.1
1958-59 .. ..	..	97.4	0.8	53.0	43.6	10.1
Year—						
1958-59 .. ..	-1.9	101.9	0.9	55.6	47.3	10.6
1959-60 .. ..	+0.8	100.6	0.4	52.6	46.8	10.3
1960-61 .. ..	+0.8	107.5	0.4	53.3	53.0	11.4
1961-62 .. ..	-0.7	120.5	0.9	55.9	64.4	13.6
1962-63 .. ..	+0.2	114.4	0.2	57.0	57.0	11.8

(b) *Bacon and Ham.* Annual consumption of bacon and ham has been about 7 lb. per head in recent years. The 1962-63 consumption was 7.3 lb. per head.

Details of production and disposal of bacon and ham for the years 1958-59 to 1962-63, compared with the averages for the three-year periods ended 1938-39, 1948-49 and 1958-59 are shown in the following table.

## PRODUCTION AND DISPOSAL OF BACON AND HAM (CURED CARCASS WEIGHT) (a): AUSTRALIA

Period	Change in stocks	Production	Exports	Canning	Apparent consumption in Australia	
					Total	Per head per annum
	'000 tons	'000 tons	'000 tons	'000 tons	'000 tons	lb.
Average for three years ended—						
1938-39 .. ..	..	32.5	1.0	..	31.5	10.2
1948-49 .. ..	..	45.1	3.1	2.1	39.9	11.7
1958-59 .. ..	+0.1	37.1	0.5	6.0	30.5	7.1
Year—						
1958-59 .. ..	+0.2	38.9	0.3	6.4	32.0	7.2
1959-60 .. ..	-0.8	36.9	0.3	5.3	32.1	7.1
1960-61 .. ..	+0.1	37.4	0.3	5.3	31.7	6.8
1961-62 .. ..	(b)	39.9	0.1	6.8	33.0	6.9
1962-63 .. ..	-0.1	41.4	0.1	5.8	35.6	7.3

(a) Pressed and canned bacon and ham have been converted to cured carcass weight.

(b) Less than 50 tons.

(vi) *Exports of Pigs and Pig Products.* Total quantities and values of exports of pigs and pig products of Australian origin for the years 1960-61 to 1962-63 are given in the following table.

## EXPORTS OF PIGS AND PIG PRODUCTS: AUSTRALIA

Particulars	Quantity			Value (£A.'000 f.o.b.)		
	1960-61	1961-62	1962-63	1960-61	1961-62	1962-63
Bacon and ham (including canned) .. .. '000 lb.	1,575	596	216	404	154	59
Lard .. .. '000 lb.	539	645	246	47	48	24
Frozen pork .. .. '000 lb.	985	2,092	482	187	306	84
Pigs, live .. .. number	125	139	113	6	5	5

## § 2. The Poultry Industry

1. **General.**—Originally the poultry industry was conducted in conjunction with other branches of rural activity, mainly dairying, but it is now a specialized and distinct industry. It is from this source that the bulk of the commercial production is obtained. Practically all farm households keep poultry for the purpose of supplying their own domestic requirements and some supplies from this source are also marketed. In addition, many private homes in both rural and suburban areas keep small numbers of fowls in back-yard runs to help satisfy domestic needs. Because of the incompleteness of data available on poultry throughout Australia, details of poultry numbers are not published.

2. **Marketing of Eggs.**—(i) *Markets.* Details of the annual contracts entered into between the United Kingdom and Australian Governments up to 1952-53 and of the results of trading under free market conditions in the four years following appear in previous issues of the Year Book.

Over the period 1952-53 to 1962-63, Australian exports of shell eggs fell by 81 per cent. The main outlets for Australian eggs in 1962-63 were Kuwait (1,258,000 dozen), Saudi Arabia (655,000 dozen) and the United States of America (467,000 dozen).

The United Kingdom remains virtually the only export market for egg pulp. Australian exports of pulp to that country were approximately 12,200 tons in 1961-62 and 7,755 tons in 1962-63.

(ii) *Egg Export Control Act 1947.* Details of this Act were given in previous issues of the Year Book (see No. 47, p. 997).

3. **Recorded Production of Eggs and Egg Products.**—(i) *Shell Eggs.* Available statistics of the production and disposal of eggs in Australia are restricted to those recorded by the Australian Egg Board and the Egg Marketing Board of New South Wales. Details of production as recorded by these authorities are shown in the following table.

SHELL EGGS: PRODUCTION<sup>(a)</sup> RECORDED BY EGG BOARDS  
( '000 Dozen)

State	1958-59	1959-60	1960-61	1961-62	1962-63
New South Wales .. ..	45,221	53,495	62,156	61,657	54,609
Victoria .. ..	23,447	26,521	28,215	29,939	26,794
Queensland .. ..	8,692	10,507	10,810	10,176	11,314
South Australia .. ..	9,692	10,041	10,491	11,387	9,816
Western Australia .. ..	7,577	7,476	7,333	7,558	7,796
Tasmania .. ..	(b)	(b)	(b)	(b)	(b)
<b>Total(c)</b> .. ..	<b>94,629</b>	<b>107,540</b>	<b>119,005</b>	<b>120,717</b>	<b>110,329</b>

(a) Receipts from consignors and sales by producer agents.  
Tasmania.

(b) Not available.

(c) Excludes

(ii) *Egg Pulp, etc. Production.* Particulars of the production of whole egg pulp as recorded by the Egg Marketing Board for the State of New South Wales and by the Australian Egg Board for the other States are shown in the following table.

### LIQUID WHOLE EGG PULP: PRODUCTION RECORDED BY EGG BOARDS

('000 lb.)

State	1958-59	1959-60	1960-61	1961-62	1962-63
New South Wales .. ..	9,808	17,791	21,446	20,916	11,499
Victoria .. ..	3,473	6,460	7,948	12,000	7,684
Queensland .. ..	2,011	2,767	3,716	3,321	3,864
South Australia .. ..	2,495	3,210	3,394	3,374	2,837
Western Australia .. ..	1,600	1,122	916	620	834
Tasmania .. ..	(a)	(a)	(a)	(a)	(a)
Total(b) .. ..	19,387	31,350	37,420	40,231	26,718

(a) Not available.

(b) Excludes Tasmania.

In addition to liquid whole egg, production was also recorded of liquid egg whites and liquid egg yolks. Output in 1962-63 amounted to 2,029,000 lb. and 1,412,000 lb., respectively, compared with 2,416,000 lb. and 1,784,000 lb., respectively, in the previous year. These figures exclude small quantities produced in Tasmania for which details are not available.

4. *Consumption of Eggs and Egg Products.*—Because of the operations of producers in areas outside the control of the Egg Boards and the extent of "back-yard" poultry-keeping, for which no statistics are collected, figures relating to total egg production must be accepted with some reserve. The production shown in the following table, together with details of exports and consumption, is based upon the records of Egg Boards of production from areas under their control, plus estimates of production from uncontrolled areas and from "back-yard" poultry-keepers.

### ESTIMATED PRODUCTION AND DISPOSAL OF EGGS IN SHELL: AUSTRALIA

Period	Change in stocks	Estimated total production	Exports	For drying and pulping(a)	Apparent consumption in Australia	
					Total	Per head per annum
	Mill. doz.	Mill. doz.	Mill. doz.	Mill. doz.	Mill. doz.	Dozen
Average for three years ended—						
1938-39 .. ..	-0.1	152.7	13.0	5.5	134.3	19.5
1948-49 .. ..	+0.1	204.7	17.7	39.1	147.8	19.3
1958-59 .. ..	..	189.9	9.6	23.0	157.3	16.1
Year—						
1958-59 .. ..	-0.3	181.1	5.7	16.5	159.2	16.0
1959-60 .. ..	+0.6	198.6	3.4	27.2	167.4	16.5
1960-61 .. ..	-0.3	212.1	6.2	36.9	169.3	16.3
1961-62 .. ..	-0.1	215.8	5.8	36.5	173.6	16.4
1962-63 .. ..	-0.4	207.2	4.6	24.7	178.3	16.5

(a) Includes wastage.

Details of the annual consumption of shell eggs, liquid whole egg and total shell egg equivalent per head of population are shown in the following table.

**SUPPLIES OF EGGS AND EGG PRODUCTS AVAILABLE FOR CONSUMPTION:  
AUSTRALIA**

(Per head per annum)

Period	Shell eggs	Liquid whole egg and egg powder (a)	Total	
			Number	Weight(b)
	No.	No.	No.	lb.
<b>Average for three years ended—</b>				
1938-39 .. .. .	235	8	243	26.6
1948-49 .. .. .	232	23	255	27.9
1958-59 .. .. .	194	12	206	22.5
<b>Year—</b>				
1958-59 .. .. .	192	12	204	22.3
1959-60 .. .. .	198	14	212	23.2
1960-61 .. .. .	195	15	210	(c) 26.3
1961-62 .. .. .	196	14	210	(c) 26.3
1962-63 .. .. .	198	12	210	(c) 26.3

(a) In terms of the number of shell eggs. (b) The average weight of an egg in Australia has been taken as 1.75 oz. for the years prior to 1960-61. From 1960-61, the average weight has been taken as 2 oz. (c) Not comparable with earlier years; see footnote (b).

5. **Oversea Trade in Poultry Products.**—Details of the exports of poultry products in each of the years 1960-61 to 1962-63 are shown below.

**EXPORTS OF POULTRY PRODUCTS: AUSTRALIA**

Particulars	Quantity			Value (£A.'000 f.o.b.)		
	1960-61	1961-62	1962-63	1960-61	1961-62	1962-63
Eggs in shell .. .. '000 doz.	5,443	5,007	3,943	847	831	603
Eggs not in shell—						
In liquid form .. .. '000 lb.	26,807	29,231	18,920	3,111	3,273	1,901
Drv .. .. .. '000 lb.	8	190	3	5	87	2
Frozen poultry .. .. '000 lb.	423	427	318	93	93	71
Poultry, live(a) .. .. number	283,365	555,908	550,362	41	75	73

(a) Includes day-old chicks.

There have been considerable imports of canned chicken from the United States of America in recent years. The quantities and values during 1960-61, 1961-62 and 1962-63, respectively, were: 2,016,000 lb., £227,000; 474,000 lb., £46,000; 293,000 lb., £28,000.

### § 3. The Bee-Farming Industry

1. **Production of Honey and Bees-wax.**—Although practised as a separate industry, bee-farming is also carried on in conjunction with other branches of farming. In recent years, there has been considerable growth in the number of itinerant apiarists operating on a large scale with mobile equipment. Some of these apiarists move as far afield as from Victoria to Queensland in an endeavour to provide a continuous supply of nectar from flora suitable for their bees. The returns of honey from productive hives during 1962-63 shows an average of 108 lb. per hive and the average quantity of wax was 1.4 lb. per productive hive.

The number of hives and the production of honey and bees-wax during the year 1962-63 are shown in the following table.

BEEHIVES, HONEY AND BEES-WAX, 1962-63

State or Territory	Beehives (a)			Honey produced		Bees-wax produced	
	Pro- ductive	Unpro- ductive	Total	Quantity	Gross value	Quantity	Gross value
	'000	'000	'000	'000 lb.	£'000	'000 lb.	£'000
New South Wales ..	121	71	192	14,087	712	177	42
Victoria ..	62	39	101	4,818	291	64	16
Queensland ..	26	11	37	2,941	123	44	9
South Australia ..	51	19	70	4,147	206	56	10
Western Australia ..	37	9	46	6,099	268	79	14
Tasmania ..	5	2	7	547	47	6	1
Aust. Cap. Territory ..	1	..	1	40	1	..	..
<b>Australia ..</b>	<b>303</b>	<b>151</b>	<b>454</b>	<b>32,679</b>	<b>1,648</b>	<b>426</b>	<b>92</b>

(a) At 30th June.

The production of honey and bees-wax fluctuates considerably and is determined mainly by the flow of nectar from flora, particularly the eucalypts, which varies greatly from year to year.

The table below shows the production of honey and bees-wax for each of the years 1958-59 to 1962-63, compared with the averages for the three-year periods ended 1938-39, 1948-49, and 1958-59.

HONEY AND BEES-WAX PRODUCTION

('000 lb.)

Period	N.S.W.	Vic.	Q'land	S. Aust.	W. Aust.	Tas.	A.C.T.	Austra- lia
<b>HONEY</b>								
Average for three years ended—								
1938-39 ..	3,005	3,107	700	2,874	1,299	200	3	11,188
1948-49 ..	14,934	8,232	2,185	8,292	2,831	206	34	36,714
1958-59 ..	12,853	7,239	2,071	5,924	6,548	398	44	35,077
Year—								
1958-59 ..	10,593	7,624	1,766	5,453	6,680	342	39	32,487
1959-60 ..	18,682	9,661	4,119	7,221	5,549	296	34	45,562
1960-61 ..	15,286	8,390	1,848	4,442	5,311	441	83	35,801
1961-62 ..	15,326	10,314	1,281	8,405	7,982	279	64	43,651
1962-63 ..	14,087	4,818	2,941	4,147	6,099	547	40	32,679
<b>BEES-WAX</b>								
Average for three years ended—								
1938-39 ..	49	39	11	38	23	2	(a)	162
1948-49 ..	174	86	36	110	34	3	(a)	443
1958-59 ..	163	81	31	94	81	5	(a)	455
Year—								
1958-59 ..	137	86	25	80	84	4	1	417
1959-60 ..	257	113	59	106	67	4	1	607
1960-61 ..	197	105	32	59	71	5	1	470
1961-62 ..	208	135	22	123	94	4	1	587
1962-63 ..	177	64	44	56	79	6	(a)	426

(a) Less than 500 lb.



2. **Oversea Trade in Bee Products.**—The quantity of honey exported in 1962–63, 26.8 million lb., was 5 per cent. more than in 1961–62. The principal importers were the United Kingdom (51 per cent. of total exports) and the Federal Republic of Germany (40 per cent.).

The quantity of bees-wax exported in 1962–63 was 322.9 million lb.

Total quantities and values of exports of honey and bees-wax for the years 1960–61 to 1962–63 are shown below.

#### EXPORTS OF HONEY AND BEES-WAX: AUSTRALIA

Particulars	Quantity			Value (£A.'000 f.o.b.)		
	1960–61	1961–62	1962–63	1960–61	1961–62	1962–63
Honey .. .. '000 lb.	16,770	25,390	26,759	708	1,113	1,401
Bees-wax .. .. lb.	195,707	211,420	322,922	42	43	71

#### § 4. Value of Dairy, Poultry and Bee Production and Indexes of Price and Quantum of Production

1. **Gross Value of Dairy, Poultry and Bee Production, 1958–59 to 1962–63.**—The following table shows the gross value of recorded dairy, poultry and bee production at the principal markets in Australia.

#### GROSS VALUE OF DAIRY, POULTRY AND BEE PRODUCTION: AUSTRALIA

(£'000)

Particulars	1958–59	1959–60	1960–61	1961–62	1962–63
<b>Whole milk used for—</b>					
Butter(a) .. ..	66,328	72,615	64,601	67,912	73,538
Cheese(a) .. ..	10,120	10,124	10,658	11,341	12,558
Preserved milk products .. ..	9,230	10,340	9,376	9,641	9,544
Other purposes .. ..	59,887	61,768	64,098	65,973	66,005
<b>Subsidy paid on whole milk for—</b>					
Butter .. ..	12,314	12,295	12,275	12,247	12,250
Cheese .. ..	1,186	1,205	1,225	1,253	1,250
<i>Total, Whole Milk (including Subsidy)</i> .. ..	<i>159,065</i>	<i>168,347</i>	<i>162,233</i>	<i>168,367</i>	<i>175,145</i>
Pigs slaughtered .. ..	25,553	30,121	30,659	26,953	31,303
Dairy cattle slaughtered .. ..	15,721	14,228	11,864	10,916	13,241
Eggs .. ..	40,397	45,249	48,854	44,130	43,739
Poultry .. ..	14,380	14,588	16,240	16,731	18,076
Honey .. ..	1,803	2,390	1,772	1,877	1,648
Bees-wax .. ..	105	155	111	130	92
<b>Grand Total</b> .. ..	<b>257,024</b>	<b>275,078</b>	<b>271,733</b>	<b>269,104</b>	<b>283,244</b>

(a) Excludes Commonwealth subsidy which is shown separately.

2. Gross, Local and Net Values, 1962-63.—The values of dairy, poultry and bee farming production on gross, local and net bases are shown in the following table. Further information on values, including definitions of the terms used, is given in Chapter XXX. Miscellaneous.

GROSS, LOCAL AND NET VALUE OF DAIRY, POULTRY AND BEE PRODUCTION, 1962-63

(£'000)

State or Territory	Gross production valued at principal markets	Marketing costs	Gross production valued at farm	Value of materials used in process of production	Net value of production(a)
New South Wales .. ..	94,518	14,467	80,051	(b) 17,595	62,456
Victoria .. ..	101,912	5,933	95,979	28,266	67,713
Queensland .. ..	40,416	2,876	37,540	11,074	26,466
South Australia .. ..	19,619	879	18,740	7,991	10,749
Western Australia .. ..	13,693	920	12,773	7,107	5,666
Tasmania .. ..	12,602	651	11,951	3,784	8,167
Northern Territory .. ..	131	n.a.	131	n.a.	131
Australian Capital Territory ..	353	29	324	80	244
<b>Australia .. ..</b>	<b>283,244</b>	<b>25,755</b>	<b>257,489</b>	<b>75,897</b>	<b>181,592</b>

(a) No deduction has been made for depreciation and maintenance.

(b) No allowance has been made for costs of power, power kerosene, petrol and other oils.

3. Net Value of Production, 1958-59 to 1962-63.—In the following table, the net values of dairy, poultry and bee production (total and per head of population) are shown by State.

NET VALUE OF DAIRY, POULTRY AND BEE PRODUCTION(a)

Year	N.S.W. (b)	Vic.	Q'land	S. Aust.	W. Aust.	Tas.	Australia (c)
NET VALUE (£'000)							
1958-59 .. ..	65,077	57,362	26,113	11,351	3,549	7,108	170,909
1959-60 .. ..	69,285	62,533	29,579	10,912	4,565	7,492	184,677
1960-61 .. ..	63,933	65,612	22,443	9,986	5,075	7,214	174,587
1961-62 .. ..	58,902	56,376	23,563	11,160	5,222	7,354	162,982
1962-63 .. ..	62,456	67,713	26,466	10,749	5,666	8,167	181,592

NET VALUE PER HEAD OF POPULATION (£)

1958-59 .. ..	17.5	20.9	18.0	12.5	5.0	21.0	17.2
1959-60 .. ..	18.2	22.2	20.0	11.7	6.4	21.8	18.2
1960-61 .. ..	16.5	22.8	14.9	10.4	7.0	20.6	16.8
1961-62 .. ..	14.9	19.1	15.4	11.4	7.0	20.6	15.4
1962-63 .. ..	15.6	22.4	17.1	10.8	7.4	22.6	16.8

(a) No deduction has been made for depreciation and maintenance.

(b) No deduction has been made for costs of power, power kerosene, petrol and other oils.

(c) Includes Northern Territory and Australian Capital Territory.

4. **Indexes of Quantum and Price of Dairy, Poultry and Bee Production.**—For details of the methods of calculating these indexes and of the weights used *see* Chapter XXX. Miscellaneous.

**INDEXES OF QUANTUM<sup>(a)</sup> AND PRICE OF DAIRY, POULTRY AND BEE PRODUCTION: AUSTRALIA**

(Base: Average 3 years ended June, 1939 = 100)

Particulars	1958-59	1959-60	1960-61	1961-62	1962-63
<b>Quantum<sup>(a)</sup> of production—</b>					
Milk .. .. .	120	123	116	125	129
Other products .. .. .	118	122	127	135	130
<i>Total, Dairy, Poultry and Bee</i>	<i>119</i>	<i>123</i>	<i>120</i>	<i>128</i>	<i>129</i>
Per head of population ..	82	83	79	83	82
<b>Price—</b>					
Milk .. .. .	372	383	384	373	378
Other products .. .. .	421	450	446	371	410
<i>Total, Dairy, Poultry and Bee . .</i>	<i>386</i>	<i>402</i>	<i>402</i>	<i>373</i>	<i>387</i>

(a) Indexes of value at constant prices, i.e. quantities revalued at average unit values of base years 1936-37 to 1938-39.

## CHAPTER XXIV

### FORESTRY

**NOTE.**—For further details on subjects dealt with in this chapter *see* the annual bulletins *Primary Industries, Part II.—Non-Rural Industries and Value of Production*, and *Secondary Industries* (for sawmills, etc., operations).

All values of Australian oversea trade shown throughout this chapter are expressed as £A. f.o.b., port of shipment. The export table on page 1112 relates to exports of Australian produce, but quantities and values quoted in the text sometimes include *re-exports*, the amounts involved, however, being generally small.

#### § 1. Source of Statistics

Statistics relating to forestry are, in general, provided by the various authorities concerned with forestry administration. Particulars of forest reservations contained in this chapter have been collected by the Statisticians of the various States, mainly from information provided by the State forestry authorities. Other information on forested areas has been provided by the Commonwealth Forestry and Timber Bureau, which has also supplied certain other data.

Statistics of timber and by-products have been compiled from the annual factory collections undertaken by the Statisticians in the several States. Figures of production of gums, resins and tanning barks have been provided by the State forestry authorities.

Data of imports and exports of forest products and timber and timber products have been compiled in the Commonwealth Bureau of Census and Statistics as part of the statistics of oversea trade.

The figures shown relate, in general, to years ended 30th June.

#### § 2. Forestry in Australia

**1. Objects of Forestry.**—The main object of forestry authorities is to manage the forests of the country in a manner that will provide the maximum benefits, both direct and indirect. Direct benefits include the provision of essential commercial commodities such as structural timber, pulpwood, plywood, veneers, firewood, bark products, tars, oils and resins.

Indirect benefits include protection of soil and stock from wind and exposure, regulation of stream flow, provision of recreational facilities, and aesthetic effects. Forestry also aims at improving existing forests and woodlands by properly controlled exploitation, by protection from such destructive agencies as fire and insect attack, and by inducing regeneration where it is desirable. The provision of a partial tree cover on denuded lands where this cover is necessary for protective purposes, and a complete cover when the land is better under forest than under any other land use, are further aims of forestry.

2. **General Account of Forests and Timbers.**—(i) *General.* The area of land in Australia suitable for the production of commercial timber as a primary crop is very small in comparison with the size of the continent. Hardwoods cover 97 per cent. of the total forested area, and approximately 94 per cent. of the hardwood area is occupied by eucalypts.

(ii) *Eucalypts.* The genus *Eucalyptus* is remarkable in that it includes over 600 species ranging in size from the mighty forest giants, mountain ash (*E. regnans*) of Victoria and karri (*E. diversicolor*) of Western Australia, down to the small mallee species which inhabit vast areas of the inland. The habitats range from the dry inland areas to the high mountain areas in the Australian Alps, from areas with the annual rainfall as low as 10 inches to those where it is 150 inches. Of the 600 species, only about 100 are used for sawmilling, and not more than 40 of these are exploited extensively.

The better class of eucalypt forest is concentrated mainly in the higher rainfall areas such as the east coast, the highlands of southern New South Wales, Victoria and Tasmania and the south-western corner of Western Australia. The more important species include blackbutt (*E. pilularis*), tallowwood (*E. microcorys*), flooded gum (*E. grandis*) and red mahogany (*E. resinifera*) of New South Wales and Queensland, alpine ash (*E. delegatensis*) of New South Wales, Victoria and Tasmania, mountain ash (*E. regnans*), messmate (*E. obliqua*) and blue gum (*E. bicostata*) of Victoria and Tasmania, and karri (*E. diversicolor*) of Western Australia. For height and grandeur, mountain ash and karri are unequalled among the hardwoods of the world, and are excelled only by a few North American softwood species.

In the coastal regions with lower rainfall, the eucalypt forests contain many durable species such as the ironbarks, grey gums and bloodwoods of the east coast and jarrah (*E. marginata*) and tuart (*E. gomphocephala*) of Western Australia. The spotted gum (*E. maculata*) occurring in New South Wales and Queensland is another example.

Along most of the inland streams and adjacent flood-plains, there are riverain forests consisting mainly of river red gum (*E. camaldulensis*), a very durable hardwood which has supplied large quantities of sawn timber, railway sleepers and fence posts.

Eucalypts also occur in open forest and savannah woodland formations in areas receiving a reliable annual rainfall of about 10 to 20 inches per annum, as on the goldfields of Western Australia where salmon gum (*E. salmophloia*), brown mallet (*E. astringens*) and wandoo (*E. wandoo*) occur. These forests are of considerable value for firewood, as mining timbers and for fencing. Minor forest products such as sandalwood, tan bark, essential oils, etc., also come from isolated areas in this type of country, and in the more arid areas.

As a measure of the relative significance of the more important eucalypts sawn in Australia, the table following shows the quantities of timber sawn from them in 1961–62.

## SAWN TIMBER PRODUCED FROM EUCALYPTS(a): AUSTRALIA, 1961-62

(Source: Forestry and Timber Bureau)

('000 super. ft.)(b)

Species							Sawn timber
Messmate ( <i>E. obliqua</i> )	..	..	..	..	..	..	206,007
Blackbutt ( <i>E. pilularis</i> )	..	..	..	..	..	..	161,284
Jarrah ( <i>E. marginata</i> )	..	..	..	..	..	..	156,539
Alpine ash ( <i>E. delegatensis</i> )	..	..	..	..	..	..	135,801
Red gum ( <i>E. camaldulensis</i> )	..	..	..	..	..	..	35,125
Mountain ash ( <i>E. regnans</i> )	..	..	..	..	..	..	34,569
Karri ( <i>E. diversicolor</i> )	..	..	..	..	..	..	29,033
Other eucalypts(c)	..	..	..	..	..	..	198,595
<b>Total, Eucalypts</b>	..	..	..	..	..	..	<b>956,953</b>

(a) Includes the volume of sawn sleepers and the sawn equivalent of ply and veneer. (b) A super. or superficial foot (true measure) can be defined as the equivalent volume of a solid body, one foot long by one foot wide by one inch thick. (c) Separate figures are not available for the production of other species, but the probable order of importance of the next three eucalypt species is: spotted gum (*E. maculata*), tallowwood (*E. microcorys*) and silvertop ash (*E. sieberiana*).

(iii) *Other Hardwoods.* Hardwood genera other than *Eucalyptus* cover a comparatively small portion of the forested land in Australia (some 6 per cent.), but these areas provide a great variety of timbers suitable for a multitude of uses. There are two basic types of forest containing supplies of hardwoods other than eucalypts, namely, the tropical and subtropical rainforests of coastal New South Wales and Queensland, and the temperate rainforests of southern Victoria and Tasmania, both of which yield species known collectively as rainforest or brushwood species. The total volume of brushwood species produced in 1961-62 was 66,869,000 super. feet, i.e. less than seven per cent. of the total hardwood cut in Australia.

The tropical and subtropical rainforest along the eastern coast of Australia contains a large number of different species. Tropical rainforest occurs in northern Queensland in the vicinity of Cairns and on the Atherton Tableland, providing such well-known cabinet woods as Queensland maple (*Flindersia brayleana*), Queensland walnut (*Endiandra palmerstonii*) and the silky oaks. The subtropical rainforest found in southern Queensland and northern New South Wales yields the tulip oaks, crab apple (*Shizomeria ovata*) and white beech (*Gmelina leichhardtii*). Coachwood (*Ceratopetalum apetalum*) and sassafras (*Doryphora sassafras*) occur in regions to the south near Dorrigo and have yielded valuable timber produce for many years.

Turpentine (*Syncarpia glomulifera*), an excellent harbour pile timber resistant to marine borer attack, and brush box (*Tristania conferta*), a superior structural and decking timber, are found in association with some eucalypts in the wetter rainfall areas on the north coast of New South Wales and in southern Queensland.

Temperate rainforest which is to be seen in southern parts of Victoria and western Tasmania consists mainly of myrtle beech (*Nothofagus cunninghamii*), but produces also southern sassafras (*Atherosperma moschata*) and blackwood (*Acacia melanoxylon*).

(iv) *Softwoods.* One of the most important species of native softwood is white cypress pine (*Callitris hugelii*). The main cypress pine forests of commercial value occur in New South Wales and southern Queensland west of the Great Dividing Range. The trees are comparatively small, but the timber has particular value owing to its durability and resistance to termites. It is suitable for use as scantlings, flooring, linings, weatherboards, poles and posts. As much of the area originally covered by cypress pine has been cleared for wheat farming and grazing, the production from the remaining State forests is now strictly regulated to ensure a continuous supply. The volume of cypress pine cut in 1961-62 was approximately 66.5 million super. feet, and in 1962-63 this cut rose to approximately 69.3 million super. feet.

Another important native softwood is hoop pine (*Araucaria cunninghamii*), which occurs naturally in the sub-tropical rain forest of southern Queensland and northern New South Wales associated with tulip oaks, crab apple, white beech, coachwood and sassafras. The greater part of the original hoop pine forests has been exploited, but considerable areas have been replanted to this species in Queensland and, to a lesser extent, in New South Wales.

Other native softwoods which have played a useful but minor part in the Australian timber industry include bunya and kauri pines (*Araucaria bidwillii* and *Agathis palmerstonii*) of Queensland, and celery top, Huon and King William pines (*Phyllocladus asplenifolius*, *Dacrydium franklinii* and *Athrotaxis selaginoides*) of Tasmania. Kauri pine is found in the tropical rainforest of northern Queensland in association with non-eucalypt hardwoods, while bunya pine occurs in the subtropical rainforests. In the temperate rainforests of Tasmania, celery top, Huon and King William pines are found in association with myrtle beech, southern sassafras and blackwood.

3. **Forested Areas.**—(i) *Extent of Forests.* Estimates prepared for the Eighth British Commonwealth Forestry Conference held in Kenya in 1962 show the total area of forest in Australia as 512.2 million acres, or about 27 per cent. of the total land area of the continent. In making these estimates, the F.A.O. definition of "forest" (published in *World Forest Inventory*, 1958, p. 123) was used. This definition includes areas of sparse or stunted tree growth, and in the case of Australia some four-fifths of the total forest area falls into this category.

### CLASSIFICATION OF FOREST AREA(a): AUSTRALIA

(Source: Forestry and Timber Bureau)

('000 acres)

Type of forest	Area
<b>LANDS</b>	
<b>Accessible forests—</b>	
<b>Productive forests in use—</b>	
Coniferous (softwood) .. .. .	492
Non-coniferous (broadleaved) .. .. .	24,352
Mixed woods .. .. .	5,636
Open areas .. .. .	245
<b>Total, Productive Forests in Use .. .. .</b>	<b>30,725</b>
Productive forests not in use .. .. .	(b) 31,961
Unproductive accessible forests .. .. .	(c) 257,687
<b>Total, Accessible Forests .. .. .</b>	<b>(d) 320,373</b>
<b>Inaccessible forests .. .. .</b>	<b>191,795</b>
<b>Total, Forested Area .. .. .</b>	<b>512,168</b>

(a) Based on the 1960 classification of forests. (b) Includes approximately 25 million acres capable of producing fuelwood only. (c) This area carries only sparse, stunted trees. (d) Includes approximately 258 million acres of land carrying only stunted trees.

CLASSIFICATION OF FOREST AREA(a): AUSTRALIA—*continued*

(Source: Forestry and Timber Bureau)

('000 acres)

Type of forest	Area
<b>OWNERSHIP OF ACCESSIBLE FORESTS</b>	
Publicly-owned forests—	
State forests .. .. .	23,534
Other forests .. .. .	150,329
<i>Total, Publicly-owned Forests</i> .. .. .	<i>173,863</i>
Privately-owned forests .. .. .	145,537
Ownership not yet determined .. .. .	973
<i>Total, Accessible Forests</i> .. .. .	<i>320,373</i>

(ii) *Forest Reservations.* Statements furnished by State and Commonwealth authorities show reservations of forest areas in Australia as at 30th June, 1963, totalling 39.1 million acres, of which 24.8 million acres were dedicated State forests and 14.3 million acres were timber and other reserves. The distribution of those areas is shown by States in the following table. Detailed comparisons between States are not possible because of the lack of uniform definitions.

## AREA OF FOREST RESERVATIONS, 30TH JUNE, 1963

('000 acres)

State or Territory	State forests	Timber reserves (Forest Acts)	Other reserves (a)	Total
New South Wales .. .. .	6,724	1,371	(b) 1,546	9,641
Victoria .. .. .	5,580	(b) 151	(b) 368	6,099
Queensland .. .. .	5,474	2,619	947	9,040
South Australia .. .. .	280	1	470	751
Western Australia .. .. .	4,454	(c) 2,617	324	7,395
Tasmania .. .. .	(d) 2,287	137	(e) 1,217	3,641
Northern Territory .. .. .	..	9	(f) 2,394	2,403
Australian Capital Territory .. .. .	..	..	(g) 131	131
<i>Australia</i> .. .. .	<i>24,799</i>	<i>6,905</i>	<i>7,397</i>	<i>39,101</i>

(a) Includes national parks and scenic reserves. (b) Reserved under Lands Acts. (c) Includes 775,000 acres reserved under Lands Acts. (d) Includes 465,000 acres of State forests under pulpwood concessions and 274,000 acres under exclusive and general forestry permits. (e) Includes 612,000 acres of Crown land under pulpwood concessions and 360,000 acres of Crown land under exclusive forestry permits. (f) Comprises a fauna and flora reserve on Coburg Peninsula (352,000 acres), land covered by pastoral leases (942,000 acres) and land within Welfare Reserves (1,100,000 acres). (g) Forest land not specifically reserved.

A considerable proportion of the permanently reserved areas is in inaccessible mountainous country, and many of the forests contain a mixture of species, only some of which are at present of commercial value. Much of the area consists of inferior forest, and a large proportion of the whole has been seriously degraded by recurrent fires.



(iii) *Plantations.* The indigenous forest of Australia does not contain adequate supplies of softwood, and Australia's requirements have had to be met largely by imports. As a result of the planned policy of the forest services and of several private commercial organizations, the area of softwood plantations, mainly of exotic species, is steadily increasing. It was natural that this aspect of forestry should receive earliest attention in South Australia, as this is the State most poorly endowed with natural forest. South Australia now has a larger area of planted softwoods than any other State in Australia, and for some years has been exploiting considerable quantities of timber from these plantations. Production is also increasing in the other States, and the thinnings from their plantations are already supplying a significant volume of timber.

The total production of roundwood from Australia's coniferous plantations is now almost 40 million cubic feet per annum and is expected to increase substantially during the next decade.

By 30th September, the planting season in the winter rainfall areas is completed, but that for the summer rainfall areas has not commenced. The following table shows the areas of softwood plantations at 30th September, 1963.

### SOFTWOOD PLANTATIONS, 30TH SEPTEMBER, 1963

(Source: Forestry and Timber Bureau)

(Acres)

State or Territory	Government			Private (mainly <i>P. radiata</i> )	Total
	<i>Pinus radiata</i>	Other species	Total		
New South Wales .. ..	79,458	(a) 20,091	99,549	25,448	124,997
Victoria .. ..	44,443	10,043	54,486	(b) 75,000	129,486
Queensland .. ..	2,237	101,125	103,362	7,970	111,332
South Australia(c) .. ..	112,704	9,904	122,608	39,750	162,358
Western Australia .. ..	14,828	24,434	39,262	1,370	40,632
Tasmania .. ..	17,917	431	18,348	7,108	25,456
Northern Territory .. ..	..	(d) 251	251	23	274
Australian Capital Territory..	24,130	2,238	26,368	..	26,368
<b>Australia .. ..</b>	<b>295,717</b>	<b>168,517</b>	<b>464,234</b>	<b>156,669</b>	<b>620,903</b>

(a) Includes 3,791 acres of hoop, bunya and kauri pine. (b) Estimated. (c) Excludes the 1963 plantations. (d) Cypress pine (*Callitris intratropica*).

A special article prepared by the Forestry and Timber Bureau giving a detailed account of the history and development of softwood plantations and of the characteristics of individual species, is included in Year Book No. 44, page 975.

Hardwood plantations (mainly *Eucalyptus spp.*) comprise a much smaller area, and the total acreage at 30th June, 1963, was 36,000 acres, about two-thirds of which was mallet. Plantations of this species have been established in Western Australia for tan bark production.

4. *Forest Administration and Research.*—(i) *Forestry Activities of the Commonwealth Government.* (a) *Commonwealth Forestry and Timber Bureau.* The functions of the Commonwealth Forestry and Timber Bureau are laid down in the Forestry and Timber Bureau Act and include forestry research and education, the study of timber supply and advice to the Government on forestry matters. The administering department is the Department of National Development.

In 1961, the Commonwealth Government decided to expand its activities in forestry research in Australia. The existing Divisions of Silvicultural Research and Forest Management Research were combined to form the Forest Research Institute. The purpose of the Institute is to provide complete coverage in forestry research, ensuring that all problems of primary importance to the practice and development of forestry in Australia are investigated.

In developing a programme with this aim, the Institute takes account of the research activities and potential of the State forest services and other organizations. The research work carried out by the existing sections of the Forest Research Institute covers a wide range of studies, including the following: factors affecting tree growth, tree breeding, introduction of exotic species, forest nutrition, forest botany, forest entomology and pathology, fire protection, watershed management, forest mensuration, forest management and management economics, and aerial inventory. The Forest Research Institute maintains five regional establishments in the Commonwealth, two of which have an outstation in addition to the regional headquarters. These regional stations are run on a co-operative basis with State forest services and private forest companies or other government instrumentalities.

The Australian Forestry School, located in Canberra, trains professional foresters. Training at the school covers the third and fourth years of a four-year degree course in forestry. The first two years of the course are spent in a study of prescribed science subjects at one of the Australian universities. The third and fourth years are spent at the Forestry School studying specialized forestry subjects. Students who complete the course satisfactorily graduate in Forestry at their home university and are awarded the Commonwealth Diploma in Forestry. The Commonwealth Diploma in Forestry or the Diploma in Forest Technology may also be awarded to suitable graduates from Australia or overseas who complete a course at the Australian Forestry School.

Advice is currently made available to government departments and private enterprise on timber supply matters. Research is undertaken on logging methods and machines and on matters associated with the marketing of timber products.

(b) *Commonwealth Scientific and Industrial Research Organization, Division of Forest Products.* The Division of Forest Products was formed in 1928 to carry out investigations into Australian forest products, assist in the effective use of such products, reduce waste, reduce losses from decay and insect attack, and conduct research into the fundamental chemical, physical and mechanical properties of Australian timbers.

The research work of the Division is carried out by eight separate sections: wood and fibre structure, wood chemistry, timber physics, timber mechanics, timber preservation, timber seasoning, plywood and glueing, and timber utilization. In addition, the Division provides assistance to individuals and local industry, administers courses of instruction on timber properties and usage, and maintains co-operative projects with several overseas authorities operating in the same field.

(c) *Forestry in the Territories.* Forestry activities in the Territory of Papua and New Guinea are controlled by the Administration through its Department of Forests. The management of forests in the Australian Capital Territory is the responsibility of the Forestry Section of the Department of the Interior.

The Forestry and Timber Bureau advises the Administrations of the Australian External Territories on the management of the forests in those territories, while the Northern Regional Station of the Forest Research Institute advises the Northern Territory Administration on forestry matters affecting the Northern Territory.

(ii) *Forestry Activities of the States.* Forestry on State-owned lands in the various States is the responsibility of the respective State Governments, but they do not exercise any control over forestry activities on private property. The powers and functions of State forest authorities are laid down under forest Acts and Regulations. In each State, there is a department or commission to control and manage State forests, etc. Its functions include the introduction of proper measures for the control and management of forest land; the protection of forest land; the conversion, marketing and economic utilization of forest products; the securing of an adequate and permanent reservation of State forests; the establishment and maintenance of coniferous forests to remedy the existing deficiency of softwoods in Australia. All State forest services are actively engaged on research programmes, and the Forests Commission of Victoria maintains a Forestry School at Creswick where recruits are trained mainly for employment in the Commission. Annual reports are issued by each State forest authority.

In addition to developing permanent forest reserves in each State, foresters are surveying all forested crown lands with a view to obtaining dedications of new State forests to add to the permanent forest estate or to release areas unsuitable for forestry for other uses. State forest authorities also usually control all timber on unoccupied Crown lands as well as over 10 million acres of timber reserves, national parks, etc.

The universities in all States provide facilities for forestry graduates attending the universities or, in some cases, for forestry graduates working within, or outside, the States to proceed to advanced degrees. The University of Melbourne has established a School of Forestry to assist both undergraduate and post-graduate students.

(iii) *Private Forestry.* Privately owned lands contribute considerably to the total production from Australian forests. The most important areas of managed native forest in private ownership are the forests owned by pulp and paper companies.

The area of privately owned softwood plantations is rapidly increasing, and here again the pulp and paper companies are very active. In step with the increase in afforestation programs the number of professional foresters employed in private forestry enterprise is increasing, while several are engaged on research.

An estimate of the area of softwood plantations established by private companies and individuals is included in the table on pages 1100-1.

5. *Fire Protection.*—The provision of adequate fire protection is one of the main problems facing forest and rural authorities. Of some 52 million acres of forest land requiring protection, the forest services maintain a high degree of protection over a relatively accessible area of about 20 million acres; about 19 million acres, being more difficult of access, are not so highly protected; and about 13 million acres are, at present, not protected.

Very intensive fire protection is afforded the softwood plantation area of Australia. During the 1962-63 fire season, 475 acres were burnt from a total area of 492,000 acres for which fire statistics are available. This represents an annual burn percentage of 0.1 which compares very favourably with the 0.53 per cent. experienced in the eucalypt forest areas.

Protection of private property outside urban areas is undertaken by volunteer bush fire brigade organizations which are co-ordinated in each State by a committee or board carrying out functions of an advisory or educational nature and fostering the growth and organization of the bush fire brigade movement. Throughout the main agricultural and forest areas of Australia, there are over 5,000 registered volunteer bush fire brigades with a membership approaching 250,000. Although forest and rural fire organizations are entirely separate entities, a high degree of co-operation and liaison is maintained.

In addition to the forest service and rural organizations, various private and semi-governmental bodies in each State maintain fire protection organizations, which are generally concerned with the protection of private forestry operations and hydro-electric and water catchment areas.

Over the five-year period 1959 to 1963, the annual cost of protecting from fire the 39 million acres of forest land for which State forest services provide protection is estimated at £2,200,000 or about 1s. 1½d. an acre. The cost of rural fire control as a whole cannot be estimated with any degree of accuracy, because by far the greatest contribution comes from the personal efforts of volunteer brigade members.

The Australian fire season is very variable, with an average of one particularly bad fire season every seven years or so. Such years as 1926, 1939, 1944, 1952 and 1957 account for a large proportion of the average annual burn. Over 80 per cent. of the area burnt carries little commercial timber, being mainly firewood and protection forest. The number of fires and the forest area burnt during the last five years is shown in the following table.

#### NUMBER OF FIRES AND FOREST AREAS BURNT: AUSTRALIA

(Source: Forestry and Timber Bureau)

Year	Number of fires	Forest areas burnt	Burnt areas as a proportion of total forest areas(a)
			Per cent.
	No.	'000 acres	
1958-59 .. .. .	1,175	456	1.10
1959-60 .. .. .	1,504	1,314	2.48
1960-61 .. .. .	2,667	1,294	2.47
1961-62 .. .. .	1,761	297	0.57
1962-63 .. .. .	1,299	275	0.53

(a) Forest areas requiring protection. See above.

Intensive research work is being undertaken on fire problems, and several governmental groups are working on such projects as the study of fire behaviour and associated fuel and meteorological conditions, the use of chemical aids in fire suppression, the development of protective clothing and devices to aid fire-fighters, and the development of more efficient fire-fighting equipment.

Since fire prevention is one of the most important aspects of the problem, intensive campaigns are being conducted to reduce the incidence of man-caused fires. A study of fire causes in recent years reveals that human agencies account for approximately 90 per cent of all fires, and of this figure at least 80 per cent. are preventable. It is estimated that "burning-off" (much of which is started illegally) accounts for 30 per cent. of all fires. Lightning accounts for a little over 10 per cent. of all fires in Australia, although the incidence of fires caused by lightning is much higher in certain areas, especially the Southern Highlands region in New South Wales and Victoria. Although lightning is a relatively small numerical cause of fire, the percentage area burnt from this cause is estimated at about 20 per cent. This higher figure is due to the occurrence of multiple fire outbreaks which cause fire fighting difficulties and to the inaccessibility of the areas in which such fires generally occur.

§ 3. Employment in Forestry

1. Persons Engaged in Forestry Activities.—In the following table, which shows particulars collected in the Population Censuses of Australia of 30th June, 1947, 1954 and 1961, the numbers of persons whose industry statements were classified to "forestry (excluding sawmilling)" are shown, together with the numbers engaged in all primary industries and the total work force.

PERSONS ENGAGED IN FORESTRY: AUSTRALIA

Particulars	Census, 30th June—		
	1947	1954	1961
Persons engaged in—			
Forestry (excluding sawmilling) .. .. .	24,793	15,468	13,847
All primary industries .. .. .	563,607	560,100	513,286
Total work force .. .. .	3,196,431	3,702,022	4,225,096
Persons employed in forestry (excluding sawmilling) as a proportion of—			
All primary industries .. .. . %	4.4	2.8	2.7
Total work force .. .. . %	0.8	0.4	0.3

NOTE.—An adjustment was made to the 1947 and 1954 industry data by distributing over the range of recorded industry the number of persons whose industry was not stated. No such adjustment was made to the 1961 figures.

2. Employment by Forestry Departments.—In the table below, details are shown of the number of persons employed by State forestry departments, and by the Forestry and Timber Bureau in the Australian Capital Territory and the Northern Territory, at 30th June, 1963.

PERSONS EMPLOYED BY FORESTRY DEPARTMENTS, 30th JUNE, 1963

Occupational group	N.S.W.	Vic.	Q'land	S. Aust.	W. Aust.	Tas.	N.T.	A.C.T.	Aust.
Professional staff	235	213	104	78	54	35	5	8	732
Non-professional field staff ..	236	263	91	8	158	96	11	1	864
Clerical staff ..	300	260	195	102	60	88	5	8	1,018
Extraction of timber ..	1,314	96	115	41	31	..	24	..	6,750
Milling of timber ..		19	..	714	19	..	..	..	
Labour (forest workers, etc.)		879	2,075	266	588	341	167	61	
Total ..	2,085	1,730	2,580	1,209	910	560	212	78	9,364

3. **Employment in Milling Operations.**—Details of the average number of persons employed, including working proprietors, in sawmills during the year 1962-63 are shown in the next table. Further details regarding the operations of sawmills in 1961-62 are shown in Chapter VI. Manufacturing Industry.

#### NUMBER OF SAWMILLS AND NUMBER OF PERSONS EMPLOYED, 1962-63

Particulars	N.S.W.	Vic.	Q'land	S. Aust.	W. Aust.	Tas. (a)	Aust. (b)
Number of sawmills .. ..	822	457	544	85	207	324	2,439
Average number of persons employed during year—							
Males .. ..	7,965	5,870	5,289	2,145	3,393	2,625	27,287
Females .. ..	375	243	270	196	61	66	1,211
<b>Total .. ..</b>	<b>8,340</b>	<b>6,113</b>	<b>5,559</b>	<b>2,341</b>	<b>3,454</b>	<b>2,691</b>	<b>28,498</b>

(a) Includes plywood mills.

(b) Excludes Northern Territory and Australian Capital Territory.

### § 4. Forest Production

1. **Forest Products.**—The table below shows details of production of forest products in each State and Territory in 1962-63.

#### FOREST PRODUCTION, 1962-63

Product	N.S.W.	Vic.	Qld	S.A.	W.A.	Tas.	N.T.	A.C.T.	Aust.
Logs for sawing, peeling, slicing or pulping—									
Forest hardwoods .. ..	'000 cub. ft. 48,640	66,910	20,751	458	46,178	47,325 (a)	25	114	b 230,401
Brushwoods and scrubwoods .. ..	4,494	..	8,161	..	..	.. (a)	2	..	(b)12,657
Softwoods—									
Indigenous forest "pines"—									
Cypress .. ..	7,236	1	5,196	..	..	.. (a)	56	..	(b)12,489
Other .. ..	361	..	3,225	4	..	209	..	..	3,799
Plantation grown "pines" .. ..	7,068	9,615	3,298	25,984	1,535	1,148	..	921	(b)49,569
Total, logs .. ..	67,799	76,526	40,631	26,446	47,713	48,682 (a)	83	1,035	b 308,915
Value of logs .. ..	£'000 9,608	9,442	6,828	2,646	3,455	5,362 (a)	21	115	(b)37,477
Hewn and other timber (not included above)—									
Firewood(c) (weight) .. ..	'000 tons 253	1,708	135	509	542	419 (a)	2 (a)	3 (b)	3,571
Other(d) (value) .. ..	£'000 3,979	(a)1,101	909	n. a.	(e) 567	220 (a)	24 (a)	2 (b)	6,802
Value of hewn and other timber .. ..	4,610 (f)	8,804	1,230 (f)	1,401	1,806 (g)	1,192 (a)	29	14 (b)	19,086
Other forest products (h) (total value) .. ..	(i) 121	(i) 86	29	38 (j)	11	9	..	..	(b) 294
<b>Total Value of Forest Products .. ..</b>	<b>f14,339</b>	<b>f18,332</b>	<b>8,087 (f)</b>	<b>4,085 (k)</b>	<b>5,438</b>	<b>6,563 (a)</b>	<b>50 (f)</b>	<b>129 (b)</b>	<b>57,023</b>

(a) Incomplete; no details available of production from private land.

(b) Incomplete; see footnotes to individual State and Territory figures.

(c) Includes mill waste used as firewood.

(d) Includes sleepers, transoms, girders, bridge timbers, mining timber, poles, piles, timber used for tannin extract, etc.

(e) Excludes timber used for tanning extract, details of which are not available for publication.

(f) Incomplete; see footnotes to individual items.

(g) Includes an estimate of the value of timber taken from private land.

(h) Includes charcoal (forest production only), tanning bark, essential oils, sandalwood, eucalyptus leaves, crude rutin, etc.

(i) Incomplete, details of some production from private land not available.

(j) Excludes value of sandalwood and substitutes, details of which are not available for publication.

(k) Includes timber used for tannin extract and sandalwood and substitutes.

The following table gives particulars of the production of forest products in Australia.

## FOREST PRODUCTION(a): AUSTRALIA

Product		1958-59	1959-60	1960-61	1961-62	1962-63
Logs for sawing, peeling, slicing or pulping—						
Forest hardwoods .. ..	'000 cub. ft.	239,968	243,940	242,142	223,389	230,401
Brushwoods and scrubwoods .. ..	"	14,518	14,287	14,689	11,890	12,657
Softwoods—						
Indigenous forest " pines "—						
Cypress .. ..	"	13,861	14,457	13,483	12,351	12,489
Other .. ..	"	5,746	4,716	4,726	3,676	3,799
Plantation grown " pines " .. ..	"	38,858	42,859	39,850	42,245	49,569
Total logs .. ..	"	312,951	320,259	314,890	293,551	308,915
Value of logs .. ..	£'000	37,167	38,972	38,475	35,588	37,477
Hewn and other timber (not included above)—						
Firewood(b)(weight) .. ..	'000 tons	4,081	3,997	3,705	3,514	3,571
Other (value)(c) .. ..	£'000	8,191	8,066	8,320	7,779	6,802
Value of hewn and other timber(d) .. ..	"	20,489	20,337	20,544	19,741	19,086
Other forest products(e) (total value) .. ..	"	448	345	372	421	294
Total Value of Forest Products(f) .. ..	"	58,190	59,842	59,763	55,992	57,023

(a) Excludes some production from private land thought to be relatively small, details of which are not available. (b) See footnote (c) to previous table. (c) See footnotes (d) and (e) to previous table. (d) Incomplete, see footnote (e) to previous table. (e) See footnotes (h) and (j) to previous table. (f) Includes timber used for tannin extract and sandalwood and substitutes in Western Australia; but excludes timber other than logs and firewood in South Australia.

2. Value of Production.—(i) *General.* While statistics of both the gross value (at principal markets) and local value (at place of production) of the forestry industry are available, particulars of the value of materials used in the process of production are not available for all States. For this reason, values cannot be stated on a net basis, as has been done with most other industries.

(ii) *Gross and Local Values, 1962-63.* The following table shows gross and local values of forestry production for each State in 1962-63. A more detailed reference to the value of production of forestry and other industries in Australia, as well as a brief explanation of the terms used, will be found in Chapter XXX. Miscellaneous.

GROSS AND LOCAL VALUE OF FORESTRY PRODUCTION, 1962-63  
(£'000)

State or Territory	Gross value(a)	Marketing costs	Local value(b)
New South Wales .. ..	14,339	351	13,988
Victoria .. ..	18,332	1,521	16,811
Queensland .. ..	8,087	2,099	5,988
South Australia .. ..	4,085	27	4,058
Western Australia .. ..	5,438	357	5,081
Tasmania .. ..	6,563	906	5,657
Northern Territory .. ..	50	} n.a. {	50
Australian Capital Territory .. ..	129		129
<b>Australia .. ..</b>	<b>57,023</b>	<b>5,261</b>	<b>51,762</b>

(a) Gross production valued at principal markets. (b) Gross production valued at place of production.

(iii) *Local Values, 1958-59 to 1962-63.* In the following table, the local value of forestry production and the local value per head of population are shown by States for the years 1958-59 to 1962-63.

### LOCAL VALUE OF FORESTRY PRODUCTION

Year	N.S.W.	Vic.	Qld	S.A.	W.A.	Tas.	Aust.(a)
LOCAL VALUE (£'000)							
1958-59 .. ..	15,574	16,148	8,356	4,103	5,067	4,887	54,358
1959-60 .. ..	15,169	17,618	8,469	3,929	5,085	5,556	56,001
1960-61 .. ..	15,300	16,713	7,149	3,729	5,167	5,735	53,975
1961-62 .. ..	14,431	16,449	5,895	3,733	5,191	5,090	50,937
1962-63 .. ..	13,988	16,811	5,988	4,058	5,081	5,657	51,762

### LOCAL VALUE PER HEAD OF POPULATION (£)

1958-59 .. ..	4.2	5.9	5.8	4.5	7.2	14.4	5.5
1959-60 .. ..	4.0	6.2	5.7	4.2	7.1	16.1	5.5
1960-61 .. ..	3.9	5.8	4.8	3.9	7.1	16.4	5.2
1961-62 .. ..	3.7	5.6	3.9	3.8	7.0	14.3	4.8
1962-63 .. ..	3.5	5.6	3.9	4.1	6.7	15.6	4.8

(a) Includes Northern Territory and Australian Capital Territory.

## § 5. Timber and Timber Products

1. *Mill Production of Timber.*—Particulars of logs treated and the production of sawn, peeled and sliced timber by sawmills and other woodworking establishments are shown in the following table. These figures have been compiled from the annual factory collections in each State, which cover virtually all sawmills. The only omissions are some small portable mills operated by itinerants, e.g. sleeper cutters.

### OUTPUT OF AUSTRALIAN-GROWN TIMBER: ALL MILLS, 1962-63 (<sup>'000</sup> super. feet)

Particulars	N.S.W.	Vic.	Q'land	S.A.	W.A.	Tas.	Aust.(a)
LOGS TREATED (TRUE VOLUME)							
Hardwood ..	601,570	639,031	343,093	7,434	554,143	397,705	2,542,976
Softwood ..	159,415	80,191	142,935	362,574	18,422	15,568	779,105
<i>Total</i> ..	<i>760,985</i>	<i>719,222</i>	<i>486,028</i>	<i>370,008</i>	<i>572,565</i>	<i>413,273</i>	<i>3,322,081</i>

### SAWN, PEELLED OR SLICED TIMBER PRODUCED FROM LOGS ABOVE

Hardwood ..	301,888	288,244	161,803	4,434	178,072	153,756	1,088,197
Softwood ..	76,005	30,760	65,663	136,310	7,560	6,072	322,370
<i>Total</i> ..	<i>377,893</i>	<i>319,004</i>	<i>227,466</i>	<i>140,744</i>	<i>185,632</i>	<i>159,828</i>	<i>1,410,567</i>

(a) Excludes Australian Capital Territory and Northern Territory.

The following table shows logs used, and sawn, peeled, and sliced timber produced, in Australia.

**OUTPUT OF AUSTRALIAN-GROWN TIMBER, ALL MILLS: AUSTRALIA<sup>(a)</sup>**  
(\*000 super. feet)

Particulars	1958-59	1959-60	1960-61	1961-62	1962-63
<b>LOGS TREATED (TRUE VOLUME)</b>					
Hardwood .. ..	2,728,183	2,793,399	2,672,080	2,519,617	2,542,976
Softwood .. ..	677,607	705,772	646,801	641,185	779,105
<b>Total .. ..</b>	<b>3,405,790</b>	<b>3,499,171</b>	<b>3,318,881</b>	<b>3,160,802</b>	<b>3,322,081</b>

**SAWN, PEELED OR SLICED TIMBER PRODUCED FROM LOGS ABOVE**

Hardwood .. ..	1,158,799	1,208,595	1,152,995	1,063,086	1,088,197
Softwood .. ..	301,175	312,450	264,838	289,116	322,370
<b>Total .. ..</b>	<b>1,459,974</b>	<b>1,521,045</b>	<b>1,417,833</b>	<b>1,352,202</b>	<b>1,410,567</b>

(a) Excludes Australian Capital Territory and Northern Territory.

In addition to the mill production of timber shown in the preceding tables, a large amount of hewn and round timber, e.g. sleepers, piles, poles, fencing timber, timber used in mining, and fuel, is obtained directly from forest and other areas. Complete information in respect of the volume of this output is not available.

2. Veneers, Plywood, etc.—Cutting of timber for the manufacture of veneers, plywood etc., has been carried out in most States for a number of years. In recent years, this has been considerably extended, since plywood manufacture has allowed the use of some species unsuitable for sawing. Special attention has been paid to ensure that logs suitable for peeling are diverted to ply factories. However, because of insufficient supplies of Australian-grown logs, 40 per cent. of the logs used in 1962-63 were imported.

The following table shows the production of plywood.

**PLYWOOD PRODUCED**

(\*000 square feet:  $\frac{3}{8}$ -in. basis)

State	1958-59	1959-60	1960-61	1961-62	1962-63
New South Wales .. ..	56,378	62,701	64,930	56,184	56,766
Queensland .. ..	139,743	134,825	112,414	98,086	85,746
Other States .. ..	39,892	44,574	46,045	48,537	52,751
<b>Australia .. ..</b>	<b>236,013</b>	<b>242,100</b>	<b>223,389</b>	<b>202,807</b>	<b>195,263</b>

Of the total plywood produced in 1962-63, 133,664,000 square feet ( $\frac{3}{8}$ -in. basis) were classed as "Commercial", 37,206,000 as "Waterproof", 1,899,000 as "Case", and 22,494,000 as "Sliced Fancy".



During 1962-63, 526.3 million square feet ( $\frac{1}{16}$ -in. basis) of veneers were produced by the rotary process for the manufacture of plywood, and 244.9 million square feet ( $\frac{1}{18}$ -in. basis) were sold or added to stock, the bulk of which would eventually be used in the production of plywood. In addition, 60.3 million square feet of sliced veneers were produced.

3. **Manufactured Boards.**—(i) *Hardboard.* There were five factories producing hardboard in Australia during 1962-63 (two in New South Wales, and one in each of Victoria, Queensland and Tasmania), and during the three years ended 30th June, 1963, the following quantities were produced:—1960-61, 31,085,000 square yards; 1961-62, 28,772,000 square yards; and 1962-63 33,317,000 square yards.

(ii) *Resin Bonded Boards.* Production of resin-bonded boards (made from wood chips, wood wool, sawdust, etc.) amounted to 2,123,399 square yards during 1962-63.

4. **Wood Pulp and Paper.**—(i) *Wood Pulp.* During 1962-63, seven wood pulp mills were operating in three States, and production was 190,782 tons of chemical pulp and 68,062 tons of mechanical pulp, a total of 258,844 tons. During the previous year, production was 152,175 tons of chemical pulp and 67,495 tons of mechanical pulp.

- (a) *Victoria.* In Victoria, wood pulp is produced at Maryvale in Gippsland by a chemical process known as the Kraft or Sulphate process. The pulpwood used at this mill consists mainly of eucalypt timber below sawmilling quality, chips from sawmill waste, and a quantity of plantation pine thinnings.
- (b) *South Australia.* Three wood pulp mills operate in the south-eastern part of South Australia, using raw material in the form of logs from the State forests.
- (c) *Tasmania.* In Tasmania, three mills are making pulp from indigenous hardwoods.

At Burnie, on the north-west coast, fine writing and printing paper, as well as parchment and other speciality papers, are produced together with hardboard. The company concerned, which produced 79,353 tons of paper in 1962-63, holds freehold and State concession forest areas which are managed on a permanent yield basis with regeneration of the eucalypts in all suitable areas. Pine plantations have been and are being established to provide softwoods for pulping. A particle board plant was erected by this company at Wesley Vale on the north-west coast, and this started commercial production in August, 1963. The factory uses plantation pine thinnings as a raw material to produce a particle board of resin bonded fine pine chippings.

The only newsprint mill in Australia is situated at Boyer, in the Derwent Valley, 20 miles from Hobart. Here wood pulp is produced from hardwoods drawn from State timber concession areas. A mechanical process was used until 1957, when additional plant was installed for the manufacture of semi-chemical pulp. This plant, which uses a cold soda process, can utilize additional species not suitable for ground-wood pulp. The components of Boyer newsprint average 60 per cent. of ground-wood pulp, 22 per cent. of cold soda pulp, both of which are made at Boyer from hardwoods, and 18 per cent. of imported long fibre kraft pulp made in New Zealand from *Pinus radiata*. Newsprint production capacity is 90,000 long tons per annum. To secure more complete bush utilization, the company has established sawmills to convert understorey species, principally myrtle and sassafras, to sawn timber. The forests are managed on a sustained yield basis. Forest utilization and management are designed to promote eucalypt regeneration. Experimental work into the problems involved is being carried out by the company and the Tasmanian Forestry Commission.

A semi-chemical pulp mill has recently been completed at Geeveston, 37 miles south of Hobart. This plant utilizes eucalypt timber, unsuitable for sawmilling, from southern forests. It has an installed capacity of 25,000 tons of pulp a year and will require some 25,000,000 super feet of timber in 1963-64. The pulp, produced in pellet form, is bulk loaded, shipped to Sydney and there converted to paper and paper board. The company has exclusive long-term rights to the pulpwood from the southern forests under the terms of a special licence. The Forestry Commission is responsible primarily for the planning and execution of forest management, including construction of access roads, and protection and regeneration of the forests. Planning provides for the integrated utilization of saw logs and pulpwood from the forests.

(ii) *Paper and Paper Board.* Paper and paper board are manufactured in all States, but the greater part of the industry is in New South Wales, Victoria and Tasmania. During 1962-63, twenty-four paper mills were operating, eleven in Victoria, four in New South Wales, four in Tasmania, two each in Queensland and South Australia and one in Western Australia. A wide variety of paper and paper board is produced in Australian mills. The table below gives details of the production of some of these items.

## PRODUCTION OF PAPER PRODUCTS: AUSTRALIA

Type of paper	Quantity (tons)			Value (£'000)		
	1960-61	1961-62	1962-63	1960-61	1961-62	1962-63
Newsprint .. ..	88,039	89,758	90,245	6,491	6,445	6,434
Blotting .. ..	755	487	558	133	84	83
Duplicating .. ..	7,055	5,156	6,794	1,176	834	1,073
Printing and writing .. ..	80,166	58,647	85,711	12,641	9,751	13,378
Wrapping—						
Kraft .. ..	98,607	108,313	118,018	12,226	13,228	14,308
Other .. ..	9,828	12,151	9,942	1,829	2,152	1,760
Felt and carpet felt .. ..	3,112	2,356	1,889	327	248	200
Paper boards .. ..	210,072	206,909	242,019	17,687	16,374	19,033

## § 6. Oversea Trade in Forest Products, Timber and Timber Products

1. *Imports.*—Quantities and values of forest products, timber and timber products imported into Australia during the years 1960-61 to 1962-63 are shown in the following table.

## IMPORTS OF FOREST PRODUCTS, TIMBER AND TIMBER PRODUCTS: AUSTRALIA

Particulars	Quantity			Value (£A.'000 f.o.b.)		
	1960-61	1961-62	1962-63	1960-61	1961-62	1962-63
Logs not sawn—						
Softwoods(a) .. '000 sup. ft.	2,008	2,024	3,226	63	68	119
Hardwoods(b) .. ..	58,313	33,650	47,312	1,710	985	1,357
Undressed timber—						
Dunnage .. ..	..	..	..	3	4	4
Softwoods(a), n.e.i.—						
Douglas fir .. '000 sup. ft.	183,126	168,436	154,457	8,498	6,606	6,759
Radiata pine .. ..	33,462	24,913	24,388	1,213	900	860
Other .. ..	35,152	17,702	26,465	2,705	1,006	1,542
Hardwoods(b), n.e.i. .. ..	85,262	53,450	64,300	5,157	2,669	3,419
Box shooks, n.e.i. .. ..	..	567	561	33	48	39
Dressed timber .. ..	13,178	7,250	8,997	887	532	634
Veneers .. .. '000 sq. ft.	18,755	15,978	2,063	185	190	311
Plywood .. ..	31,618	31,390	26,040	1,090	1,069	903
Tanning substances .. .. cwt.	164,596	145,329	161,209	402	380	370
Sandalwood oil .. .. lb.	1,540	1,508	2,516	9	14	9

(a) Non-pored woods.

(b) Pored woods.

Imports of softwood logs in recent years have come almost exclusively from the Solomon Islands and Sarawak, and more than two-thirds of the imports of hardwood logs have come from North Borneo. Imports of undressed softwood timber comprise mainly Douglas fir (Oregon pine) from Canada and the United States of America and Radiata pine from New Zealand. Imports of undressed hardwood timber come mainly from Malaya and Sarawak. Timbers from Scandinavian countries provide most of the dressed timber imports.

Imports of timber products are mainly veneers and plywoods. The Australian Trust Territory of New Guinea and Japan provide most of the plywood imports, and the United Kingdom and New Guinea supply about 47 per cent. of Australia's imports of veneer.

Tanning substances are the only other forest products imported in significant quantities. The most important of these is wattle bark produced in South Africa.

2. Exports.—Details of exports of Australian forest and timber products in the years 1960–61 to 1962–63 are given in the table below.

**EXPORTS OF AUSTRALIAN FOREST PRODUCTS, TIMBER AND TIMBER PRODUCTS(a)**

Particulars	Quantity			Value (£A.'000 f.o.b.)		
	1960–61	1961–62	1962–63	1960–61	1961–62	1962–63
Logs not sawn .. '000 sup. ft.	6,494	8,190	4,392	371	309	161
Undressed timber(b)—						
Sleepers .. .. . "	17,779	27,464	22,998	931	1,518	1,285
Fence posts, girders and pole blocks .. .. . "	387	879	373	31	51	20
Softwoods(c), n.e.i. .. .. . "	134	74	112	14	8	11
Hardwoods(d), n.e.i. .. .. . "	21,028	16,966	13,917	1,458	1,169	959
Dressed timber .. .. . "	1,021	1,330	1,419	142	184	207
Veneers .. .. . '000 sq. ft.	2,046	1,589	1,474	49	38	33
Plywood .. .. . "	1,101	898	751	124	107	95
Tanning substances .. .. . cwt.	63,582	88,659	88,317	182	256	237
Charcoal .. .. . "	5,712	6,831	6,602	22	25	31
Eucalyptus oil .. .. . '000 lb.	235	310	475	80	104	156
Acaroid resin, grass tree and yacca gum .. .. . cwt.	8,949	15,714	10,934	17	32	20

(a) Excludes re-exports. (b) Excludes stumps and the like. (c) Non-pored woods. (d) Pored woods.

Of the exports of logs in 1962–63, 55 per cent. were consigned to New Zealand and 34 per cent. to Japan. In the same year, 37 per cent. of the sleepers exported were consigned to the United Kingdom and 13 per cent. to New Zealand, while of all undressed timber exported, 23 per cent. were consigned to New Zealand and 28 per cent. to the United Kingdom. Consignments to the United States of America accounted for 77 per cent. of the exports of tanning substances in 1962–63.

## CHAPTER XXV

## FISHERIES

NOTE.—Further information on subjects dealt with in this chapter is contained in the annual printed bulletin *Primary Industries, Part II.—Non-Rural Industries and Value of Production* and in the annual mimeographed statistical bulletin *Fishing and Whaling*, particularly as regards types of fish, etc., caught.

## § 1. Resources, Development and National Aspects

1. Natural Resources.—(i) *Edible Fauna.* (a) *Fish.* Australian fishery resources, in comparison with those of some other areas, are not large. It has been calculated that there are approximately 2,000 species of fish in Australia and the waters surrounding it (including freshwater species), but the stocks of each species are comparatively small. Australia lacks adequate resources of such highly productive species as the herrings, cods, halibuts and true salmon (except for the Tasmanian whitebait and acclimatized freshwater species) on which the major proportion of world fisheries production is based.

The marine life of northern Australia is similar to that of the south-east Asian region; for example, the giant perch (*Lates calcarifer*) of northern Australia is also taken in Thailand and Malaya, and the parrot fishes (*Labridae*) are also distributed over the region. Some similarities with the fishes of South Africa can also be noted. For instance, the barracouta (*Leionura atun*) of Australia is also caught in South African waters. Mulletts, which form the basis of Australia's largest single species catch, occur throughout the world, as do the tunas.

Fishing is carried out continuously in estuarine, coastal and off-shore Australian waters in the east and south from Port Douglas in Queensland to Ceduna in South Australia, in Western Australia from Esperance to Shark Bay, and sporadically in the Onslow, Broome, Darwin and Karumba areas in the north. Most fishing is done in waters over the continental shelf, which varies greatly in width around the continent, but tuna is sometimes fished beyond the shelf. As in other countries, fisheries in Australia may be divided into three types: the estuarine fisheries, located in the tidal waters of rivers and coastal lakes; the pelagic fisheries which exploit species inhabiting the surface layers of the open ocean; and the demersal fisheries, which fish the bottom layers of the sea. The estuarine fisheries produce considerable quantities of the table varieties, such as mullets (*Mugil cephalus* and associated species), breams (*Acanthopagrus spp.*), and some crustaceans. In addition to these, there is a small freshwater commercial fishery, principally in New South Wales and South Australia, exploiting Murray cod (*Maccullochella macquariensis*) and golden perch (*Plectroplites ambiguus*). The pelagic fisheries produce species exploited during their seasonal migration, such as Australian "Salmon" (*Arripis trutta*), which is a member of the order Perciformes, or perch-like fishes, tunas (*Fam. Thynnidae, Katsuwonidae, Sardidae*), barracouta (*Leionura atun*) and mackerels (*Cybiium spp.*). These fisheries, with the exception of some tuna, mackerel and reef fisheries, are concentrated in the temperate waters around the southern half of the continent. The offshore demersal fisheries include those pursued on the reefs which may be found virtually right around the continent, and which yield such species as snapper (*Chrysophrys auratus*), the so-called "cods" (*Epinephelus, Choerodon, Callyodon spp.*), and associated species; those pursued on the trawling grounds, which produce species such as flathead (*Neoplatycephalus, Trudis spp.*), morwong (*Nemadactylus spp.*), John dory (*Zeus faber*), etc.; and the important fishery for edible shark (school shark, *Galeorhinus australis*, and gummy shark, *Mustelus antarcticus*), in south-eastern Australia.

(b) *Crustaceans.* Crustaceans taken in Australia include crayfish, prawns, crabs and freshwater lobsters. Crayfish (southern, *Jasus lalandei*; western, *Panulirus cygnus*; and eastern, *Jasus verreauxi*) is the most important crustacean exploited in Australia, and various species occur on the reefs of the continental shelf in all States. The commercial fishery, for technological reasons and through lack of knowledge of numbers, has not extended to the tropical species (*P. ornatus*, etc.), but is concentrated on species found around the southern

part of Australia. Prawns (*Penaeus* and *Metapenaeus* spp.) are taken in the estuarine, coastal and offshore waters of New South Wales and Queensland, and in the Shark Bay region of Western Australia. Crabs (*Scylla* and *Portunus* spp.) are taken mainly in Queensland and Western Australia, but small quantities are also taken in the other States. Fresh-water lobsters (*Euastacus serratus*) are caught in inland streams in New South Wales, and one species, marron (*Cheraps tenuimanus*) forms the basis of an amateur fishery in the south-west of Western Australia.

(c) *Molluscs*. Edible molluscs produced in Australia include oysters (mainly *Crassostrea commercialis*), scallops, mussels and some of the cephalopods (squid, octopus, cuttlefish). Naturally-grown oysters are produced in all States except South Australia. In New South Wales and, to a lesser extent, in Queensland, edible oysters are cultured commercially. Scallops (*Pecten meridionalis* and *Equichlamys bifrons*) are taken in Tasmania. A new fishery exploiting the species *Pecten alda* has developed in Port Phillip Bay. The saucer scallop (*Amusium balloti*) is obtained in the Queensland fishery. The scallop resources in the Shark Bay area of Western Australia have not been developed, and are still the subject of scientific investigations. Mussels (*Mytilus planulatus*) are gathered mainly in Victoria. Small quantities of cephalopods, mainly squid (*Loligo* spp.), are produced in many localities. Increased interest in the abalone (*Haliotis* spp.) has resulted in the development of small fisheries off southern New South Wales and the east coast of Tasmania. Other edible molluscs taken from time to time include pipis (*Plebidonax deltooides*).

(ii) *Pearl-shell and Trochus-shell*. Pearl-shell (*Pinctada maxima*), which is used for the manufacture of buttons, knife handles, etc., is taken in the tropical waters of Australia from Onslow in Western Australia to Cairns in Queensland. Trochus-shell is found mainly on coral reefs off the Queensland coast, although very small quantities occur in Western Australia.

(iii) *Whales*. Baleen whales, particularly humpback (*Megaptera nodosa*), migrate during winter from their summer feeding grounds in Antarctic waters to their breeding and nursery grounds in warmer waters off the north-east and north-west coasts of Australia. Since the war, the Australian whaling industry has exploited humpback whales on both coasts during the winter migrations. However, the same stocks have been available to Antarctic whalers in the summer, and this, together with their slow reproduction rate, has resulted in the stocks of Antarctic humpback whales in the Southern Hemisphere being subjected to exploitation greater than they can sustain.

Sperm whales (*Physeter catodon*) have been taken in the southern waters of Western Australia since 1955.

(iv) *Marine Flora*. Seaweeds of possible commercial value occur in coastal waters of New South Wales, Tasmania and Western Australia. During 1962, a venture was launched to exploit seaweed (*Macrocystis pyrifera*) beds for their derivatives, principally alginates, in Tasmanian waters.

2. **Development of Fisheries in Australia.**—At the beginning of this century, Australian fisheries were principally estuarine and onshore, and the deeper offshore resources were comparatively unknown. Vessels were generally sail-powered, and catching and preservation methods were primitive.

From 1909 to 1914, a Commonwealth vessel was engaged in research into fisheries resources around Australia. As a result of this exploration, trawling in the south-eastern waters began in 1915. There have been several years of high production from this fishery, but in each case the peak year was followed by a period of low production. Danish seine trawlers entered this fishery in 1936. In 1958–59, steam trawling vessels used in this area were taken out of service, and a modern diesel trawler was introduced. This fishery is now stabilized at a relatively low level of production.

The tuna fishery began with the establishment in 1937 of a cannery at Narooma in New South Wales to exploit the occurrences, mainly of southern bluefin tuna (*Thunnus thynnus maccoyii*), which had been revealed by aerial surveys in 1936. However, landings were insignificant for over a decade. In 1950, the Commonwealth Government sponsored the visit of a Fijian tuna clipper and trained crew to instruct fishermen in the pole-and-live-bait method of catching tuna. Development of the South Australian tuna fishery followed the visit of two American tuna experts in 1954. Recent developments in tuna fishing include the use of gill netting and long-lining. Techniques of taking species of tuna other than southern bluefin are being investigated.

The crayfishery, which is pursued off south-eastern Australia and off the west coast of Western Australia, was for many decades on a small scale. It was not until 1944 that the major sector, the western crayfishery, began to develop into what is now Australia's most productive single fishery. Between 1944 and 1947, production from the shallow areas of Houtman's Abrolhos was used for canning for the armed forces. From 1948 to 1953, mechanization of the fleet was introduced progressively and deeper waters were worked. The United States market for frozen craytails was established during this period. The period 1954 to 1962 saw the introduction of larger and more powerful vessels, of conservation measures designed to maximize the sustainable yield, and of increased processing facilities. In the southern crayfishery, development has followed similar lines, but on a smaller scale because of the smaller crayfish population.

The prawn fishery was pursued for many decades on a small scale, but it was not until the discovery of the need for prawns to spawn at sea that interest developed in catching them during this phase of their life cycle. The discovery in 1947 of stocks of prawns in Stockton Bight and off Evans Head (both in New South Wales) initiated the development of deep-sea prawning in Australia. Since that time, the prawn fishery has expanded to the offshore grounds. In 1962, a commercial prawn fishery was commenced in Shark Bay, Western Australia.

Whaling has been undertaken from time to time in Australia since the early days of settlement. Humpback whaling has been carried out from stations on the west coast of Australia since 1949, and off the east coast since 1952. A station was established on Norfolk Island in 1956. Despite the introduction of catch quotas by the Commonwealth Government, the humpback whale stocks, like most other baleen whale stocks throughout the world, have been over exploited. By the end of the 1962 whaling season, whale stocks had been depleted to the extent that the stations on the east coast and Norfolk Island had either gone into liquidation or otherwise disposed of their assets. On the west coast, the station at Albany, by 1962, had almost completely changed its operations to sperm whaling, and the station at Carnarvon was extending its activities into other types of fisheries. As a result of a decision at the 15th Meeting of the International Whaling Commission in July, 1962, the taking of humpback whales in waters south of the Equator has been prohibited. The Commonwealth Government has accepted this decision.

**3. Government Administration of the Fishing Industry.**—The fisheries within territorial waters (that is, within three miles of the shore) are administered by State departments and Territory administrations. The Fisheries Branch of the Department of Primary Industry develops and administers fisheries in extra-territorial waters and co-ordinates fisheries administration.

The fisheries legislation of each State and Territory and of the Commonwealth provides for the licensing of boats used in commercial fishing operations and of commercial fishermen. The provisions are broadly similar in each State, the general requirement being that any person who takes fish for sale, and any boat used in such fishing operations, must be licensed in the State or Territory concerned. Some States extend the licensing requirements to amateur or part-time fishermen. Australian nationals who fish commercially outside the territorial waters of a State or Territory, but within Australian waters as proclaimed under the *Fisheries Act 1952-1959*, are required to take out licences and to register their boats under that Act.

Fish stocks inhabiting Australian waters are a common property resource. With the exception of the Western Australian crayfishery and the Shark Bay prawn fishery, there is no restriction on recruitment of men and vessels to any fishery. It has, therefore, been necessary for governmental action to be taken in an endeavour to provide rules of operation in certain fisheries which are vulnerable to depletion. The policy basic to the management of these fisheries is the greatest sustainable yield consistent with economic operations. Where a fishery, for economic reasons, is not producing its maximum yield, efforts to discover new methods of utilization of the catch are made.

The *Pearl Fisheries Act 1952-1953* aims at the management of the pearl-shell resources in accord with Australia's proclamation of sovereign rights over the natural resources of the sea bed and subsoil to the 100 fathom line. It requires that all pearlers, vessels, etc., must be licensed, and prohibits the removal of live shell from Australian waters except with the written permission of the Minister for Primary Industry.

The Commonwealth controls whaling from Australian stations in accordance with the conditions laid down by the International Whaling Commission. This Commission was established by the International Convention for the Regulation of Whaling, 1946, to organize world-wide conservation measures.

4. **Research.**—The aim of all fisheries research in Australia is to achieve the greatest sustainable yield of fish and to assist in the development of an efficient industry. To this end, much of the biological research already undertaken has been directed at formulating recommendations for conservation measures in various fisheries. Future work is expected to concentrate on the discovery, development and conservation of new fisheries, on the expansion of under-exploited fisheries, on the economics of the industry and on the improvement of equipment.

The organizations, committees, etc., in Australia at present engaged in research into fisheries matters are:—

- (i) Division of Fisheries and Oceanography, C.S.I.R.O. (biological and oceanographic research);
- (ii) Division of Food Preservation, C.S.I.R.O. (research into handling, storage, processing and transport of fish);
- (iii) the several State fisheries departments (general biological research);
- (iv) Fisheries Branch, Department of Primary Industry (economic and management research, gear technology, extension work to the industry);
- (v) Southern Pelagic Project Sub-committee and the Western Fisheries Sub-committee of the Commonwealth-State Fisheries Conference (co-ordination and planning of research); and
- (vi) Advisory Committee to the Minister for Primary Industry on the Fisheries Development Trust Account (consideration and recommendation to the Minister on projects to be subsidized from the Account, which was set up from the sale of the Commonwealth Government's whaling assets in 1956).

## § 2. Collection and Presentation of Statistics

Statistics presented in this chapter have been collected by a number of authorities. The various State fisheries authorities have supplied, through the Deputy Commonwealth Statisticians in the States, the details of employment, boats, equipment, and production of the general fisheries and the pearl and shell fisheries. The Fisheries Branch of the Department of Primary Industry has supplied particulars of the whaling industry. Statistics of the processing of general fisheries products and of oversea trade in the products of fishing and whaling have been compiled in the Commonwealth Bureau of Census and Statistics.

The statistics refer, in general, to financial years. However, pearl and shell fishing data refer to the season ended in the financial year shown. Whaling statistics are shown by calendar years, and refer to the season (from May to October) in the calendar year. All oversea trade information refers to financial years.

In the preparation of Australian fisheries production statistics, the quantities of individual products are generally in terms of the form in which they are taken from the water. For example, the statistics of fish production published in this chapter are in terms of "estimated live weights" which are calculated from landed weights by using conversion factors for each species in each State. These conversion factors allow for the fact that the quantities of fish reported are frequently in a gutted, headed and gutted, or otherwise reduced condition. Crustaceans are reported on a "whole weight" basis, and molluscs (edible) on a "gross (in-shell) weight basis". The figures of pearl-shell and trochus-shell refer to the actual quantities of dry shell for sale and exclude the weight of the fish.

The catch is generally shown according to the State in whose waters it was taken. However, a quantity of sharks and crayfish taken by Victorian-based fishermen in Tasmanian waters, but marketed in Victoria, is included in the Victorian catch, since the economy of that State is most directly affected. Similarly, pearl-shell taken by Queensland luggers operating in Northern Territory waters is included in the Queensland take. Pearl-shell taken by Japanese fishermen operating in Australian waters is excluded from Australian production figures, although the quantities taken up until 1961-62 are shown as a footnote to the table on page 1123. The Japanese pearling fleet did not operate in Australian waters during 1962-63.

Details of production given in this chapter refer in most cases only to the recorded commercial production. In view of the importance of amateur fishermen in certain types of fishing, details shown cannot be taken as representing the total catch. In addition, it is likely that the figures shown understate to some extent the full commercial catch, because no information is available on fish taken for sale by persons not licensed as professional fishermen.

## § 3. The Fishing Industry

1. Persons Engaged in Fisheries.—In the following table, which shows particulars collected in the Population Censuses of Australia at 30th June, 1947, 1954 and 1961, the numbers of persons whose industry statements were classified to "fishing and whaling" are shown together with the numbers engaged in all primary industries and the total work force.

## PERSONS ENGAGED IN FISHERIES: AUSTRALIA

Particulars	Census, 30th June—		
	1947	1954	1961
Persons engaged in—			
Fishing and whaling .. .. .	10,656	8,637	8,252
All primary industries .. .. .	563,607	560,100	513,286
Total work force .. .. .	3,196,431	3,702,022	4,225,096
Persons engaged in fishing and whaling as a proportion of—			
All primary industries .. .. %	1.9	1.5	1.6
Total work force .. .. %	0.3	0.2	0.2

NOTE.—An adjustment was made to the 1947 and 1954 industry data by distributing over the range of recorded industry the number of persons whose industry was not stated. No such adjustment was made to the 1961 figures.

2. General Fisheries.—(i) *Employment, Boats and Equipment.* The boats used for the estuarine fisheries are mostly small vessels, propelled by diesel or petrol engines of low power. The offshore vessels range in length from 30 feet to 120 feet and are almost invariably powered by diesel engines. Many of them have insulated holds to carry fish in ice, and some of the crayfish boats are fitted with wells in which the catch is kept alive. Some vessels have dry refrigeration, and others, including some of the tuna live-bait pole-fishing vessels, are equipped with brine refrigeration.

Almost every type of fishing equipment is used. The following table sets out the main types of fish, crustaceans and molluscs and the equipment most commonly used.

## FISHING EQUIPMENT USED IN AUSTRALIA

Type of fish	Equipment used
Mullet .. .. .	Beach seine, gill net
Shark (edible) .. .. .	Long-lines
Australian salmon .. .. .	Beach seine
Barracouta .. .. .	Trolling lines
Flathead .. .. .	Danish seine, otter trawl
Snapper .. .. .	Long-lines, traps
Morwong .. .. .	Danish seine, otter trawl, traps
Whiting .. .. .	Handlines, Danish seine
Garfish .. .. .	Gill net, beach seine
Mackerel .. .. .	Trolling lines
Tuna(a) .. .. .	Pole and live-bait, trolling lines, gill netting
Prawns .. .. .	Otter trawl, beam trawl, seine net
Crayfish .. .. .	Pots, traps
Scallops .. .. .	Dredge, otter trawl

(a) Lampara nets and purse seines are used for taking live bait for tuna.



The following two tables show details of persons, boats and equipment employed in the taking of fish, crustaceans and edible molluscs, and data relating to oyster leases. These statistics are derived mainly from the licensing records of the various State fisheries authorities. Because the definitions and licensing procedures used by these authorities are not uniform, the statistics should not be used to compare the relative productivities of the fishing industries in the several States. Figures for 1962-63 are not comparable with those for previous years as persons engaged in fishing in South Australia included licensed part-time (non-commercial) fishermen prior to 1962-63. In 1962-63, an estimate of full-time (commercial) fishermen engaged has been recorded.

Boats and persons engaged in more than one type of fishing are classified according to their main activity, and so may be classified differently from one year to the next.

The table below gives details by States for 1962-63.

#### EDIBLE FISHERIES: BOATS AND EQUIPMENT IN USE, PERSONS ENGAGED, ETC., 1962-63

Particulars	Unit	N.S.W.	Vic.	Qld	S.A.	W.A. (a)	Tas.	N.T.	Aust.
General fisheries(b)—									
Boats engaged .. ..	No.	2,879	784	1,855	1,650	1,325	511	30	9,034
Value of boats and equipment .. ..	£'000	3,066	1,692	2,230	1,700	4,294	1,127	40	14,149
Persons engaged .. ..	No.	2,445	1,004	2,336	(c) 2,000	2,483	1,208	68	11,544
Edible oyster fisheries—									
Boats engaged .. ..	No.	1,256	(d)	36	..	2	(d)	(d)	1,294
Value of boats and equipment .. ..	£'000	445	(d)	16	..	(e)	(d)	(d)	461
Persons engaged .. ..	No.	1,067	(d)	81	..	6	(d)	(d)	1,154
Leases granted .. ..	No.	5,149	5	235	..	..	..	4	5,393
Length of foreshore in leases .. ..	'000 yds	908	16	(f)	..	..	..	26	(g) 950
Off-shore leases .. ..	acres	7,342	330	(f)	..	..	..	24,000	g 31,672

(a) Year ended December, 1961. (b) Excludes edible oyster fisheries but includes crustacean and other mollusc fisheries. (c) In addition, approximately 5,000 licensed fishermen operate on a part-time (non-commercial) basis. ( ) No boats or persons had oyster fishing as their main activity in 1962-63. (e) Less than £500. (f) Not available. (g) Excludes Queensland.

The following table shows similar information for Australia for the years 1959-60 to 1962-63.

#### EDIBLE FISHERIES: BOATS AND EQUIPMENT IN USE, PERSONS ENGAGED, ETC., AUSTRALIA

Particulars	Unit	1959-60	1960-61	1961-62	1962-63
General fisheries(a)—					
Boats engaged .. ..	No.	7,890	7,756	8,460	9,034
Value of boats and equipment .. ..	£'000	10,762	12,411	12,899	14,149
Persons engaged .. ..	No.	13,319	14,955	15,878	(b) 11,544
Edible oyster fisheries—					
Boats engaged .. ..	No.	1,213	1,449	1,349	1,294
Value of boats and equipment(c)	£'000	368	412	484	461
Persons engaged .. ..	No.	917	822	993	1,154
Leases granted .. ..	No.	4,897	5,085	5,231	5,393
Length of foreshore in leases(d)	'000 yds	860	920	918	950
Off-shore leases(d) .. ..	acres	5,537	6,051	7,040	31,672

(a) Excludes edible oyster fisheries, but includes crustacean and other mollusc fisheries. (b) Not comparable with previous years; see explanation in text preceding tables. (c) Excludes particulars for the Northern Territory for 1959-60. (d) Excludes Queensland.

(ii) *Production. (a) Fish.* The following table shows details of the production of the main types of fish caught in each State and the Northern Territory in 1962-63.

## FISH: PRODUCTION BY TYPE, 1962-63

('000 lb. estimated live weight)

Type	N.S.W.	Vic.	Qld	S.A.	W.A.	Tas.	N.T.	Aust.
<b>Marine types—</b>								
Mullet .. ..	6,446	979	4,402	550	1,346	12	1	13,736
Tuna .. ..	2,769	106	47	7,932	121	24	6	11,005
Shark .. ..	2,018	(a)4,336	25	2,632	681	(a) 832	..	10,524
Australian salmon ..	1,564	1,023	..	885	3,157	1,165	..	7,794
Flathead .. ..	4,756	1,832	178	..	17	45	..	6,828
Morwong .. ..	4,663	277	..	..	..	9	..	4,949
Barracouta .. ..	15	3,697	..	..	..	1,130	..	4,842
Snapper .. ..	1,743	303	38	637	1,386	..	..	4,107
Whiting .. ..	438	300	467	1,875	619	..	..	3,699
Mackerel .. ..	322	..	1,718	..	140	(b)	12	2,192
Leatherjacket .. ..	1,893	28	..	..	34	(b)	..	1,955
Garfish .. ..	329	503	140	500	35	138	..	1,645
Bream (incl. Tarwhine)	727	196	453	67	79	(b)	9	1,531
Ruff .. ..	..	61	..	460	839	..	..	1,360
Luderick .. ..	1,130	56	125	..	197	..	..	1,311
Tailor .. ..	222	..	537	..	..	..	..	956
Other .. ..	3,994	1,431	1,646	970	1,483	114	303	9,941
<i>Total, Marine</i> .. ..	33,029	a 15,128	9,776	16,508	10,134	(a)3,469	331	88,375
<b>Freshwater types</b> .. ..	498	211	(c)	600	..	..	..	(d) 1,309
<b>Grand Total</b> .. ..	33,527	a 15,339	(d)9,776	17,108	10,134	(a)3,469	331	(d)89,684

(a) 935,000 lb. taken by Victorian fishermen in Tasmanian waters is included in Victoria.

(b) Less than 500 lb. (c) Not available. (d) Excludes freshwater fish caught in Queensland, particulars of which are not available.

The total Australian production of these more common types of fish is shown in the following table for the years 1958-59 to 1962-63.

## FISH: PRODUCTION BY TYPE, AUSTRALIA

('000 lb. estimated live weight)

Type	1958-59	1959-60	1960-61	1961-62	1962-63
<b>Marine types—</b>					
Mullet .. ..	14,063	12,340	11,362	13,242	13,736
Tuna .. ..	5,493	7,099	9,767	10,616	11,005
Shark .. ..	7,375	8,457	7,636	8,691	10,524
Australian salmon ..	8,543	7,601	6,630	11,534	7,794
Flathead .. ..	4,599	4,902	5,141	6,458	6,828
Morwong .. ..	2,572	2,329	2,258	2,773	4,949
Barracouta .. ..	4,300	5,871	5,981	6,810	4,842
Snapper .. ..	3,115	4,602	4,684	3,756	4,107
Whiting .. ..	2,990	3,297	3,267	3,513	3,699
Mackerel .. ..	2,193	1,641	1,779	1,631	2,192
Leatherjacket .. ..	1,866	2,476	2,516	2,193	1,955
Garfish .. ..	1,079	1,024	1,315	1,465	1,645
Bream (incl. Tarwhine)	1,207	1,123	1,236	1,382	1,531
Ruff .. ..	1,860	1,506	1,288	1,188	1,360
Luderick .. ..	1,063	1,199	1,096	1,020	1,311
Tailor .. ..	845	1,199	1,407	1,148	956
Other .. ..	8,927	9,819	10,137	9,780	9,941
<i>Total, Marine</i> .. ..	72,090	76,485	77,500	87,200	88,375
<b>Freshwater types</b> .. ..	2,293	1,612	(a) 1,597	(a) 1,260	(a) 1,309
<b>Grand Total</b> .. ..	74,383	78,097	(a) 79,097	(a) 88,460	(a) 89,684

(a) Excludes freshwater fish caught in Queensland, particulars of which are not available.

(b) *Crustaceans*. In terms of gross value of catch, the importance of crustaceans has increased in recent years, and in 1962-63 was greater than that of fish. The crayfish is the most important crustacean. The bulk of Australian production of crayfish is exported, nearly all going to the United States of America. Details of the production of crustaceans in each State and the Northern Territory in 1962-63 are shown in the following table.

**CRUSTACEANS: PRODUCTION BY TYPE, 1962-63**  
(\*000 lb. whole weight)

Type	N.S.W.	Vic.	Q'land	S. Aust.	W. Aust.	Tas.	N.T.	Aust.
Crayfish ..	(a) 498	(b)1,531	(c) 31	4,650	d 21,380	(b)3,310	..	ac 31,400
Prawns ..	6,623	3	4,971	..	1,017	..	2	12,616
Crabs ..	227	..	571	..	36	..	8	842
<b>Total ..</b>	<b>7,348</b>	<b>(b)1,534</b>	<b>5,573</b>	<b>4,650</b>	<b>d 22,433</b>	<b>(b)3,310</b>	<b>10</b>	<b>44,858</b>

(a) Includes catch of freshwater lobster (7,000 lb. in 1962-63). (b) The catch of crayfish by Victorian fishermen in Tasmanian waters (451,000 lb. in 1962-63) is included in Victoria. (c) Includes take of shovel-nosed lobster (21,000 lb. in 1962-63). (d) Partly estimated.

The following table shows details of the production of crustaceans in Australia in the years 1958-59 to 1962-63.

**CRUSTACEANS: PRODUCTION BY TYPE, AUSTRALIA**  
(\*000 lb. whole weight)

Type	1958-59	1959-60	1960-61	1961-62	1962-63
Crayfish(a) ..	..	26,314	28,023	27,494	31,400
Prawns ..	..	6,751	7,749	6,529	12,616
Crabs ..	..	906	1,044	787	842
<b>Total ..</b>	<b>..</b>	<b>33,971</b>	<b>36,816</b>	<b>34,810</b>	<b>44,858</b>

(a) Includes freshwater lobster caught in New South Wales and shovel-nosed lobster taken in Queensland.

(c) *Molluscs (edible)*. Details of the production of molluscs in each State and the Northern Territory in 1962-63 are shown in the table below.

**MOLLUSCS(a): PRODUCTION BY TYPE, 1962-63**  
(\*000 lb. gross (in shell) weight)

Type	N.S.W.	Vic.	Q'land	W. Aust.	Tas.	N.T.	Aust.
Oysters ..	12,604	63	330	28	1	3	13,029
Scallops ..	..	..	627	(b)	5,871	..	(b)6,498
Mussels ..	..	683	..	..	..	..	683
Squid ..	..	167	119	6	..	..	292
Octopus ..	..	17	..	1	..	..	18
Cuttlefish ..	..	..	..	1	..	..	1
<b>Total ..</b>	<b>12,604</b>	<b>930</b>	<b>1,076</b>	<b>36</b>	<b>5,872</b>	<b>3</b>	<b>20,521</b>

(a) Excludes pipis taken in New South Wales and scallops taken in Western Australia, details of which are not available for publication. (b) See footnote (a).

The following table shows the production of molluscs in Australia in the years 1958-59 to 1962-63.

**MOLLUSCS(a): PRODUCTION BY TYPE, AUSTRALIA**

('000 lb. gross (in-shell) weight)

Type	1958-59	1959-60	1960-61	1961-62	1962-63
Oysters .. .. .	<i>bc</i> 12,885	<i>(c)</i> 12,690	14,220	12,613	13,029
Scallops .. .. .	<i>(b)</i> 4,786	<i>(b)</i> 6,105	6,896	5,172	<i>(b)</i> 6,498
Mussels .. .. .	..	87	394	646	683
Squid .. .. .	225	210	228	319	292
Octopus .. .. .	2	52	36	58	18
Cuttlefish .. .. .	57	60	34	7	1
<b>Total .. .. .</b>	<i>(d)</i> 17,955	<i>(d)</i> 19,204	21,808	18,815	<i>(d)</i> 20,521

(a) Excludes pipis, particulars of which are not available for publication. (b) Excludes Western Australia. (c) Excludes Northern Territory. (d) Incomplete; see footnotes to individual types.

(iii) *Marketing.* The greater part of Australian fisheries production is marketed fresh or frozen. For practical purposes, the whole of the tuna and Australian "salmon" catches are canned, as is a large proportion of the barracouta catch.

Marketing arrangements for fresh fish vary from State to State. In New South Wales, fish marketing is controlled by the Chief Secretary's Department, which operates the Metropolitan and Wollongong fish markets. In other coastal centres of New South Wales, Fishermen's Co-operatives may become registered as local fish markets. Fish for industrial use does not pass through any of these markets. The Queensland Fish Board sells all production on behalf of fishermen in that State, and has branches in 18 centres, as well as depots at eight others. The Board also purchases fish on its own account to stabilize prices. In Victoria, Western Australia and Tasmania, the marketing of fish is undertaken through agents. In South Australia, the great majority of the fishermen are members of the South Australian Fishermen's Co-operative Ltd., which handles the whole of their production.

Quick-freezing is widely used at sea and ashore to preserve fisheries products before delivery to consumers. The main techniques employed in Australia are brine freezing, which is used in the tuna and salmon fisheries, and air blast freezing, which is used chiefly for crayfish and scallops. Cold preservation with ice is still widely used.

(iv) *Processing.* Fish canning in Australia on a modern scale dates from 1937, prior to which the only fish canning carried out was on an occasional basis in factories handling other foodstuffs. In 1962-63, there were 25 fish canneries operating in Australia. The main canneries handle tuna (Eden, Melbourne, Port Lincoln), Australian salmon (Eden, Melbourne, Margate, Port Lincoln, Adelaide, Albany), and barracouta (Melbourne, Margate, Portland). A long-established general cannery in Sydney handles a small quantity of tuna each year, as well as prawns and fish paste, and a general cannery in Melbourne produces paste and other fish products.

Apart from canning, other processes used on fish products include smoking and bottling. These processes take place only on a small scale.

There are few by-products derived from fish, crustaceans, and molluscs taken in Australia. Small quantities of fish meal are produced from scrap products. Oil from the livers of sharks was produced on a small scale until 1962, when cheaper substitutes became available.

The following table gives further details of fish processing in Australia during the years 1958-59 to 1962-63.

**FISH PROCESSING (EXCEPT FREEZING): AUSTRALIA**

Particulars	1958-59	1959-60	1960-61	1961-62	1962-63
Number of factories .. .. .	18	19	18	20	25
Fish used(a)—	'000 lb.	'000 lb.	'000 lb.	'000 lb.	'000 lb.
Whole .. .. .	10,603	12,507	13,737	18,494	15,590
Headed and/or gutted .. .. .	4,825	3,773	3,758	6,796	5,827
<i>Estimated live weight equivalent(b)</i> .. .. .	16,300	16,900	18,200	26,500	22,445
Production(c)—					
Canned fish(d)—					
Australian salmon .. .. .	4,756	4,550	3,480	5,772	3,976
Tuna .. .. .	1,609	1,983	3,070	3,624	4,201
Other .. .. .	1,417	1,585	1,647	2,637	2,151
<i>Total</i> .. .. .	7,782	8,118	8,197	12,033	10,328
Smoked fish .. .. .	286	296	301	181	286
Fish paste .. .. .	1,314	1,379	1,261	1,027	1,053
Fish meal(e) .. .. .	1,442	1,718	2,041	2,640	2,076

(a) Fish used for canning (including fish loaf), smoking and the manufacture of fish paste, but excluding the weight of oysters, other shellfish and crustaceans used for canning. (b) The weight of headed and/or gutted fish is taken as 85 per cent. of live weight. (c) Excludes canned crayfish, lobsters, prawns, oysters and clams, details of which are not available for publication. (d) Includes fish loaf, fish cakes, etc. (e) Excludes whale meal.

3. Pearls, Pearl-shell and Trochus-shell.—NOTE.—Prior to the 1962-63 season, considerable quantities of pearl-shell were taken from Australian waters by Japanese pearling luggers. Details of this pearl-shell taken and boats and equipment employed are excluded from the following tables. Production data are, however, shown as a footnote to the table reporting production of pearl-shell and trochus-shell for the years 1958-59 to 1961-62. The Japanese fleet did not operate in Australian waters in 1962-63.

(i) *Employment, Boats and Equipment.* Ketch-rigged luggers about 55 feet long and with crews of 8 to 14 members are used for pearl and shell fishing around Australia. Divers using suits collect the shells from the sea bed, at depths ranging from 3 to 45 fathoms. Details of employment of persons and equipment in the shell fisheries in 1962-63 are contained in the following table.

**PEARL-SHELL AND TROCHUS-SHELL: BOATS AND EQUIPMENT IN USE, PERSONS ENGAGED, 1962-63**

Particulars	Unit	Q'land	W. Aust.	N.T.	Aust.
Boats engaged .. .. .	No.	42	16	2	60
Value of boats and equipment .. .. .	£'000	181	74	20	275
Persons engaged .. .. .	No.	534	171	22	727

The following table gives similar details for Australia for the years 1958-59 to 1962-63.

**PEARL-SHELL AND TROCHUS-SHELL: BOATS AND EQUIPMENT IN USE,  
PERSONS ENGAGED, AUSTRALIA (a)**

Particulars	Unit	1958-59	1959-60	1960-61	1961-62	1962-63
Boats engaged .. ..	No.	110	85	85	56	60
Value of boats and equipment .. ..	£'000	647	515	467	254	275
Persons engaged .. ..	No.	1,419	1,120	995	724	727

(a) Excludes Japanese pearlers operating in Australian waters. See text p. 1122.

(ii) *Production.* The production of cultured pearls was introduced into Australia in 1956, when a station was established off the north coast of Western Australia. The industry has since expanded, and in 1963, there were eleven pearl culture farms in operation in Queensland and Western Australia. Particulars of cultured pearl production are not available for publication.

In recent years, plastics have replaced pearl-shell in many uses. However, since the introduction of pearl culture, live pearl-shell has been in demand for this purpose. The following table gives details of pearl-shell and trochus-shell production in Australia in the years 1958-59 to 1962-63.

**PEARL-SHELL AND TROCHUS-SHELL: PRODUCTION  
(\*000 lb.)**

Particulars	1958-59	1959-60	1960-61	1961-62	1962-63
<b>Pearl-shell—</b>					
Queensland(a) .. ..	889	1,082	1,821	860	788
Western Australia(b) .. ..	1,687	1,138	1,270	802	782
Northern Territory(a) .. ..	314	188	222	147	115
<i>Australia</i> .. ..	<i>(c)2,890</i>	<i>(c)2,408</i>	<i>(c)3,313</i>	<i>(c)1,809</i>	<i>1,685</i>
<b>Trochus-shell—</b>					
Queensland(a) .. ..	887	847	309	457	357
Western Australia(b) .. ..	29	22	10	..	..
<i>Australia</i> .. ..	<i>916</i>	<i>869</i>	<i>319</i>	<i>457</i>	<i>357</i>

(a) Season ended January of years shown. Shell taken by Queensland luggers operating in Northern Territory waters is included in Queensland. (b) Season ended December of years shown. (c) Excludes pearl-shell taken by Japanese pearlers operating in Australian waters. The quantities taken were as follows:—1958-59, 1,064,000 lb.; 1959-60, 763,000 lb.; 1960-61, 860,000 lb.; 1961-62, 813,000 lb. The Japanese pearling fleet did not operate in Australian waters in 1962-63.

Particulars of the production of natural pearls in Australia are not available.

4. *Whaling.*—The whaling industry is highly mechanized. Standard equipment includes aircraft to locate whales, steam and diesel powered catchers of about 100 to 125 feet in length, and tow-boats.

Whale meat is marketed as pet food. Oil from baleen whales is used in the manufacture of margarine, soap and cosmetics. Oil from sperm whales is used in the manufacture of soap, plastics and watch lubricants, and in automatic transmission systems in motor cars.

Owing to the scarcity of whales during the 1962 season, catches fell far below quotas set. Consequently, the stations on the east coast and Norfolk Island ceased operations at the close of the 1962 season. The Western Australian stations operated during the 1963 season with poor results in humpback whaling. These stations caught a substantial number of sperm whales to compensate in part for the deficiency of humpbacks. The table below gives details of the whaling industry in Australia during the years 1959 to 1963.

Quotas set by the Department of Primary Industry are in terms of humpback whales, and for this purpose 1 blue whale is taken as the equivalent of 2 fin, 2½ humpback, 6 sei or 6 bryde whales.

WHALING STATISTICS: AUSTRALIA(a)  
(Source: Fisheries Branch, Department of Primary Industry)

Particulars	1959	1960	1961	1962	1963
Stations operating .. .. . No.	4	4	4	4	2
Chasers engaged .. .. . "	12	11	12	11	8
Persons employed—(b)					
At sea .. .. . "	151	139	161	123	85
Ashore .. .. . "	444	421	240	164	90
Types of baleen whales taken—					
Humpback .. .. . "	1,510	1,355	1,311	716	87
Blue .. .. . "	12	2	..	..	1
Bryde .. .. . "	..	..	2	..	..
Sei .. .. . "	..	..	..	2	..
Fin .. .. . "	1	..	..	..	..
Sex of baleen whales—					
Male .. .. . "	880	767	755	404	37
Female .. .. . "	643	590	556	314	51
<i>Total Baleen Whales Taken</i> .. .. . "	<i>1,523</i>	<i>1,357</i>	<i>c 1,313</i>	<i>718</i>	<i>88</i>
Humpback Equivalent(d) .. .. . "	1,541	1,360	1,312	717	89
Quota of Humpback Whales(d) .. .. . "	1,930	1,680	1,390	1,300	550
<i>Sperm Whales Taken</i> .. .. . "	<i>138</i>	<i>282</i>	<i>454</i>	<i>591</i>	<i>598</i>
Sex of sperm whales—					
Male .. .. . "	138	274	451	570	587
Female .. .. . "	..	8	3	21	11
<b>Total Whales Taken</b> .. .. . "	<b>1,661</b>	<b>1,639</b>	<b>1,767</b>	<b>1,309</b>	<b>686</b>
Whale oil produced—				(e)	(e)
Baleen oil .. .. . barrels(f)	80,601	69,738	59,187	30,849	3,865
Sperm oil .. .. . "	5,910	11,312	18,929	24,833	23,860
Value of oil .. .. . £'000	1,279	1,171	1,180	782	443
Value of by-products (meal, meat, solubles, etc.) .. .. . "	395	320	346	224	69
<b>Total Value</b> .. .. . "	<b>1,674</b>	<b>1,491</b>	<b>1,526</b>	<b>1,006</b>	<b>512</b>

(a) Excludes details of Norfolk Island. was not recorded. (d) See text above. research. (f) 6 barrels=1 ton.

(b) Estimated.

(c) The sex of two whales processed

(e) Includes produce from whales taken for scientific

5. Value of Production.—(i) *Gross Value of Products.* The following table shows details of gross values of production at principal markets of edible fisheries products, pearl-shell, and trochus-shell in each State and the Northern Territory in 1962-63.

## FISHERIES PRODUCTION: GROSS VALUE, 1962-63

(£'000)

Product	N.S.W.	Vic.(a)	Qld	S. Aust.	W. Aust.	Tas.(a)	N.T.	Aust.
Fish(b) .. ..	2,225	1,469	735	930	602	162	19	6,142
Crustaceans ..	1,199	384	846	770	4,068	737	2	8,006
Molluscs (edible) ..	c 1,103	29	42	..	2	228	(d)	1,404
Pearl-shell(e) .. ..	..	..	(f) 158	..	(g) 156	..	(f) 20	334
Trochus-shell .. ..	..	..	(f) 18	..	..	..	..	18

(a) Victorian figures include catch by Victorian fishermen in Tasmanian waters (shark, £66,000; crayfish, £113,000). (b) Includes shark livers for oil extraction; excludes freshwater fish caught in Queensland, particulars of which are not available. (c) Excludes pipis, particulars of which are not available for publication. (d) Less than £500. (e) Queensland luggers operating in Northern Territory waters. (f) Season ended January. (g) Season ended December.

The table below gives this information for Australia for the years 1958-59 to 1962-63.

## FISHERIES PRODUCTION: GROSS VALUE, AUSTRALIA

(£'000)

Product	1958-59	1959-60	1960-61	1961-62	1962-63
Fish(a) .. .. .	5,294	5,851	5,907	6,075	6,142
Crustaceans .. ..	4,585	5,561	5,906	7,477	8,006
Molluscs (edible)(b)	1,037	1,089	1,186	1,252	1,404
Pearl-shell(c) .. ..	(d) 561	(d) 558	(d) 724	(d) 361	334
Trochus-shell(c) .. ..	106	78	27	28	18

(a) Includes shark livers for oil extraction; excludes freshwater fish caught in Queensland in 1960-61 and subsequent years. (b) Excludes pipis in New South Wales for all years, scallops in Western Australia and oysters in the Northern Territory for 1958-59 and 1959-60, and oysters in Western Australia for 1958-59. (c) Season ended December (Western Australia) or January (Queensland and Northern Territory) of years shown. (d) Excludes pearl-shell taken by Japanese pearlers in Australian waters.

(ii) *Gross and Local Values, 1962-63.* Gross and local values of fishing and whaling production for each State are shown in the following table. A more detailed reference to the value of production of fishing and whaling and other industries in Australia, as well as a brief explanation of the terms used, is included in Chapter XXX. Miscellaneous.



**FISHING AND WHALING: GROSS AND LOCAL VALUE OF PRODUCTION,  
1962-63**

(£'000)

State or Territory	Gross value(a)	Marketing costs	Local value(b)
New South Wales .. ..	4,565	765	3,800
Victoria .. ..	1,881	257	1,624
Queensland .. ..	2,116	194	1,922
South Australia .. ..	1,700	227	1,473
Western Australia .. ..	5,610	46	5,564
Tasmania .. ..	1,127	242	885
Northern Territory .. ..	43	n.a.	43
<b>Australia .. ..</b>	<b>17,042</b>	<b>1,731</b>	<b>15,311</b>

(a) Gross production valued at principal markets.  
production.

(b) Gross production valued at place of  
production.

(iii) *Local Values, 1958-59 to 1962-63.* In the following table, the local value of fisheries production and the local value per head of population are shown by States. Because the value of materials used in the course of production is not available for all States, it is not possible to show a comparison of net values.

**FISHING AND WHALING: LOCAL VALUE OF PRODUCTION**

Year	N.S.W.	Vic.	Qld	S. Aust.	W. Aust.	Tas.	Aust.(a)
<b>LOCAL VALUE</b>							
<b>(£'000)</b>							
1958-59 .. ..	2,947	1,265	1,343	1,071	3,867	664	11,243
1959-60 .. ..	3,101	1,771	1,448	975	4,276	683	12,325
1960-61 .. ..	3,299	1,787	1,372	1,237	4,220	813	12,813
1961-62 .. ..	3,288	1,741	1,633	1,379	5,291	909	14,294
1962-63 .. ..	3,800	1,624	1,922	1,473	5,564	885	15,311

**LOCAL VALUE PER HEAD OF POPULATION**

(£)

1958-59 .. ..	0.8	0.5	0.9	1.2	5.5	2.0	1.2
1959-60 .. ..	0.8	0.6	1.0	1.0	6.0	2.0	1.2
1960-61 .. ..	0.9	0.6	0.9	1.3	5.8	2.3	1.2
1961-62 .. ..	0.9	0.6	1.1	1.4	7.1	2.6	1.4
1962-63 .. ..	0.9	0.6	1.2	1.5	7.2	2.5	1.4

(a) Includes Northern Territory.

#### § 4. Consumption of Fish

Particulars of the estimated supplies of fish, crustaceans and molluscs available for consumption per head of population, in terms of edible weight, are included in the table below. For the purpose of compiling this table, the non-commercial fish catch has been estimated at ten per cent. of the recorded catch.

#### FISHERIES PRODUCTS: ESTIMATED SUPPLIES AVAILABLE FOR CONSUMPTION, AUSTRALIA

(lb. edible weight per head per annum)

Particulars	1958-59	1959-60	1960-61	1961-62	1962-63
Fresh or frozen—					
Fish—					
Australian origin .. ..	3.1	3.2	3.1	3.1	3.3
Imported .. .. .	2.2	3.2	3.0	2.7	2.7
Crustaceans and molluscs .. ..	0.9	1.0	1.2	1.0	1.3
Cured (including smoked and salted)	0.8	1.1	1.1	0.9	1.0
Canned—					
Australian origin .. ..	0.8	0.8	0.7	0.8	0.9
Imported .. .. .	1.7	2.0	2.6	2.0	1.9
<b>Total .. .. .</b>	<b>9.5</b>	<b>11.3</b>	<b>11.7</b>	<b>10.5</b>	<b>11.1</b>

#### § 5. Oversea Trade in Products of Fishing and Whaling

NOTE.—Values shown are expressed as £A. f.o.b. port of shipment. The tables of exports relate to Australian produce only, but quantities and values quoted in the text sometimes include re-exports, the amounts involved, however, generally being small.

1. **Edible Products.**—A large proportion of the fish consumed in Australia is imported. Of the edible products imported in 1962-63, those originating in Japan were valued at £2.1 million (24 per cent. of the total value), United Kingdom, £2 million (22 per cent.), and South Africa, £1.2 million (13 per cent.).

South Africa supplied 9 million lb. (27 per cent., valued at £0.7 million) of the fresh or frozen fish products imported in 1962-63, and the United Kingdom 8.8 million lb. (26 per cent., valued at £1.2 million). Of the smoked or dried fish products imported in 1962-63, South Africa supplied 6.8 million lb. (70 per cent., valued at £0.6 million). Japan supplied 9.4 million lb. (44 per cent., valued at £2.1 million) of the canned fish products imported in 1962-63.

The value of exports of edible products in 1962-63 was 3 per cent. less than that in 1961-62. The value of crayfish tails exported in 1962-63 was 82 per cent. of the value of all exports of edible products. Of all crayfish tails exported in 1962-63, 97 per cent. (8,745,000 lb., valued at £5,029,000) were consigned to the United States of America.

The table below gives further details of Australia's oversea trade in edible products in the years 1960-61, 1961-62 and 1962-63.

## OVERSEA TRADE IN EDIBLE FISHERIES PRODUCTS: AUSTRALIA

Particulars	Quantity ('000 lb.)			Value (£A.'000 f.o.b.)		
	1960-61	1961-62	1962-63	1960-61	1961-62	1962-63
<b>IMPORTS</b>						
Fresh and frozen (a) .. ..	34,594	32,290	33,630	3,423	3,561	3,822
Smoked and dried .. ..	8,695	8,359	8,945	692	718	835
Potted and concentrated (b) ..	361	177	256	131	58	94
Canned—						
Herrings .. .. .	7,427	4,504	3,333	821	473	376
Salmon .. .. .	10,398	9,370	9,158	2,775	2,211	2,255
Sardines and pilchards .. ..	7,598	5,460	6,136	1,241	884	960
Tuna .. .. .	424	709	415	63	96	61
Other fish .. .. .	812	1,251	1,869	110	147	163
Crustaceans and molluscs .. ..	834	736	619	298	276	224
<b>Total, Canned .. ..</b>	<b>27,493</b>	<b>22,030</b>	<b>21,530</b>	<b>5,308</b>	<b>4,087</b>	<b>4,039</b>
<b>Products not elsewhere included .. ..</b>	<b>..</b>	<b>..</b>	<b>..</b>	<b>139</b>	<b>112</b>	<b>141</b>
<b>Grand Total .. ..</b>	<b>..</b>	<b>..</b>	<b>..</b>	<b>9,693</b>	<b>8,536</b>	<b>8,931</b>

## EXPORTS

(Australian produce only; excludes re-exports)

Fresh or frozen(c)—						
Crayfish tails .. ..	6,023	9,875	9,002	3,401	6,020	5,169
Whole crayfish .. ..	1,783	513	1,380	649	173	478
Fish .. .. .	(d)	1,351	1,635	} 267 {	166	127
Other .. .. .	(d)	195	1,260		66	494
Canned—						
Salmon .. .. .	21	30	38	4	6	7
Other fish .. .. .	114	130	113	14	17	12
Crustaceans and molluscs .. ..	97	57	25	43	17	11
<b>Total, Canned .. ..</b>	<b>232</b>	<b>217</b>	<b>176</b>	<b>61</b>	<b>40</b>	<b>30</b>
<b>Products not elsewhere included .. ..</b>	<b>..</b>	<b>..</b>	<b>..</b>	<b>2</b>	<b>3</b>	<b>2</b>
<b>Grand Total .. ..</b>	<b>..</b>	<b>..</b>	<b>..</b>	<b>4,380</b>	<b>6,468</b>	<b>6,300</b>

(a) Excludes frozen smoked, which is included with "Smoked and dried". (b) Includes extracts and caviare. (c) Excludes frozen smoked, which is included in item Products not elsewhere included. (d) Not available separately.

2. Pearls.—Cultured pearls valued at £245,000 were imported into Australia in 1962-63. This was 30 per cent. greater than the value imported in 1961-62 (£189,000). In 1962-63, imports of cultured pearls valued at £240,000 (98 per cent. of the total value of cultured pearl imports) originated in Japan.

Cultured pearls exported from Australia in 1962-63 were valued at £361,000, £308,000 more than 1961-62. In 1962-63, cultured pearl exports consigned for Japan were valued at £352,000, 98 per cent. of the value of all cultured pearls shipped in that year.

The value of natural pearls exported from Australia in 1962-63 was £6,000, 78 per cent. lower than that in 1961-62 (£27,000).

3. Unmanufactured Shells.—Of the pearl-shell exported in 1962-63, 595,000 lb. (33 per cent.) were consigned to the Federal Republic of Germany, 552,000 lb. (30 per cent.) to the United States of America, and 475,000 lb. (26 per cent.) to Japan. More than 57 per cent. (116,000 lb.) of the trochus-shell exported was consigned to Italy.

Imports of unmanufactured shells included quantities of pearl, trochus and green snail shell from New Guinea, Papua and the Pacific Islands, which were subsequently re-exported from Australia.

Further particulars of Australia's oversea trade in unmanufactured shells are shown in the table below.

OVERSEA TRADE IN UNMANUFACTURED SHELLS: AUSTRALIA

Particulars	Quantity ('000 lb.)			Value (£A.'000 f.o.b.)		
	1960-61	1961-62	1962-63	1960-61	1961-62	1962-63
IMPORTS						
<i>Total .. .. .</i>	<i>114</i>	<i>96</i>	<i>105</i>	<i>10</i>	<i>14</i>	<i>10</i>
EXPORTS (Australian produce only; excludes re-exports)						
Pearl-shell .. .. .	3,089	1,999	1,811	661	384	343
Trochus-shell .. .. .	455	567	176	46	44	12
Other .. .. .	10	22	38	2	4	5
<i>Total .. .. .</i>	<i>3,554</i>	<i>2,588</i>	<i>2,025</i>	<i>709</i>	<i>432</i>	<i>360</i>

4. Marine Animal Oils.—The value of whale oil exported in 1962-63 was 52 per cent. less than that in 1961-62. Further details of oversea trade in marine animal oils are shown in the table below.

## OVERSEA TRADE IN MARINE ANIMAL OILS: AUSTRALIA

Particulars	Quantity ('000 gals.)			Value (£A.'000 f.o.b.)		
	1960-61	1961-62	1962-63	1960-61	1961-62	1962-63
<b>IMPORTS</b>						
Whale oil from—						
Norfolk Island .. ..	348	316	8	141	127	3
Japan .. ..	1	..	311	1	..	99
Other countries .. ..	137	181	91	48	82	51
<b>Total, Whale Oil .. ..</b>	<b>486</b>	<b>497</b>	<b>410</b>	<b>190</b>	<b>209</b>	<b>153</b>
Cod liver oil .. ..	115	94	95	53	45	44
Unrefined fish oils .. ..	127	100	107	70	58	50
Other .. ..	..	..	..	25	21	20
<b>Grand Total .. ..</b>	<b>..</b>	<b>..</b>	<b>..</b>	<b>338</b>	<b>333</b>	<b>267</b>

## EXPORTS

(Australian produce only; excludes re-exports)

Whale oil .. ..	2,298	1,900	950	865	671	322
Other .. ..	..	..	..	18	48	5
<b>Total .. ..</b>	<b>..</b>	<b>..</b>	<b>..</b>	<b>883</b>	<b>719</b>	<b>327</b>

## CHAPTER XXVI MINERAL INDUSTRY

NOTE.—Further detailed information on the subjects dealt with in this chapter is contained in the annual printed Bulletin *Primary Industries, Part II.—Non-Rural Industries and Value of Production* issued by this Bureau, and in *The Australian Mineral Industry—Annual Review* and other publications issued by the Bureau of Mineral Resources, Geology and Geophysics, which also issues, in co-operation with this Bureau, a quarterly publication *The Australian Mineral Industry*, comprising two parts—Part I.—Quarterly Review, and Part II.—Quarterly Statistics. The mimeographed statistical bulletin *Mining and Quarrying* of this Bureau contains annual statistics of the industry prepared and published as soon as possible after the data have been compiled. A monthly statistical bulletin *The Gold Mining Industry, Australia* is issued also, and other current information on mining or mine products is contained in the *Quarterly Summary of Australian Statistics*, the *Monthly Review of Business Statistics*, the *Digest of Current Economic Statistics*, and the *Monthly Bulletin of Production Statistics*.

Values of Australian oversea trade shown throughout this chapter are expressed as £A. f.o.b. port of shipment, except where otherwise indicated.

### § 1. Introduction

1. Occurrences of Minerals.—The greatest part of the area of outcropping rock on the Australian continent is Precambrian in age. These basement rocks form the western and central core of the continent and are flanked by younger Palaeozoic rocks which, along the eastern edge of the continent, form a belt several hundred miles wide extending from north Queensland to Tasmania. Smaller areas of Palaeozoic rocks occur in other States. Mesozoic sediments overlie large areas of the continent and reach their greatest development in central Queensland. Cainozoic rocks occur mainly in the southern parts of Victoria and South Australia and as residual basalt cappings over an extensive area of the Palaeozoic rocks of eastern Australia.

Minerals occur widely throughout the Precambrian and Palaeozoic rocks of the continent. Palaeozoic mineralization is perhaps more varied, but the deposits now being worked are in general smaller than those found in Precambrian rocks. Most of the larger deposits of minerals now being mined in Australia are shown in the following table according to the geological era in which they were formed.

#### PRINCIPAL AUSTRALIAN MINERAL DEPOSITS

Age of geological formation in which located	Metal or mineral	State or Territory	Locality
Precambrian (more than 520 million years old)	Copper .. ..	Queensland .. Northern Territory	Mount Isa Tennant Creek
	Gold .. ..	Western Australia	Kalgoorlie and other localities
	Iron .. ..	South Australia .. Western Australia	Middleback Ranges Yampi Sound and Pilbara
	Lead-silver-zinc	New South Wales	Broken Hill
	Uranium .. ..	Queensland .. Queensland .. South Australia .. Northern Territory	Mount Isa Mary Kathleen Radium Hill Rum Jungle and South Alligator River area
	Palaeozoic (between 200 and 520 million years old)	Black coal ..	New South Wales
		Queensland ..	Kianga-Moura, Baralaba, Bowen, etc.
		Western Australia	Collie
Copper-gold ..		Queensland .. Tasmania ..	Mount Morgan Mount Lyell
Lead-silver-zinc		Tasmania ..	Mount Read and Rosebery
Tin (lode) ..		Queensland .. Tasmania .. Tasmania ..	Herberton North-east of State King Island and north-east of State

PRINCIPAL AUSTRALIAN MINERAL DEPOSITS—*continued*

Age of geological formation in which located	Metal or mineral	State or Territory	Locality
Mesozoic (between 75 and 200 million years old)	Black coal ..	Queensland ..	Ipswich
		South Australia ..	Leigh Creek
	Mineral sands(a)	Tasmania ..	St. Marys
		New South Wales ..	North coast
Cainozoic (less than 75 million years old)	Brown coal ..	Queensland ..	South coast
		Victoria ..	Gippsland
	Tin (alluvial) ..	New South Wales ..	Tingha
		Queensland ..	Herberton
	Bauxite ..	Tasmania ..	North-east of State
		Queensland ..	Weipa
	Western Australia	Darling Range	

(a) The deposition of mineral sands, derived from Palaeozoic granites, continued throughout the Cainozoic era.

Of the non-metallic minerals, many, such as clay, sand and silica, etc., are not restricted to the rocks of any particular era. However, Precambrian rocks do contain important deposits of asbestos in Western Australia, limestone and dolomite in South Australia, and mica in the Northern Territory. All crude salt is produced by the evaporation of water from pans constructed along the sea coast or from inland lakes.

2. **Mineral Concentrates.**—Concentration is a physical process involving the removal of mineral impurity from the ore. Most mines now dispatch ore in concentrate form, as this considerably reduces the transport costs and produces a salable product in the form required by smelters. Most concentrates are nearly pure mineral, and the ore-dressing processes (with the exception of that for uranium) involve no chemical change to the mineral being won. Various methods are used in concentration. Sulphide ores, which now comprise the greatest tonnages treated, are, in most instances, separated from the gangue by flotation. In this method of concentration, the ore is ground finely enough to liberate the individual mineral particles, aerated, and agitated in tanks of water to which chemicals have been added. Under certain conditions, particles of one sulphide mineral adhere to the froth bubbles and are collected in the froth overflow, while gangue and even other sulphides are depressed. By treating the tailings of one flotation process with different chemicals and conditions, it is often possible to separate a further concentrate, as is done at Broken Hill where the zinc sulphide is recovered from the tailings of the lead sulphide concentration process.

Other methods of concentration used are gravity (alluvial tin, mineral sands), electromagnetic (wolfram, scheelite and mineral sands), and electrostatic (mineral sands).

3. **Government Aid to Mining, and Mineral Control.**—(i) *Aid to Mining—Commonwealth.* (a) *Income Taxation Concessions.* One-fifth of the net income derived from mining for prescribed minerals in Australia or the Territory of Papua and New Guinea is exempt from tax. The metals or minerals to which this concession applies are as follows:—asbestos, bauxite, chromite, emery, fluorspar, graphite, ilmenite, kyanite, magnesite, manganese oxides, mica, monazite, pyrite, quartz crystals (piezo-electric quality), radio-active ores, rutile, sillimanite, vermiculite and zircon; and ores of antimony, arsenic, beryllium, bismuth, cobalt, columbium, copper, lithium, mercury, molybdenum, nickel, osmiridium, platinum, selenium, strontium, tantalum, tellurium, tin, tungsten and vanadium.

Income derived from mining principally for gold in Australia or the Territory of Papua and New Guinea is exempt from tax. The exemption is also available in respect of income derived from mining principally for gold and copper if the value of the gold obtained is not less than 40 per cent. of the value of total output.

Income attributable to uranium obtained from working a mining property in Australia or the Territory of Papua and New Guinea, or from the treatment of ore in Australia or the Territory to recover uranium concentrates, is exempt from tax for residents of Australia and the Territory of Papua and New Guinea. The exemption is, however, conditional upon the uranium recovered being owned by the Commonwealth or disposed of to a person approved by the Commonwealth.

Dividends paid wholly and exclusively out of exempt mining income are also exempt from tax.

Further information is given in a booklet entitled *Income Tax for the Mining Industry*, issued by the Commissioner of Taxation.

(b) *Assistance to the Gold-Mining Industry.* The assistance to the gold-mining industry by subsidy was introduced at a time of rising costs in the industry and a fixed official world price for gold. Because many producers were faced with the likelihood of closing down, the Government decided to subsidize marginal producers in Australia and the Territories of Papua and New Guinea. Under the *Gold-Mining Industry Assistance Act 1954*, a producer the value of whose gold output exceeded 50 per cent. of the total value of his mine output was eligible for assistance, subject to certain conditions, on the production of gold from 1st July, 1954. The rate of subsidy payable under the original Act was increased under amendments enacted on 22nd October, 1957, and 22nd May, 1959. Under the Act as it now stands, the subsidy payable to small producers whose annual deliveries do not exceed 500 fine oz. is £2 8s. 0d. per fine oz., irrespective of cost of production or rate of profit. For large producers, subject to certain provisions, subsidy is paid at the rate of three-quarters of the excess of the average cost of production over £13 10s. per fine oz. with a maximum amount of subsidy of £3 5s. per fine oz. A producer whose deliveries during the year exceed 500 fine oz. may elect to be treated as a small producer. In this case, the subsidy rate payable per fine ounce on total deliveries is £2 8s. reduced by one penny for each fine ounce by which deliveries exceed 500 fine ounces. Where a producer receives an amount in excess of the official price of £15 12s. 6d. per fine oz. as a result of sales on overseas premium markets or otherwise, the subsidy payable is reduced by the amount of the excess. The subsidy is also limited, in the case of large producers, to the extent that the annual net profit of a producer shall not, with the addition of the subsidy, exceed 10 per cent. of the capital used in the production and sale of gold. The expenditure on development allowable in determining costs is subject to a limiting provision. A further condition of the Act is that the recovery rate of the mine shall not fall below nine-tenths of that for the year previous to the commencement of the Act. Payments under the Act are to apply to production until 30th June, 1965.

Payments under the Act commenced in March, 1955, and the amounts paid to gold producers in the various States and Territories of Australia in each of the years 1959 to 1963 are shown in the table on page 1152.

The purpose of the *Gold Mines Development Assistance Act 1962* is to provide assistance to gold producers in Australia and the Territories of Papua and New Guinea not receiving subsidy under the *Gold-Mining Industry Assistance Act 1954-1962*, in order to increase the rate of their development work and so to add to their proved reserves of gold-bearing minerals. In recent years, these reserves had declined to the extent that the long-term prospects of the industry were jeopardized. The Act, which applies to 1962-63 and the next two financial years, provides that a development allowance is payable to a mine approved for the purposes of the scheme equal to the amount by which its allowable expenditure on development in a year, as defined in the Act, exceeds a defined base amount, which normally will be the average annual amount spent by the mine on development during the three years preceding 1962-63. The payment of allowance is also subject to a number of other conditions and limits provided for in the Act.

(c) *Assistance to the Copper Mining Industry.* After a Tariff Board investigation, assistance was accorded to the industry in 1958, partly by import duty and partly by bounty. The assistance to the industry was reviewed in 1960 and 1963, and the present bounty assistance will continue until 31st December, 1965. Under the *Copper Bounty Act 1958-1963*, bounty is payable, subject to specified conditions, on refined copper sold for use in Australia. The rate of bounty is £35 a ton when the overseas price, as determined by the Minister for Customs and Excise, is £290 (£Stg.232) or less. When the overseas price rises above £290, the bounty falls by the same extent, so that no bounty is payable when the overseas price is £325 (£Stg.260) or more. A duty is imposed on imports of copper when the overseas price falls below £290 a ton, to the extent of £1 for each £1 that the price falls below £290. Including freight and other charges, the landed cost of imported copper is thus expected not to fall below about £305 a ton.

(d) *Search for Petroleum.* The Commonwealth Government has encouraged the search for petroleum in Australia, Papua and New Guinea, and considerable sums have been spent during recent years in geological and geophysical surveys and in drilling operations.

The Bureau of Mineral Resources, in close co-operation with the Mines Departments of the States, has continued regional geological and geophysical surveys throughout Australia. In 1957, the Commonwealth Government introduced the *Petroleum Search Subsidy Act 1957*, whereby stratigraphic drilling operations were subsidized to the extent of 50 per cent. of cost. The *Petroleum Search Subsidy Act 1959* widened the scope of operations for which subsidy was offered to include all types of geophysical surveys and off-structure drilling operations.



Another amendment in 1961 further widened the scope of the 1959 Act to provide subsidy for test drilling and detailed structure drilling operations. It also provided for the calculation of drilling subsidies on a footage basis as an alternative to the total cost basis. A sum of £5 million was allocated to the petroleum search subsidy scheme for 1962-63. This amount was almost double the allocation of £2.7 million provided in the previous year. In spite of the increased allocation, applications for subsidy increased to such an extent that the maximum rate of subsidy was reduced from 50 per cent. of the allowable cost of approved operations to 30 per cent. in 1962-63. A cash allocation of £5 million was made for subsidy in the 1963-64 financial year.

To the end of 1963, actual payments of subsidy totalling more than £11 million had been made in accordance with the terms of the subsidy Acts. Further particulars of government assistance in petroleum exploration will be found in Year Book No. 48, pages 1095-6.

(e) *Assistance to Producers of Sulphuric Acid and Iron Pyrites.* Following recommendations of the Tariff Board, the Sulphuric Acid Bounty Act was extended for a period of five years from 1st July, 1960. Arising from these same recommendations, the *Pyrites Bounty Act* 1960 was enacted on 15th December, 1960, to be operative for a period of four and a half years from 1st January, 1961. The Acts provide for bounties to be paid, subject to specified conditions, on sulphuric acid produced from prescribed materials of Australian origin and to producers of iron pyrites.

(f) *Bureau of Mineral Resources, Geology and Geophysics.* The Bureau of Mineral Resources, Geology and Geophysics has sections dealing with geology, geophysics, mining engineering, petroleum technology and mineral economics. The geological section provides geologists to conduct all surveys required in Commonwealth Territories, and makes detailed and regional surveys in conjunction with or by arrangement with the State Mines Departments, surveys of possible oil-fields in Australia and New Guinea, surveys of mines for which financial assistance is sought, and investigations of deposits of radio-active minerals. The geophysical section conducts investigations throughout Australia and New Guinea connected with the search for metalliferous radio-active and other mineral deposits; investigations connected with exploration for coal, oil and water; regional magnetic and gravity surveys; engineering and military geophysics; and the operation of geophysical (magnetic and seismic) observatories. The Bureau works in close co-operation with the Mines Departments of the States. It has assumed full responsibility for geological and geophysical surveys in Commonwealth Territories, but suitable arrangements have been made to ensure that the local Administrations have the necessary technical advice directly available to them.

(g) *Research Investigations.* Research investigations into mineral problems are undertaken by the Australian Mineral Development Laboratories in Adelaide. This organization is sponsored by the Commonwealth Government, the South Australian Government and the Australian Mineral Industries Research Association (an association of companies engaged in the mineral industry formed to foster and develop mineral research). Ore-dressing and mineragraphic investigations are conducted by the Commonwealth Scientific and Industrial Research Organization as required by the industry. Ore-dressing investigations are carried out at the Ore-Dressing Laboratory, situated in the Department of Mining, University of Melbourne, and at the Ore-Dressing Laboratory, Kalgoorlie, situated at the School of Mines. The Mineragraphic Investigations Section is located in the Geology Department, University of Melbourne.

These two groups of laboratories perform complementary services—the Mineragraphic Investigations Section assesses microscopically the state of dispersion and the mineral association of ore bodies, while the Ore-Dressing Laboratories investigate the composition of ores and provide advice on suitable methods for their full-scale treatment.

(h) *Department of Territories.* For particulars of the Northern Territory Administration, see paragraph (h) under section (ii) *Aid to Mining—States*, page 1135.

(ii) *Aid to Mining—States.* (a) *General.* In addition to free assays and determinations of rocks and minerals carried out for prospectors by the Mines Departments of the States and Territories, technical officers of these departments provide advice to the mining and allied industries where required, carry out field examinations of mining prospects, advise on exploration and development, select sites for water supply, and in general give a free technical service to the mining industry.

(b) *New South Wales.* State aid to assist metalliferous mining may consist of grants to assist the prospecting and/or mining for gold and minerals, and for the purchase, removal and installation of mining plant or equipment. A quantity of mechanical equipment is also available in several localities for hire at reasonable rentals to prospectors and small mine operators, and District Inspectors have geiger counters and scheelite detectors which are loaned to approved persons.

(c) *Victoria.* Loans may be granted to assist prospecting and development or the purchase of machinery for gold mining. The Mines Department has stamp batteries in different parts of the State to crush ore for prospectors at nominal rates. Small mining companies may avail themselves of these facilities. Drilling with diamond, rotary and percussion drills is carried out by the Mines Department for mining companies and for general mineral exploration. A survey of the State's underground water resources is in progress, in conjunction with the development of town water supplies from underground sources.

(d) *Queensland.* Various forms of assistance to mining are made available by the Queensland Department of Mines. Grants are made from the Consolidated Revenue Fund for use on construction and maintenance of roads in mining areas. Advances are made from the Gold Mining Encouragement Fund for mining development work. This assistance is restricted to gold mines, and advances are repayable from proceeds of the mine, if any. From the Assistance to Metalliferous Mining Fund, plant such as jackhammers, compressors and pumps is purchased and maintained. Such plant is made available on hire, the rental payments being credited back to the fund. Prospecting assistance is made available in approved cases, the rates being £2 10s. a week for a single man and £3 10s. a week for a married man with dependants. This is not repayable. From the Advances to Mining Fund, assistance by way of subsidy is advanced for mine development. This is repayable from proceeds of the mine. The department also maintains a treatment works for tin ores, etc., at Irvinebank, an assay office at Cloncurry, and diamond-drilling plants in several parts of the State. The Venus State battery at Charters Towers is available for the treatment of gold-bearing ores.

(e) *South Australia.* The Department of Mines provides the following services and facilities to the mineral industry:—(i) hire of boring plant and mining equipment, boring and testing of mineral deposits, financial subsidies in approved cases for prospecting and mining development, development of sub-surface water supplies for farming, pastoral, irrigation and mining purposes, and purchase of basic metal ores from prospectors; (ii) geological examination of mineral deposits, water supply, dam foundation and drainage problems, guidance on mining legislation, and publication and issue of geological bulletins and maps. It also provides, through the Australian Mineral Development Laboratories, chemical and metallurgical and analytical and assay investigation, testing and treatment of ores and minerals, and petrographic, mineragraphic and radiometric determinations. Pilot scale metallurgical and chemical treatment plants are maintained and operated for the development of mineral extraction processes.

(f) *Western Australia.* Assistance is given to prospectors to the extent of £5 a week south of the 26th parallel of latitude, and of £6 a week north of that parallel; also provision is made for the supply of some tools required for prospecting.

There are twenty State batteries operating intermittently throughout the goldfields for the treatment of ore from prospectors and small mine-owners, at a nominal charge. A cartage subsidy is also granted to such operators sending ore to State batteries for treatment.

Provision is made for loans to mine-owners who require assistance to develop mines. The Government also has a drilling scheme, financing mine-owners on a £1 for £1 basis.

(g) *Tasmania.* The Department of Mines provides financial assistance to mining lessees for the purchase of plant and machinery, for sinking, repairing or de-watering of shafts, for construction of dams and water races, for testing and proving a deposit of any mining product, for developmental work, and for diamond and other types of drilling. The Department has available for hire percussion and diamond drills for exploration, as well as a complete plant for small shaft sinking and tunnelling. Other assistance is rendered to the industry by geological and engineering advice, through ore-dressing research into metallurgical recoveries, and the selection and design of treatment plant.

In consequence of a serious fall in world tungsten prices, the *King Island Scheelite Agreement Act 1963 (No. 1)* was passed. This Act permitted the Tasmanian Government to provide financial assistance until the end of August, 1963, so that production of scheelite on King Island could be continued. A second Act (*King Island Scheelite Agreement Act 1963 (No. 2)*) gave authority for advances in the period to 31st May, 1964.

(h) *Northern Territory.* To encourage the development of the mining industry, the Northern Territory Administration has erected four government batteries for the treatment of miners' ores. Only two of these, at Tennant Creek and Mount Wells near Burrundie, are now in operation. The re-opening of the other two batteries will depend on the revival of small scale wolfram and tin mining in Hatches Creek and Maranboy where these batteries are located.

The crushing charges are subsidized by government grants. In addition, the Administration provides cartage subsidies and financial advances to encourage miners to carry out developmental work. Roads and water supply services are provided and maintained for mines under active development throughout the Territory.

(iii) *Controls on Minerals and Metals.* Export controls are maintained over certain minerals and metals. These controls are enforced by means of the Customs (Prohibited Exports) Regulations as amended from time to time by Statutory Rules. To export these materials, it is necessary to obtain a clearance from the following Commonwealth authorities:—

Department of National Development—mineral sands in all forms (including concentrates) containing zircon, rutile or ilmenite; lithium ores and concentrates; beryllium ores and concentrates; manganese ores; iron ores, beneficiated iron ores and iron concentrates;

Department of Primary Industry—phosphate rock, phosphate and superphosphate, and fertilizers containing phosphate or superphosphate;

Australian Atomic Energy Commission—all radio-active minerals, metals and compounds, including uranium, thorium and monazite; lithium metal and alloys; beryllium metal, alloys and compounds; zirconium metal, alloys and compounds.

Further information concerning the Atomic Energy Commission appears in Chapter XIX. Education, Cultural Activities and Research.

## § 2. The Mineral Industry

1. *Sources and Scope of Statistics.*—In the main, the data contained in this chapter consist of official statistics of the Mines Departments of the several States and of the Northern Territory Mines Branch. The particulars shown have been compiled as far as practicable on the standardized basis which has been used in Australia since 1950, and this presentation has involved some rearrangement of official statistics published by the Mines Departments in some States. These statistics have been supplemented, as necessary, by data obtained from the Statisticians of the Several States, the Bureau of Mineral Resources, Geology and Geophysics, the Joint Coal Board, the Division of Minerals of the United States Bureau of Mines, and from several other sources.

The coverage of the collection in respect of construction materials is incomplete in most States. This deficiency is due primarily to the inherent difficulty of obtaining complete lists of quarries (including those operated by governmental authorities) many of which operate intermittently and in different locations. There is difficulty also in obtaining satisfactory returns from quarries operated in conjunction with some other activity, e.g. road-making, brickworks, etc., and quarries operated in conjunction with large construction projects, such as the Snowy Mountains Scheme, are excluded from these statistics. In some States, there have been deficiencies also in the collection of data for certain non-metal (excluding fuel) mining industries, mainly because these are outside the fields normally under the administrative control of Mines Departments. Products chiefly affected are clays, loam and silica.

2. *Presentation of Mineral Statistics.*—(i) *Mineral Industry Data.* The mineral industry includes all mining and quarrying and the recovery of minerals from ore dumps, tailings, etc. Ore-dressing and elementary smelting of metallic minerals (e.g. in the case of gold) and miscellaneous treatment of non-metallic minerals, where these are carried out in an associated plant at or near the mine, are included in the mineral industry. However, establishments primarily engaged in smelting and/or refining (including the smelting and refining sections of the large plants operated at Mount Morgan and Mount Isa in Queensland and at Mount Lyell in Tasmania) are omitted and classified to the manufacturing industry.

For mines and quarries which produce more than one product, it is not possible to apportion some particulars relating to the operations of the mine (employment, salaries and wages paid, and costs incurred in production) to the minerals produced. It is, therefore, the practice to record these data only as a total for each mine and then to classify each mine to the industry of the most important mineral produced. Thus a mine producing, say, both tin and tungsten minerals, would be classified as a tin mine if tin were the more important product by value, and as tungsten if tungsten were the dominant product.

The mineral industries are classified into four major groups, namely, Metal Mining, Fuel Mining, Non-metal (excluding Fuel) Mining, and Construction Material Quarrying.

Mineral industry data have been obtained annually, since 1952, from the Mining and Quarrying Census. This census is carried out in collaboration with the several Mines Departments and involves the uniform collection of particulars from all establishments employing on the average four or more persons during the period worked by the mine. A representative specimen collection form is included in the bulletin *Primary Industries, Part II.*, No. 56, 1961-62, pages 47 and 48. For smaller mines, either simplified Census returns covering number of persons employed and value of output are collected, or these particulars are compiled from data made available by the Mines Departments.

Statistics of oil search operations have been excluded in accordance with the definition of the mining industry on page 1136, but a special article on developments in the search for oil, contributed by the Commonwealth Bureau of Mineral Resources, may be found in Year Book No. 48, pages 1094-9. More recent developments are outlined in § 13 of this chapter. Details of the activities of establishments engaged in the mining and treatment of uranium ore have been excluded because of the confidential nature of these operations.

(ii) *Mineral Product Data.* In the preparation of Australian mineral production statistics, the quantities and values of individual minerals produced are recorded in terms of the products in the form in which they are dispatched from the locality of each mine. For example, in the case of a metal mine, the output is recorded as ore when no treatment is undertaken at the mine, or as a concentrate where ore-dressing operations are carried out in associated works in the locality of the mine. In addition to the basic quantity data, the contents of metallic minerals and contents or average grade of selected non-metallic minerals are recorded. Whenever practicable, contents (based on assay) of metallic minerals are shown for each metal which is a "pay metal" or a "refiners' prize" when present in the particular mineral. In general, other metallic contents which are not recovered are excluded.

Minerals are divided into four major groups, namely, Metals, Fuels, Non-metals (excluding Fuels) and Construction Materials. In this chapter, individual mineral products are arranged in these four groups. Particulars relating to uranium-bearing minerals are excluded.

3. Number of Mines and Quarries.—The following table shows the number of mines and quarries which operated in each State and Territory in 1962.

MINING AND QUARRYING: NUMBER OF MINES AND QUARRIES, 1962

Industry	N.S.W.	Vic.	Q'land	S.A.	W.A.	Tas.	N.T.	A.C.T.	Aust.
Metal mining—									
Gold mining ..	42	24	53	3	141	4	19	..	286
Lead-silver-zinc mining ..	11	..	4	1	4	2	..	..	22
Copper-gold mining ..	12	2	53	2	33	1	..	..	107
Tin mining ..	53	5	216	..	10	33	27	..	344
Mineral sands mining ..	12	..	4	..	4	..	..	..	20
Other metal mining ..	32	3	6	5	36	3	2	..	87
<i>Total, Metal Mining</i>	<i>162</i>	<i>34</i>	<i>336</i>	<i>11</i>	<i>228</i>	<i>43</i>	<i>52</i>	<i>..</i>	<i>866</i>
Fuel mining—									
Black coal mining—									
Underground ..	97	3	73	..	3	(a) 10	..	..	(a) 186
Opencut ..	3	..	7	1	1	..	..	..	12
<i>Total .. ..</i>	<i>100</i>	<i>3</i>	<i>80</i>	<i>1</i>	<i>4</i>	<i>10</i>	<i>..</i>	<i>..</i>	<i>198</i>
Brown coal mining ..	..	6	..	..	..	..	..	..	6
<i>Total, Fuel Mining ..</i>	<i>100</i>	<i>9</i>	<i>80</i>	<i>1</i>	<i>4</i>	<i>10</i>	<i>..</i>	<i>..</i>	<i>204</i>
Non-metal (excluding fuel) mining(b) ..	345	53	102	128	76	25	2	..	731
<i>Total, All Mining ..</i>	<i>607</i>	<i>96</i>	<i>518</i>	<i>140</i>	<i>308</i>	<i>78</i>	<i>54</i>	<i>..</i>	<i>1,801</i>
Construction material quarrying(b) ..	384	254	60	241	44	74	40	10	1,107
<i>Total, All Mining and Quarrying ..</i>	<i>991</i>	<i>350</i>	<i>578</i>	<i>381</i>	<i>352</i>	<i>152</i>	<i>94</i>	<i>10</i>	<i>2,908</i>

(a) Includes one mine operating both underground and open-cut workings. (b) Incomplete, owing to difficulties of coverage. See para. 1. Sources and Scope of Statistics, p. 1136.

In the next table, the numbers of mines and quarries which operated in Australia in each of the years 1958 to 1962 are shown.

**MINING AND QUARRYING: NUMBER OF MINES AND QUARRIES, AUSTRALIA**

Industry	1958	1959	1960	1961	1962
<b>Metal mining—</b>					
Gold mining .. .. .	285	306	296	295	286
Lead-silver-zinc mining .. .. .	50	35	28	27	22
Copper-gold mining .. .. .	81	81	90	111	107
Tin mining .. .. .	180	216	216	266	344
Mineral sands mining .. .. .	28	22	22	21	20
Other metal mining .. .. .	84	96	94	85	87
<i>Total, Metal Mining</i> .. .. .	<i>708</i>	<i>756</i>	<i>746</i>	<i>805</i>	<i>866</i>
<b>Fuel mining—</b>					
Black coal mining .. .. .	227	218	218	202	198
Brown coal mining .. .. .	7	8	7	6	6
<i>Total, Fuel Mining</i> .. .. .	<i>234</i>	<i>226</i>	<i>225</i>	<i>208</i>	<i>204</i>
Non-metal (excluding fuel) mining(a) .. .. .	645	687	698	755	731
<i>Total, All Mining</i> .. .. .	<i>1,587</i>	<i>1,669</i>	<i>1,669</i>	<i>1,768</i>	<i>1,801</i>
Construction material quarrying(a) .. .. .	746	862	892	(b)1,056	(b)1,107
<b>Total, All Mining and Quarrying</b> .. .. .	<b>2,333</b>	<b>2,531</b>	<b>2,561</b>	<b>(b)2,824</b>	<b>(b)2,908</b>

(a) Incomplete. See para. 1. Sources and Scope of Statistics, p. 1136. with years prior to 1961, owing to extension of coverage in Victoria.

(b) Not comparable

4. **Employment in Mining and Quarrying.**—(i) *Persons Engaged.* Statistics of persons employed in the mining and quarrying industry are derived mainly from the annual census of that industry.

Data on the work force employed in the industry are also obtained from the population censuses of Australia. The population census figure for mining and quarrying includes a number of persons excluded by definition from the mining and quarrying census employment figure, e.g. prospectors, head office employees, etc.

In the following table, which shows particulars collected in the population censuses of Australia at 30th June, 1947, 1954, and 1961, the numbers of persons whose industry statements were classified to "mining and quarrying" are shown together with the numbers engaged in all primary industries and the total work force.

**PERSONS ENGAGED IN MINING AND QUARRYING, AUSTRALIA**

Particulars	Census, 30th June—		
	1947	1954	1961
<b>Persons engaged in—</b>			
Mining and quarrying .. .. .	57,574	62,107	54,401
All primary industries .. .. .	563,697	560,100	513,286
<b>Total work force</b> .. .. .	<b>3,196,431</b>	<b>3,702,022</b>	<b>4,225,096</b>
<b>Persons engaged in mining and quarrying as a proportion of—</b>			
All primary industries .. .. . %	10.2	11.1	10.6
Total work force .. .. . %	1.8	1.7	1.3

NOTE.—An adjustment was made to the 1947 and 1954 industry data by distributing over the range of recorded industry the number of persons whose industry was not stated. No such adjustment was made to the 1961 figures.

The following table is derived from mining census data and shows the average numbers engaged in the various mining industries in each State or Territory in 1962.

## MINING AND QUARRYING: EMPLOYMENT(a), 1962

Industry	N.S.W.	Vic.	Q'land	S.A.	W.A.	Tas.	N.T.	A.C.T.	Aust.
Metal mining—									
Gold mining .. ..	15	220	132	..	4,796	..	127	..	5,290
Lead-silver-zinc mining ..	4,652	..	(b)	(b)	5	(b)	..	..	7,958
Copper-gold mining .. ..	100	4	(b)	(b)	172	(b)	234	..	2,242
Tin mining .. ..	103	5	499	..	57	468	25	..	1,157
Mineral sands mining .. ..	869	..	(b)	..	(b)	..	..	..	1,408
Other metal mining .. ..	28	6	8	(b)	342	(b)	2	..	968
<b>Total, Metal Mining</b>	<b>5,767</b>	<b>235</b>	<b>4,507</b>	<b>(b)</b>	<b>(b)</b>	<b>2,156</b>	<b>388</b>	<b>..</b>	<b>19,023</b>
Fuel mining—									
Black coal mining—									
Underground .. ..	11,842	303	2,632	..	(b)	(b)	..	..	(b)
Opencut .. ..	156	..	216	(b)	..	c 219	..	..	(b)
<b>Total .. ..</b>	<b>11,998</b>	<b>303</b>	<b>2,848</b>	<b>(b)</b>	<b>(b)</b>	<b>219</b>	<b>..</b>	<b>..</b>	<b>16,312</b>
Brown coal mining .. ..	..	1,453	..	..	..	..	..	..	1,453
<b>Total, Fuel Mining ..</b>	<b>11,998</b>	<b>1,756</b>	<b>2,848</b>	<b>(b)</b>	<b>(b)</b>	<b>219</b>	<b>..</b>	<b>..</b>	<b>17,765</b>
Non-metal (excluding fuel) mining(d) .. ..	1,115	283	253	543	533	107	4	..	2,838
<b>Total, All Mining ..</b>	<b>18,880</b>	<b>2,274</b>	<b>7,608</b>	<b>1,183</b>	<b>6,807</b>	<b>2,482</b>	<b>392</b>	<b>..</b>	<b>39,626</b>
Construction material quarrying(d) .. ..	1,776	1,933	456	853	246	244	32	59	5,599
<b>Total, All Mining and Quarrying ..</b>	<b>20,656</b>	<b>4,207</b>	<b>8,064</b>	<b>2,036</b>	<b>7,053</b>	<b>2,726</b>	<b>424</b>	<b>59</b>	<b>45,225</b>

(a) Average employment during whole year, including working proprietors. (b) Not available for publication. (c) Includes persons engaged by one mine which has both underground and opencut workings. (d) Incomplete, owing to difficulties of coverage. See para. 1. Sources and Scope of Statistics, p. 1136.

The following table shows particulars of mining employment in Australia for the years 1958 to 1962. The figures show the average number of persons employed during the whole year, including working proprietors.

## MINING AND QUARRYING: EMPLOYMENT, AUSTRALIA

Industry	1958	1959	1960	1961	1962
Metal mining—					
Gold mining .. ..	5,901	5,948	5,544	5,438	5,290
Lead-silver-zinc mining .. ..	9,461	9,031	8,731	8,158	7,958
Copper-gold mining .. ..	2,057	2,301	2,364	2,322	2,242
Tin mining .. ..	944	926	946	1,131	1,157
Mineral sands mining .. ..	1,102	1,019	1,127	1,141	1,408
Other metal mining .. ..	1,030	1,031	1,177	1,097	968
<b>Total, Metal Mining ..</b>	<b>20,495</b>	<b>20,256</b>	<b>19,889</b>	<b>19,287</b>	<b>19,023</b>
Fuel mining—					
Black coal mining .. ..	20,795	18,678	18,529	16,957	16,312
Brown coal mining .. ..	1,540	1,519	1,399	1,441	1,453
<b>Total, Fuel Mining ..</b>	<b>22,335</b>	<b>20,197</b>	<b>19,928</b>	<b>18,398</b>	<b>17,765</b>
Non-metal (excluding fuel) mining (a) .. ..	2,728	2,975	2,925	2,942	2,838
<b>Total, All Mining ..</b>	<b>45,558</b>	<b>43,428</b>	<b>42,742</b>	<b>40,627</b>	<b>39,626</b>
Construction material quarrying (a) .. ..	4,581	4,116	5,016	(b)5,498	(b)5,599
<b>Total, All Mining and Quarrying ..</b>	<b>50,139</b>	<b>47,544</b>	<b>47,758</b>	<b>b 46,125</b>	<b>b 45,225</b>

(a) Incomplete. See para. 1.—Sources and Scope of Statistics, p. 1136. (b) Not comparable with years prior to 1961 owing to extension of coverage in Victoria.

(ii) *Size Classification of Mines and Quarries.* Most of the mines and quarries worked during 1962 employed less than four persons, including working proprietors. However, more than half of the persons engaged in mining and quarrying were in the 48 mines each employing 200 persons or more. The following table shows the distribution of the total number of mines into various size groups according to the average number of persons employed during the period worked by each mine in 1962. For particulars of the method of compiling these industry statistics, see para. 2 (i), pages 1136-7.

#### MINING AND QUARRYING: SIZE CLASSIFICATION OF ESTABLISHMENTS, 1962

Mines and quarries employing on the average(a)—	N.S.W.	Vic.	Q'land	S.A.	W.A.	Tas.	N.T. and A.C.T.	Aust.
Less than 4 persons—								
Establishments ..	709	144	413	270	243	91	87	1,957
Persons ..	1,114	265	660	407	575	169	126	3,316
From 4 to 20 persons—								
Establishments ..	168	174	92	96	82	46	13	671
Persons ..	1,288	1,377	1,019	773	680	307	99	5,543
From 21 to 200 persons—								
Establishments ..	87	29	71	13	17	12	3	232
Persons ..	6,623	1,101	(b)	(b)	1,346	661	142	13,924
More than 200 persons—								
Establishments ..	27	3	2	2	10	3	1	48
Persons ..	12,116	1,888	(b)	(b)	4,874	1,713	223	24,806
Total—								
Establishments ..	991	350	578	381	352	152	104	2,908
Persons ..	21,141	4,631	8,506	2,396	7,475	2,850	590	47,589

(a) Average during period worked. Includes working proprietors. (b) Not available for publication; included in total for Australia.

(iii) *Accidents in Mining.* Particulars of numbers of persons killed and injured in accidents in mines and associated treatment plants are recorded by State Mines Departments. Numbers injured are not reported on a uniform basis in all States, as varying criteria are used in determining what constitutes injury. In 1962, 40 persons were recorded as killed and 1,226 as injured in mining (excluding quarrying) accidents. Recorded deaths and injuries in that year were highest in black coal mines (20 and 352, respectively), gold mines (6 and 320), lead-silver-zinc mines (4 and 288), and copper-gold mines (1 and 80). Persons killed and injured in the construction material quarrying industry numbered 5 and 76, respectively, in 1962.

5. *Production Costs in Mining and Quarrying.*—(i) *Salaries and Wages Paid.* Salaries and wages paid in the mining and quarrying industries in Australia during each year 1958 to 1962 are shown in the following table. Information regarding rates of wages paid in the mining industry is shown in Chapter XIII. Labour, Wages and Prices (p. 451) and also in the *Labour Report*.

**MINING AND QUARRYING: SALARIES AND WAGES PAID(a), AUSTRALIA**  
(£'000)

Industry	1958	1959	1960	1961	1962
<b>Metal mining—</b>					
Gold mining .. .. .	6,492	6,504	6,655	6,591	6,534
Lead-silver-zinc mining .. .. .	13,462	13,944	13,555	13,261	12,227
Copper-gold mining .. .. .	2,362	2,710	2,938	2,915	2,851
Tin mining .. .. .	737	814	905	946	1,050
Mineral sands mining .. .. .	1,327	1,188	1,336	1,474	1,739
Other metal mining .. .. .	1,108	1,058	1,338	1,277	1,188
<i>Total, Metal Mining</i> .. .. .	<i>25,488</i>	<i>26,218</i>	<i>26,727</i>	<i>26,464</i>	<i>25,589</i>
<b>Fuel mining—</b>					
Black coal mining .. .. .	24,501	23,437	25,918	25,460	24,849
Brown coal mining .. .. .	1,694	1,710	1,785	1,923	1,971
<i>Total, Fuel Mining</i> .. .. .	<i>26,195</i>	<i>25,147</i>	<i>27,703</i>	<i>27,383</i>	<i>26,820</i>
<b>Non-metal (excluding fuel) mining(b)</b> .. .. .	2,384	2,631	2,664	2,875	2,898
<i>Total, All Mining</i> .. .. .	<i>54,067</i>	<i>53,996</i>	<i>57,094</i>	<i>56,722</i>	<i>55,307</i>
<b>Construction material quarrying(b)</b> .. .. .	3,241	3,490	3,628	(c)4,018	(c)4,381
<i>Total, All Mining and Quarrying</i> .. .. .	<i>57,308</i>	<i>57,486</i>	<i>60,722</i>	<i>c 60,740</i>	<i>c 59,688</i>

(a) Excludes mines and quarries employing less than four persons, and drawings by working proprietors; the amounts are net after deducting value of explosives sold to employees. (b) Incomplete. See para. 1. Sources and Scope of Statistics, p. 1136. (c) Not comparable with years prior to 1961, owing to extension of coverage in Victoria.

(ii) *Power, Fuel, Light and Materials, etc., used.* The following table contains details of the value of power, fuel, materials and stores used by the mining and quarrying industry during each year 1958 to 1962.

**MINING AND QUARRYING: VALUE OF POWER, FUEL, LIGHT AND MATERIALS, ETC., USED, AUSTRALIA**  
(£'000)

Industry	1958	1959	1960	1961	1962
<b>Metal mining—</b>					
Gold mining .. .. .	4,970	5,069	4,909	4,979	4,947
Lead-silver-zinc mining .. .. .	10,025	10,367	12,106	10,303	8,671
Copper-gold mining .. .. .	2,969	3,325	3,288	3,503	3,384
Tin mining .. .. .	521	512	530	601	637
Mineral sands mining .. .. .	1,281	1,348	1,562	1,797	1,838
Other metal mining .. .. .	1,004	924	1,109	1,258	1,242
<i>Total, Metal Mining</i> .. .. .	<i>20,770</i>	<i>21,545</i>	<i>23,504</i>	<i>22,441</i>	<i>20,719</i>
<b>Fuel mining—</b>					
Black coal mining .. .. .	10,536	10,166	11,319	12,409	13,346
Brown coal mining .. .. .	612	593	623	622	672
<i>Total, Fuel Mining</i> .. .. .	<i>11,148</i>	<i>10,759</i>	<i>11,942</i>	<i>13,031</i>	<i>14,018</i>
<b>Non-metal (excluding fuel) mining(a)</b> .. .. .	2,389	2,359	2,340	2,508	2,818
<i>Total, All Mining</i> .. .. .	<i>34,307</i>	<i>34,663</i>	<i>37,786</i>	<i>37,500</i>	<i>37,555</i>
<b>Construction material quarrying(a)</b> .. .. .	3,312	4,167	4,427	(b)4,926	(b)4,500
<i>Total, All Mining and Quarrying</i> .. .. .	<i>37,619</i>	<i>38,830</i>	<i>42,213</i>	<i>(b)42,906</i>	<i>b 42,055</i>

(a) Incomplete. See para. 1. Sources and Scope of Statistics, p. 1136. (b) Not comparable with years prior to 1961, owing to extension of coverage in Victoria.



6. Value of Additions and Replacements to Fixed Assets in Mining and Quarrying.—The following table shows details for Australia of the value of additions and replacements to fixed assets during the years 1958 to 1962.

**MINING AND QUARRYING: VALUE OF ADDITIONS AND REPLACEMENTS TO FIXED ASSETS(a), AUSTRALIA**  
(£'000)

Industry	1958	1959	1960	1961	1962
<b>Metal mining—</b>					
Gold mining .. .. .	1,334	1,446	789	778	1,608
Lead-silver-zinc mining .. .. .	3,692	6,566	3,548	3,425	3,523
Copper-gold mining .. .. .	540	651	451	845	1,365
Tin mining .. .. .	75	66	185	261	270
Mineral sands mining .. .. .	894	787	481	728	1,876
Other metal mining .. .. .	624	713	1,369	1,138	2,577
<i>Total, Metal Mining</i> .. .. .	<i>7,159</i>	<i>10,229</i>	<i>6,823</i>	<i>7,175</i>	<i>11,219</i>
<b>Fuel mining—</b>					
Black coal mining .. .. .	7,912	7,707	10,947	11,535	13,048
Brown coal mining .. .. .	2,309	3,654	1,914	2,723	3,061
<i>Total, Fuel Mining</i> .. .. .	<i>10,221</i>	<i>11,361</i>	<i>12,861</i>	<i>14,258</i>	<i>16,109</i>
Non-metal (excluding fuel) mining(b) .. .. .	1,283	1,454	588	1,274	704
<i>Total, All Mining</i> .. .. .	<i>18,663</i>	<i>23,044</i>	<i>20,272</i>	<i>22,707</i>	<i>28,032</i>
Construction material quarrying(b) .. .. .	825	1,408	1,624	2,281	1,951
<b>Total, All Mining and Quarrying</b> .. .. .	<b>19,488</b>	<b>24,452</b>	<b>21,896</b>	<b>24,988</b>	<b>29,983</b>

(a) Excludes mines and quarries employing less than four persons.  
para. 1. Sources and Scope of Statistics, p. 1136.

(b) Incomplete. See

7. Mineral Production.—(i) *Quantity of Principal Minerals Produced.* In the following table, particulars of the quantity of the principal minerals produced during 1962 are shown for each State and the Northern Territory.

**QUANTITY OF PRINCIPAL MINERALS PRODUCED, 1962**

Mineral	N.S.W.	Vic.	Q'land	S.A.	W.A.	Tas.	N.T.	Aust.
<b>METALLIC MINERALS</b>								
Antimony ore and concentrate tons	99	1	(a)	..	..	..	..	100
Bauxite .. .. .	5,225	4,413	19,909	..	..	..	..	29,547
Beryllium ore .. .. .	10	..	..	18	195	..	..	223
Copper ore(b) .. .. .	32	73	90,705	..	9,275	9,882	800	110,777
Copper concentrate .. .. .	642	..	308,862	..	5,277	49,361	31,285	395,427
Copper precipitate .. .. .	136	..	14	..	..	13	53	216
Gold(c) .. .. . oz.	488	(d)	(d)	(d)	(d)	453	(d)	(d)
Ilmenite concentrate .. .. . tons	4,288	..	..	..	175,206	..	..	179,494
Iron ore(e) .. .. . '000 tons	..	..	..	3,439	1,404	..	..	4,843
Lead ore(f) .. .. . tons	328	..	12,869	..	..	..	..	13,197
Lead concentrate .. .. .	384,535	..	123,556	..	443	13,742	..	522,276
Lead-copper concentrate .. .. .	..	..	..	..	..	11,192	..	11,192
Manganese ore .. .. .	583	..	2,880	..	67,871	..	312	71,646
Pyrite concentrate .. .. .	4,130	..	12,960	73,642	49,461	8,373	..	148,566
Rutile concentrate .. .. .	80,171	..	38,501	..	523	..	..	119,195
Tantalite-columbite concentrate lb.	..	..	..	..	43,097	..	..	43,097
Tin concentrate .. .. . tons	293	11	1,505	..	465	1,507	61	3,842
<b>Tungsten concentrates—</b>								
Scheelite concentrate .. .. .	..	..	..	..	7	988	..	995
Wolfram concentrate .. .. .	..	..	2	..	..	488	2	492
Zinc concentrate .. .. .	428,282	..	63,967	..	..	80,651	..	572,900
Zircon concentrate .. .. .	91,298	..	38,815	..	3,731	..	..	133,844

NOTE.—For footnotes see next page.

## QUANTITY OF PRINCIPAL MINERALS PRODUCED, 1962—continued

Mineral	N.S.W.	Vic.	Q'land	S.A.	W.A.	Tas.	N.T.	Aust.
<b>FUEL MINERALS</b>								
Coal, black—								
Semi-anthracite .. '000 tons	..	..	68	..	..	2	..	70
Bituminous .. .. "	19,031	57	2,648	..	..	270	..	22,006
Sub-bituminous .. .. "	..	..	83	1,392	919	..	..	2,394
<i>Total</i> .. .. "	19,031	57	2,799	1,392	919	272	..	24,470
Coal, brown (lignite) .. .. "	..	17,137	..	..	..	..	..	17,137

## NON-METALLIC (EXCLUDING FUEL) MINERALS

Asbestos .. .. short tons	866	..	..	..	17,550	..	..	18,416
Barite .. .. .. tons	435	..	..	11,605	494	..	..	12,534
Clays—								
Brick clay and shale .. '000 tons	1,966	1,181	316	338	441	141	..	4,383
Other(g) .. .. .. "	623	140	3	68	48	31	..	913
Diatomite .. .. .. tons	4,318	770	2,209	..	15	..	..	7,312
Dolomite(h) .. .. .. "	4,919	..	3,708	169,853	..	2,217	..	180,697
Felspar .. .. .. "	5,925	..	..	1,321	1,267	..	..	8,513
Gypsum .. .. .. "	71,802	78,728	..	428,730	51,650	..	..	630,910
Limestone(h) .. .. '000 tons	2,432	1,214	(i)	1,400	(i)	319	..	6,415
Magnesite .. .. .. tons	61,672	..	..	295	224	..	..	62,191
Phosphate rock .. .. .. "	..	..	..	4,317	68	..	..	4,385
Salt, crude .. .. .. "	..	(i)	(i)	389,597	(i)	..	890	536,019
Silica (glass, chemical, etc.) (g) ..	158,619	..	25,614	23,446	10,351	514	..	218,544
Talc .. .. .. .. "	1,071	..	..	8,008	4,981	..	..	14,060

## CONSTRUCTION MATERIALS(g)

Sand .. .. .. .. '000 tons	2,957	2,797	n.a.	1,516	n.a.	98 (j)	167	7,535
River gravel and gravel boulders .. .. "	1,492	2,943	n.a.	747	n.a.	646 (j)	84	5,912
Dimension stone .. .. "	197	9	3	37	128	1 (j)	4	379
Crushed and broken stone .. .. "	3,947	11,205	2,363	8,302	1,320	617 (j)	190	27,944
Other (decomposed rock, etc.) ..	15,491	1,713	n.a.	n.a.	n.a.	106	n.a.	17,310

(a) Less than one half ton. (b) Includes cupreous ore for fertilizer. (c) Bullion, alluvial, retorted gold, etc. (d) Gross weight not available. (e) Iron oxide for metal extraction. (f) Includes lead-silver-zinc ore. (g) Incomplete, see para 1. Source and Scope of Statistics, p. 1136. (h) Excludes quantities used directly as a building or road material. (i) Not available for publication. (j) Includes Australian Capital Territory which is not available for separate publication.

NOTE.—Particulars of uranium concentrate produced are not available for publication and are excluded.

(ii) *Quantities of Principal Minerals Produced, Australia.* The following table shows the quantities of the principal minerals produced in Australia during the years 1958 to 1962.

## QUANTITIES OF PRINCIPAL MINERALS PRODUCED: AUSTRALIA

Mineral	1958	1959	1960	1961	1962
<b>METALLIC MINERALS</b>					
Antimony ore and concentrate .. tons	1,116	1,022	256	190	100
Bauxite .. .. . "	6,909	14,985	69,435	15,976	29,547
Beryllium ore .. .. . "	247	317	190	306	223
Chromite .. .. . "	776	120	529	..	369
Copper ore(a) .. .. . "	58,109	77,738	68,321	75,215	110,777
Copper concentrate .. .. . "	279,976	358,774	432,758	373,770	395,427
Copper precipitate .. .. . "	1,536	1,379	1,301	825	216
Gold concentrate .. .. . "	1,855	1,487	43	1	..
Gold—other forms(b) .. .. . oz. (c)	..	..	..	..	..
Ilmenite concentrate .. .. . tons	69,948	83,577	106,586	166,400	179,494
Iron ore(d) .. .. . '000 tons	3,917	4,141	4,355	5,342	4,843
Lead ore(e) .. .. . tons	21,854	12,693	13,716	7,743	13,197
Lead concentrate .. .. . "	492,908	461,055	449,590	382,292	522,276
Lead-copper concentrate .. .. . "	7,630	6,010	6,797	8,057	11,192
Manganese ore .. .. . "	59,683	89,971	60,646	87,411	71,646
Pyrite concentrate .. .. . "	226,744	223,004	238,630	213,423	148,566
Rutile concentrate .. .. . "	83,328	81,905	88,637	101,431	119,195
Tantalite-columbite concentrate .. lb.	13,507	18,950	23,677	31,808	43,097
Tin concentrate .. .. . tons	3,128	3,304	3,099	3,870	3,842
Tungsten concentrates—					
Scheelite concentrate .. .. . "	733	1	420	1,017	995
Wolfram concentrate .. .. . "	517	903	1,131	1,142	492
Zinc concentrate .. .. . "	503,752	473,276	549,000	542,640	572,900
Zircon concentrate .. .. . "	59,269	113,356	102,362	136,462	133,844
<b>FUEL MINERALS</b>					
Coal, black—					
Semi-anthracite .. .. . '000 tons	57	54	50	59	70
Bituminous .. .. . "	18,616	18,576	20,641	21,991	22,006
Sub-bituminous .. .. . "	1,769	1,668	1,878	1,956	2,394
<i>Total</i> .. .. . "	20,442	20,298	22,569	24,006	24,470
Coal, brown (lignite) .. .. . "	11,644	13,035	14,967	16,279	17,137
<b>NON-METALLIC (EXCLUDING FUEL) MINERALS</b>					
Asbestos .. .. . short tons	15,568	17,875	15,613	16,746	18,416
Barite .. .. . tons	6,802	6,214	11,417	19,217	12,534
Clays—					
Brick clay and shale .. .. . '000 tons	3,829	4,299	4,636	4,344	4,383
Other .. .. . "	775	823	880	912	913
Diatomite .. .. . tons	4,240	5,089	4,659	5,417	7,312
Dolomite(f) .. .. . "	138,832	160,084	190,868	191,624	180,697
Felspar .. .. . "	7,016	6,750	8,414	8,209	8,513
Gypsum .. .. . "	504,938	516,791	580,878	609,907	630,910
Limestone(f) .. .. . '000 tons	5,324	5,305	5,669	6,146	6,415
Magnesite .. .. . tons	69,391	60,586	62,166	98,795	62,191
Mica—muscovite, trimmed .. lb.	42,479	44,665	9,500	..	..
Phosphate rock .. .. . tons	7,421	4,775	2,321	4,874	4,385
Salt, crude .. .. . "	429,534	467,532	463,296	508,657	536,019
Silica (glass, chemical, etc.) .. .. . "	145,483	154,778	210,100	212,575	218,544
Talc .. .. . "	15,393	16,376	15,670	13,545	14,060

NOTE.—For footnotes see next page.

QUANTITIES OF PRINCIPAL MINERALS PRODUCED: AUSTRALIA—*continued*

Mineral	1958	1959	1960	1961	1962
CONSTRUCTION MATERIALS(g)					
Sand .. .. . '000 tons	4,118	4,623	5,934	7,427	7,535
River gravel and gravel boulders .. .. . "	2,265	2,524	2,932	6,018	5,912
Dimension stone .. .. . "	272	283	318	533	379
Crushed and broken stone .. .. . "	15,542	19,822	22,530	27,303	27,944
Other (decomposed rock, etc.) .. .. . "	12,722	13,699	15,586	16,482	17,310

(a) Includes cupreous ore for fertilizer. (b) Bullion, alluvial, retorted gold, etc. (c) Gross weight not available. (d) Iron oxide for metal extraction. (e) Includes lead-silver-zinc ore. (f) Excludes quantities used directly as a building or road material. (g) Incomplete owing to difficulties of coverage. See para. 1. Sources and Scope of Statistics, p. 1136. 1961 and later figures are not comparable with previous years owing to extension of coverage in Victoria.

NOTE.—Particulars of production of uranium oxide (U<sub>3</sub>O<sub>8</sub>) are not available for publication.

(iii) *Contents of Metallic Minerals Produced.* The following table shows the contents of metallic minerals produced in 1962 which were "pay metals" or which were recovered as "refiners' prizes". Further particulars for earlier years are shown in the following paragraph and in the sections later in this chapter covering principal contents.

## CONTENTS OF METALLIC MINERALS PRODUCED, 1962

Content of metallic minerals produced	N.S.W.	Vic.	Q'land	S. Aust.	W. Aust.	Tas.	N.T.	Aust.
Alumina (Al <sub>2</sub> O <sub>3</sub> ) .. .. . tons	1,991	2,300 (a)	8,959	..	..	..	..	(b)13,250
Antimony .. .. . "	874	(c)	(c)	..	..	..	..	874
Beryllium oxide (BeO) .. .. . unit(d)	130	..	..	233	2,223	..	..	2,586
Bismuth .. .. . lb.	..	..	..	..	97	..	..	97
Cadmium .. .. . tons	920	..	..	..	..	72	..	992
Cobalt .. .. . "	77	..	..	..	..	1	..	78
Copper .. .. . "	3,747	10	79,242	2	1,488	14,515	7,968	106,972
Gold .. .. . fine oz.	11,234	28,262	67,729	48	860,039	32,115	69,410	1,068,837
Iron(e) .. .. . '000 tons	..	..	..	(a) 2,236	883	..	..	(b) 3,119
Lead .. .. . tons	292,381	..	62,669	..	306	14,754	..	370,118
Manganese(f) .. .. . "	..	..	1,296	..	32,862	..	..	34,150
Manganese dioxide (MnO <sub>2</sub> )(g) .. .. . tons	424	..	..	..	152	..	188	764
Molybdenum disulphide (MoS <sub>2</sub> ) .. .. . lb.	..	..	(a) 2,332	..	..	..	..	(a) 2,332
Monazite .. .. . tons	136	..	66	..	570	..	..	772
Platinum .. .. . oz.	2	..	..	..	..	..	..	2
Silver .. .. . '000 fine oz.	9,929	1	5,601	..	218	1,700	105	17,554
Sulphur(h) .. .. . tons	196,793	..	(b)27,151 (a)29,092 (b)23,209	..	36,558	..	..	b 312,803
Tantalite .. .. . columbite (Ta <sub>5</sub> O <sub>8</sub> +Nb <sub>5</sub> O <sub>8</sub> ) .. .. . lb.	..	..	..	..	18,879	..	..	18,879
Tin .. .. . tons	212	7	1,077	..	323	1,058	38	2,715
Titanium dioxide (TiO <sub>2</sub> ) .. .. . tons	79,157	..	37,472	..	98,865	..	..	215,494
Tungstic oxide (WO <sub>3</sub> ) .. .. . tons	..	..	1	..	5	1,035	1	1,042
Zinc .. .. . "	244,863	..	44,704	47	..	47,918	..	337,532
Zircon .. .. . "	89,947	..	38,468	..	3,694	..	..	132,109

(a) Estimated. (b) Partly estimated. (c) Less than one half ton. (d) 1 unit = 22.4 lb. (e) Excludes iron content of iron oxide not intended for metal extraction. (f) Content of metallurgical grade manganese ore. (g) Content of manganese ore of other than metallurgical grade. (h) Sulphur content of pyrite and other minerals from which sulphur is extracted.

NOTE.—Particulars of production of uranium oxide (U<sub>3</sub>O<sub>8</sub>) are not available for publication.

(iv) *Contents of Metallic Minerals Produced in Australia.* Particulars of the contents of metallic minerals produced in Australia in the years 1958 to 1962 are shown in the following table. Graphs showing details of the mine production of principal metals and coal from 1935 to 1963 may be found on pages 1147-8.

CONTENTS OF METALLIC MINERALS PRODUCED: AUSTRALIA

Content of metallic minerals produced	1958	1959	1960	1961	1962
Alumina (Al <sub>2</sub> O <sub>3</sub> ) .. tons	3,533	6,914	31,393	7,464	13,250
Antimony .. "	1,356	1,280	786	680	874
Beryllium oxide (BeO) units(b)	2,900	3,587	2,221	3,585	2,586
Bismuth .. lb.	2,328	..	..	602	97
Cadmium .. tons	872	860	949	907	992
Chromic oxide (Cr <sub>2</sub> O <sub>3</sub> )(c)	386	60	265	..	185
Cobalt .. "	71	60	65	65	78
Copper .. "	75,715	94,950	109,435	95,626	106,972
Gold .. fine oz.	1,103,980	1,085,104	1,086,709	1,076,292	1,068,837
Iron(d) .. '000 tons	2,539	2,700	2,814	3,434	3,119
Lead .. tons	328,347	316,293	308,163	269,656	370,110
Manganese(e)	25,623	40,966	28,585	40,989	34,158
Manganese dioxide (MnO <sub>2</sub> )(f)	2,819	2,475	1,617	1,104	764
Molybdenum disulphide (MoS <sub>2</sub> ) .. lb.	(c) 8,568	..	..	2,630	(c) 2,332
Monazite .. tons	423	331	344	1,463	772
Osmiridium .. oz.	43	3	..	..	..
Platinum .. "	22	..	4	2	2
Silver .. '000 fine oz.	16,340	15,161	15,216	13,059	17,554
Sulphur(a)(g) .. tons	322,619	310,545	340,000	324,866	312,803
Tantalite-columbite (Ta <sub>2</sub> O <sub>5</sub> + Nb <sub>2</sub> O <sub>5</sub> ) .. lb.	6,736	8,499	11,500	13,814	18,879
Tin .. tons	2,237	2,351	2,202	2,745	2,715
Titanium dioxide (TiO <sub>2</sub> ) .. "	119,233	125,301	144,744	191,965	215,494
Tungstic oxide (WO <sub>3</sub> ) .. "	850	653	1,111	1,536	1,042
Zinc .. "	293,708	275,411	317,489	311,157	337,532
Zircon .. "	58,745	112,352	101,494	134,483	132,109

(a) Partly estimated. (b) 1 unit = 22.4 lb. (c) Estimated. (d) Iron oxide for metal extraction. Partly estimated. (e) Content of metallurgical grade manganese ore. (f) Content of manganese ore of other than metallurgical grade. (g) Sulphur content of pyrite and other minerals from which sulphur is extracted.

NOTE.—Particulars of production of uranium oxide (U<sub>3</sub>O<sub>8</sub>) are not available for publication.

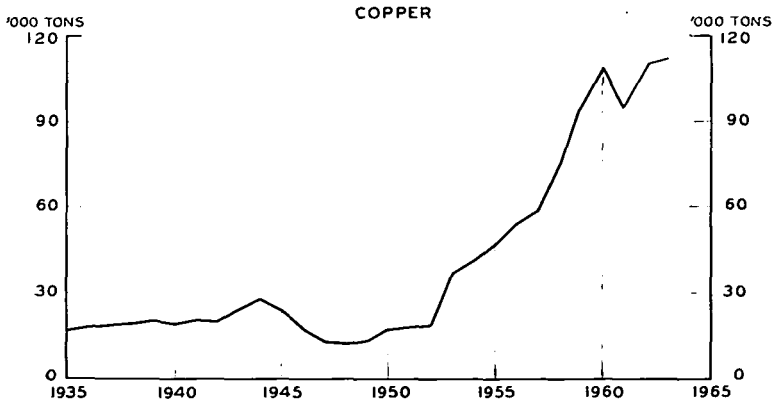
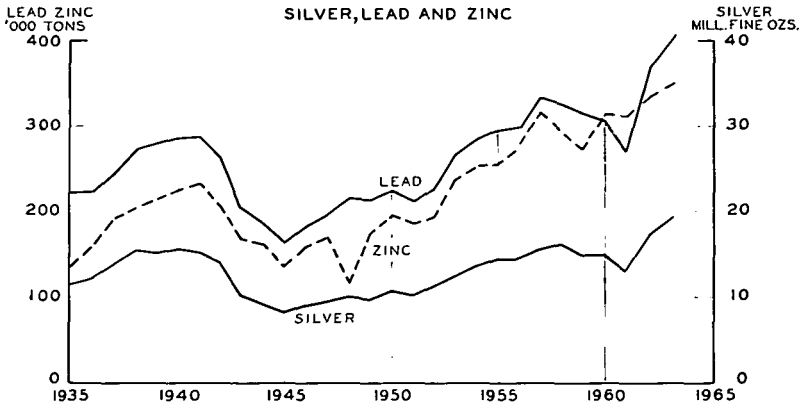
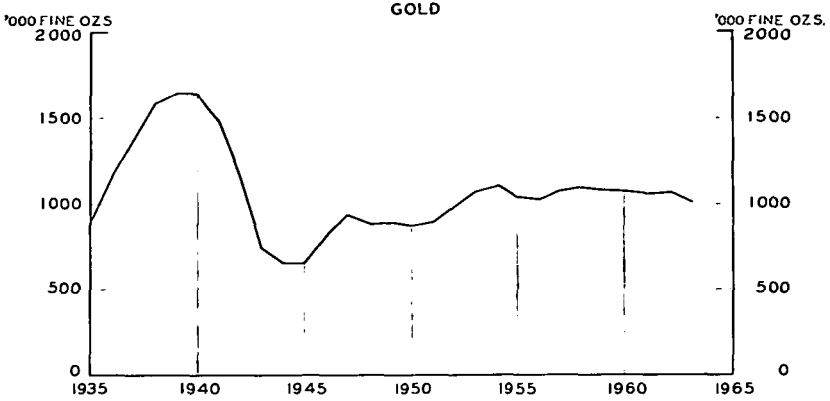
### § 3. Gold

1. **Historical.**—A brief history of gold-mining in Australia may be found in previous issues of the Year Book (*see* No. 48, p. 1059).

2. **Methods of Mining and Treatment.**—Gold ores can be divided into two types, namely, free-milling and refractory. Free-milling ores are those that, when finely ground, will yield their gold content to amalgamation and/or cyanidation, and these are found in most of the gold deposits of Australia.

MINE PRODUCTION OF PRINCIPAL METALS  
(METALLIC CONTENT OF MINERALS)

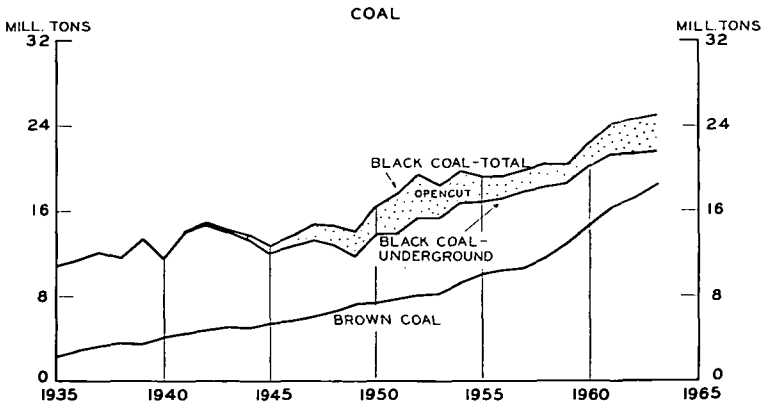
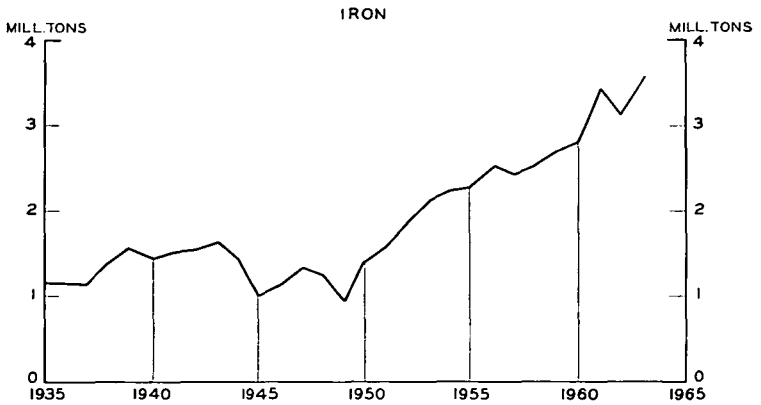
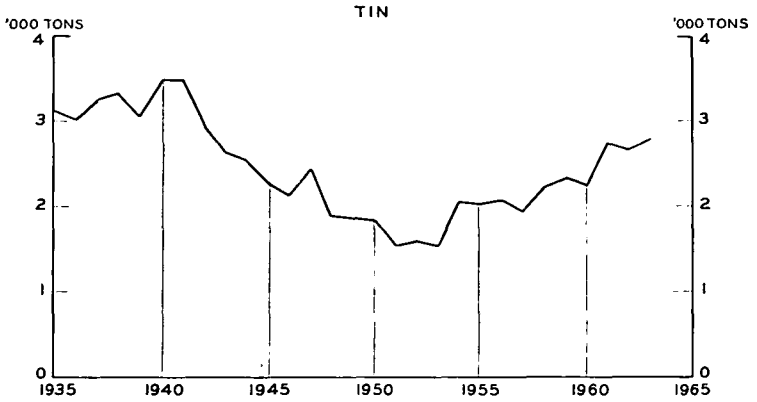
AUSTRALIA, 1935 TO 1963



MINE PRODUCTION OF PRINCIPAL METALS  
AND PRODUCTION OF COAL

(METALLIC CONTENT OF MINERALS)

AUSTRALIA, 1935 TO 1963



Some refractory ores, which are not amenable to amalgamation, allow their gold to be dissolved by cyanidation, from which solution the gold is then precipitated. However, on the Coolgardie field, where gold-bearing sulphide and telluride minerals occur, it is necessary first to recover these from gangue by flotation. This concentrate is then roasted, and the resulting calcine, an impure oxide containing free gold, is cyanided to yield gold. This is usually smelted as bullion, in which form it leaves the vicinity of the mine.

3. Mine Production.—The following table shows the mine production of gold (gold content of minerals produced) during 1962 according to the mineral in which it was contained and the State or Territory of origin. A small quantity of gold recovered from pyrite concentrate produced at Kalgoorlie, Western Australia, for sulphuric acid manufacture is included with gold ore, concentrate, etc.

GOLD: MINE PRODUCTION, 1962  
(Fine oz.)

Mineral in which contained	N.S.W.	Vic.	Q'land	S.A.	W.A.	Tas.	N.T.	Aust.
Copper ore, concentrate, etc. ..	302	..	53,085	..	2,679	7,453	15,285	78,804
Gold ore, concentrate, etc. ..	432	28,262	14,644	48	857,360	414	54,125	955,285
Lead concentrate ..	8,902	..	..	..	..	3,384	..	12,286
Lead-copper concentrate ..	..	..	..	..	..	18,021	..	18,021
Zinc concentrate ..	1,598	..	..	..	..	2,843	..	4,441
<b>Total Gold ..</b>	<b>11,234</b>	<b>28,262</b>	<b>67,729</b>	<b>48</b>	<b>860,039</b>	<b>32,115</b>	<b>69,410</b>	<b>1,068,837</b>

The principal sources of production during 1962 were as follows.

(i) *New South Wales.* Most of the gold produced during 1962 was contained in lead and zinc concentrates produced at Broken Hill.

(ii) *Victoria.* At Chewton, near Castlemaine, one mine produced almost half of the State's production. Two other gold mines located in eastern Victoria produced the bulk of the remainder.

(iii) *Queensland.* The copper concentrate produced at Mount Morgan contained more than three-quarters of the State's output of gold, nearly all the remaining production coming from a mine at Cracow.

(iv) *South Australia.* The only gold produced was won by prospectors.

(v) *Western Australia.* More than half the total production came from the East Coolgardie goldfield, while most of the remaining production came from the Dundas, Murchison and Yilgarn goldfields. A single mine at Fimiston maintained its position as the largest gold producer in Australia, mining 181,095 fine oz. during 1962, and three other mines each produced over 100,000 fine oz. in the same period.

(vi) *Tasmania.* Lead-copper, lead and zinc concentrates milled at Rosebery contained more than three-quarters of the gold produced in Tasmania during 1962, nearly all the remaining production being contained in copper concentrate produced at Mount Lyell.

(vii) *Northern Territory.* Gold production is centred around Tennant Creek.

The following table shows the recorded mine production of gold (i.e. gold content of minerals produced) in the several States and in Australia as a whole during each year 1959 to 1963 and total output since the first major discovery of gold in 1851. Owing to defective information in the earlier years, it is likely that the total production figures fall considerably short of the actual totals.



## GOLD: MINE PRODUCTION(a)

State or Territory	1959	1960	1961	1962	1963(b)	Total(b) 1851-1963
	f. oz.	f. oz.	f. oz.	f. oz.	f. oz.	'000 f. oz.
New South Wales ..	13,275	13,628	12,034	11,234	11,604	16,458
Victoria ..	34,662	28,566	26,229	28,262	24,744	73,757
Queensland ..	91,687	78,267	64,786	67,729	67,534	22,888
South Australia ..	16	36	55	48	16	451
Western Australia ..	860,969	869,966	870,658	860,039	802,860	64,160
Tasmania ..	21,353	23,994	26,885	32,115	36,181	2,495
Northern Territory ..	63,142	72,252	75,645	69,410	79,738	1,607
<b>Australia ..</b>	<b>1,085,104</b>	<b>1,086,709</b>	<b>1,076,292</b>	<b>1,068,837</b>	<b>1,022,677</b>	<b>181,816</b>

(a) Gold content of minerals produced.

(b) Subject to revision.

4. **Refinery Production.**—Amalgam and gold slimes from cyanide extraction are treated at the mines to produce gold bullion, which at some mines may be partly refined before dispatch to the Royal Mints, located in Melbourne and Perth. By-product gold from lead smelting is refined at Port Pirie in South Australia, while the gold contained in copper refinery sludges resulting from electrolytic copper refining at Mount Lyell and Port Kembla is recovered at Port Kembla. Gold bullion and other gold-bearing materials are also refined in Sydney.

Details of the refinery production of gold in Australia and the value of refined newly-won gold of Australian origin are shown in the following table for each of the years 1959 to 1963. The value of the refined newly-won gold is based on the price fixed by the Reserve Bank, but allowance is made for premiums on sales of gold overseas and for industrial purposes in Australia.

## PRODUCTION OF REFINED GOLD IN AUSTRALIA

Particulars	1959	1960	1961	1962	1963
QUANTITY (FINE OZ.)					
Australian origin—					
Newly-won gold .. ..	1,067,129	1,045,139	1,036,947	1,024,623	958,381
From scrap .. ..	20,617	22,699	22,593	21,806	20,404
Overseas origin—					
Newly-won gold .. ..	141,624	142,526	155,598	138,455	161,083
From scrap .. ..	1,075	1,164	1,277	188	290
<b>Total .. ..</b>	<b>1,230,445</b>	<b>1,211,528</b>	<b>1,216,415</b>	<b>1,185,072</b>	<b>1,140,158</b>

## VALUE (£'000) (a)

<i>Newly-won gold of Australian origin .. ..</i>	16,677	16,396	16,241	16,021	14,997
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(a) Based on the price fixed by the Reserve Bank. Includes allowance for premiums on sales of gold overseas and for industrial purposes in Australia.

5. Changes in Stocks of Gold held in Australia.—The following table shows particulars of production and consumption, imports and exports of gold and changes in stocks of gold held in Australia for each of the years 1959 to 1963.

CHANGES IN STOCKS OF GOLD HELD IN AUSTRALIA  
(fine oz.)

Particulars	1959	1960	1961	1962	1963 (a)
Mine production of gold(b) ..	1,085,104	1,086,709	1,076,292	1,068,837	1,022,677
Imports of gold(c)(d) ..	136,674	144,033	146,279	132,963	162,065
<i>Total</i> .. ..	<i>1,221,778</i>	<i>1,230,742</i>	<i>1,222,571</i>	<i>1,201,800</i>	<i>1,184,742</i>
Exports of gold(c) .. ..	128,052	2,513,906	1,099,701	314,996	472,132
Gold content of ores and concentrates exported ..	17,941	25,803	39,835	44,166	50,683
Net industrial consumption of gold .. ..	33,938	40,972	35,429	47,881	61,042
<i>Total</i> .. ..	<i>179,931</i>	<i>2,580,681</i>	<i>1,174,965</i>	<i>407,043</i>	<i>583,857</i>
Changes in stocks of gold held in Australia(e) .. ..	+1,041,847	-1,349,939	+ 47,606	+ 794,757	+ 600,885

(a) Subject to revision. (b) Gold content of minerals produced in Australia. (c) Includes gold contained in matte. Excludes specie, leaf and foil and gold in unrefined forms other than the gold content of unrefined gold and silver bullion. (d) Excludes gold imported in some minor minerals. (e) Includes changes in holdings in Australia by official and banking institutions both on their own behalf and that of non-residents, together with the gold content of change in stocks of minerals awaiting refining. The sign near the figure indicates increase (+) or decrease (-) in stocks during the period shown.

6. Prices of Gold.—Under existing legislation, all gold produced in Australia is sold to the Reserve Bank. The official price of gold is fixed by the Reserve Bank. On 1st May, 1954, it was raised from £15 9s. 10d. to £15 12s. 6d. per fine oz. and has remained unchanged since that date. The current price reflects the "parity" value of Australian currency established by the *International Monetary Agreement Act 1947*. Prior to 1947, the price of gold was based on the price for which it could be sold abroad in official markets, less cost of movement.

Average prices of gold per fine oz. at mints in Australia and on the London gold market are shown in the following table for the years 1959 to 1963.

PRICES OF GOLD: AUSTRALIA AND LONDON  
(per fine oz.)

Place of sale	1959	1960	1961	1962	1963
At mints in Australia £A. s. d.	15 12 6	15 12 6	15 12 6	15 12 6	15 12 6
London .. fstg. s. d.	12 9 10½	12 11 2½	12 11 0	12 10 1	12 10 6½

7. Sales of Gold on Oversea Premium Markets.—In November, 1951, the Commonwealth Government decided to allow Australian gold producers to benefit from the higher prices then being paid for gold on some overseas markets. To implement this decision, producers formed the Gold Producers' Association Limited in December, 1951, and the first sales were made in that month. By arrangement with the Reserve Bank of Australia, the total quantity of newly-won gold delivered to the Bank by members of the Association in any calendar month, less the quantity required for industrial purposes in Australia, is available to the Association for sale on overseas premium markets during the ensuing two calendar months. The net proceeds from premium sales are distributed to members in proportion to their production of gold.

The following table shows the quantity and value of gold sold on overseas premium markets and the average price realized for these sales during the years 1959 to 1963.

### GOLD SOLD ON OVERSEA PREMIUM MARKETS

Particulars	Unit	1959	1960	1961	1962	1963
Quantity ..	fine oz.	37,346	320,151	733,217	320,323	512,805
Value ..	£A. f.o.b.	584,129	5,049,183	11,513,571	5,016,625	8,028,227
Average price ..	£A. s. d.	15 12 9 $\frac{3}{4}$	15 15 5	15 14 0 $\frac{1}{2}$	15 13 2 $\frac{1}{2}$	15 13 1 $\frac{1}{2}$

8. Gold Subsidy.—Details of amounts paid under the provisions of the *Gold Mining Industry Assistance Act 1954–1962* for the years 1959 to 1963 are shown in the following table. Particulars of this Act and other legislation are given in para. 3 (i) (b) on page 1133.

### NET SUBSIDY PAYMENTS TO GOLD PRODUCERS

(£)

Year	New South Wales	Vic.	Q'land	S. Aust.	W. Aust.	Tas.	Nor. Terr.	Papua and New Guinea	Total
1959 .. ..	107	41,500	2,937	55	652,266	..	39,181	52,449	788,495
1960 .. ..	14	45,881	881	35	698,242	..	4,253	65,292	814,598
1961 .. ..	145	63,036	1,325	..	585,306	..	4,930	44,758	699,500
1962 .. ..	61	50,579	2,134	97	621,573	18	1,235	72,812	748,509
1963 .. ..	463	43,267	2,488	..	669,782	12	288	42,896	759,196

9. Production in Principal Countries.—The quantities of gold produced in the principal producing countries and the estimated world total production in each of the years 1958 to 1962 are shown in the following table.

### GOLD: PRODUCTION IN PRINCIPAL COUNTRIES

(Source: Division of Minerals, United States Bureau of Mines)

('000 fine oz.)

Country	1958	1959	1960	1961	1962
South Africa .. ..	17,656	20,066	21,383	22,942	25,492
U.S.S.R.(a) .. ..	10,000	10,000	11,000	11,800	12,200
Canada .. ..	4,571	4,483	4,629	4,474	4,156
United States of America .. ..	1,759	1,635	1,680	1,567	1,556
Australia .. ..	1,104	1,085	1,087	1,076	1,069
Ghana .. ..	853	913	893	853	888
Rhodesia and Nyasaland .. ..	559	572	568	574	558
Philippines .. ..	423	403	411	424	423
Colombia .. ..	372	398	434	410	397
Japan .. ..	261	262	261	295	286
<i>Estimated World Total</i> .. ..	40,600	42,800	45,300	47,400	50,000

(a) Estimated.

## § 4. Lead, Silver and Zinc

1. **Historical.**—A brief history of silver-lead-zinc mining in Australia may be found in previous issues of the Year Book (*see* No. 48, p. 1065).

2. **Methods of Mining and Treatment.**—All the lead-zinc production from the large mines is obtained by underground mining. The lead-zinc sulphides mined are concentrated by differential flotation to produce separate lead and zinc concentrates, with the lead concentrate containing most of the silver.

3. **Mine Production.**—The following table shows the mine production (metal content of ores and concentrates produced) of lead, silver and zinc in Australia, and the respective minerals in which these metals were contained.

LEAD, SILVER AND ZINC: CONTENT OF ORES AND CONCENTRATES PRODUCED, 1962

Mineral in which contained	N.S.W.	Vic.	Q'land	S.A.	W. Aust.	Tas.	N.T.	Aust.
LEAD (tons)								
Lead ore(a) ..	51	..	784	..	..	..	..	835
Lead concentrate ..	289,090	..	60,332	..	306	8,056	..	357,784
Lead-copper concentrate ..	..	..	..	..	..	4,228	..	4,228
Zinc concentrate ..	3,240	..	1,553	..	..	2,470	..	7,263
<i>Total Lead</i> ..	<i>292,381</i>	<i>..</i>	<i>62,669</i>	<i>..</i>	<i>306</i>	<i>14,754</i>	<i>..</i>	<i>370,110</i>

SILVER (fine oz.)								
Copper ore ..	61	..	..	..	..	12,308	..	12,369
Copper concentrate ..	6,370	..	630,766	..	6,421	72,605	105,095	821,257
Copper precipitate ..	..	..	..	..	..	1	..	1
Gold concentrate, etc. ..	35	472	13,059	..	211,733	..	24	225,323
Lead ore(a) ..	6,560	..	33,477	..	..	..	..	40,037
Lead concentrate ..	9,643,454	..	4,720,061	..	212	387,926	..	14,751,653
Lead-copper concentrate ..	..	..	..	..	..	994,880	..	994,880
Silver-copper concentrate ..	10,303	..	..	..	..	..	..	10,303
Zinc concentrate ..	262,396	..	203,139	..	..	232,333	..	697,868
<i>Total Silver</i> ..	<i>9,929,179</i>	<i>472</i>	<i>5,600,502</i>	<i>..</i>	<i>218,366</i>	<i>1,700,053</i>	<i>105,119</i>	<i>17,553,691</i>

ZINC (tons)								
Lead concentrate ..	17,257	..	11,314	..	..	2,113	..	30,684
Lead-copper concentrate ..	..	..	..	..	..	1,423	..	1,423
Zinc ore ..	..	..	..	47	..	..	..	47
Zinc concentrate ..	227,606	..	33,390	..	..	44,382	..	305,378
<i>Total Zinc</i> ..	<i>244,863</i>	<i>..</i>	<i>44,704</i>	<i>47</i>	<i>..</i>	<i>47,918</i>	<i>..</i>	<i>337,532</i>

(a) Includes lead-silver-zinc ore.

The principal sources of production of lead, silver and zinc during 1962, were as follows.

(i) *New South Wales.* Lead and zinc concentrates, produced at Broken Hill, contained nearly all the New South Wales production of lead, silver and zinc. During 1962, New South Wales mines produced (in terms of the content of all ores and concentrates produced) more than three-quarters of Australia's lead, more than two-thirds of the zinc and more than half of the silver.

(ii) *Victoria.* All the silver produced was obtained from gold mining operations. No lead or zinc-bearing minerals are mined in Victoria.

(iii) *Queensland.* Mount Isa produced all the lead and zinc concentrates in Queensland during 1962. These concentrates contained almost all of the State's production of lead and silver and all the zinc. Nearly all the remaining silver was contained in copper concentrates produced at Mount Isa and at Mount Morgan.

(iv) *South Australia.* A small quantity of zinc ore for fertilizer was mined during 1962; there was no mine production of lead or silver during the year.

(v) *Western Australia.* Nearly all the silver produced was obtained from gold bullion produced by the gold-mining industry. All the lead was contained in lead concentrate produced in the Northampton district. No zinc was produced during 1962.

(vi) *Tasmania.* All the lead, silver and zinc was produced from mines on the West Coast. All the zinc and most of the lead and silver were produced from mines at Rosebery and Williamsford and milled at Rosebery to produce separate lead, zinc, and lead-copper concentrates.

(vii) *Northern Territory.* Almost all the silver was contained in copper concentrates produced at Tennant Creek and Rum Jungle.

The table hereunder shows the quantities of lead, silver and zinc contained in minerals won in the several States and the Northern Territory during the years 1958 to 1962.

#### LEAD, SILVER AND ZINC: CONTENT OF ORES AND CONCENTRATES PRODUCED

State or Territory	1958	1959	1960	1961	1962
LEAD (tons)					
New South Wales .. ..	246,896	246,449	235,868	211,679	292,381
Queensland .. ..	65,799	54,415	57,518	45,280	62,669
South Australia .. ..	13	8	..	..	..
Western Australia .. ..	1,854	1,382	1,739	433	306
Tasmania .. ..	13,785	14,039	13,038	12,253	14,754
Northern Territory .. ..	..	..	..	11	..
<i>Australia</i> .. ..	<i>328,347</i>	<i>316,293</i>	<i>308,163</i>	<i>269,656</i>	<i>370,110</i>
SILVER (fine oz.)					
New South Wales .. ..	8,992,293	8,555,203	8,397,889	7,447,957	9,929,179
Victoria .. ..	3,018	2,016	576	573	472
Queensland .. ..	5,710,031	4,953,209	5,121,700	3,882,784	5,600,502
South Australia .. ..	613	394	..	..	..
Western Australia .. ..	189,375	179,601	196,756	209,647	218,366
Tasmania .. ..	1,394,818	1,369,070	1,398,424	1,436,023	1,700,053
Northern Territory .. ..	49,664	101,138	100,611	82,182	105,119
<i>Australia</i> .. ..	<i>16,339,812</i>	<i>15,160,631</i>	<i>15,215,956</i>	<i>13,059,166</i>	<i>17,553,691</i>

LEAD, SILVER AND ZINC: CONTENT OF ORES AND CONCENTRATES  
PRODUCED—*continued*

State or Territory	1958	1959	1960	1961	1962
ZINC (tons)					
New South Wales .. ..	227,440	216,993	248,164	237,834	244,863
Queensland .. ..	29,538	23,468	34,775	33,219	44,704
South Australia .. ..	113	..	35	12	47
Western Australia .. ..	20	..	..	..	..
Tasmania .. ..	36,597	34,950	34,515	40,092	47,918
Northern Territory .. ..	..	..	..	(a)	..
<i>Australia</i> .. ..	<i>293,708</i>	<i>275,411</i>	<i>317,489</i>	<i>311,157</i>	<i>337,532</i>

(a) Less than one half ton.

4. Smelter and Refinery Production.—(i) *Lead.* The bulk of lead concentrate produced at Broken Hill is railed to Port Pirie, in South Australia, for smelting and refining. Lead-silver bullion is produced from initial smelting, and lead, silver and gold are then extracted as refined products. Cadmium is contained in the smelter fumes and is extracted. The sulphur dioxide gas formed during pre-smelter sintering operations is used to manufacture sulphuric acid. The antimony contained in the concentrate is alloyed with lead to form marketable antimonial lead, while the copper is recovered in various products which are sent to copper refineries for copper extraction.

In 1961, a new smelter was commissioned at Cockle Creek, New South Wales. It draws its supplies of lead and zinc concentrates from Broken Hill. This plant is unique in Australia in that the zinc content of lead concentrate is recovered. Previously this zinc content had accumulated in lead smelter slags. The bullion produced at this plant is exported for treatment while most of the refined zinc is used domestically. Sulphuric acid and cadmium are recovered as by-products. Some of the Broken Hill concentrate not treated at Port Pirie and Cockle Creek is exported for treatment overseas.

Lead ore and concentrate produced at Mount Isa is smelted at the mine to derive a lead bullion which is rich in silver. All this bullion is exported to the United Kingdom for refining. A lead-copper dross is produced as a by-product of lead smelting and this is also exported.

Lead and lead-copper concentrates produced in Tasmania and lead concentrates produced in Western Australia are exported for smelting and refining overseas.

(ii) *Zinc.* A large proportion of the zinc concentrate produced at Broken Hill is exported, and the remainder is either shipped from Port Pirie to Risdon, near Hobart, or railed to Cockle Creek for smelting and refining. At Risdon, the Broken Hill concentrate, together with all zinc concentrate produced in Tasmania, is roasted to form zinc oxide or calcine. Sulphur dioxide formed during this roasting process is used for the manufacture of sulphuric acid. The calcine is leached with a weak solution of sulphuric acid to form a zinc sulphate solution which, after purification, is electrolysed. Zinc of high purity is deposited on the cathodes and this zinc is melted and cast into ingots. Cadmium metal and cobalt oxide are also recovered.

Zinc concentrate produced at Mount Isa is refined overseas.

The following table gives, for the years 1958 to 1962, particulars of the production and sales of refined primary lead, silver and zinc as recorded from data received from the Bureau of Mineral Resources.

## REFINED LEAD, SILVER AND ZINC: PRODUCTION, SALES AND EXPORTS, AUSTRALIA

Particulars	1958	1959	1960	1961	1962
<b>LEAD (tons)</b>					
Refined lead—					
Production(a) .. .. .	191,474	185,805	189,823	162,264	190,125
Domestic sales(a) .. .. .	39,600	31,900	32,700	24,400	26,500
Exports .. .. .	155,730	138,448	125,265	145,174	197,049
Silver-lead bullion (lead content)—					
Production(a) .. .. .	57,171	50,310	52,723	48,090	73,110
Exports .. .. .	57,661	52,650	49,305	45,767	75,482
<b>SILVER ('000 fine oz.)</b>					
Production(a) .. .. .	9,101	7,805	8,085	7,099	7,378
Domestic sales(a) .. .. .	4,184	4,775	5,284	6,362	6,851
Exports .. .. .	4,876	3,001	2,800	1,055	346
<b>ZINC (tons)</b>					
Production(a) .. .. .	114,773	116,461	120,230	138,694	167,928
Domestic sales(a) .. .. .	72,844	78,753	90,240	76,295	82,047
Exports .. .. .	37,938	41,606	27,443	46,472	91,215

(a) Source: Bureau of Mineral Resources.

5. Prices of Lead, Silver and Zinc.—The following table shows average prices of lead, silver and zinc in Australia and on the London Metal Exchange during the years 1959 to 1963.

## AVERAGE PRICES OF LEAD, SILVER AND ZINC

Particulars	1959	1960	1961	1962	1963
<b>Australian prices, in Australian currency—</b>					
Lead, per ton(a) .. £	100	100	99	82	85
Silver, per fine oz.(b) s. d.	8 2½	8 3½	8 4½	9 6½	11 5
Zinc, per ton(c) .. £	105	113	102	100	111
<b>London Metal Exchange prices, in sterling—</b>					
Lead, per ton .. £	72	72	65	57	63
Silver, per fine oz. s. d.	6 7	6 7½	6 7½	7 7½	9 2
Zinc, per ton .. £	80	88	78	68	76

(a) Soft pig lead, f.o.b. Port Pirie.  
from London Metal Exchange prices.  
s.l.f. Sydney basis.

(b) Silver prices shown represent export parity calculated  
(c) Electrolytic zinc, f.o.b. Risdon for 1959-62, subsequently

6. Production in Principal Countries.—The following table shows, for the years 1958 to 1962, particulars of lead, silver and zinc production (mine basis) in principal producing countries, together with the estimated world total.

**LEAD, SILVER AND ZINC: MINE PRODUCTION IN PRINCIPAL COUNTRIES**  
(Source: Division of Minerals, United States Bureau of Mines)

Country	1958	1959	1960	1961	1962
<b>LEAD ('000 tons)</b>					
Australia .. .. .	328	316	308	270	370
U.S.S.R.(a) .. .. .	295	304	304	348	357
United States of America .. .. .	239	228	220	234	212
Mexico .. .. .	199	188	188	178	190
Canada .. .. .	167	167	184	163	189
Peru .. .. .	132	113	130	134	131
<i>Estimated World Total</i> .. .. .	<i>2,310</i>	<i>2,290</i>	<i>2,335</i>	<i>2,344</i>	<i>2,469</i>

<b>SILVER ('000 fine oz.)</b>					
Mexico .. .. .	47,592	44,075	44,526	40,349	41,249
United States of America .. .. .	34,111	31,194	30,766	34,794	36,798
Peru .. .. .	25,918	27,225	30,755	34,162	36,017
Canada .. .. .	31,163	31,924	34,017	31,382	30,669
U.S.S.R.(a) .. .. .	25,000	25,000	25,000	25,000	27,000
Australia .. .. .	16,340	15,161	15,216	13,059	17,554
Japan .. .. .	6,552	6,651	6,913	7,960	8,620
Germany, Eastern(a) .. .. .	4,800	4,800	4,800	4,800	4,800
Bolivia .. .. .	6,051	4,504	4,887	3,901	3,760
Congo .. .. .	3,794	4,768	3,963	3,473	1,190
<i>Estimated World Total</i> .. .. .	<i>239,000</i>	<i>221,900</i>	<i>240,500</i>	<i>236,500</i>	<i>242,400</i>

<b>ZINC ('000 tons)</b>					
United States of America .. .. .	368	380	389	415	451
Canada .. .. .	380	354	363	396	448
U.S.S.R.(a)(b) .. .. .	321	330	339	393	393
Australia .. .. .	294	275	317	311	338
Mexico .. .. .	221	260	258	265	247
Japan .. .. .	141	140	154	166	189
Peru .. .. .	133	141	175	171	164
Poland .. .. .	121	127	142	137	143
<i>Estimated World Total</i> .. .. .	<i>3,000</i>	<i>3,020</i>	<i>3,232</i>	<i>3,366</i>	<i>3,455</i>

(a) Estimated.

(b) Smelter production.

## § 5. Copper

1. **Historical.**—A brief history of copper-mining in Australia may be found in previous issues of the Year Book (see No. 48, p. 1070).

2. **Assistance to the Copper Mining Industry.**—For particulars, see para. 3(i)(c), page 1133.

3. **Methods of Mining and Treatment.**—Most of the large copper ore bodies contain the mineral chalcopyrite, an iron-copper sulphide. Copper ore is mined by open-cut methods at Mount Morgan, Mount Isa and Mount Lyell and by underground methods at Mount Isa and Ravensthorpe (Western Australia). Oxidized copper ore is mined at Mount Isa and at numerous other localities, mainly in Western Australia.

It is the practice for the sulphide ore to be finely ground and for the chalcopyrite contained in it to be recovered by flotation. At Mount Lyell and Mount Morgan, the tailings from the copper flotation are subjected to a further flotation and a pyrite concentrate is produced. The oxidized ore mined at Mount Isa has, in the past, been fed direct to the smelter for fluxing purposes, but in 1962 some was concentrated. As part of the programme to develop a new open-cut operation at Mount Isa, large amounts of this oxidized ore have been removed but only material actually smelted or concentrated is recorded as current production.



4. **Mine Production.**—The following table shows for 1962 the copper content of all minerals produced in the several States and the Northern Territory.

**COPPER: CONTENT OF ORES AND CONCENTRATES PRODUCED, 1962**  
(Tons)

Mineral in which contained	N.S.W.	Vic.	Q'land	S. Aust.	W. Aust.	Tas.	N.T.	Aust.
Copper ore, concentrate, and precipitate ..	253	10	78,307	2	1,488	13,229	7,968	101,257
Lead concentrate ..	3,095	..	935	..	..	80	..	4,110
Lead-copper concentrate ..	..	..	..	..	..	961	..	961
Silver-copper concentrate ..	4	..	..	..	..	..	..	4
Zinc concentrate ..	395	..	..	..	..	245	..	640
<b>Total .. ..</b>	<b>3,747</b>	<b>10</b>	<b>79,242</b>	<b>2</b>	<b>1,488</b>	<b>14,515</b>	<b>7,968</b>	<b>106,972</b>

The following were the principal sources of copper during 1962.

- (i) *New South Wales.* Most of the copper produced was contained in lead and zinc concentrate milled at Broken Hill.
- (ii) *Victoria.* One mine produced a small quantity of copper ore during 1962.
- (iii) *Queensland.* Mount Isa was the most important copper producing centre in Australia, its 1962 output being almost 70 per cent. of the Australian total. The copper produced at Mount Isa is contained in copper sulphide concentrate, oxidized copper ore and lead concentrate. Copper concentrate produced at Mount Morgan contained most of the remainder of the State's production.
- (iv) *South Australia.* Only a small quantity of copper ore for fertilizer was produced during 1962.
- (v) *Western Australia.* Two-thirds of the copper mined was contained in copper concentrate produced at Ravensthorpe. The remainder was contained in copper ore won at various localities in the State for fertilizer manufacture.
- (vi) *Tasmania.* Most of the State's production was at Mount Lyell, where copper was contained in copper concentrate, ore and precipitate. Lead-copper concentrate and lead concentrate milled at Rosebery contained the remainder of Tasmania's production.
- (vii) *Northern Territory.* Copper concentrate from Tennant Creek and copper concentrate and precipitate from Rum Jungle contained almost all of the Territory's output of copper.

The table hereunder shows the quantities of copper contained in minerals produced in the several States and the Northern Territory during the years 1958 to 1962.

**COPPER: CONTENT OF ORES AND CONCENTRATES PRODUCED**  
(Tons)

State or Territory	1958	1959	1960	1961	1962
New South Wales .. ..	4,023	3,728	3,572	3,510	3,747
Victoria .. ..	..	14	..	8	10
Queensland .. ..	50,511	66,798	82,753	66,505	79,242
South Australia .. ..	1	16	5	2	2
Western Australia .. ..	1,107	2,197	1,661	2,206	1,488
Tasmania .. ..	11,413	12,244	11,680	12,743	14,515
Northern Territory .. ..	8,660	9,953	9,764	10,652	7,968
<b>Australia .. ..</b>	<b>75,715</b>	<b>94,950</b>	<b>109,435</b>	<b>95,626</b>	<b>106,972</b>

5. **Smelter and Refinery Production of Copper.**—Most of the copper concentrate milled in Australia is smelted locally, blister copper being produced at Mount Isa, Mount Morgan, Mount Lyell and Port Kembla.

Blister copper smelted at Mount Isa is railed to Townsville for electrolytic refining. Mount Lyell blister copper is electrolytically refined at Mount Lyell and the bulk is re-melted and cast into primary shapes at Port Kembla. Mount Morgan blister copper is shipped to Port Kembla, where together with blister produced at Port Kembla, it is refined. All refined copper now produced in Australia is processed electrolytically.

At Port Kembla, gold and silver contained in electrolytic refining tank house slimes from Mount Lyell, Townsville, and Port Kembla are recovered.

In the following table, details are given of the production of blister copper, and the production and exports of refined copper for the years 1958 to 1962.

#### METALLIC COPPER: PRODUCTION AND EXPORTS, AUSTRALIA

(Source: Bureau of Mineral Resources)

(Tons)

Particulars	1958	1959	1960	1961	1962
Blister copper production ..	64,608	68,494	71,037	62,497	87,337
Refined copper production ..	43,276	51,593	70,652	63,723	79,450
Exports of blister and refinery shapes .. .. .	14,421	18,974	14,079	24,095	16,497

6. **Prices.**—Details of average market prices for the years 1959 to 1963 are given in terms of Australian currency and sterling in the following table.

#### AVERAGE PRICES OF ELECTROLYTIC COPPER IN AUSTRALIA AND THE UNITED KINGDOM

(£ per ton)

Country	1959	1960	1961	1962	1963
Australia — in Australian currency <sup>(a)</sup> .. .. .	312	324	307	305	305
United Kingdom—in sterling .. .. .	235	239	228	232	234

(a) Ex works Port Kembla.

7. **Production in Principal Countries.**—The following table shows the mine production of copper for the years 1958 to 1962 in the principal producing countries and the estimated world production in those years.

## COPPER: MINE PRODUCTION IN PRINCIPAL COUNTRIES

(Source: Division of Minerals of the United States Bureau of Mines)

('000 tons)

Country	1958	1959	1960	1961	1962
United States of America ..	874	736	964	1,040	1,097
U.S.S.R.(a) .. ..	420	429	491	536	625
Chile .. ..	460	538	528	542	577
Rhodesia and Nyasaland ..	401	545	581	579	567
Canada .. ..	308	353	392	392	416
Congo(b) .. ..	234	278	297	291	291
Peru .. ..	53	49	179	195	163
Australia .. ..	76	95	109	96	107
Japan .. ..	80	84	88	95	102
Philippines .. ..	46	49	43	51	54
South Africa .. ..	49	48	45	52	46
Mexico .. ..	64	56	59	49	46
<i>Estimated World Total ..</i>	<i>3,375</i>	<i>3,598</i>	<i>4,143</i>	<i>4,321</i>	<i>4,509</i>

(a) Estimated.

(b) Smelter production.

## § 6. Tin

1. Historical.—A brief history of tin-mining in Australia may be found in previous issues of the Year Book (see No. 48, p. 1073).

2. Methods of Mining and Treatment.—The greater proportion of tin concentrate production is obtained from alluvial workings as a gravity concentrate of cassiterite (tin oxide). The remainder is obtained from underground mining, where the tin mineralization is frequently associated with wolfram and sulphide minerals.

3. Mine Production.—The following table sets out the tin content of tin concentrate produced in Australia during the years 1958 to 1962. No tin is recorded from minerals other than tin concentrate.

## TIN: CONTENT OF TIN CONCENTRATES PRODUCED

(Tons)

State or Territory	1958	1959	1960	1961	1962
New South Wales .. ..	239	174	223	173	212
Victoria .. ..	..	..	..	..	7
Queensland .. ..	1,019	1,104	885	1,350	1,077
Western Australia .. ..	94	174	190	231	323
Tasmania .. ..	883	890	884	986	1,058
Northern Territory .. ..	2	9	20	5	38
<b>Australia .. ..</b>	<b>2,237</b>	<b>2,351</b>	<b>2,202</b>	<b>2,745</b>	<b>2,715</b>

The following were the principal sources of production in 1962.

- (i) *New South Wales.* All production was from alluvial deposits. The New England region, mainly around Tingha, Tenterfield and Deepwater produced over 70 per cent. of the total production.
- (ii) *Queensland.* Most of the tin concentrate produced was from the Herberton field, principally alluvial tin concentrate being produced. Tin concentrate was also produced in the Chillagoe, Kangaroo Hills, Cooktown and Mareeba districts.
- (iii) *Western Australia.* Nearly all the tin concentrate produced was alluvial tin won from the Pilbara field.
- (iv) *Tasmania.* Most of the tin concentrate produced was won in the north-east part of the State, from both lode and alluvial deposits. Wolfram concentrate, as well as tin concentrate, was produced.
- (v) *Northern Territory.* More than half of the output of tin came from mines in the Mount Masson area. Most of the remainder was produced at Boombera and Mount Harris.

4. *Smelter and Refinery Production.*—Except for occasional small parcels of concentrate shipped to oversea smelters, all local production is treated by the two tin smelters located in Sydney.

The production of refined tin in Australia from locally produced tin concentrate during recent years, as recorded by the Bureau of Mineral Resources, was as follows:—1959, 2,226 tons; 1960, 2,254 tons; 1961, 2,546 tons; 1962, 2,704 tons; and 1963, 2,636 tons.

Consumption of refined tin has increased substantially in recent years following the introduction of tin-plate production in Australia; hot-dip plating began in 1957 and the electrolytic plant at Port Kembla, New South Wales, commenced operations early in 1962.

5. *Prices.*—Details of the movement in average market prices of tin for the years 1959 to 1963 are given in terms of Australian currency and sterling in the following table.

**AVERAGE PRICE OF TIN IN AUSTRALIA AND THE UNITED KINGDOM**  
(£ per ton)

Country	1959	1960	1961	1962	1963
Australia — in Australian currency(a)	1,058	1,042	1,169	1,163	1,179
United Kingdom—in sterling(b)	786	794	895	898	909

(a) Delivered, Sydney.

(b) London Metal Exchange price.

6. *Production in Principal Countries.*—World production of tin reached its maximum in 1941, when 241,400 tons were recorded. Australia's contribution to the world's tin production is slightly above 1 per cent.

The mine production of tin for the principal producing countries and the estimated world totals in 1961 and 1962 were as follows.

## TIN: PRODUCTION IN PRINCIPAL COUNTRIES

(Source: Division of Minerals of the United States Bureau of Mines)

(Tons)

Country	Production		Country	Production	
	1961	1962		1961	1962
Malaya, Federation of	56,028	58,603	Australia . . . . .	2,745	2,715
China(a) . . . . .	30,000	30,000	South Africa . . . . .	1,430	1,422
Bolivia . . . . .	20,408	21,493	United Kingdom . . . . .	1,210	1,181
Indonesia . . . . .	18,574	17,583	Burma(b) . . . . .	1,130	950
Thailand . . . . .	13,270	14,680	Japan . . . . .	853	859
Nigeria . . . . .	7,779	8,210	<i>Estimated World</i>		
Congo(b) . . . . .	6,616	7,243	<i>Total</i> . . . . .	185,200	190,200

(a) Estimated smelter production.

(b) Estimated.

## § 7. Iron

1. *Historical.*—Iron ore was first mined in New South Wales to supply raw material for the ironworks that were established near Mittagong in 1852. Iron ore for the ironworks established later at Lithgow was drawn from Carcoar, near Bathurst.

In South Australia, the iron ore deposits of the Middleback ranges, near Whyalla, were first mined by the Broken Hill Proprietary Co. Ltd. in 1900 to provide a flux for lead smelting operations at Port Pirie. When that company opened its Newcastle steelworks in 1915, it greatly expanded ore production from the Middleback Ranges and most of the Australian steel industry's requirements of iron ore still come from this source.

Regular shipments of iron ore from Yampi Sound, north of Derby in Western Australia, to the steelworks at Port Kembla commenced in 1951. Iron ore for the iron smelter at Wundowie, which commenced operations in 1948, has in recent years been provided entirely from the deposits at Koolyanobbing, near Southern Cross. The Koolyanobbing deposits will be worked on a very much larger scale eventually and will supply the ore for an iron and steel industry to be established at Kwinana, south of Perth. A blast furnace is expected to be in operation in 1968.

In December, 1960, the Commonwealth Government announced a partial relaxation of the embargo on the export of iron ore which had been in force since 1938. Permission has been granted for the export of iron ore from Tallering Peak-Koolanooka, Mount Goldsworthy, the Hamersley Range and the Scott River area in Western Australia, and from small deposits in New South Wales and Queensland.

Following the modification of the export embargo in 1960, known reserves of iron ore have greatly increased. The embargo was further relaxed in June, 1963.

Besides the large quantities of iron ore that are mined for metal extraction purposes, smaller quantities of iron oxide are mined for other purposes, such as gas purification, cement manufacture, coal washing and fluxing.

**2. Methods of Mining and Treatment.**—Currently all iron ore and iron oxide is won by open-cut mining. The ore is selectively mined, crushed and screened to provide a standard assay and size for blast furnace use. Some concentration of lower grade ore from the Iron Knob area in South Australia is now carried out. In August, 1962, a scree ore treatment plant began operating at Iron Knob. Concentrates produced have an iron content of over 60 per cent. and recovery is of the order of 85 per cent. Sintering is now carried out at both Newcastle and Port Kembla to provide an improved blast furnace feed.

**3. Mine Production of Iron Ore.**—Iron oxide deposits exist in all States and in the Northern Territory, but at present iron oxide for metal extraction purposes, termed iron ore in this chapter, is produced in two States only. The following table shows the estimated iron content of iron ore produced during the years 1958 to 1962.

**IRON: ESTIMATED IRON CONTENT OF IRON ORE PRODUCED**  
(Tons)

State	1958	1959	1960	1961	1962
South Australia .. ..	2,173,922	2,218,846	2,227,551	2,581,313	2,235,832
Western Australia .. ..	365,275	480,769	586,404	852,663	883,263
<b>Australia .. ..</b>	<b>2,539,197</b>	<b>2,699,615</b>	<b>2,813,955</b>	<b>3,433,976</b>	<b>3,119,095</b>

The producing centres during 1962, were as follows.

- (i) *South Australia.* 3,439,742 tons of iron ore were drawn from the Iron Monarch and Iron Prince quarries in the Middleback Ranges. Selected foundry grade ore was diverted as required to the Whyalla blast furnace, but the greater part was shipped to Newcastle and Port Kembla for smelting. Production of beneficiated iron ore commenced at Iron Knob in the latter part of 1962.
- (ii) *Western Australia.* Ore shipped from Yampi Sound, north of Derby, to New South Wales for sintering and smelting amounted to 1,320,355 tons. A quantity of 83,987 tons was mined at Koolyanobbing, near Southern Cross, for pig iron production at Wundowie.

**4. Mine Production of Iron Oxide.**—Production of iron oxide, excluding that used for metal extraction (iron ore) and mineral pigments, in the several States during 1962, according to end use, is shown in the following table.

**IRON OXIDE PRODUCTION, 1962**  
(Tons)

Use	New South Wales	Victoria	Queensland	South Australia	Tasmania	Australia
For gas purification ..	634	81	..	..	84	799
For cement manufacture	17,160	..	2,337	..	3,998	23,495
For coal washing ..	1,715	..	..	..	..	1,715
For fluxing .. ..	..	..	..	14,400	..	14,400
<b>Total .. ..</b>	<b>19,509</b>	<b>81</b>	<b>2,337</b>	<b>14,400</b>	<b>4,082</b>	<b>40,409</b>

The principal sources of iron oxide production during 1962 were as follows.

- (i) *New South Wales.* Quantities of iron oxide for gas purification were obtained from deposits near Port Macquarie, while that used for cement manufacture was mined from the Lithgow, Mudgee and Rylstone mining divisions. Magnetite, used in coal washing, was produced in the Copmanhurst mining division.
- (ii) *Victoria.* Limonite ore used for gas purification was mined at Buchan.
- (iii) *Queensland.* Iron oxide produced for cement manufacture was mined near Townsville.
- (iv) *South Australia.* A quantity of 14,400 tons drawn from the Middleback Ranges was dispatched to Port Pirie for use as a flux in lead smelting operations.
- (v) *Tasmania.* Iron oxide for gas purification and cement manufacture was mined in the vicinity of Penguin.

Particulars of Australian production of iron oxide according to end use are shown in the following table.

#### IRON OXIDE PRODUCTION: AUSTRALIA

(Tons)

Use	1958	1959	1960	1961	1962
For gas purification ..	2,864	4,355	2,970	1,446	799
For cement manufacture ..	6,093	9,485	15,776	21,786	23,495
For coal washing .. ..	25	30	386	1,260	1,715
For fluxing .. ..	8,100	9,600	9,600	8,850	14,400
<b>Total .. ..</b>	<b>17,082</b>	<b>23,470</b>	<b>28,732</b>	<b>33,342</b>	<b>40,409</b>

5. **Iron and Steel Production.**—The production of pig-iron and steel ingots in Australia, of which New South Wales is the main producing State, is shown in the following table. Figures shown below may differ from corresponding figures in Chapter V. Manufacturing Industry because of revisions since that chapter was prepared.

#### PIG-IRON AND INGOT STEEL: PRODUCTION, AUSTRALIA

(Tons)

Year ended 31st May		Pig-iron (a)	Steel ingots (b)	Year ended 31st May		Pig-iron (a)	Steel ingots (b)
1954	.. ..	1,826,711	2,116,813	1959	.. ..	2,293,709	3,203,584
1955	.. ..	1,868,841	2,208,708	1960	.. ..	2,655,237	3,519,719
1956	.. ..	1,910,521	2,320,289	1961	.. ..	3,001,800	3,748,037
1957	.. ..	2,098,352	2,773,995	1962	.. ..	3,380,334	4,075,699
1958	.. ..	2,283,925	3,037,705	1963	.. ..	3,400,302	4,259,909

(a) Includes pig-iron for castings; excludes ferro-alloys.

(b) Includes recovery from scrap.

In 1963, eleven blast furnaces were operating in Australia; four at Port Kembla and four at Newcastle, in New South Wales, two at Wundowie in Western Australia, and one at Whyalla, South Australia. Production of pig-iron throughout 1963 was at a record level. The fourth blast furnace at Newcastle, with a daily capacity of 1,400 tons of pig-iron, was commissioned in July, 1963.

During 1963, the bulk of Australia's ingot steel production was obtained from 17 open hearth furnaces (13 at Port Kembla and 4 at Newcastle). In addition, 3 other open hearth furnaces and 15 electric furnaces were in operation during 1963 for the production of special steels and ferro-alloys. The use of oxygen in steel-making assumed greater importance in Australia during 1963. All furnaces in the No. 2 open hearth shop at Port Kembla are now using oxygen lancing equipment and two basic oxygen steel-making units were in operation at Newcastle throughout the year. Annual steel-making capacity in Australia is now in excess of 5 million tons.

6. Production of Iron and Steel in Principal Countries.—Particulars of the production in the principal countries and the estimated world total production during the calendar years 1961 and 1962 are shown in the following table.

#### IRON AND STEEL: PRODUCTION IN PRINCIPAL COUNTRIES

(Source: Division of Minerals of the United States Bureau of Mines)

('000 Tons)

Country	Pig-iron and ferro-alloys		Steel ingots and castings	
	1961	1962	1961	1962
United States of America ..	59,569	60,389	87,513	87,793
U.S.S.R. .. .. .	50,089	54,643	69,456	75,089
Germany, Federal Republic ..	25,029	23,868	32,929	32,049
Japan .. .. .	16,124	18,147	27,821	27,111
United Kingdom .. .. .	14,747	13,830	22,087	20,491
France .. .. .	14,613	13,384	17,322	16,968
China (Mainland) .. .. .	19,643	17,679	13,393	11,607
Italy .. .. .	3,150	3,619	8,979	9,338
Poland .. .. .	4,695	5,232	7,120	7,563
Czechoslovakia .. .. .	4,893	5,116	6,932	7,411
Belgium .. .. .	6,343	6,642	6,900	7,245
Canada .. .. .	4,503	4,846	5,773	6,404
India .. .. .	4,616	5,818	4,007	4,962
Australia .. .. .	3,156	3,434	3,885	4,171
Luxembourg .. .. .	3,773	3,540	4,048	3,948
Germany, Eastern .. .. .	1,997	1,988	3,389	3,566
Sweden .. .. .	1,867	1,786	3,501	3,553
Austria .. .. .	2,226	2,085	3,052	2,923
<i>Estimated World Total ..</i>	<i>257,000</i>	<i>263,000</i>	<i>348,600</i>	<i>354,800</i>



## § 8. Mineral Sands

1. **Historical.**—Since the war, the growing world demand for rutile as a coating for electric welding rods and as a source of titanium metal, and for ilmenite in the production of titanium pigments, has brought about a rapid expansion of Australian mineral sands mining. Australia is the largest producer of rutile and zircon in the world, and nearly all this production comes from the mineral sands deposits on the east coast. The ilmenite produced on the east coast has proved unsuitable for titanium oxide pigment manufacture, and most of the production is discarded. However, ilmenite produced from mineral sands mined in Western Australia since 1956 has a much lower chromic oxide content than east coast ilmenite and is therefore suitable for pigment production. Operators produce separate concentrates of rutile, zircon and ilmenite and, in addition, a few companies produce high-grade monazite concentrate.

Following the record post-war output of rutile in 1957, production was on a reduced scale during the period 1958–60, mainly because of greatly reduced prices offering on world markets. Commencing with the second half of 1961, however, the price of rutile improved and production increased, resulting in a record level of production being achieved in 1963.

2. **Methods of Mining and Treatment.**—Mining on the east coast of Australia is mainly by suction dredging. In Western Australia, ilmenite is mined hydraulically or by earth-moving equipment. Heavy mineral concentrates are recovered by wet gravity concentration, using a combination of concentrating spirals and shaking tables. The constituent minerals of the heavy-mineral concentrates, mainly rutile, zircon, ilmenite and monazite are separated by electromagnetic and electrostatic methods.

3. **Mine Production.**—(i) *Titanium Dioxide.* The following table shows the quantities of titanium dioxide contained in rutile and ilmenite concentrates produced during the years 1958 to 1962.

## TITANIUM DIOXIDE: CONTENT OF CONCENTRATES PRODUCED

(Tons)

State	1958	1959	1960	1961	1962
CONTAINED IN RUTILE CONCENTRATE					
New South Wales .. ..	44,915	44,792	52,262	64,284	77,227
Queensland .. ..	35,755	34,736	33,260	33,056	37,472
Western Australia .. ..	285	96	493	880	501
<i>Australia</i> .. ..	<i>80,955</i>	<i>79,624</i>	<i>86,015</i>	<i>98,220</i>	<i>115,200</i>
CONTAINED IN ILMENITE CONCENTRATE					
New South Wales .. ..	59	111	537	905	1,930
Queensland .. ..	..	..	21	2	..
Western Australia .. ..	38,219	45,566	58,171	92,838	98,364
<i>Australia</i> .. ..	<i>38,278</i>	<i>45,677</i>	<i>58,729</i>	<i>93,745</i>	<i>100,294</i>

(ii) *Zircon.* The quantities of zircon mineral contained in zircon concentrate produced during the years 1958 to 1962 are shown in the following table.

## ZIRCON: CONTENT OF ZIRCON CONCENTRATE PRODUCED

(Tons)

State	1958	1959	1960	1961	1962
New South Wales .. ..	32,230	71,156	65,764	98,421	89,947
Queensland .. ..	26,412	34,504	31,752	28,775	38,468
Western Australia .. ..	103	6,692	3,978	7,287	3,694
<b>Australia .. ..</b>	<b>58,745</b>	<b>112,352</b>	<b>101,494</b>	<b>134,483</b>	<b>132,109</b>

(iii) *Other Products.* During 1962, small quantities of monazite concentrate, magnetite and garnet concentrate were also recovered from mineral sands.

(iv) *Sources of Production.* The principal sources of mineral sands treated during 1962 were as follows.

(a) *New South Wales and Queensland.* The main deposits of mineral sands occur along the eastern Australian coast from Wyong in New South Wales to Curtis Island, Queensland. At present, the principal mining operations are located between Lake Munmorah and Newcastle in the south, between Laurieton and Crescent Head on the central coast, and between Byron Bay and North Stradbroke Island in the north. Most mining operations are now confined to dunes and swampy areas lying behind beaches where high-grade deposits are now exhausted.

(b) *Western Australia.* The chief deposits of mineral sands occur in the south-west corner of the State, between Bunbury and Wonnerup. During 1962, the bulk of production was from inland deposits in the Capel-Yoganup area.

## § 9. Aluminium

1. *Mine Production.*—The source of aluminium is bauxite. Until recent years, the only bauxite production in Australia was from small deposits in Queensland, New South Wales and Victoria. Production from these deposits has been used mainly by the chemical and steel industries.

Large deposits of bauxite exist at Weipa (North Queensland), Gove (Northern Territory) and Darling Range (Western Australia). The deposits at Weipa and the Darling Range are now being mined. Part of the bauxite from Weipa is shipped to Bell Bay (Tasmania) for treatment and part is exported to Japan. Bauxite from the Darling Range deposits is treated at Kwinana for the production of alumina. Part of the alumina from Kwinana is shipped to Point Henry (Victoria) for smelting to aluminium, and part is exported to Japan. Part of the deposits at Gove are being investigated under lease by an overseas company for the development of a bauxite exporting industry and possibly the establishment of an alumina plant. The remainder of the deposits at Gove are not held under lease at present, and the Commonwealth Government through the Department of Territories has called for proposals for the development of this remaining area. The alumina content of bauxite produced in Australia during the years 1958 to 1962 is shown in the following table.

## ALUMINA: CONTENT OF BAUXITE PRODUCED

(Tons)

State	1958	1959	1960	1961	1962
New South Wales .. ..	633	1,648	1,386	929	1,991
Victoria .. ..	2,304	1,991	2,306	2,035	2,300
Queensland(a) .. ..	596	..	14,442	4,500	8,959
Western Australia(a) ..	..	3,275	13,259	..	..
<b>Australia(b) .. ..</b>	<b>3,533</b>	<b>6,914</b>	<b>31,393</b>	<b>7,464</b>	<b>13,250</b>

(a) Estimated.

(b) Partly estimated.

2. **Refinery Production.**—There is a refinery for the production of alumina and refined aluminium at Bell Bay on the River Tamar in Northern Tasmania. The location of this refinery was determined by the availability of large supplies of hydro-electric power. Production of alumina commenced in February, 1955, and of refined aluminium in September, 1955. The capacity of the Bell Bay plant was increased to 35,000 tons in 1962 and was further increased to 52,000 tons in 1963. A new smelter with an ultimate capacity of 40,000 tons is under construction at Geelong (Victoria). The first section of the plant was commissioned in 1963. The following table shows the production of alumina and refined aluminium in Australia during the years 1958 to 1962.

## ALUMINA AND REFINED ALUMINIUM: PRODUCTION, AUSTRALIA

(Source: Bureau of Mineral Resources)

(Tons)

Refinery product	1958	1959	1960	1961	1962
Alumina .. ..	22,490	26,900	29,801	29,468	33,806
Refined aluminium ..	10,869	11,370	11,655	13,204	16,152

## § 10. Uranium

Uranium concentrate has been produced in Australia since 1954, but particulars of the quantity of  $U_3O_8$  concentrate produced and its value are not available for publication. All  $U_3O_8$  concentrate has been for export overseas. During 1963, the principal producing centres were as follows.

- (i) *Queensland.* Uranium ore was mined by opencut methods at Mary Kathleen, 33 miles east of Mount Isa. Mining ceased in September, 1963, and the treatment plant at Mary Kathleen closed in October, 1963, following the completion of the operating company's contract to supply uranium oxide to the United Kingdom Atomic Energy Agency.
- (ii) *Northern Territory.* At Rum Jungle, stockpiled uranium ores were treated to produce  $U_3O_8$  concentrate. Shipments of uranium oxide from the Rum Jungle plant to the Combined Development Agency were completed early in 1963.

In the South Alligator River area, the El Sherana mine was operated to supply ore to a concentrating plant at Moline.

Domestic production in 1964 will be confined to Rum Jungle and Moline. Existing contracts with the U.K. Atomic Energy Authority are expected to keep the Moline plant operating until 1965. Operations at Rum Jungle will be maintained at about current levels and the uranium oxide produced and stockpiled will be available for sale overseas.

## § 11. Other Metallic Minerals

1. Tungsten.—In recent years, Tasmania has been the principal State producing tungsten ores, scheelite being mined on King Island in Bass Strait and wolfram being mined in association with tin ores in the north-east part of the State. Because of low world prices, scheelite production on King Island ceased in August, 1958, but production was recommenced in 1960. Low prices have persisted and production since then has been on a limited scale. During 1963, the State Government provided financial assistance to the company producing scheelite on King Island to forestall a threatened closure of the mine due to marketing difficulties.

Particulars of the production of tungstic oxide contained in scheelite and wolfram concentrates produced during the years 1958 to 1962 are shown in the following table.

**TUNGSTIC OXIDE (WO<sub>3</sub>): CONTENT OF CONCENTRATES PRODUCED**  
(Tons)

State	1958	1959	1960	1961	1962
<b>CONTAINED IN SCHEELITE CONCENTRATE</b>					
New South Wales .. ..	1	(a)	(a)	(a)	..
Western Australia .. ..	..	..	..	..	5
Tasmania .. ..	477	..	291	709	686
<i>Australia</i> .. ..	478	(a)	291	709	691
<b>CONTAINED IN WOLFRAM CONCENTRATE</b>					
New South Wales .. ..	..	..	..	(a)	..
Queensland .. ..	5	..	..	1	1
Tasmania .. ..	360	645	804	810	349
Northern Territory .. ..	7	8	16	16	1
<i>Australia</i> .. ..	372	653	820	827	351

(a) Less than one half ton.

2. Manganese.—In recent years, Western Australia has been the principal State producing manganese ore, mined mainly from the Pilbara goldfield.

The following table shows the manganese content of metallurgical grade and the manganese dioxide content of battery and other grades of manganese ore produced during the years 1958 to 1962.

**MANGANESE: CONTENT OF MANGANESE ORE PRODUCED**  
(Tons)

Year	Metallurgical grade In terms of manganese (Mn) content				Battery and other grades In terms of manganese dioxide (MnO <sub>2</sub> ) content				
	N.S.W.	Q'land	W. Aust.	Aust.	N.S.W.	S. Aust.	W. Aust.	N. Terr.	Aust.
1958 ..	516	3,181	21,926	25,623	511	..	195	2,113	2,819
1959 ..	620	4,350	35,996	40,966	907	..	162	1,406	2,475
1960 ..	342	1,670	26,561	28,585	623	45	9	940	1,617
1961 ..	..	1,109	39,880	40,989	632	192	204	76	1,104
1962 ..	..	1,296	32,862	34,158	424	..	152	188	764

(a) Includes Victoria (12 tons).

The quantity of manganese dioxide recovered at the Risdon, Tasmania, refinery during 1962 amounted to 3,602 tons, of which 346 tons were sold for chemical processing and trace element fertilizer.

3. **Other.**—Production in 1962 (1961 shown in parentheses) of other metallic minerals are listed in the following paragraphs.

(i) *Antimony.* The antimony content of antimony-bearing minerals produced was 874 tons (680 tons). Of this amount, 808 tons (563 tons) were in lead concentrate and 66 tons (117 tons) in 100 tons (190 tons) of antimony ore and concentrate.

(ii) *Beryllium.* Production of beryllium ore was 223 tons (306 tons), which came mainly from the Yalgoo and Pilbara fields in Western Australia. The beryllium oxide content of the ore was 2,586 units of 22.4 lb. (3,585 units).

(iii) *Chromite.* Production of chromite in 1962 amounted to 369 tons with an estimated chromic oxide content of 185 tons. This was all mined in the Rockhampton district in Queensland. There was no production in the previous year.

(iv) *Tantalite-columbite.* The production of tantalite-columbite concentrate was 43,097 lb. (31,808 lb.) and the whole of this output came from Western Australia. The tantalum pentoxide and columbium pentoxide content of the concentrates was 18,879 lb. (13,814 lb.).

(v) *Other.* Other metallic minerals produced in 1962 were bismuth concentrate, 181 lb., from Western Australia; molybdenite concentrate, 2,800 lb., from Queensland; and platinum concentrate, 3 oz.

## § 12. Coal

1. **Historical.**—A brief history of coal-mining in Australia may be found in previous issues of the Year Book (see No. 48, p. 1086).

2. **Joint Coal Board.**—For details of the powers and functions of this Board, which has functioned since 1947, see page 887 of Year Book No. 39.

3. **Coal Industry Tribunal.**—The Coal Industry Tribunal was established under the Commonwealth *Coal Industry Act* 1946 and the New South Wales *Coal Industry Act*, 1946 to consider and determine interstate disputes and, in respect of New South Wales only, intra-State disputes between the Australian Coal and Shale Employees' Federation and employers in the coal-mining industry. Following legislation in 1951, the Tribunal was vested with authority to deal with all interstate industrial disputes in the coal-mining industry, irrespective of the trade union involved, and, in the case of New South Wales, intra-State disputes also. The Tribunal consists of one person who may appoint two assessors nominated by the parties to advise him in matters relating to any dispute.

4. **Australia's Coal Reserves.**—The latest available estimates of the measured and indicated coal reserves of Australia are those prepared by the Mines Departments in the various States for the Coal Utilization Research Advisory Committee whose report was issued by the Department of National Development in 1962. This information is shown in the following table. It should be noted that reserves can only be included in the "measured and indicated" categories when sufficient exploratory and testing work has been completed.

### ESTIMATED COAL RESERVES OF AUSTRALIA

(Source: State Mines Departments)

(Million Tons)

State	Type of coal	Measured and indicated	Inferred
New South Wales .. ..	Bituminous .. ..	(a) 3,050	(b)
Victoria .. ..	" .. ..	20	10
" .. ..	Brown .. ..	54,700	43,000
Queensland .. ..	Bituminous, sub-bituminous .. ..	950	(c)
South Australia .. ..	Sub-bituminous .. ..	130	..
" .. ..	Lignite .. ..	530	..
Western Australia .. ..	Sub-bituminous .. ..	274	1,603
Tasmania .. ..	Bituminous .. ..	(d)	(e) 137

(a) Recoverable reserves. (b) In excess of 30,000 million tons. (c) In excess of 10,000 million tons. (d) Very small; measured reserves in Tasmania amount to only several thousand tons. (e) Includes both indicated and inferred reserves.

5. *Mine Production of Black Coal.*—Production of black coal according to rank in the several States during the years 1959 to 1963 is set out in the following table. The tonnages produced by underground mining and opencut mining are also shown.

## BLACK COAL: PRODUCTION

(Tons)

Particulars	1959	1960	1961	1962	1963
<b>NEW SOUTH WALES</b>					
<i>Total(a)</i> .. ..	15,712,440	17,736,994	19,020,805	19,030,418	18,940,206
Underground mines	15,278,162	16,981,561	18,188,613	18,195,881	18,337,767
Opencut mines ..	434,278	755,433	832,192	834,537	602,439
<b>VICTORIA</b>					
<i>Total(b)</i> .. ..	90,438	76,972	66,363	56,721	50,711
<b>QUEENSLAND</b>					
Semi-anthracite ..	51,849	47,762	56,437	67,652	60,122
Bituminous .. ..	2,476,479	2,531,581	2,650,367	2,648,200	3,077,901
Sub-bituminous ..	66,059	70,769	75,362	82,989	107,403
<i>Total</i> .. .. .	2,594,387	2,650,112	2,782,166	2,798,841	3,245,426
Underground mines	2,142,302	2,269,564	2,157,790	2,194,351	2,433,221
Opencut mines ..	452,085	380,548	624,376	604,490	812,205
<b>SOUTH AUSTRALIA</b>					
<i>Total(c)</i> .. ..	690,374	884,819	1,115,156	1,392,085	1,511,719
<b>WESTERN AUSTRALIA</b>					
<i>Total(d)</i> .. ..	911,435	922,393	765,740	919,112	902,497
Underground mines	800,856	798,185	506,306	598,502	600,935
Opencut mines ..	110,579	124,208	259,434	320,610	301,562

NOTE.—For footnotes see next page.

BLACK COAL: PRODUCTION—*continued*

(Tons)

Particulars	1959	1960	1961	1962	1963
<b>TASMANIA</b>					
Semi-anthracite ..	2,217	2,333	2,142	1,649	2,081
Bituminous ..	297,151	295,337	253,686	270,693	204,841
<b>Total .. ..</b>	<b>299,368</b>	<b>297,670</b>	<b>255,828</b>	<b>272,342</b>	<b>206,922</b>
Underground mines	281,310	281,662	241,812	262,137	205,560
Opencut mines ..	18,058	16,008	14,016	10,205	1,362
<b>AUSTRALIA</b>					
Semi-anthracite ..	54,066	50,095	58,579	69,301	62,203
Bituminous ..	18,576,508	20,640,884	21,991,221	22,006,032	22,273,659
Sub-bituminous ..	1,667,868	1,877,981	1,956,258	2,394,186	2,521,619
<b>Total .. ..</b>	<b>20,298,442</b>	<b>22,568,960</b>	<b>24,006,058</b>	<b>24,469,519</b>	<b>24,857,481</b>
Underground mines	18,593,068	20,407,944	21,160,884	21,307,592	21,628,194
Opencut mines ..	1,705,374	2,161,016	2,845,174	3,161,927	3,229,287

(a) Bituminous coal from an opencut mine.

(b) Bituminous coal from underground mines.

(c) Sub-bituminous coal.

The principal producing centres during 1962 were as follows.

- (i) *New South Wales.* The principal deposits worked were in the vicinity of Newcastle, Cessnock and Singleton (northern field), Lithgow (western field), and Wollongong (southern field). Tonnages mined in 1962 were: northern field, 10,058,000 tons; southern field, 7,454,000 tons; and western field, 1,517,000 tons. All opencut coal was from the northern field.
- The coal fields of New South Wales, predominantly bituminous, are the most important in Australia, in respect of the magnitude, quality and accessibility of reserves and the extent to which the deposits are being worked. Coal from the various seams differs in properties, coal from the Greta seam worked in the vicinity of Cessnock being particularly suitable for gas-making, while coal from the Victoria Tunnel, Dudley, Young Wallsend and Borehole seams, all of which are mined near Newcastle, have coking properties and are used in the steelworks. Coking coal is also obtained from the Bulli seam which is mined near Wollongong and in the Burragorang Valley. A multi-purpose coal is available in the Singleton area, and steaming coals are mined around Newcastle, Lithgow, Cessnock and Wollongong.
- (ii) *Victoria.* Production of black coal was restricted to the Gippsland district. The State Coal Mine at Wonthaggi was the main producer, and the remaining production came from small privately-owned mines.
- (iii) *Queensland.* The principal producing centres were Ipswich, 1,657,733 tons; Bowen, 367,313 tons; Mount Morgan, 301,584 tons; and Maryborough, 155,680 tons. Opencut methods were used on the Bowen, Clermont and Mount Morgan fields, and the total coal won by this means was 21.6 per cent. of total production.

- (iv) *South Australia.* Coal was mined only at Leigh Creek, 377 miles north of Adelaide.
- (v) *Western Australia.* The only coal deposits which have been developed on a commercial scale are at Collie in the south-west of the State, and all production during 1962 was from this source.
- (vi) *Tasmania.* Most of the coal produced was won in the north-east of the State, the principal producing centres in 1962 being Fingal, 108,959 tons; St. Mary's, 105,268 tons; and Avoca, 50,049 tons.

6. Production of Black Coal Per Man-shift.—(i) *Underground Mines.* The following table shows particulars of estimated black coal output per man-shift worked, (a) at the coal face, and (b) by all employees, in respect of underground mines for each State concerned and for Australia for the years 1958 to 1962. These estimates have been calculated by the Joint Coal Board from data collected fortnightly in respect of coal production and the number of man-shifts actually worked. In South Australia, black coal is won only by opencut mining.

**PRODUCTION OF BLACK COAL PER MAN-SHIFT: UNDERGROUND MINES**  
(Tons)

Year	N.S.W.	Vic.	Q'land	W. Aust.	Tas.	Australia
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**PRODUCTION PER MAN-SHIFT WORKED AT COAL FACE**

1958	.. ..	14.48	2.04	7.28	6.67	8.01	11.96
1959	.. ..	18.07	2.10	7.53	7.60	7.34	14.13
1960	.. ..	20.64	2.16	8.37	8.12	7.64	16.08
1961	.. ..	24.61	2.15	8.69	8.09	8.77	19.04
1962	.. ..	25.92	1.94	9.25	8.90	11.04	20.13

**PRODUCTION PER MAN-SHIFT WORKED BY ALL EMPLOYEES**

1958	.. ..	4.35	0.89	2.90	3.02	3.91	3.95
1959	.. ..	4.90	0.93	2.95	3.35	3.72	4.37
1960	.. ..	5.39	0.94	3.19	3.62	3.87	4.81
1961	.. ..	6.23	0.83	3.46	4.00	4.09	5.55
1962	.. ..	6.57	0.78	0.36	4.32	4.71	5.84

(ii) *Opencut Mines.* In the next table, the Joint Coal Board's estimates of production of black coal per man-shift worked by all employees in opencut mines are shown. There are no opencuts producing black coal in Victoria.

**PRODUCTION OF BLACK COAL PER MAN-SHIFT: OPENCUT MINES**  
(Tons)

Year	N.S.W.	Q'land	S. Aust.	W. Aust.	Tas.	Australia	
1958	.. ..	11.31	13.63	11.46	6.78	10.42	11.47
1959	.. ..	12.47	12.50	10.36	7.64	10.47	11.08
1960	.. ..	22.15	10.96	12.46	8.01	9.38	13.79
1961	.. ..	22.29	11.43	14.91	9.63	10.79	14.60
1962	.. ..	22.42	10.42	19.78	10.32	10.89	15.97



7. **Mine Production of Brown Coal.**—Brown coal is mined only in Victoria, and production in recent years has been as follows:—1959, 13,034,605 tons; 1960, 14,967,202 tons; 1961, 16,279,168 tons; 1962, 17,137,436 tons; and 1963, 18,456,838 tons. In the past ten years, the output of brown coal has nearly doubled, and further increases are expected in the future as electricity generation projects proceed.

8. **Value at the Mine in New South Wales.**—Particulars of the average values at the mine (or at screens or mine washeries where these are at a distance from the mine) of salable coal for each district and for New South Wales as a whole are shown in the following table for the years 1958 to 1962. Salable coal excludes miners' coal, coal consumed at the mines, and refuse, etc., removed by the use of hand-picking belts or at mine washeries. In calculating these values, most coal won by producer consumers is also excluded, and in respect of stocks of coal held at grass by the Commonwealth Government, only actual sales have been taken into account. No deduction has been made in respect of excise duty operative from 1st November, 1949.

**AVERAGE SELLING VALUE AT THE MINE PER TON OF SALABLE COAL:  
NEW SOUTH WALES**

(s. d.)

Year	Northern District	Southern District	Western District	Average for State
1958.. .. .	56 1	55 0	47 5	54 10
1959.. .. .	52 5	54 4	47 6	52 7
1960.. .. .	51 11	55 11	48 1	52 8
1961.. .. .	51 5	55 1	46 9	52 3
1962.. .. .	51 3	52 9	44 4	51 2

9. **Values in New South Wales, United Kingdom and the United States of America.**—The following table shows for the years 1958 to 1962 average values of coal produced in New South Wales, Great Britain and the United States of America. The figures give an indication of changes in average value or price within each country, but they do not necessarily show the relative levels as between the countries concerned.

**PRODUCTION VALUES OF COAL PER TON: NEW SOUTH WALES, UNITED KINGDOM AND UNITED STATES OF AMERICA**

Country	1958	1959	1960	1961	1962
	<i>s. d.</i>	<i>s. d.</i>	<i>s. d.</i>	<i>s. d.</i>	<i>s. d.</i>
New South Wales—bituminous(a)	54 10	52 7	52 8	52 3	51 2
United Kingdom—deep-mined(b)	85 1	83 5	86 1	90 10	91 9
United States of America— bituminous and lignite(c)	\$ 4.86	\$ 4.77	\$ 4.69	\$ 4.58	\$ 4.48

(a) Average selling value at the mine per ton of 2,240 lb.; the figures relate to salable coal and include excise duty. (b) Average value in sterling at the mine per ton of 2,240 lb. (c) Average value in United States currency at the mine per ton of 2,000 lb.

10. **Consumption of Coal in Australia.**—(i) *Black Coal.* Details of the production of black coal in Australia and its disposal are shown in the following table for the years 1958–59 to 1962–63.

**BLACK COAL: PRODUCTION AND CONSUMPTION**  
(’000 Tons)

Particulars	1958-59	1959-60	1960-61	1961-62	1962-63
Production(a) .. ..	20,459	21,223	22,947	24,427	24,301
Imports .. ..	8	8	7	5	8
<b>Total</b> .. ..	<b>20,467</b>	<b>21,231</b>	<b>22,954</b>	<b>24,432</b>	<b>24,309</b>
Consumption as fuel—					
Electricity generation .. ..	7,131	7,398	7,420	7,869	8,293
Factories .. ..	3,122	3,166	3,103	2,844	2,779
Railway locomotives(b) .. ..	2,050	2,002	1,847	1,627	1,481
Bunker coal(c) .. ..	203	169	136	115	115
<b>Total</b> .. ..	<b>12,506</b>	<b>12,735</b>	<b>12,506</b>	<b>12,455</b>	<b>12,668</b>
Consumption as raw material—					
For metallurgical coke .. ..	3,846	4,216	4,910	5,039	5,195
For other purposes .. ..	1,787	1,776	1,751	1,631	1,473
<b>Total</b> .. ..	<b>5,633</b>	<b>5,992</b>	<b>6,661</b>	<b>6,670</b>	<b>6,668</b>
Exports (oversea) .. ..	645	1,088	1,888	3,470	2,677
Mine washery refuse and dump losses(d) .. ..	660	982	1,072	1,341	1,278
Balance—unrecorded consumption, other purposes(e) .. ..	1,023	434	827	496	1,018
<b>Grand Total</b> .. ..	<b>20,467</b>	<b>21,231</b>	<b>22,954</b>	<b>24,432</b>	<b>24,309</b>

(a) Includes miners' and colliery coal. (b) Government railways only. (c) Figures refer only to New South Wales consumption by oversea, interstate and intrastate vessels. (d) Prior to 1959-60, figures refer only to New South Wales. Later figures include Tasmania. (e) Includes net change in stocks.

After the 1939-45 War, it was found necessary to augment local supplies of black coal in Australia by increasing imports. The quantity imported reached a post-war peak of 597,866 tons in 1950-51, but has since declined as production has expanded considerably. Since 1952-53, exports have exceeded imports by a wide margin; in 1962-63, exports of black coal were 2,676,522 tons and imports were 7,929 tons. These imports were of black coal only for special purposes.

(ii) *Brown Coal.* The table following shows the production and consumption of brown coal and the production of briquettes in Victoria for the years 1958-59 to 1962-63.

**BROWN COAL: PRODUCTION AND CONSUMPTION, VICTORIA**  
(’000 Tons)

Particulars	1958-59	1959-60	1960-61	1961-62	1962-63	
Production .. ..	12,243	14,101	15,723	16,729	17,766	
Consumption as fuel—						
Electricity generation .. ..	} 9,289	10,498	9,970	10,981	{ 11,333	
Briquette factory .. ..						535
Other factories .. ..						894
<b>Total</b> .. ..	1,293	1,248	951	860		
Consumption as raw material—						
Briquette manufacture .. ..	1,639	2,396	4,764	4,862	4,980	
Balance(a) .. ..	+22	-41	+38	+26	+24	
Briquettes manufactured .. ..	643	975	1,807	1,820	1,805	

(a) The sign (+) indicates that the balance shown is available for other consumption and accumulation of stocks; the sign (-) indicates a reduction in stocks.

The State Electricity Commission of Victoria produces brown coal briquettes at Yallourn and Morwell, both situated on the brown coal deposits in Gippsland. The former commenced commercial production of briquettes in 1925, and initial output of the Morwell plant was in 1960. Output of briquettes (Yallourn and Morwell combined) was 1,819,954 tons in 1961-62, and 1,805,347 tons in 1962-63.

In December, 1956, the Lurgi high pressure brown coal gasification plant at Morwell was opened by the Gas and Fuel Corporation of Victoria. This plant operates on briquettes supplied by belt conveyor from the State Electricity Commission's Morwell works, and produces town gas which is sent to Melbourne through 103 miles of pipeline.

11. Exports.—The quantities and values of the oversea exports of Australian coal and of bunker coal for oversea vessels for the five years 1958-59 to 1962-63 are shown in the following table. These shipments were made mainly from New South Wales.

**COAL: OVERSEA EXPORTS AND BUNKER, AUSTRALIA**

Year	Oversea exports(a)		Bunker coal for oversea vessels	
	Quantity	Value	Quantity	Value
	Tons	£	Tons	£
1958-59 .. .. .	645,249	2,676,042	8,187	37,808
1959-60 .. .. .	1,087,844	4,326,810	8,117	25,380
1960-61 .. .. .	1,888,415	7,682,223	179	1,716
1961-62 .. .. .	3,469,552	13,611,122	37	410
1962-63 .. .. .	2,676,522	11,170,712	1,703	17,578

(a) Excludes bunker coal.

New South Wales, in addition to meeting requirements within the State, supplies considerable quantities of coal to other States and for export overseas. Of the total of 18,725,000 tons produced in 1962-63, 1,223,000 tons (6.5 per cent.) were exported interstate and 2,431,000 tons (13.0 per cent.) were exported overseas. The demand for bunker coal continues to decline, and in 1962-63 a total of 115,000 tons (0.6 per cent.) of New South Wales production was supplied for interstate, intrastate and oversea vessels.

12. Production in Principal Countries.—The following table shows the production of coal in the principal countries and estimated world totals in 1961 and 1962.

**COAL: PRODUCTION IN PRINCIPAL COUNTRIES**  
(Source: Division of Minerals, United States Bureau of Mines.)  
(<sup>000</sup> Tons)

Country	Black Coal		Brown Coal and Lignite	
	1961	1962	1961	1962
China (Mainland) .. .. .	(a) 375,000	(a) 375,000	(b)	(b)
United States of America .. .. .	372,683	389,275	2,695	2,728
U.S.S.R. .. .. .	371,064	375,966	131,407	132,868
United Kingdom .. .. .	190,464	197,388	..	..
Germany, Federal Republic of .. .. .	143,082	141,392	95,661	99,652
Poland .. .. .	104,922	107,873	10,175	10,916
India .. .. .	(a) 55,243	(a) 60,578	(b)	(b)
Japan .. .. .	53,623	53,535	1,288	1,094
France .. .. .	51,531	51,532	2,860	2,837
South Africa .. .. .	38,940	40,623	..	..
Czechoslovakia .. .. .	25,819	27,754	64,271	68,107
Australia .. .. .	24,006	24,470	16,279	17,137
Belgium .. .. .	21,196	20,891	..	..
Korea (North) .. .. .	(a) 11,604	(a) 12,991	(b)	(b)
Spain .. .. .	13,578	12,466	2,056	2,443
Netherlands .. .. .	12,421	11,390	..	..
Korea, Republic of .. .. .	5,791	7,328	..	..
Canada .. .. .	7,312	7,168	1,972	2,014
Turkey .. .. .	6,281	6,348	3,713	3,888
China, Republic of (Formosa) .. .. .	4,170	4,482	..	..
Hungary .. .. .	3,022	3,290	24,707	24,912
Colombia .. .. .	2,755	2,953	..	..
Germany, Eastern .. .. .	2,634	2,539	232,666	243,296
New Zealand(c) .. .. .	2,768	2,402	157	148
<i>Estimated World Total</i> .. .. .	<i>1,920,117</i>	<i>1,959,197</i>	<i>651,348</i>	<i>677,621</i>

(a) Includes lignite.  
Department Report, 1962.

(b) Included with black coal.

(c) Source: New Zealand Mines

13. **Coke and Other By-products from Coal.**—(i) *Coke.* The production of metallurgical coke in Australia during 1962–63 was 2,759,060 tons, compared with 2,716,894 tons during 1961–62.

In addition to metallurgical coke referred to above (which is produced by specialized coke works), considerable quantities of coke are produced in gas works as a by-product of the manufacture of gas. Production in gas works in 1962–63 was 694,575 tons. To date, there has been no production of petroleum coke at Australian oil refineries.

In order to avoid duplication with coal values, the figures for coke have not been included in the general tables of mineral production in the early part of this chapter.

In the following table, particulars of the production of coke in coke works and gas works in Australia are shown for the years 1958–59 to 1962–63. The figures exclude output of coke breeze, which amounted to 456,719 tons in 1961–62 and 379,183 tons in 1962–63.

#### COKE PRODUCTION: AUSTRALIA

(Tons)

Industry	1958–59	1959–60	1960–61	1961–62	1962–63
Coke works .. ..	2,210,621	2,376,097	2,738,505	2,716,894	2,759,060
Gas works .. ..	815,464	758,668	764,626	761,355	694,575
<b>Total .. ..</b>	<b>3,026,085</b>	<b>3,134,765</b>	<b>3,503,131</b>	<b>3,478,249</b>	<b>3,453,635</b>

(ii) *Other By-products from Coal.* In addition to coke, other products are obtained from the treatment of coal by coke and gas works. Some of the main items produced, principally in coke and gas works, during 1962–63 (1961–62 in parentheses) were: crude tar, 53,886,802 gallons (56,883,264 gallons); refined tar, 38,514,896 gallons (24,070,783 gallons); and ammonium sulphate, 93,675 tons (103,918 tons).

NOTE.—Figures shown in this paragraph may differ from corresponding figures in Chapter V. Manufacturing Industry because of revisions since that chapter was prepared.

### § 13. Oil Exploration in Australia

1. **Introduction.**—A comprehensive survey of developments in the search for oil up to the end of 1961 and early 1962 was presented on pages 1094–8 of Year Book No. 48 and continued into 1962 in Year Book No. 49, pages 1185–6. A summary of developments in 1963 is given below.

2. **Developments in 1963.**—The search for petroleum continued with increasing effort throughout 1963, following earlier successes achieved in Queensland. To the end of 1963, seventeen wells had been drilled in the Moonie field, two of which proved dry. Commercial production from this field commenced early in 1964 at a daily rate of 7,000–10,000 barrels of oil. The oil is transported 200 miles to Brisbane through a 10-inch pipeline which was completed in October, 1963.

No new oil fields have been discovered since Moonie, but several important oil and gas strikes were made in the Bowen–Surat Basin in Queensland. Three wells in the Bony Creek area and two in the Westgrove area were completed as gas wells, while in the Richmond area two wells produced light oil with gas on tests.

During 1963, combined private and government expenditure on petroleum exploration is estimated at about £23.5 million. Total expenditure to date on the search for, and development of, petroleum is of the order of £125 million. Information regarding government assistance in the search for oil is given in para. 3 (i) (d) on pp. 1133-4.

3. Footage Drilled in the Search for Oil.—The following table shows details of footage drilled in the search for oil in Australia, Papua and New Guinea during the years 1959 to 1963.

#### FOOTAGE DRILLED IN THE SEARCH FOR AND DEVELOPMENT OF PETROLEUM

(Source: Bureau of Mineral Resources(a))

(Feet)

State or Territory	1959	1960	1961	1962	1963
New South Wales .. ..	17,422	6,169	7,779	34,031	72,922
Victoria .. ..	8,395	14,682	22,439	42,635	28,023
Queensland .. ..	30,328	54,841	74,931	237,380	433,790
South Australia .. ..	12,637	..	8,945	40,836	65,941
Western Australia .. ..	36,020	17,193	13,712	38,400	41,416
Northern Territory .. ..	2,458	1,373	1,024	9,347	18,954
<b>Australia .. ..</b>	<b>107,260</b>	<b>94,258</b>	<b>128,830</b>	<b>402,629</b>	<b>661,046</b>
Papua and New Guinea .. ..	13,389	10,042	..	5,947	4,657

(a) Based on figures obtained from State Departments of Mines and the Northern Territory Mines Branch.

### § 14. Sulphur

1. Mine Production.—There is no production of elemental sulphur (brimstone) in Australia. However, while sulphur is itself non-metallic, considerable quantities are contained in certain metallic minerals produced. Large quantities of the lead and zinc concentrates produced are exported, and the sulphur they contain is not available for utilization in Australia.

The following table shows the sulphur content of the metallic minerals produced during 1962 from which sulphur was subsequently recovered.

#### SULPHUR: CONTENT OF METALLIC MINERALS PRODUCED, 1962

(Tons)

Mineral in which contained	N.S.W.	Q'land	S. Aust.	W. Aust.	Tas.	Australia
Lead concentrate ..	57,848	..	..	(a) 62	2,817	(b) 60,727
Lead-copper concentrate ..	..	..	..	..	2,926	2,926
Pyrite concentrate ..	2,012	6,681	(a) 29,092	23,147	4,131	(b) 65,063
Zinc concentrate ..	136,933	(a) 20,470	..	..	26,684	(b) 184,087
<b>Total ..</b>	<b>196,793</b>	<b>(b) 27,151</b>	<b>(a) 29,092</b>	<b>(b) 23,209</b>	<b>36,558</b>	<b>(b) 312,803</b>

(a) Estimated.

(b) Partly estimated.

The principal producing centres during 1962 were as follows.

(i) *New South Wales.* All the sulphur produced was contained in lead and zinc concentrates produced at Broken Hill and in lead, zinc and pyrite concentrates produced at Captain's Flat.

(ii) *Queensland.* Sulphur is contained in the copper, lead and zinc concentrates milled at Mount Isa and in the copper and pyrite concentrates produced at Mount Morgan. Zinc concentrate produced at Mount Isa was exported.

(iii) *South Australia.* A pyrite concentrate containing sulphur was produced from ore mined at Nairne, 22 miles east of Adelaide.

(iv) *Western Australia.* Sulphur was recovered from pyrite concentrates produced at Norseman and at Kalgoorlie.

(v) *Tasmania.* A pyrite concentrate was produced at Mount Lyell after the separation of the copper sulphide mineral. Recoverable sulphur was contained also in lead, lead-copper and zinc concentrates milled at Rosebery, but only that contained in zinc concentrate was recovered in Australia.

The following table shows for the years 1958 to 1962 the sulphur content of minerals from which sulphur was recovered.

#### SULPHUR: CONTENT OF METALLIC MINERALS PRODUCED

(Tons)

State	1958	1959	1960	1961	1962
New South Wales .. ..	197,736	188,892	204,358	194,659	196,793
Queensland(a) .. ..	14,647	17,464	24,612	20,515	27,151
South Australia(b) .. ..	32,129	27,616	31,717	33,357	29,092
Western Australia(a) .. ..	22,635	24,473	24,556	24,046	23,209
Tasmania .. ..	55,472	52,100	54,757	52,289	36,558
<b>Australia(a) .. ..</b>	<b>322,619</b>	<b>310,545</b>	<b>340,000</b>	<b>324,866</b>	<b>312,803</b>

(a) Partly estimated.

(b) Estimated.

2. *Production of Sulphuric Acid.*—The principal use of sulphur is in the manufacture of sulphuric acid, which is produced in all States and in the Northern Territory. Most of this is used for fertilizer manufacture, although small quantities are used in the rubber and chemical industries and in the preparation of uranium concentrates. Sulphur contained in lead concentrate is used for acid manufacture at Port Pirie and sulphur in zinc concentrate is used at Risdon. In June, 1961, acid production from lead-zinc sinter gases commenced at Cockle Creek, near Newcastle, New South Wales. Pyrite concentrate is used as a source of sulphur for acid manufacture at Cockle Creek and at Port Kembla in New South Wales, and at Melbourne, Brisbane, Adelaide, Perth and Fremantle. However, about half the sulphuric acid produced in Australia is made from imported elemental sulphur. The next table shows, for the years 1959 to 1963, the Australian production of sulphuric acid and the quantity of sulphur in the acid produced from various sources.

## SULPHUR USED IN SULPHURIC ACID PRODUCTION: AUSTRALIA

(Tons)

Item	1959	1960	1961	1962	1963
Production of sulphuric acid (mono) .. .. .	1,000,458	1,109,751	1,137,501	1,229,256	1,315,562
Sulphur in sulphuric acid (mono) produced from—					
Sulphur (elemental)(a) ..	153,195	179,752	182,554	202,659	212,208
Zinc concentrate ..	39,933	42,946	52,423	65,342	72,059
Lead concentrate ..	19,619	21,573	22,440	20,247	24,643
Pyrite ..	103,596	104,406	100,520	97,927	108,692
Spent oxide ..	3,655	3,814	2,277	2,381	132
Other materials ..	7,151	10,396	11,749	13,410	12,455
<b>Total Sulphur Content</b>	<b>327,149</b>	<b>362,887</b>	<b>371,963</b>	<b>401,966</b>	<b>430,189</b>

(a) All imported.

## § 15. Non-metallic Minerals

1. **Asbestos.**—Production of asbestos has been confined mainly to crocidolite in Western Australia, principally at Wittenoom Gorge in the north-western part of the State. Deposits of chrysotile, located mainly at Nunyerry in Western Australia and at Baryulgil in New South Wales, are relatively small and widely scattered.

The production of chrysotile and crocidolite in Australia during the five years 1958 to 1962 is shown in the following table.

## PRODUCTION OF ASBESTOS

(Short tons of 2,000 lb.)

Year	Chrysotile			Crocidolite
	New South Wales	Western Australia	Australia	Australia(a)
1958 .. .. .	712	1,543	2,255	13,313
1959 .. .. .	726	707	1,433	16,442
1960 .. .. .	1,072	69	1,141	14,472
1961 .. .. .	794	175	969	15,777
1962 .. .. .	866	59	925	17,491

(a) Wholly produced in Western Australia.

2. **Clays.**—Statistics of clay production in Australia are not entirely satisfactory, mainly because of differences between States in the classification of the various types of clays. In addition, the statistics are incomplete, as some clays are outside the normal administrative control of some State Mines Departments. In the following table, the recorded production of the main types of clays produced in each State of Australia is shown for the year 1962.

## PRODUCTION OF CLAYS, 1962

(Tons)

Type	New South Wales	Victoria	Queensland	South Australia	Western Australia	Tasmania	Australia
Bentonite and bentonitic clay ..	..	..	299	..	485	..	784
Brick clay and shale	1,966,322	1,181,058	315,862	338,180	441,156	140,536	4,383,114
Cement clay and shale ..	274,351	n.a.	n.a.	14,606	21,635	n.a.	(a)310,592
Damouritic clay ..	..	..	..	485	..	..	485
Fireclay, n.e.l. ..	120,753	28,207	2,948	20,853	24,785	..	197,546
Fuller's earth ..	272	..	..	..	120	..	392
Kaolin ..	21,072	11,404	116	2,190	682	606	36,070
Stoneware clay ..	101,187	37,979	..	30,386	n.a.	..	(a)169,552
Tile clay ..	101,513	61,952	n.a.	..	n.a.	4,724	(a)168,189
Other clays ..	4,181	..	n.a.	..	n.a.	25,242	(a) 29,423

(a) Incomplete, see para. 1. Sources and Scope of Statistics, p. 1136.

3. Gypsum.—There are very extensive deposits of gypsum in Australia, but only the more accessible and easily worked deposits have been exploited. These deposits lie in four main regions, (a) in New South Wales stretching from around Griffith to near Broken Hill, (b) in the north-west corner of Victoria, the south-west corner of New South Wales and adjoining parts of South Australia, (c) in South Australia on both sides of St. Vincent Gulf and extending to Lake MacDonnell in the west, and (d) between Perth and Kalgoorlie in Western Australia. The South Australian deposits are the most important, and more than half the total Australian production of gypsum in 1962 came from that State, where the main centres of production are Kangaroo Island, Stenhouse Bay and Lake MacDonnell.

The building industry is the main user of the gypsum produced in Australia. The greatest part is used in the manufacture of plaster and most of the remainder in cement manufacture. A small amount is also used as fertilizer. A considerable quantity is exported, mainly to New Zealand for use in the plaster industry. Substantial quantities of gypsum are also exported to Japan, Malaya and the Philippines.

The production of gypsum in Australia is set out in the following table for the five years 1958 to 1962.

## PRODUCTION OF GYPSUM

(Tons)

Year	New South Wales	Victoria	South Australia	Western Australia	Australia
1958 .. ..	90,664	72,010	306,749	35,515	504,938
1959 .. ..	101,143	81,101	296,816	37,731	516,791
1960 .. ..	95,514	100,386	340,762	44,216	580,878
1961 .. ..	97,250	80,223	387,289	45,145	609,907
1962 .. ..	71,802	78,728	428,730	51,650	630,910



4. **Limestone.**—Limestone is quarried in all States, being used mainly for the manufacture of cement. Other uses are in the steel industry as a metallurgical flux, in the chemical industry and in agriculture.

The recorded statistics of limestone production in each State of Australia are shown in the following table. Details of limestone produced for use as building or road material are not included.

**PRODUCTION OF LIMESTONE(a)**  
(’000 Tons)

Year	N.S.W.	Vic.	Q’land	S.A.	W.A.	Tas.	Aust.
1958 .. ..	2,061	859	(b)	1,220	(b)	235	5,324
1959 .. ..	2,056	1,120	(b)	1,017	(b)	230	5,305
1960 .. ..	2,400	1,157	(b)	1,064	(b)	215	5,669
1961 .. ..	2,576	1,243	(b)	1,105	(b)	204	6,146
1962 .. ..	2,432	1,214	(b)	1,400	(b)	319	6,415

(a) Includes shell and coral. (b) Not available for publication, included in total for Australia.

5. **Magnesite.**—The major sources of magnesite at present are deposits at Fifield, Thuddungra and Lake Cargelligo in central New South Wales, and at Ravensthorpe in Western Australia. Most of the output of magnesite in Australia is used for refractory purposes, mainly in the steel industry, and small amounts are used in chemical, paper, glass, rubber, and ceramic industries. Particulars of the production of magnesite in each State for the years 1958 to 1962 are set out in the table below.

**PRODUCTION OF MAGNESITE**  
(Tons)

Year	New South Wales	Queensland	South Australia	Western Australia	Australia
1958 .. ..	69,030	20	341	..	69,391
1959 .. ..	59,777	..	790	19	60,586
1960 .. ..	61,668	..	498	..	62,166
1961 .. ..	88,511	..	659	9,625	98,795
1962 .. ..	61,672	..	295	224	62,191

6. **Salt.**—Salt is obtained in Australia from solar evaporation pans and dry salt lakes. Production satisfies local requirements and provides a considerable surplus for export, mainly to Japan. Recorded production in South Australia (the chief producing State) is shown in the following table for the years 1958 to 1962. Estimates of total Australian production are also shown.

**SALT PRODUCTION**  
(’000 Tons)

Particulars	1958	1959	1960	1961	1962
South Australia .. ..	336	358	359	387	390
Estimated Australian total ..	430	468	463	509	536

7. **Other Non-metallic Minerals.**—(i) *General.* Many other non-metallic minerals are produced in Australia in considerable quantities, and are listed separately in the following paragraphs.

(ii) *Barite.* The principal centre producing first-grade barite is at Orparinna in the North Flinders Range in South Australia. The production of barite in Australia during 1962 was 12,534 tons, of which 11,605 tons came from South Australia, 494 tons from Western Australia and 435 tons from New South Wales.

(iii) *Diatomite.* Production of diatomite is carried on mainly in the eastern States of Australia. In 1962, 7,312 tons were produced, of which New South Wales produced 4,318 tons, mainly at Coonabarabran and Barraba. The remaining 2,994 tons were produced in Queensland (2,209 tons), Victoria (770 tons) and Western Australia (15 tons).

(iv) *Dolomite.* In 1962, South Australia continued to supply the bulk of the requirements of the iron and steel industry from quarries at Ardrossan. During the year, production in the various States was South Australia, 169,853 tons; New South Wales, 4,919 tons; Queensland, 3,708 tons; and Tasmania, 2,217 tons; making an Australian total of 180,697 tons.

(v) *Felspar.* The main demand for felspar comes from the glass and ceramic industries. Most of the Australian production of felspar comes from New South Wales, which produced 5,925 tons of the Australian total of 8,513 tons in 1962. Of the remainder, 1,321 tons came from South Australia and 1,267 tons from Western Australia.

(vi) *Gemstones.* (a) *Opals.* Most of the opals won in recent years came from the Coober Pedy and Andamooka fields in South Australia, which produced opals worth £949,000 in 1962. Other production in 1962 was from Lightning Ridge in New South Wales, valued at £100,000.

(b) *Sapphires.* In 1962, sapphires produced in the Glen Innes and Inverell Districts of New South Wales were valued at £31,000 and production from the Anakie field in Central Queensland was valued at £5,000.

(vii) *Phosphate Rock.* During 1962, 4,385 tons of phosphate rock were produced, of which 4,317 tons came from South Australia and the remaining 68 tons from Western Australia. Phosphate deposits at Rum Jungle were tested by the Bureau of Mineral Resources in 1962. Further testing is required but present indications are that the phosphate rock is not likely to be suitable for the production of superphosphate. A programme to test phosphate deposits in the Amadeus Basin, west of Alice Springs, is planned for 1963.

(viii) *Silica.* The production of silica is not recorded in Victoria and production recorded in all other States may not be complete. The output of silica, which includes glass sand, quartz, quartzite, sand, sandstone, and silicious abrasives, but does not include production for use as building or road material, was 158,619 tons in New South Wales; 25,614 tons in Queensland; 23,446 tons in South Australia; 10,351 tons in Western Australia; and 514 tons in Tasmania; making a total of 218,544 tons recorded for those States during 1962.

(ix) *Sillimanite.* In 1962, 2,637 tons of sillimanite were produced in Australia, 1,359 tons of which came from South Australia and 1,278 tons from New South Wales.

(x) *Talc.* The Australian output of talc (including steatite) was 14,060 tons in 1962. South Australia produced 8,008 tons, Western Australia 4,981 tons, and New South Wales 1,071 tons.

(xi) *Other.* Other non-metallic minerals produced in Australia in small quantities during 1962 were garnet concentrate, foundry loam, lithium ores, mineral pigments, pebbles for grinding, perlite, pyrophyllite, rhodonite and serpentine.

## § 16. Value of Production

1. **Local Value of Mining and Quarrying Production, 1962.**—The following table shows particulars of the local value of production for individual mining industry groups and quarrying for the year 1962. It should be stressed that these statistics are on an industry basis and not by product. For particulars of the method of compiling these industry statistics, see para. 2 (j), pages 1136-7. A more detailed reference to the value of production of mining and quarrying and other industries together with a brief explanation of terms used will be found in Chapter XXX. Miscellaneous.

## MINING AND QUARRYING: LOCAL VALUE OF PRODUCTION(a), 1962

(£'000)

Industry	N.S.W.	Vic.	Q'land	S.A.	W.A.	Tas.	N.T.	A.C.T.	Aust.
<b>Metal mining—</b>									
Gold mining ..	7	473	231	1	14,148	(b)	926	..	15,786
Lead-silver-zinc mining ..	17,494	..	(c)	4	14	(c)	..	..	40,564
Copper-gold mining ..	26	3	(c)	(b)	287	(c)	1,548	..	7,842
Tin mining ..	211	8	1,107	..	334	1,220	35	..	2,915
Mineral sands mining ..	3,005	..	1,775	..	715	..	..	..	5,495
Other metal mining ..	81	16	(c)	4,571	2,277	(c)	2	..	7,524
<b>Total, Metal Mining</b>	<b>20,824</b>	<b>500</b>	<b>26,715</b>	<b>4,576</b>	<b>17,775</b>	<b>7,225</b>	<b>2,511</b>	<b>..</b>	<b>80,126</b>
<b>Fuel mining—</b>									
Black coal mining ..	47,034	316	8,143	1,449	1,981	616	..	..	59,539
Brown coal mining ..	..	7,841	..	..	..	..	..	..	7,841
<b>Total, Fuel Mining ..</b>	<b>47,034</b>	<b>8,157</b>	<b>8,143</b>	<b>1,449</b>	<b>1,981</b>	<b>616</b>	<b>..</b>	<b>..</b>	<b>67,380</b>
<b>Non-metal (excluding fuel) mining—</b>									
Clays(d) ..	1,110	1,121	101	239	161	49	..	..	2,781
Gypsum ..	137	82	..	499	45	..	..	..	763
Limestone ..	1,270	610	(c)	1,087	(c)	(c)	..	..	3,973
Salt ..	..	(c)	(c)	779	(c)	..	13	..	1,023
Other non-metal (excluding fuel) mining(d)	718	(c)	26	1,269	1,581	(c)	..	..	3,617
<b>Total, Non-metal (excluding Fuel) Mining</b>	<b>3,235</b>	<b>1,968</b>	<b>751</b>	<b>3,873</b>	<b>1,960</b>	<b>357</b>	<b>13</b>	<b>..</b>	<b>12,157</b>
<b>Total, All Mining ..</b>	<b>71,093</b>	<b>10,625</b>	<b>35,609</b>	<b>9,898</b>	<b>21,716</b>	<b>8,198</b>	<b>2,524</b>	<b>..</b>	<b>159,663</b>
Construction material quarrying(d) ..	8,871	9,383	1,490	5,489	1,529	705	158	281	27,906
<b>Total, All Mining and Quarrying ..</b>	<b>79,964</b>	<b>20,008</b>	<b>37,099</b>	<b>15,387</b>	<b>23,245</b>	<b>8,903</b>	<b>2,682</b>	<b>281</b>	<b>187,569</b>

(a) Value of output or selling value of products at the mine or quarry. (b) Less than £500.  
(c) Not available for publication, included in total for Australia. (d) Incomplete; see para. 1.  
Sources and Scope of Statistics, p. 1136.

2. Local Values, 1958 to 1962.—In the following table, the local value of mining and quarrying production is shown by States and Territories.

## MINING AND QUARRYING: LOCAL VALUE OF PRODUCTION(a)

(£'000)

Year	N.S.W.	Vic.	Q'land	S. Aust.	W. Aust.	Tas.	N.T.(b)	Aust.
1958 ..	71,414	13,694	27,632	12,308	20,777	7,358	2,772	155,955
1959 ..	71,090	14,935	33,329	13,209	21,787	7,639	2,996	164,985
1960 ..	79,641	16,267	37,608	13,952	22,166	8,067	3,539	181,240
1961 ..	78,171	c 20,027	32,220	15,912	22,496	7,959	3,366	180,151
1962 ..	79,964	c 20,008	37,099	15,387	23,245	8,903	2,963	187,569

(a) Value of output or selling value of products at the mine or quarry. (b) Includes Australian Capital Territory.  
(c) Not comparable with years prior to 1961 owing to extension of coverage of quarrying activities.

3. Net Value of Mining and Quarrying Production.—The following table shows particulars of the net value of production for individual mining industry groups and construction material quarrying for the year 1962.

MINING AND QUARRYING: NET VALUE OF PRODUCTION(a), 1962  
(£'000)

Industry	N.S.W.	Vic.	Q'land	S.A.	W.A.	Tas.	N.T.	A.C.T.	Aust.
<b>Metal mining—</b>									
Gold mining .. .. .	6	(b)	(b)	(b)	9,556	(c)	799	..	10,839
Lead-silver-zinc mining ..	13,001	..	(b)	(b)	2	(b)	..	..	31,893
Copper-gold mining .. ..	18	2	(b)	(b)	112	(b)	1,122	..	4,458
Tin mining .. .. .	186	7	798	..	250	1,014	23	..	2,278
Mineral sands mining .. ..	2,009	..	(b)	..	(b)	..	..	..	3,657
Other metal mining .. ..	69	(b)	(b)	(b)	1,828	(b)	(d) 2	..	(e)6,282
<b>Total, Metal Mining</b>	<b>15,289</b>	<b>333</b>	<b>20,758</b>	<b>(b)</b>	<b>(b)</b>	<b>4,839</b>	<b>1,946</b>	<b>..</b>	<b>59,407</b>
<b>Fuel mining—</b>									
Black coal mining .. .. .	35,975	219	6,716	(b)	(b)	508	..	..	46,193
Brown coal mining .. .. .	..	7,169	..	..	..	..	..	..	7,169
<b>Total, Fuel Mining ..</b>	<b>35,975</b>	<b>7,388</b>	<b>6,716</b>	<b>(b)</b>	<b>(b)</b>	<b>508</b>	<b>..</b>	<b>..</b>	<b>53,362</b>
<b>Non-metal (excluding fuel) mining—</b>									
Clays(f) .. .. .	853	1,030	(d) 101	210	111	43	..	..	(e)2,348
Gypsum .. .. .	102	63	..	(b)	(b)	..	..	..	608
Limestone .. .. .	914	349	(b)	911	(b)	(b)	..	..	2,804
Salt .. .. .	..	(b)	(b)	612	(b)	..	12	..	(g) 831
Other non-metal (excluding fuel) mining(f)	605	(b)	24	(b)	(b)	(b)	..	..	2,748
<b>Total, Non-metal (excluding Fuel) Mining ..</b>	<b>2,474</b>	<b>1,597</b>	<b>499</b>	<b>3,358</b>	<b>1,181</b>	<b>218</b>	<b>12</b>	<b>..</b>	<b>9,339</b>
<b>Total, All Mining ..</b>	<b>53,738</b>	<b>9,318</b>	<b>27,973</b>	<b>8,566</b>	<b>14,990</b>	<b>5,565</b>	<b>1,958</b>	<b>..</b>	<b>122,108</b>
<b>Construction material quarrying(f) ..</b>	<b>(d)8,871</b>	<b>6,879</b>	<b>1,030</b>	<b>4,641</b>	<b>1,132</b>	<b>552</b>	<b>114</b>	<b>187</b>	<b>e 23,406</b>
<b>Total, All Mining and Quarrying ..</b>	<b>62,609</b>	<b>16,197</b>	<b>29,003</b>	<b>13,207</b>	<b>16,122</b>	<b>6,117</b>	<b>2,072</b>	<b>187</b>	<b>145,514</b>

(a) Local value (i.e. value of output at mine) less cost of power, fuel, light and other materials and stores used; depreciation and maintenance costs have not been deducted. (b) Not available for publication, included in total for Australia. (c) Less than £500. (d) No allowance has been made for costs of power, fuel, light and other materials and stores used, particulars of which are not available. (e) See footnote (d). (f) Incomplete; see para. 1. Sources and Scope of Statistics, p. 1136. (g) No allowance has been made for cost of power, fuel, light and materials and stores used by the salt industry in Victoria as particulars are not available.

4. Net Value of Production, 1958 to 1962.—In the following table, the net value of mining and quarrying production and the value per head of population are shown by States and Territories.

## MINING AND QUARRYING: NET VALUE OF PRODUCTION(a)

Year	N.S.W.	Vic.	Q'land	S.A.	W.A.	Tas.	N.T. and A.C.T.	Aust.
NET VALUE OF PRODUCTION(a) (£'000)								
1958 .. ..	55,801	10,987	19,796	9,999	14,454	5,168	2,131	118,336
1959 .. ..	56,331	12,101	24,481	10,698	14,765	5,398	2,381	126,155
1960 .. ..	63,214	13,158	27,460	11,404	15,444	5,476	2,871	139,027
1961 .. ..	60,684	(b)16,479	23,434	13,103	15,553	5,203	2,789	137,245
1962 .. ..	62,609	(b)16,197	29,003	13,207	16,122	6,117	2,259	145,514

NET VALUE OF PRODUCTION(a) PER HEAD OF POPULATION  
(£)

1958 .. ..	15.0	4.0	13.6	11.0	20.5	15.3	32.3	11.9
1959 .. ..	14.8	4.3	16.6	11.5	20.6	15.7	31.9	12.4
1960 .. ..	16.3	4.5	18.3	11.9	21.2	15.6	35.5	13.4
1961 .. ..	15.4	(b) 5.6	15.4	13.4	20.9	14.6	31.4	13.0
1962 .. ..	15.6	(b) 5.4	18.7	13.2	21.1	16.9	23.3	13.5

(a) Local value, or value of output, less cost of power, fuel, light and other materials and stores used; depreciation and maintenance costs have not been deducted. (b) Not comparable with years prior to 1961 owing to extension of coverage of quarrying activities.

5. Local Value of Minerals Produced, 1958 to 1962.—Particulars of the estimated values of minerals (mine and quarry products) produced are shown in the following table. The values represent the estimated selling value at the mine or quarry of minerals produced during the years concerned.

LOCAL VALUE OF MINERALS PRODUCED: AUSTRALIA  
(£'000)

Mineral	1958	1959	1960	1961	1962
METALLIC MINERALS					
Copper ore, concentrate, etc. .. ..	14,770	21,165	25,439	21,249	24,302
Gold ore, concentrate, other forms, etc. ..	16,251	15,853	15,870	15,859	15,627
Iron ore .. .. ..	(a) 4,393	4,633	4,844	5,899	5,325
Lead and lead-silver ore and concentrate, lead-copper concentrate, etc. .. ..	22,493	21,477	20,396	16,933	19,548
Manganese ore .. .. ..	460	626	329	427	480
Pyritic concentrate .. .. ..	1,112	1,068	1,136	1,252	1,115
Rutile concentrate .. .. ..	4,524	3,838	3,639	3,314	3,519
Tin concentrate .. .. ..	1,739	2,043	1,940	2,786	2,834
Tungsten concentrates .. .. ..	871	410	940	1,033	559
Zinc ore and concentrate .. .. ..	2,565	4,888	7,730	5,295	4,555
Zircon concentrate .. .. ..	487	1,008	972	1,267	1,291
Other metallic minerals .. .. ..	525	512	575	769	947
<i>Total, Metallic Minerals</i> .. ..	<i>70,190</i>	<i>77,521</i>	<i>83,810</i>	<i>76,083</i>	<i>80,102</i>
FUEL MINERALS					
Coal, black .. .. ..	51,658	49,211	55,201	57,081	59,539
Coal, brown .. .. ..	5,418	6,123	6,845	7,722	7,841
<i>Total, Fuel Minerals</i> .. .. ..	<i>57,076</i>	<i>55,334</i>	<i>62,046</i>	<i>64,803</i>	<i>67,380</i>
NON-METALLIC (EXCLUDING FUEL) MINERALS					
<i>Total, Non-metallic (excluding Fuel) Minerals</i> .. .. ..	<i>(b) 10,192</i>	<i>(b) 10,533</i>	<i>10,843</i>	<i>11,494</i>	<i>12,160</i>

NOTE.—For footnotes see next page.

LOCAL VALUE OF MINERALS PRODUCED: AUSTRALIA—*continued*  
(£'000)

Mineral	1958	1959	1960	1961	1962
<b>CONSTRUCTION MATERIALS(c)</b>					
Total, Construction Materials .. ..	18,497	21,597	24,541	(d) 27,771	(d) 27,927
<b>TOTAL</b>					
Total, All Minerals and Construction Materials(e) .. ..	155,955	164,985	181,240	180,151	187,569

(a) Includes the value of iron oxide for fluxing. (b) Excludes Australian Capital Territory, details of which are included with construction materials. (c) Incomplete owing to difficulties of coverage. See para. 1. Sources and Scope of Statistics, p. 1136. (d) Not comparable with years prior to 1961 owing to extension of coverage in Victoria.

NOTE.—Particulars of the value of uranium concentrate produced are not available for publication and have been excluded from the table above.

Owing to the necessity of classifying individual mines according to the principal mineral produced, the values in the table on page 1184 for mining industry groups differ slightly in some cases from totals of the corresponding groups of mine products shown in the table above.

## § 17. Oversea Trade in Minerals and Mineral Products

Particulars of the quantity and value (£A. f.o.b. port of shipment) of the principal mineral and mineral product items imported into and exported from Australia during the years 1960 to 1962 are shown in the following table.

IMPORTS AND EXPORTS OF PRINCIPAL MINERALS AND MINERAL PRODUCTS:  
AUSTRALIA

Item	Quantity			Value (£A.'000 f.o.b.)		
	1960	1961	1962	1960	1961	1962
<b>IMPORTS</b>						
Aluminium, refined—						
Ingots .. .. tons	26,432	16,141	31,389	6,448	3,883	7,443
Plates, sheets and strips .. ..	5,770	1,953	2,163	2,432	802	929
Foil .. .. "	3,909	2,002	2,101	2,560	1,343	1,424
Asbestos .. .. short tons	41,002	36,901	39,105	2,568	2,310	2,437
Gold, unrefined bullion(a) .. fine oz.	144,029	146,131	135,084	2,238	2,283	2,074
Iron and steel—						
Iron ore .. .. tons	278,502	270,422	260,431	310	321	291
Ferro-alloys .. .. "	41,315	55,959	16,218	3,391	4,195	1,296
Tinplate .. .. "	63,741	38,355	31,102	6,039	3,661	2,818
Petroleum oils—						
Crude .. .. '000 gals.	2,705,989	2,837,372	2,976,789	67,743	66,455	66,675
Enriched crude .. .. "	237,336	404,861	398,340	6,923	11,831	11,666
Kerosenes .. .. "	102,965	110,906	103,176	5,368	5,673	5,488
Lubricating oil .. .. "	49,837	50,117	52,296	6,809	7,208	7,220
Gasolenes and solvents .. .. "	238,208	190,245	234,186	13,247	10,284	13,087
Phosphate rock .. .. '000 tons	1,491	1,766	1,721	4,075	4,768	4,484
Sulphur .. .. tons	221,778	182,052	229,195	2,285	1,920	2,389
Titanium oxide (pigments) .. .. "	5,054	5,139	5,947	971	1,017	1,144

NOTE.—For footnotes see next page.

**IMPORTS AND EXPORTS OF PRINCIPAL MINERALS AND MINERAL PRODUCTS: AUSTRALIA—continued**

Item	Quantity			Value (£A.'000 f.o.b.)		
	1960	1961	1962	1960	1961	1962
<b>EXPORTS(b)</b>						
Asbestos .. .. short tons	8,299	8,060	9,738	784	800	981
Coal .. .. tons	1,577,140	2,850,307	2,909,169	6,327	11,505	11,694
Copper, blister .. .. "	502	1,022		162	395	
Gold, refined .. .. fine oz.	2,513,583	1,099,701	314,971	39,275	17,265	4,932
Iron and steel—						
Iron ore .. .. tons	10	43	107	(c)	(c)	1
Pig iron .. .. "	99,847	296,050	157,502	2,199	6,588	3,514
Ingots, blooms and slabs .. .. "	9,619	86,860	97,950	380	3,102	3,210
Tinplate .. .. "	8,080	16,644	25,238	699	1,338	2,134
Scrap .. .. "	205,747	223,320	138,977	3,431	3,957	1,967
Lead—						
Ore and concentrate(d) .. .. "	74,696	86,268	109,058	4,172	4,590	5,596
Lead-silver bullion .. .. "	49,653	46,089	76,014	5,268	4,476	6,212
Pig .. .. "	125,265	145,174	197,049	10,970	11,382	13,199
Petroleum oils—						
Gasolenes and solvents .. '000 gals.	37,312	63,214	32,075	2,586	3,635	2,131
Automotive distillate .. .. "	179,490	139,311	165,222	10,232	6,884	8,288
Residuals and heavy distillates .. .. "						
Rutile concentrate .. .. '000 gals.	175,330	238,318	350,662	7,346	8,096	10,376
Silver, refined .. .. '000 fine oz.	93,706	99,652	117,291	4,064	3,207	3,629
Zinc—	2,800	1,055	346	1,150	437	158
Ore and concentrate .. .. tons	321,930	276,109	255,209	5,395	5,056	4,072
Refinery type shapes .. .. "	27,443	46,472	91,215	3,066	4,482	7,459

(a) Includes gold contained in matte. (b) Includes re-exports. (c) Less than £500.  
(d) Includes lead-copper concentrate.

Considerable quantities of metallic ores, concentrates, slags and residues are exported from Australia for refining overseas. The following table shows the quantities of such items exported during 1962 and their principal metallic content as estimated by assay.

**PRINCIPAL METALLIC CONTENTS OF SPECIFIED ORES AND CONCENTRATES, ETC., EXPORTED FROM AUSTRALIA DURING 1962**

Ores and concentrates, etc.	Quantity exported	Metallic contents—estimated from assay						
		Copper	Gold	Lead	Silver	Tin	Tungstic oxide	Zinc
	tons	tons	fine oz.	tons	fine oz.	tons	tons	tons
<b>Copper—</b>								
Ore and concentrate .. ..	78,983	19,375	19,708	..	197,573	..	..	..
Copper-lead dross and speiss .. ..	4,686	757	..	3,162	199,332	7	..	..
Other slags and residues .. ..	196	127	..	3	..	3	..	..
<b>Lead—</b>								
Ore and concentrate(a) .. ..	109,058	1,140	24,027	74,586	2,632,866	..	..	7,209
Slags and residues .. ..	12,069	429	431	5,236	14,136	14	..	934
Lead-silver bullion .. ..	76,014	..	..	75,482	4,865,453	..	..	..
<b>Tungsten—</b>								
Scheelite ore and concentrate .. ..	450	..	..	..	..	..	316	..
Wolfram ore and concentrate .. ..	711	..	..	..	..	3	516	..
<b>Zinc—</b>								
Ore and concentrate .. ..	255,209	..	..	1,979	60,491	..	..	132,571
Slags and residues .. ..	5,006	..	..	..	..	..	..	3,385
<b>Total Metallic Contents .. ..</b>	..	21,828	44,166	160,448	7,969,851	27	832	144,099

(a) Includes lead-copper concentrate.

## CHAPTER XXVII

## DEFENCE

## § 1. Department of Defence

1. **Functions and Organization.**—(i) *Functions.* The functions of the Department of Defence include:—defence policy; joint Service matters and matters having an inter-departmental defence aspect; the financial requirements of defence policy and the allocation of the funds made available; the supply aspect of defence policy including the review of production programmes and capacity; important matters of policy or principle affecting the Defence Forces and their requirements, including the strength, organization and disposition of the forces, higher appointments in the Services, their weapons and equipment, and defence research and development.

(ii) *Organization, higher Defence machinery and the control of the joint Service machinery.* The joint Service and inter-departmental advisory machinery of the Department consists of various committees headed by the Defence Committee, the Chiefs of Staff Committee, the Defence Administration Committee and the Joint War Production Committee.

The Defence Committee is a statutory body consisting of the Secretary, Department of Defence, who is Chairman; the Chairman of the Chiefs of Staff Committee; the Chiefs of Staff of the three Services; the Secretary, Prime Minister's Department; the Secretary, Department of External Affairs; and the Secretary to the Treasury. Its function is to advise the Minister for Defence on—the defence policy as a whole and the co-ordination of military, strategic, economic, financial and external affairs aspects of defence policy; matters of policy or principle and important questions having a joint Service or an inter-departmental defence aspect; and such other matters having a defence aspect as are referred to the Committee by or on behalf of the Minister for Defence.

The Chiefs of Staff Committee meets regularly for the discussion of technical military matters on a joint service basis, and is responsible in peace for the preparation of military appreciations and plans. The functions of the Defence Administration Committee are the regular review of the progress of the Defence Programme, the co-ordination or integration of Service activities where appropriate in the interests of improved efficiency and economy, and the improvement of methods and organization. The function of the Joint War Production Committee is, briefly, to examine the relation between strategic plans and their requirements to ensure that the war potential for them exists. The major committees subordinate to the Defence Committee and/or the Chiefs of Staff Committee comprise the Principal Administrative Officers Committee (Maintenance and *Matériel*), the Principal Administrative Officers Committee (Personnel), the Defence Research and Development Policy Committee, the Joint Planning Committee, the Joint Intelligence Committee and the Joint Administrative Planning Committee.

In addition, the Defence Business Board furnishes advice on business matters of common interest to the three Services, or important subjects on which the collective advice of the Board is desired from the business aspect, with a view to promoting efficiency and economy in the execution of the Defence Programme. The Board comprises businessmen who serve in a part-time honorary capacity and consists of an independent chairman and deputy chairman and the business advisers of the three Service Departments.

2. **Basis of Current Defence Policy.**—The basic aim of Australia's defence policy is to ensure the security of this country and of its island territories. This aim is pursued through a series of defence programmes which are designed to give progressive effect to the objectives of policy approved by the Government, and are capable of adjustment to meet the requirements of the strategic situation as it may change from time to time. Because of the increased strength which comes from mutual security, Australia participates in a policy of collective defence in south-east Asia, which is the area of primary defence interest to Australia. The collective security arrangements in which Australia participates are—SEATO, ANZUS and British Commonwealth arrangements for defence co-operation (*see also* Chapter XXIX. International Relations).



General or global war as a deliberate act of policy is considered unlikely, and the main aim of Australia's defence preparations is the continual improvement of the capability of its forces to make a prompt and effective contribution to any allied effort required in a limited war or insurgency situation in south-east Asia, while at the same time having a capacity for independent action to meet the initial shock of an emergency. Should the situation change and Australia itself be directly threatened, our collective defence arrangements would be of great importance in maintaining the security of Australia and its territories.

**3. The Defence Programme.—(i) Objectives.** The defence programme must be maintained at a level that will enable Australia to meet its regional and home defence responsibilities. In the present strategic circumstances, emphasis is placed on progressively increasing our military capacity and preparedness by having both regular and citizen forces more readily available, and improving their means of strategic and tactical mobility. The forces are being extensively re-equipped with modern conventional weapons which are standard or compatible, as far as possible, with those used by United States forces with whom Australia is associated in defence arrangements.

The naval programme provides for the continuing modernization and development of the Royal Australian Navy into a well-balanced operational fleet with emphasis on anti-submarine capability. Three guided missile destroyers of the United States *Charles F. Adams* class are being obtained, the first two of which are scheduled for delivery in 1965 and the third in 1967. Four *Oberon* class submarines are being purchased to replace the submarines which have been maintained on the Australia station for some years by arrangement with the Royal Navy. The carrier H.M.A.S. *Melbourne* is now equipped with both Westland Wessex anti-submarine helicopters and Gannet and Sea Venom fixed wing aircraft. The two latter aircraft are expected to reach the end of their service life in about 1967. Four Type 12 anti-submarine frigates are in commission. One is already fitted with the Seacat close range anti-aircraft missile system and the others will also be fitted with it. The Australian anti-submarine missile *Ikara* will be added to the armament of the guided missile destroyers and the frigates. The R.A.N. also has in commission three *Daring* class destroyers, including one on loan from the United Kingdom, one *Battle* class destroyer, a fast transport, H.M.A.S. *Sydney*, a fast fleet replenishment tanker, H.M.A.S. *Supply*, six "Ton" class minesweepers, a recently built survey ship, and auxiliary vessels. There are also several ships in reserve. A 15,000-ton escort maintenance ship is under construction in Australia. The present target strength of the R.A.N. is over 14,000.

The Army is increasing the strength of the Regular operational force and of the Citizen Military Forces which are available for service anywhere. Regular Army strength is being increased to 28,000, including a third battle group which is being raised, and the target strength of the Citizen Military Forces has been increased to 35,000. The Pacific Island Regiment in Papua-New Guinea is being doubled in strength to 1,400 and further development is under consideration. The combat elements of the Army are based on the pentropic divisional organization. The approved objective is to provide material and reserves needed by the Regular and Citizen components of a complete pentropic division of five battle groups with appropriate support and logistic units. The tactical flexibility and mobility of the field force are being greatly improved by the acquisition of landing ships, amphibious and other vehicles, by light aircraft and helicopters for the Army light aircraft squadron, and also by utility helicopters and short take-off and landing fixed-wing aircraft in the R.A.A.F. programme.

The operational units of the Royal Australian Air Force comprise three bomber squadrons, four fighter squadrons, two maritime reconnaissance squadrons, three transport squadrons, one surface-to-air-missile squadron, one utility helicopter squadron and three control and reporting radar units. The fighter squadrons are to be re-equipped with the supersonic *Mirage III-O* jet fighter, of which 100 have been ordered. The airframes and engines are being manufactured to a substantial extent in Australia and deliveries have commenced. Deliveries are also being made of eighteen *Caribou* Mark I short take-off and landing aircraft and of additional *Iroquois* utility helicopters. Two radar units are being re-equipped. Approval has been given for the purchase of two squadrons of *F-111A* strike-reconnaissance aircraft to replace the *Canberra* and delivery is scheduled to commence in 1967. An additional airfield is being developed at *Tindal* in the Northern Territory. The present target strength of the Air Force is over 18,000.

In the field of research and development, Australia is making its principal contribution through the *Long Range Weapons* Project which is a joint effort with the United Kingdom. Australia also participates in the *European Launcher Development Organization* and is associated with the United States in many space and defence projects. The Australian executive authority in these matters is the *Department of Supply*.

(ii) *Financial.* Details of defence expenditure for 1962-63, and the allocation of the Defence Vote for 1963-64 are set out in the following table.

**DEFENCE EXPENDITURE**  
(£'000)

Service or Department	Maintenance, aid pro- grammes, etc.	Capital material requirements, machinery, plant and equipment	Capital buildings, works and acquisition of sites	Total expenditure
<b>DEFENCE EXPENDITURE, 1962-63</b>				
Defence .. .. .	1,572	1,125	120	2,817
Navy .. .. .	33,311	14,462	1,619	49,392
Army .. .. .	53,577	10,828	3,431	67,836
Air .. .. .	47,652	16,141	3,652	67,445
Supply .. .. .	17,939	2,613	2,503	23,055
Other .. .. .	3,305	162	42	3,509
<b>Total .. .. .</b>	<b>157,356</b>	<b>45,331</b>	<b>11,367</b>	<b>214,054</b>

**DEFENCE VOTE, 1963-64**

Defence .. .. .	1,933	45	29	2,007
Navy .. .. .	36,014	17,127	1,368	54,509
Army .. .. .	60,261	14,164	3,892	78,317
Air .. .. .	50,751	26,413	3,354	80,518
Supply .. .. .	24,594	3,273	2,672	30,539
Other .. .. .	5,547	185	49	5,781
<b>Total .. .. .</b>	<b>179,100</b>	<b>61,207</b>	<b>11,364</b>	<b>251,671</b>

(iii) *Personnel Strengths.* The personnel strengths of the Services at 31st March, 1964, are shown in the following table.

**PERSONNEL STRENGTHS: SERVICES, MARCH, 1964**

Category	Navy	Army	Air Force	Total
Permanent Forces .. .. .	12,317	23,492	16,387	52,279
Citizen Forces .. .. .	5,398	27,296	828	33,439
<b>Total Forces .. .. .</b>	<b>17,715</b>	<b>50,788</b>	<b>17,215</b>	<b>85,718</b>

4. *Australian Forces Serving Overseas.*—Australia has participated with the United Kingdom and New Zealand in the Commonwealth Strategic Reserve in Malaya since it was first established in 1955. The strength of the Australian component normally serving with the Reserve is as follows:—Navy—two destroyers or frigates, with an annual visit by an aircraft carrier; Army—one infantry battalion and supporting units; Air Force—one light bomber squadron, two fighter squadrons and supporting units. At the request of the Federation of Malaysia, the Strategic Reserve continues to be stationed in Malaya to assist in border security operations against the communist terrorists.

The Malaysian Government has recently requested the Australian Government, and it has agreed, to provide additional forces to the Strategic Reserve to assist Malaysian and British forces in the defence of the Federation's territorial integrity and political independence. Australian forces will provide assistance in countering the threat of seaborne infiltration of

insurgents along the coasts of Sarawak and Sabah, for engineering construction in the Borneo States, for helicopter support of the security operations against terrorists along the northern border of Malaya and some air transport and anti-aircraft defence support.

In pursuance of its obligations under the SEATO Treaty, Australia has also deployed to Thailand, at the invitation of the Government of Thailand, a contingent of Sabre fighter aircraft, and a party of Army engineers is also assisting in the construction of an airfield for medium range transport aircraft at Mukdahan. A small number of Army instructors has also been provided, at the invitation of the Government of South Vietnam, to assist that country in training for jungle warfare, village defence and other related activities.

## § 2. Naval Defence

1. **General.**—Prior to 1901, naval defence systems were organized under the State Governments. Information regarding these systems is given in Year Book No. 2, page 1084. An outline of the development of Australian Naval policy is given in Year Books No. 3, page 1060, and No. 12, page 1012. An account of the building of the Australian Navy, its cost, the compact with the Imperial Government, and other details appears in Year Book No. 15, pages 921–3. The growth and the activities of the Royal Australian Navy during the 1939–45 War are shown in Year Book No. 36, pages 1023–7.

Under the provisions of the Commonwealth of Australia Constitution Act, the Minister of State for the Navy administers the Department of the Navy. Under the *Naval Defence Act* 1910–1952, the Royal Australian Navy is administered by the Naval Board. The Naval Board consists of the Minister as Chairman, four Naval Members, and the Secretary, Department of the Navy.

Strong links with the Royal Navy are maintained by a constant exchange of officers for extended tours of duty, and by a full exchange of information and ideas. A liaison staff is maintained by the Royal Australian Navy in London, and by the Royal Navy in Australia. Advanced training and staff courses in the United Kingdom are provided by the Royal Navy for Royal Australian Navy officers.

A liaison staff is also maintained by the Royal Australian Navy in Washington and a comprehensive exchange of information is provided by this link. Staff courses in the United States are also attended by officers of the Royal Australian Navy.

The defined limits of the Australia Station are as follows.

*Eastern*—from 3° 30' North, 169° East, south to 1° South, thence east to 170° East, thence south along this meridian to 30° South, thence to 45° South, 160° East, thence south along this meridian.

*Northern*—from 3° 30' North, 169° East, west to 125° East, thence south to the coast of Celebes, thence west along the coast of Celebes to 120° East, thence south along this meridian to 10° South, thence west to 78° East.

*Western*—from 10° South, 78° East, south along this meridian.

2. **Ships of the Royal Australian Navy.**—The following ships were in commission or in reserve in March, 1964.

In commission:—*Melbourne*—aircraft carrier; *Sydney*—fast troop transport; *Supply*—fast fleet replenishment tanker; *Anzac*, *Vampire* and *Vendetta*—destroyers; *Stuart*, *Parramatta*, *Quiberon*, *Yarra*, *Diamantina* (training) and *Gascoyne* (training)—frigates; *Kimbla* (trials)—boom defence vessel; *Hawk*, *Gull*, *Ibis*, *Teal*, *Curlew* and *Snipe*—minesweepers; *Bass* and *Banks*—general purpose vessels; *Paluma* and *Moresby*—survey vessels.

In reserve:—*Arunta* and *Tobruk*—destroyers; *Culgoa*, *Queenborough*, *Quickmatch*, *Barcoo* and *Swan*—frigates; *Kangaroo*, *Karangi*, *Kookaburra* and *Koala*—boom working vessels; *Sprightly*—fleet tug.

Under dockyard control:—*Derwent*—frigate (completing).

3. **Ships' Service Outside Australian Waters.**—During the year ended March, 1964, H.M.A. Ships *Melbourne*, *Supply*, *Vampire*, *Vendetta*, *Voyager*, *Yarra*, *Parramatta* and *Quiberon* served on the Far East Station as units of the Commonwealth Strategic Reserve with headquarters at Singapore. H.M.A. Ships *Diamantina*, *Gascoyne*, *Hawk*, *Gull*, *Ibis*, *Teal*, *Curlew* and *Snipe* also made visits beyond the limits of the Australia Station.

4. **Personnel.**—The authorized establishment strength of the Royal Australian Navy for 1963–64 is 14,300 comprising 1,539 officers and 12,761 ratings. In March, 1964, the actual strength of the permanent Naval Forces was 1,218 officers and 10,385 ratings. One hundred and twenty-six cadet midshipmen, including 31 not on pay, were undergoing training at the Royal Australian Naval College. Sixteen officers and 487 ratings were serving in the Women's Royal Australian Naval Service. Eighty-five native ratings were serving in the Papua and New Guinea Division of the Royal Australian Navy. Reserve strength in March, 1964, comprised 963 officers and 4,435 ratings, of whom 53 officers and 36 ratings were serving full-time.

The established personnel strength of the W.R.A.N.S. is 17 officers and 500 ratings. They serve in the shore establishments in the following categories: radio-operators, regulating, writers, stores assistants, sick berth attendants, motor transport drivers, Wrans (radar plot), cooks and stewards.

Members of the Royal Australian Naval Reserve are the drilling reserve of the Citizen Naval Forces. They carry out weekly training and 13 days' annual continuous training. Officers are commissioned and may serve until retiring age is reached. Ratings engage for periods of three years. Other branches of the Citizen Naval Forces are the R.A.N. Emergency List, Royal Australian Fleet Reserve and Royal Australian Naval Volunteer Reserve. These are a non-drilling reserve, but members may volunteer for periods of annual continuous training. Pay for members of Reserve Forces is approximately that paid to members of the Permanent Naval Forces. Special courses and service for long periods are available to all selected Reservists.

The Papua and New Guinea Division of the Royal Australian Navy was inaugurated in 1951. It is based at H.M.A.S. *Tarangau*, Manus Island, and consists of indigenous ratings from all districts of Papua and New Guinea.

5. **Fleet Air Arm.**—The Fleet Air Arm of the Royal Australian Navy is maintaining two front line squadrons embarked in the operational carrier H.M.A.S. *Melbourne*. This ship is fitted with an angled deck, steam catapult and mirror deck-landing sights. Training and support squadrons for H.M.A.S. *Melbourne's* Sea Venom jet all-weather fighter and ground attack aircraft and Gannet turbo-prop anti-submarine aircraft are based at the Naval Air Station H.M.A.S. *Albatross* at Nowra, New South Wales. Westland Wessex anti-submarine helicopters have been introduced into the Fleet Air Arm and are embarked in H.M.A.S. *Melbourne*. Training and support squadrons for the helicopters will also be based at the Naval Air Station.

6. **Ship Construction and Repair.**—There are two naval dockyards, at Garden Island, New South Wales, and at Williamstown, Victoria. Also the dockyard at Cockatoo Island which is operated by the Cockatoo Docks and Engineering Company Pty. Ltd., by agreement with the Commonwealth, carries out considerable naval work.

Two anti-submarine frigates have recently been completed, one at Cockatoo Island which commissioned in June, 1963, and the other at Williamstown which commissioned in April, 1964. All three dockyards are also engaged on ship refitting work for the Navy.

A new survey vessel, carrying special modern equipment including a helicopter, was built at the State Dockyard, Newcastle, New South Wales and commissioned in March, 1964.

Included in the present ship construction plan is the building of a 15,000 ton escort maintenance ship at Cockatoo Island. Four submarines of the *Oberon* class are being obtained in the United Kingdom. Of these, the first two are under construction, and tenders have been called for the remainder. In the United States, two *Charles F. Adams* class destroyers are being built for the Royal Australian Navy at the DeFoe Ship Building Yard and the construction of a third is to commence in 1964.

7. **Naval College.**—The Royal Australian Naval College, transferred in 1930 from Jervis Bay, A.C.T., to Flinders Naval Depot, was re-established at Jervis Bay in January, 1958, and was commissioned as H.M.A.S. *Creswell*.

8. **Training Establishments.**—H.M.A.S. *Cerberus* at Crib Point, Westernport, Victoria, is the basic training establishment for adult ratings in the permanent forces, while several advanced training schools are established in Sydney, New South Wales.

H.M.A.S. *Leeuwin* at Fremantle, Western Australia, is the junior recruits training establishment for the permanent forces. A large proportion of instructional hours is devoted to school subjects, and the remaining instructional time is basic naval training and disciplinary training, so that on completion of training ratings will be ready to undergo technical and specialist courses.

H.M.A.S. *Nirimba*, at Quakers Hill, New South Wales, is the Apprentice Training Establishment which provides secondary education as well as training in trades in which the lads will be employed during their service in the Royal Australian Navy.

### § 3. Military Defence

1. **General.**—(i) *State Systems.* A detailed historical account of the Australian defence forces prior to federation appears in Year Book No. 2, pages 1075–80. *See also* Year Book No. 12, page 999.

The strength of the military forces of the States at 31st December, 1900 (the eve of federation), exclusive of cadets, reservists, and rifle club members, was—New South Wales, 9,338; Victoria, 6,335; Queensland, 4,028; South Australia, 2,932; Western Australia, 2,696; Tasmania, 2,024; total for Australia, 27,353.

(ii) *Commonwealth Systems.* Under the terms of the Commonwealth of Australia Constitution Act, the Commonwealth took over control of defence matters in March, 1901. The growth of the Commonwealth Military Forces may be considered to have taken place in a number of phases. For particulars of the phases which cover the period from the welding together of the military forces of the States into one homogeneous Army in 1902 up to the re-establishment of the Military Board and the organization of Commands after the 1939–45 War, *see* Year Book No. 46 and earlier issues.

Members of the Commonwealth Military Forces have taken part in the following campaigns:—the South African War, 1902; the First World War, 1914–1918; the Second World War, 1939–1945; Korea, 1950–1954; Malaya, 1955–1960.

In 1960, a complete re-organization of the Australian Military Forces was undertaken. The re-organization involved the reshaping of the Army by:—the adoption of a pentropic divisional organization; increasing the Regular Field Force; reducing the command, training and administrative structure; and converting the Citizen Military Forces to a wholly volunteer force and eliminating national service training which was introduced in 1951 and suspended in 1959–60.

2. **Organization.**—Army Headquarters is responsible for the policy and control of the Australian Military Forces. The Military Board consists of the Minister for the Army, President; the Chief of the General Staff; the Adjutant-General; the Quartermaster-General; the Master-General of the Ordnance; the Deputy Chief of the General Staff; the Citizen Military Forces Member; and the Secretary, Department of the Army. After the 1939–45 War, Command Headquarters were established to implement Army Headquarters policy and to command and administer those units placed under their authority. Command Headquarters are established in the mainland capital cities of Australia. The geographic extent of Commands is as follows.

*Northern Command*—the State of Queensland, a small part of northern New South Wales, and the Territory of Papua and New Guinea.

*Eastern Command*—the State of New South Wales, less those parts included in Northern, Southern, and Central Commands.

*Southern Command*—the State of Victoria, the State of Tasmania, and part of southern New South Wales.

*Central Command*—the State of South Australia, plus a portion of south-western New South Wales.

*Western Command*—the State of Western Australia.

*Northern Territory Command*—the Northern Territory.

The basic formation in the re-organized Army is the pentropic division, which is designed to have improved tactical capabilities with increased mobility and flexibility under conditions of tropical warfare. The pentropic division consists of five battle groups, each under the direct command of the divisional headquarters. Each battle group has, as its basic component, an infantry battalion of larger size and greatly increased fire-power compared with the infantry battalion which existed prior to the re-organization. In addition to the strengthened infantry battalion, each battle group includes supporting elements such as armour, artillery, engineers, signals, etc.

The general structure of the Army is divided between Field Forces and the Australian Support Area organization (home defence, training and command, and administrative units). The main field force components are as follows.

- (a) In Australia, two Regular Army battle groups with a third in the process of being raised, and eight Citizen Military Forces battle groups. In addition, there are combat support and communication zone supporting units. Two pentropic division headquarters, one Regular Army/Citizen Military Force and one Citizen Military Force, enable grouping of battle groups as pentropic divisions.
- (b) A restricted Regular Army battalion in Malaysia as a part of the British Commonwealth Far East Strategic Reserve.
- (c) A Regular Army anti-aircraft battery and an engineer construction group in Malaysia at the request of the Malaysian Government.

Regular Army Forces in Papua-New Guinea consist of a battalion of the Pacific Islands Regiment with a number of small supporting units. Action is being taken to raise a second battalion.

3. **Strength of the Australian Military Forces.**—The effective strength at 31st March, 1964, was—Australian Regular Army (including 815 Pacific Islanders and 760 Women's Services), 23,492; Citizen Military Forces, 27,296.

4. **Military Training Systems.**—(i) *The Staff College.* Until 1938, the training of staff officers was carried out in the various Military Districts throughout Australia, except in cases where officers were selected from time to time to attend courses abroad. In 1938, an Australian Command and Staff School, located in the original Officers' Mess at Victoria Barracks, Sydney, was established. Between 1939 and 1945, the training of staff officers was carried out under varying conditions by different schools in accordance with the changing needs of the war.

Early in 1946, the Staff School (Australia) was established at Seymour, Victoria, and redesignated the Staff College in conformity with other Commonwealth training establishments for training officers for command and staff appointments. The College was later moved to Queenscliff, Victoria, where it is at present situated. From 1965 the course will be held annually and will be of twelve months duration. The normal intake is 50 students, and, on successfully completing the course, an officer is awarded the symbol "psc". The course is designed to train selected officers for appointments in all branches of the staff in peace and war, and to prepare them to assume, after experience, command and higher staff appointments.

Included in the 1965 course will be students from the United Kingdom, Canada, New Zealand, India, Pakistan, Ceylon, United States of America, Thailand, Malaysia and the Philippines. Vacancies on each course are reserved also for officers who may be nominated by the Royal Australian Navy, the Royal Australian Air Force and the Commonwealth Public Service.

In order to ensure common standards in tactical doctrine and staff and command training throughout the Commonwealth of Nations, liaison is maintained with other Staff Colleges, and to this end there is also a reciprocal exchange of instructors between the United Kingdom and Australia. An instructor is also provided by New Zealand.

(ii) *The Royal Military College.* The Royal Military College was established in 1911 at Duntroon in the Australian Capital Territory for the purpose of providing trained officers for the Army. The conditions of entry are laid down in the Royal Military College Regulations. The length of the normal course is four years. While at the College, Staff Cadets are wholly maintained, and, in addition, receive payment increasing with each year of the course. The course of instruction is organized into military and civil departments, and the instructional staff comprises officers of the Army and civilian professors. On graduation, cadets are appointed lieutenants in the Australian Regular Army. The College also trains New Zealand cadets for commissions in the New Zealand Permanent Forces.

(iii) *The Officer Cadet School.* The Officer Cadet School was established in 1951 at Portsea, Victoria, for the purpose of speeding up the production of junior regimental officers for the Australian Regular Army. Serving members of the Australian Regular Army, the Citizen Military Forces, and civilians between the ages of 18 and 23 years are eligible to apply for entrance. A special entry provides for candidates up to 25 years. The course is of 44 weeks' duration, and, on graduation, cadets are appointed second-lieutenants in the Australian Regular Army. Graduates normally proceed to further training at the Army School of the Arm and Service to which they have been allotted, before being posted to regimental duties.

(iv) *The Women's Royal Australian Army Corps School.* The W.R.A.A.C. School, established in 1952 at Mildura, Victoria, moved to Mosman, New South Wales, in 1958. It has three wings, one whose primary task is the training of officer cadets for the W.R.A.A.C., one for the training of non-commissioned officers at all levels and for other special courses, and one which is a basic training wing. The officer cadets are selected from eligible applicants, who may be serving members between 21 and 32 years of age, or civilians between 21 and 30 years of age. The course is of six months' duration and, on graduation, cadets are appointed lieutenants in the Women's Royal Australian Army Corps.

(v) *The Army Apprentices' School.* The Army Apprentices' School was opened in 1948 at Balcombe, Victoria, with the aim of training youths as skilled tradesmen for the Australian Regular Army, and to form a background for an Army career with prospects of promotion. The course is open to boys between the ages of 15 and 17 years and provides training in a number of highly skilled trades. A three-year course of intensive theoretical and practical work at the Apprentices' School is followed by one year in an appropriate Army workshop or technical unit. At the end of their third year, boys are given their Army trade test and also take the Victorian Apprenticeship Commission's final grade public examinations, which ensures that they will be accepted as qualified tradesmen in civil life when they eventually leave the Army. In addition to trade training, the Apprentices' School provides general educational facilities up to the School Leaving Standard.

(vi) *Other Schools.* Army Schools have been established for the major Arms and Services for the purpose of training officers and other ranks in the up-to-date techniques of their own Arm or Service, to qualify them for promotion requirements and to produce trained instructors. Courses at Army Schools are conducted for members of both the Australian Regular Army and the Citizen Military Forces.

The following Army Schools have been established:—Jungle Training Centre, Armoured Centre, School of Artillery, School of Military Engineering, Transportation Centre, School of Military Survey, School of Signals, Infantry Centre, Army Intelligence Centre, Royal Australian Army Service Corps Centre, Royal Australian Army Medical Corps School of Army Health, Royal Australian Army Ordnance Corps School, Royal Australian Electrical and Mechanical Engineers' Training Centre, School of Music, and Air Support Unit (Army Component).

5. *Women's Services.*—In July, 1950, approval was given for the enlistment of women into the Australian Regular Army on a limited scale. Enlistment into the Royal Australian Army Nursing Service commenced in November, 1950, and into the Australian Women's Army Corps early in 1951. In February, 1951, the Royal Australian Army Nursing Service became a Corps and was designated the Royal Australian Army Nursing Corps (R.A.A.N.C.). During June, 1951, the Australian Women's Army Corps was redesignated the Women's Royal Australian Army Corps (W.R.A.A.C.). The Women's Services in the Australian Regular Army now comprise two Corps only, the Royal Australian Army Nursing Corps and the Women's Royal Australian Army Corps.

Women's Services are incorporated in the Citizen Military Forces, and one company of the Women's Royal Australian Army Corps is located in each Command excluding Northern Territory Command. Companies of the Royal Australian Nursing Corps are located in each Command excluding Northern Territory Command.

6. *The Australian Cadet Corps.*—The Australian Cadet Corps is a voluntary organization. It serves as a training ground to provide, to some extent, the future officers and non-commissioned officers of the Australian Military Forces, and, as such, occupies a foremost position in the scheme of national defence. The Australian Cadet Corps, however, does not form part of the Australian Military Forces. School Cadet units are raised at educational establishments throughout the Commonwealth and Papua and New Guinea, except in the Northern Territory. The minimum age for enrolment is the year in which the applicant reaches the age of 14 years, and cadets, who, in the large majority of schools receive a free issue of A.M.F. pattern uniform, may remain in the Cadet Corps until they cease to be pupils of the educational establishments concerned. A few units retain their own pattern school uniform and are not issued with A.M.F. pattern uniforms. Provision is made for the appointment of officers, cadet under-officers, warrant and non-commissioned officers on an authorized establishment scale from within school units. School Cadet units may be, and in many cases are, affiliated with Citizen Military Force units.

The establishment of the Corps is 39,000 all ranks, and at 25th March, 1964, comprised 315 School Cadet units with a posted strength of 38,294, all ranks.

#### § 4. Air Defence

1. **General.**—A statement regarding the preliminary steps taken in connexion with the development of air defence appears in Year Book No. 18, page 610, and one on the expansion and development and zones and operations of the Royal Australian Air Force during the 1939–45 War in Year Book No. 36, page 1027.

2. **Administration and Organization.**—(i) *General.* The Air Board is responsible, subject to approved policy, for the control, organization and administration of the Royal Australian Air Force, and is constituted as follows:—Chief of the Air Staff, Air Member for Technical Services, Air Member for Personnel, Air Member for Supply and Equipment, and the Secretary, Department of Air.

Headquarters of the Royal Australian Air Force is in Canberra. A R.A.A.F. representative is located in London, and Air Attachés are located in Paris and Washington.

(ii) *Commands.* The units of the Royal Australian Air Force are organized into the following two functional Commands throughout Australia and its Territories.

*Operational Command*—responsible for the command of operational units and the conduct of their operations within Australia and its territories.

*Support Command*—responsible for the command of training units, supply and servicing units; recruitment and individual training in the R.A.A.F.; and supply and servicing, including technical servicing of the R.A.A.F. in Australia.

(iii) *Formations and Units.* The organization of the Royal Australian Air Force includes the following types of formations and units.

*Formations*—comprising a headquarters unit to control the activities of a number of units at one location; each formation has a base squadron which provides common services to all units at the location.

*Flying Squadrons*—bomber, fighter, transport, helicopter and maritime reconnaissance squadrons which undertake the operational and, in conjunction with operational conversion units, the operational training flying commitments of the R.A.A.F.

*Operational Conversion Units*—specializing in operational conversion training of aircrew for the bomber and fighter squadrons.

*Aircraft Depots*—specializing in major overhauls, etc., of aircraft and equipment and relieving flying unit ground staff of these commitments.

*Stores Depots*—centrally located depots to which stores and equipment ordered by the R.A.A.F. are delivered for distribution to units.

*Flying Training, Ground Training, Navigation, Radio and Air Armament Training Units*—specializing in the aircrew and ground staff training required by the R.A.A.F.

*Airfield Construction Squadrons*—specializing in the construction of R.A.A.F. aerodromes and associated buildings and works services.

*Royal Australian Air Force Academy*—the training college for officer cadet entrants to the R.A.A.F.

*Telecommunications Units*—responsible for the communications services of the R.A.A.F.

*R.A.A.F. Staff College*—trains specially selected R.A.A.F. officers for higher staff and command posts.

3. **Aircraft.**—The aircraft which are at present being used in the Royal Australian Air Force are: bomber squadrons—Canberra; fighter squadrons—Avon Sabre (the R.A.A.F. is currently re-equipping with Mirage III fighters); transport squadrons—Dakota, Hercules and Metropolitan (the R.A.A.F. is currently acquiring a squadron of Caribou aircraft); maritime reconnaissance squadrons—Neptune; utility helicopter squadron—Iroquois helicopters; training—Avon Sabre, Canberra, Dakota, Meteor, Vampire and Winjeel.



4. **Personnel.**—The Royal Australian Air Force comprises an operational element and a support element. At 1st April, 1964, establishment posts totalling 17,283 had been authorized. On the same date, the enlisted strength of the Royal Australian Air Force was as follows: Permanent Air Force, 16,387; Citizen Air Force, 828; and General Reserve, 16,731. The preceding figures include the Women's Royal Australian Air Force which was separately established at 854 posts on 1st April, 1964, and had reached an enlisted strength of 784 members by that date.

### § 5. Department of Supply

1. **General.**—On 17th March, 1950, the Department of Supply was created to take over the functions of the former Department of Supply and Development, except those relating to the Bureau of Mineral Resources, Geology and Geophysics, which were transferred to the Department of National Development on that date. The Department of Supply and Development had been formed in April, 1948, to take over the munitions and aircraft activities of the Department of Munitions and the supply activities of the Department of Supply and Shipping. To these were added the design and inspection activities of the Department of the Army in February, 1950.

On 11th May, 1951, the munitions and aircraft production and the defence production planning activities of the Department were transferred to a newly created Department of Defence Production. The Department of Supply continued to exercise the remaining functions except shipbuilding, which was transferred to the Department of Shipping and Transport. In April, 1953, the control of materials used in producing atomic energy was vested in a newly created Australian Atomic Energy Commission, which was administered by the Minister for Supply until October, 1956, when it became the responsibility of the Minister for National Development. In March, 1958, responsibility for the production of aluminium was transferred to the Department of National Development. The Australian Aluminium Production Commission, the executive body appointed to carry out this function, became responsible to the Minister for National Development as from that date.

On 24th April, 1958, the Department of Defence Production was abolished, and the functions of that Department were re-transferred to the Department of Supply. References to those functions and to the activities of the various branches and establishments of the former Department of Defence Production are contained in Year Book No. 44, pages 1059–61. On 11th March, 1959, the design and inspection functions were re-transferred to the Department of the Army.

On 18th December, 1959, the Department assumed responsibility for the operation and management of space tracking stations in Australia on behalf of the United States National Aeronautics and Space Administration. On 29th March, 1962, Australia became a foundation member of the European Launcher Development Organisation, and the Department accepted responsibility for the test firing of the launching rocket for that Organisation's communications satellite, using the facilities of the Woomera Rocket Range.

2. **Functions of the Department.**—The functions of the Department of Supply include the following.

Defence research and development, including the operation of the Joint United Kingdom—Australia Weapons Research Project, and Australian research and development through the Weapons Research Establishment, the Aeronautical Research Laboratories, the Defence Standards Laboratories and associated establishments.

Manufacture, acquisition, provision and supply of munitions (including aircraft) and miscellaneous goods and services required by the defence forces.

Arrangement of contracts for the supply of goods and the performance of services.

Operation and management of factories, workshops and undertakings concerned in the production of munitions (including aircraft), clothing, canvas-ware and other defence goods.

Operation and management of space tracking stations in Australia on behalf of the United States National Aeronautics and Space Administration.

Test firing of the launching rocket for the European Launcher Development Organisation's communications satellite, using the facilities of the Woomera Rocket Range.

- Acquisition, maintenance and disposal of strategic materials.
- Planning and establishment of manufacturing facilities for the production of munitions and other defence goods.
- Investigation and development of Australian sources of supply in connexion with defence.
- Sale or disposal of surplus Commonwealth property other than land or buildings.
- Provision of Commonwealth transport facilities outside the Australian Capital Territory and the Northern Territory.
- Provision and control of stores required for or in connexion with matters administered by the Department of Supply, and general storage for other Departments as required.
- Provision of security services within the Department.
- Arrangements for ascertaining costs and the control and limitation of profits in connexion with the production of munitions and other defence goods.

3. *Act Administered.*—The Minister for Supply administers the *Supply and Development Act 1939–1948*, except insofar as it concerns the building (*see also* Chapter XV., p. 554, of this volume), repair and maintenance of merchant ships and the building, extension, alteration, repair and maintenance of shipyards, drydocking and repair facilities for merchant ships.

4. *Research and Development Branch.*—(i) *General.* The Research and Development Branch, which is under the control of the Chief Scientist, is responsible for research and scientific development in relation to war *matériel*, including the operation of the Joint United Kingdom—Australia Weapons Research Project. The Chief Scientist is also the Chairman of the Joint Project Board, which is responsible for the administration of the Joint Project undertaking. The headquarters of the Branch is situated in Melbourne, and the following establishments are included in the Branch:—(a) Weapons Research Establishment, Salisbury, South Australia; (b) Defence Standards Laboratories, Maribyrnong, Victoria, Finsbury, South Australia, and Alexandria, New South Wales; (c) Aeronautical Research Laboratories, Fishermen's Bend, Victoria.

(ii) *Weapons Research Establishment, Salisbury, South Australia.* This establishment, which occupies an area of about six square miles, includes Edinburgh Airfield, where accommodation is provided for a unit of the R.A.A.F., which carries out the experimental and other flying required. Extensive facilities have been provided for branches of British firms which have contracted with the British Ministry of Aviation to develop weapons systems or components.

The Establishment has four main sections, namely the Trials Wing, the Space Physics Wing, the Weapons Research and Development Wing and the Engineering Wing. The Trials Wing is concerned with the operation, development and instrumentation of the Woomera Range, also the planning, execution and assessment of trials. The Space Physics Wing undertakes the operation of United States satellite and space tracking stations throughout Australia and conducts research and development in support of the Range, including investigations into the characteristics of the upper atmosphere using sounding rockets. The Weapons Research and Development Wing is concerned primarily with Australian-initiated defence research, but assistance is also given with some phases of the Joint Project programme. The Engineering Wing provides the design and manufacturing effort required to support the work of the Establishment and the Range.

Testing ranges have been established at Woomera, which is approximately 280 miles north-west of Adelaide. A township, together with modern amenities such as hospital, school, kindergarten, community store, swimming pool and all sporting facilities, has been built at Woomera to accommodate the range and allied service personnel and their families. The population is approximately 4,500.

(iii) *European Launcher Development Organisation (ELDO).* By virtue of the major facilities at Woomera for launching space vehicles, Australia has become a member of ELDO, which has been established with the object of developing a launching vehicle for placing satellites in orbit for peaceful purposes. Other members of ELDO are Britain, Belgium, the Federal Republic of Germany, France, Italy and the Netherlands.

(iv) *United States Space Projects.* Agreements have been signed by the Australian and United States Governments for a co-operative programme for the establishment and operation in Australia, for scientific purposes, of facilities for space vehicle tracking and data recording. Space tracking, telemetry and command stations have been established

at Island Lagoon, near Woomera, and at Carnarvon, Western Australia, while other stations are in course of construction near Canberra, at Tiddinbilla and Orroral Valley. A small mobile station is also being set up at Darwin. All these are an integral part of the world-wide network of tracking and data recording stations being established by the United States National Aeronautics and Space Administration to support its programme for manned space vehicles, scientific satellites and deep space probes.

(v) *Defence Standards Laboratories.* The broad function of these Laboratories is to provide a scientific service to the Armed Services, Civilian Defence and the factories, branches and establishments of the Department of Supply. It also provides trained groups in specialist fields for which there is no counterpart elsewhere in Australia. This service covers problems arising in the provision and use of defence *matériel* and is given generally within the fields of chemistry, physics, metallurgy and engineering and, to a limited extent, in those of bio-chemistry and physiology.

(vi) *Aeronautical Research Laboratories.* The work of these Laboratories lies in the fields of: (a) aeronautics; (b) guided missiles; and (c) branches of engineering appropriate to the special facilities, resources, or experience resulting from (a) and (b). In particular it comprises aerodynamics, including wind tunnel, free flight model and actual flight testing; structures of aircraft and missiles; metals and other materials used in the construction of airframes and engines; engines of the air-breathing type used for the propulsion of aircraft or missiles; human engineering studies relating to the operation of aircraft and guided missiles; research and development related to Australian-initiated guided missiles; and operational assessment studies on devices and techniques employed or proposed for the defence of Australia.

5. **Production.**—(i) *Munitions.* The Department is responsible for the production of a wide range of munitions required by the Armed Services. Production is carried out substantially in Government factories, although some orders, mainly for components, are placed with private industry.

The following Government factories are currently in operation:—Ammunition—Footscray, Victoria; Explosives and Filling—Albion and Maribyrnong, Victoria; Mulwala and St. Marys, New South Wales; Ordnance—Maribyrnong, Bendigo and Port Melbourne, Victoria; Small Arms—Lithgow, New South Wales; Clothing—South Melbourne and Brunswick, Victoria.

The Ammunition Factory produces the complete round of small arms ammunition and also components for larger calibre gun ammunition, including empty cartridge cases; electronic and mechanical fuses and primers. The Explosives Factories produce the various types of explosive compositions and propellants required for gun ammunition, rockets and guided missiles. The Filling Factory at St. Marys fills and assembles into complete rounds of ammunition (other than small arms ammunition) the empty components and materials supplied by the other munitions factories and by private industry.

The Ordnance Factories at Maribyrnong and Bendigo are equipped to produce heavy ordnance equipment, such as naval guns and gun mountings; large turbine gears; steel shell bodies; empty rocket motors for guided missiles; trailers and tank transporters; and other items requiring heavy engineering capacity. As well as work for the Services, the Bendigo Factory is producing equipment for projects of national importance, e.g. control equipment for the Snowy Mountains Hydro-electric Authority, components for marine diesel engines for Australian shipping and large heavy engineering items for the coal, cement and steel industries.

The Port Melbourne Factory builds large marine diesel engines for the Australian ship-building industry. Major forgings and fabrications for these engines are produced at the Ordnance Factories at Maribyrnong and Bendigo.

The Small Arms Factory is equipped to produce the rifles and other small arms required by the Army. Current production is the 7.62-mm. automatic rifle, for which orders have also been received from overseas, and the 9-mm. carbine, which replaces the Owen as the infantry light machine gun.

The Clothing Factories make uniforms, clothing and canvas goods for the three Services and also for the Postmaster-General's Department and some other Commonwealth authorities.

(ii) *Aircraft and Guided Weapons.* (a) *Aircraft and Engines.* Production both in Government factories and in industry of military types of aircraft and aero engines and of other aircraft components required by the Royal Australian Air Force is administered by the Department of Supply. Planning of capacity and the negotiations of contractual

arrangements concerning aircraft modification, repair and overhaul, and for the supply of spare parts and airborne equipment for the R.A.A.F., the R.A.N. and the Army are also functions of the Department.

The following factories are operated by the Department:—The Government Aircraft Factory at Fishermen's Bend, and the Final Assembly Workshops and Test Airfield at Avalon, Victoria; the Airframe Repair Workshops at Parafield and Northfield, South Australia.

The current aircraft production programme at the Government Aircraft Factory comprises the French Mirage supersonic fighter for the R.A.A.F. and the Jindivik radio-controlled target aircraft, which has been or is being supplied to Britain, Sweden and the United States, as well as to the Weapons Research Establishment, South Australia.

Apart from the Government Aircraft Factory, the Commonwealth Aircraft Corporation Pty. Ltd. is the only major aircraft manufacturer in Victoria, and this company is currently producing the French Atar turbo-jet engine for the Mirage fighter and also some sections of the airframe.

Other major activities carried out in the Government factories or by various private contractors are the manufacture of airframe and engine spare parts; the overhaul, repair and modification of military aircraft and engines currently in service with the R.A.A.F., R.A.N. and Army; and the reconditioning and servicing of aircraft instruments and other ancillary equipment.

(b) *Guided Weapons.* The Government Aircraft Factory at Fishermen's Bend has become increasingly engaged in recent years in guided weapons development and production. The first production task undertaken at the Factory in the guided weapons field was the supply of the Malkara anti-tank missile to the British Army. While the Factory is responsible for producing the missile body and control equipment and for final assembly of the completed weapon, the project involves other factories also, e.g. the Ordnance Factory, Maribyrnong, produces the hardware for the rocket motor; the Explosives Factory, Mulwala, supplies the propellant; and the Explosives Factory, Maribyrnong, fills and finally assembles the motor. Private industry has also contributed to the project by supplying vital electronic and other components.

Preparations are in hand for quantity production of the Ikara anti-submarine weapons system for the Royal Australian Navy; some missiles and associated equipment have already been produced for trials purposes.

(c) *Telecommunications.* The Department is responsible for the technical aspects of production of telecommunications and electronics equipment for the Armed Services and for certain other organizations such as S.E.A.T.O. and the Colombo Plan. All production is carried out by the electronics industry. Substantial orders have been placed on local industry for a wide range of telecommunications and electronics equipment. Some of the major projects are the development of pilot models of an improved man-pack transistorized receiver/transmitter for the Army; the manufacture of telegraph relay stations for the R.A.A.F.; the production of major sections of the Ikara weapons system for the R.A.N.; and wind-finding radar equipment for the Bureau of Meteorology. Development contracts are in progress for the local production of high-stability miniaturized electronic components such as sealed crystal holders, fixed and variable resistors, mica and tantalum capacitors and a quartz crystal oscillator.

6. *Contract Board.*—(i) *General.* Under the *Supply and Development Act 1939–1948*, the Contract Board is the authority responsible for the arranging of contracts for the performance of services and the purchase of supplies for the Naval, Military and Air Forces of the Commonwealth, as well as for the Department of Supply. The Board is also responsible for the sale or disposal of all surplus or unserviceable Commonwealth goods approved for disposal. By arrangement, the Board also arranges purchases on behalf of other Commonwealth departments and authorities which desire to use its facilities.

(ii) *The Board and its Administrative Organization.* The Contract Board meets in Melbourne, and comprises representatives of the Departments of Supply, Navy, Army and Air. The Board's administrative organization is the Directorate of Contracts. In each State other than Victoria, there is a District Contract Board with an administrative organization similar to the Directorate of Contracts. The table following shows, in respect of the Contract Board organization, the purchases and realizations from disposals for the years 1961–62 and 1962–63.

**CONTRACT BOARD ORGANIZATION: PURCHASES AND REALIZATIONS  
FROM DISPOSALS**  
(£)

State	Purchases		Realizations from disposals	
	1961-62	1962-63	1961-62	1962-63
Contract Board, Victoria .. ..	39,052,328	33,876,845	1,380,091	1,253,181
District Contract Board—				
New South Wales .. ..	7,359,936	6,664,285	1,556,825	1,206,164
Queensland .. ..	1,072,749	931,855	315,856	339,588
South Australia .. ..	1,709,412	2,089,214	508,433	541,318
Western Australia .. ..	357,019	843,685	201,445	187,663
Tasmania .. ..	94,887	103,501	39,147	49,131
<b>Total .. ..</b>	<b>49,646,331</b>	<b>44,509,385</b>	<b>4,001,797</b>	<b>3,577,045</b>

7. **Defence Supply Planning.**—The central planning authority of the Department is the Planning Branch, whose principal functions are:—

- to plan for and to assist in the development of additional production capacity to meet the Services' munitions requirements for peace and war;
- to provide and administer stockpiles of relevant materials and reserve pools of plant and equipment considered essential for expansion of production in the event of war;
- to prepare and advance co-ordinated production programmes against Service orders and to analyse and interpret achievement against these programmes for the information of the Department and the Services;
- to provide advisory services in the field of instrumentation, machine tools, materials, and inspection to Government factories and contractors engaged in the production of munitions requirements; and
- to administer the national stockpile.

A series of Industry Advisory Committees has been established to advise the Minister and the Department in the development of industrial mobilization plans to meet the Services' *matériel* requirements for mobilization and war. The Committees are:—Ammunition; Electrical; Explosives and Chemicals; Machine Tools and Gauges and Munitions Factory Equipment; Materials; Military Vehicles; Radar and Telecommunications; Weapons and their Equipment; Hard Fibres; Raw Cotton; and Rubber and Allied Materials.

Members of the Committees include industrialists of wide experience and the highest ability in their chosen fields.

8. **Stores and Transport Branch.**—This Branch, administered by a Board of Management and working under the direction of a General Manager, functions as the central storage authority and the central transport authority for all Commonwealth Departments. It is the authority for the arrangement of furniture removals at departmental expense in all States, but not in the Australian Capital Territory or the Northern Territory. It has agents in Canberra and Darwin. It also operates a shipping and customs section and the England-Australia bulk air freight scheme for Commonwealth Departments.

On 30th June, 1963, the Branch had under its control land, buildings and works, vehicles, plant and equipment valued at £11,184,528, and 3,302,000 sq. ft. of storage space, as well as storage facilities for large quantities of chemicals, bulk liquids and explosives.

9. **Finance Branch.**—The total expenditure on Department of Supply activities during the year 1962-63 was £48,690,000, comprising £23,055,000 (net) from Parliamentary appropriations, and £25,635,000 from Trust Fund Accounts. The latter included expenditure of £6,043,000 for Stores and Transport and £18,299,000 in Government Munitions and Aircraft Factories.

## CHAPTER XXVIII

## REPATRIATION

## § 1. General

The Repatriation Commission was established by the *Repatriation Act* 1920–1963, and consists of three full-time members. It is responsible for the administration of the *Repatriation Act* and associated legislation, all matters of policy, and the general administration and overall supervision of the Repatriation Department. The central office is in Melbourne and there is a branch office under the control of a Deputy Commissioner in each State.

The principal functions of the Department are:—the payment of war and service pensions to eligible ex-service men and women and their dependants; the provision of medical treatment to ex-service men and women for injuries and illnesses caused or aggravated by their war service; the provision of medical treatment in certain circumstances to ex-service men and women who are suffering from injuries and illnesses not caused or aggravated by war service; and the provision of medical treatment to widows and dependants of deceased ex-servicemen whose deaths are due to war service.

Other functions of the Repatriation Department are outlined in a later section of this chapter (see § 5, General Benefits and Miscellaneous, pp. 1211–15).

Benefits are provided in respect of service, not only in the 1914–18 and 1939–45 Wars, but also in the Korea and Malaya operations, with the British Commonwealth Far East Strategic Reserve and the Special Overseas Forces.

## § 2. War Pensions

1. General.—The first provision for the payment of war pensions to ex-servicemen and their dependants was made by the Commonwealth Parliament in the *War Pensions Act* 1914. This Act was repealed in 1920 by the *Australian Soldiers' Repatriation Act* 1920 (amended from 31st December, 1950, to the *Repatriation Act*). The main features relating to war pensions under the *Repatriation Act* 1920–1963 are set out in the following paragraphs.

(i) *Eligibility for Pension.* Claims for eligibility for war pensions are determined in the first instance by a Repatriation Board in each State of the Commonwealth, and the *Repatriation Act* provides for a right of appeal from the determination of a Board. Members of women's services are eligible for pensions and other benefits, as prescribed in the Act, on the same basis as male members of the forces. Amendments to the Act in 1943 considerably widened the eligibility provisions, to the benefit, mainly, of members of the Citizen Military Forces who had not served outside Australia. These provisions are summarized as follows.

A member of the forces who served (1) outside Australia, (2) in the Territories of Australia, such as Papua and New Guinea, or (3) within Australia in circumstances which can be regarded as combat against the enemy, is covered for war pension purposes in respect of incapacity or death which may result from any occurrence that happened during the period from the date of his enlistment to the date of the termination of his service in respect of that enlistment.

In other cases where a member served only in Australia, incapacity or death to be pensionable must have been attributable to service.

There is a third ground applicable to all members except those with less than six months' camp service. This provides that, where a condition existed at enlistment, a pension may accrue if it is considered that the condition was aggravated by service.

If, at any time after discharge, an ex-serviceman who served in a theatre of war becomes incapacitated or dies from pulmonary tuberculosis, war pension is payable as if the incapacity or death resulted from an occurrence on service. (See also § 3. Service Pensions.) Medical treatment may also be provided.

(ii) *Rates.* The main classes of war pensions are the special (T.P.I.) rate, the general rate and the war widows' pension.

The *special rate* of war pension is payable to those who are totally and permanently incapacitated and are unable to earn more than a negligible percentage of a living wage. The weekly rate is £13 15s., plus £1 15s. 6d. wife's allowance and 13s. 9d. for each child under 16 years.

The *general rate* of war pension is the rate payable to those who suffer war-caused disabilities but are not thereby prevented from working, although their earning capacity may be reduced. The actual pension payable is assessed in accordance with the degree of incapacity suffered. The maximum (100 per cent.) rate is now £5 15s. a week. A wife and children under 16 years also receive pensions at rates according to the assessed degree of incapacity of the ex-serviceman, the maximum being £1 15s. 6d. for a wife and 13s. 9d. for each child.

The *war widows' pension* is paid to widows of ex-servicemen who died as a result of war service, and to their children under the age of 16 years. The weekly rates are: widow, £5 15s.; first child, £1 19s.; second and each subsequent child, £1 7s. 6d.

(iii) *Allowances.* The following allowances are provided in addition to pension.

*Domestic Allowance* (£3 10s. per week). This is paid, in addition to pension, to a widow of an ex-serviceman whose death is due to war service, if she is 50 years of age; or is permanently unemployable; or has a dependent child under the age of 16 years, or a dependent child over 16 years being educated and not in receipt of an adequate living wage.

*Attendant's Allowance* (maximum rate £5 5s. per week). This allowance is paid, in addition to war pension, to certain classes of seriously disabled ex-servicemen, for example, war blinded, those who are paralysed, and certain double amputees.

*Clothing Allowance.* A clothing allowance is paid at various rates (3s. 9d. to 7s. 6d. per week) to an ex-serviceman who, as a result of war service, has lost an arm or a leg or, because of an injury to a limb, is required to use a surgical aid or appliance. An amount not exceeding £9 15s. in any one year is also payable to certain other war disabled ex-servicemen.

*Sustenance Allowance.* This allowance is paid where an ex-serviceman is prevented from following his normal occupation through treatment of a war-caused disability or while undergoing medical investigation. The rate payable is the same as the general (100 per cent.) rate pension.

Where an ex-serviceman is receiving in-patient treatment for a war-caused disability or is undergoing periods of essential convalescence immediately following discharge from hospital, a higher rate to bring the sustenance allowance up to the equivalent of the special (T.P.I.) rate is paid.

A wife and children under 16 years also receive pensions at the current general or special rate.

During 1963, the regulation governing the payment of sustenance allowance was amended to abolish the limited means test hitherto applied to determine eligibility for the higher rate of sustenance allowance.

This amendment removed anomalies which operated prejudicially against certain classes of otherwise eligible ex-servicemen. It also eliminated delays and a considerable amount of administrative effort.

*Recreation Transport Allowance.* This allowance provides transport for recreation purposes and may be paid to an ex-serviceman who, as a result of war service, suffers certain amputations of the arms or legs or is seriously disabled to the extent that his powers of locomotion are negligible.

*Other Allowances and General Assistance.* These include re-establishment loans and allowances, funeral benefits, vocational training allowances for education and training of children, fares and allowances for loss of remunerative time in connexion with medical or pension purposes, and motor vehicle allowances for seriously disabled ex-servicemen.

**2. Appeals Tribunals.**—The principal Act was amended, as from 1st June, 1929, to create tribunals to hear appeals in respect of war pensions. The War Pensions Entitlement Appeal Tribunal is empowered to hear and decide any appeal by or on behalf of ex-servicemen or their dependants against a decision of a Repatriation Board or the Repatriation Commission that the incapacity or death of an ex-serviceman did not arise out of war service. Assessment Appeal Tribunals were created to hear and decide any appeal against a current assessment or a "Nil" assessment of war pension made by the Repatriation Commission in respect of the incapacity of an ex-serviceman which had been accepted as arising out of war service. Provision was made by subsequent legislation to enable the tribunals to hear appeals by certain members whose applications for a service pension had been refused on the grounds that they were not suffering from pulmonary tuberculosis or were permanently unemployable.

**3. Summary of War Pensions, 1962-63.**—The following table provides a summary of war pensions for the 1914-18 War, the 1939-45 War, the Korea and Malaya operations and the Far East Strategic Reserve.

## WAR PENSIONS: SUMMARY, AUSTRALIA, 1962-63

Particulars	1914-18 War	1939-45 War	Korea and Malaya operations	Far East Strategic Reserve	Total
New claims granted .. ..	2,394	32,496	1,035	193	36,118
Restorations .. ..	239	784	12	..	1,035
Claims rejected(a) .. ..	1,854	6,125	342	48	8,369
Pensions cancelled or discontinued ..	670	27,234	112	4	28,020
Deaths of pensioners .. ..	5,113	3,735	18	1	8,867
Number of pensions in force at 30th June, 1963 .. ..	115,384	546,231	8,320	466	670,401
Annual pension liability at 30th June, 1963 .. .. £'000	23,705	40,546	438	24	64,713
Amount paid in pensions during the year 1962-63 .. .. £'000	n.a.	n.a.	n.a.	n.a.	70,365

(a) Number of claimants who had their claims for all their disabilities rejected.

4. Classes of War Pensions, Australia, 1962-63.—(a) *New Claims Granted.* The following is an analysis of the total number of new claims granted during 1962-63.

## WAR PENSIONS: NEW CLAIMS GRANTED, AUSTRALIA, 1962-63

Class	1914-18 War	1939-45 War	Korea and Malaya operations	Far East Strategic Reserve	Total
Ex-servicemen .. ..	1,045	7,731	209	63	9,048
Wives of ex-servicemen .. ..	1,138	7,536	200	43	8,917
Children .. ..	77	16,257	610	85	17,029
Other dependants .. ..	134	972	16	2	1,124
Total .. ..	2,394	32,496	1,035	193	36,118

(b) *Pensions in Force.* The following table shows the number of pensions in force at 30th June, 1963, for each war and for each class of pensioner.

## WAR PENSIONS IN FORCE: AUSTRALIA, 30th JUNE, 1963

Class	1914-18 War	1939-45 War	Korea and Malaya operations	Far East Strategic Reserve	Total
Ex-servicemen .. ..	46,606	170,594	2,412	166	219,778
Wives .. ..	43,735	144,505	1,798	100	190,138
Children .. ..	1,110	200,838	3,817	163	205,928
War widows .. ..	22,940	15,894	74	9	38,917
Children of deceased ex-servicemen	159	6,705	115	23	7,002
Orphans .. ..	15	140	..	1	156
Parents .. ..	546	7,239	101	3	7,889
Brothers and sisters .. ..	49	101	3	..	153
Others .. ..	224	215	..	1	440
Total .. ..	115,384	546,231	8,320	466	670,401

(c) *Special Rate Pensions.* At 30th June, 1963, special rate pensions were being paid to the following classes of ex-servicemen.

## WAR PENSIONS: MEMBERS ON SPECIAL RATES, AUSTRALIA, 30th JUNE, 1963

Class	1914-18 War	1939-45 War	Korea and Malaya operations	Far East Strategic Reserve	Total
Totally and permanently incapacitated ex-servicemen .. ..	12,722	8,724	30	..	21,476
Blinded ex-servicemen .. ..	208	232	1	..	441
Tuberculous ex-servicemen .. ..	393	338	12	..	743
Tuberculous ex-servicemen (intermediate rate) .. ..	95	227	3	..	325



5. Number of War Pensions and Annual Liability, States, 30th June, 1963.—The following table shows the number of pensions in force and annual liability for each war at 30th June, 1963, according to place of payment. (The amount paid is shown on p. 1208.)

**WAR PENSIONS: NUMBER OF PENSIONS AND ANNUAL LIABILITY,**  
30th JUNE, 1963

Where paid	Number of war pensions in force at 30th June, 1963				Annual pension liability (£'000)
	Incapacitated ex-servicemen	Dependants of incapacitated ex-servicemen	Dependants of deceased ex-servicemen	Total	
1914-18 WAR					
New South Wales(a) .. ..	14,939	14,379	8,072	37,390	7,833
Victoria .. ..	15,446	14,599	7,936	37,981	7,891
Queensland .. ..	6,026	5,718	2,334	14,078	3,150
South Australia(b) .. ..	3,674	3,685	1,855	9,214	1,847
Western Australia .. ..	3,661	3,864	1,623	9,148	1,516
Tasmania .. ..	1,971	1,937	962	4,870	1,057
<i>Australia</i> .. ..	45,717	44,182	22,782	112,681	23,294
Abroad .. ..	889	1,030	784	2,703	411
<b>Total .. ..</b>	<b>46,606</b>	<b>45,212</b>	<b>23,566</b>	<b>115,384</b>	<b>23,705</b>

1939-45 WAR					
New South Wales(a) .. ..	59,579	113,923	11,227	184,729	14,126
Victoria .. ..	46,985	96,344	7,758	151,087	10,958
Queensland .. ..	24,486	52,779	4,124	81,389	6,543
South Australia(b) .. ..	17,188	36,533	3,006	56,727	3,850
Western Australia .. ..	15,205	29,934	2,468	47,607	3,325
Tasmania .. ..	6,538	15,573	861	22,992	1,567
<i>Australia</i> .. ..	170,001	345,086	29,444	544,531	40,369
Abroad .. ..	593	828	279	1,700	177
<b>Total .. ..</b>	<b>170,594</b>	<b>345,914</b>	<b>29,723</b>	<b>546,231</b>	<b>40,546</b>

KOREA AND MALAYA OPERATIONS

New South Wales(a) .. ..	942	2,111	120	3,173	165
Victoria .. ..	545	1,201	57	1,803	95
Queensland .. ..	420	1,040	54	1,514	87
South Australia(b) .. ..	169	435	10	614	28
Western Australia .. ..	203	516	20	739	36
Tasmania .. ..	90	253	8	351	17
<i>Australia</i> .. ..	2,369	5,556	269	8,194	428
Abroad .. ..	43	62	21	126	10
<b>Total .. ..</b>	<b>2,412</b>	<b>5,618</b>	<b>290</b>	<b>8,320</b>	<b>438</b>

FAR EAST STRATEGIC RESERVE

New South Wales(a) .. ..	66	125	17	208	9
Victoria .. ..	29	43	6	78	4
Queensland .. ..	43	66	8	117	7
South Australia(b) .. ..	6	4	..	10	1
Western Australia .. ..	20	26	3	49	2
Tasmania .. ..	1	..	..	1	..
<i>Australia</i> .. ..	165	264	34	463	23
Abroad .. ..	1	..	2	3	1
<b>Total .. ..</b>	<b>166</b>	<b>264</b>	<b>36</b>	<b>466</b>	<b>24</b>

(a) Includes Australian Capital Territory.

(b) Includes Northern Territory.

6. Summary of War Pensions.—(i) Number. The following table shows, for each year and in total, the number of pensions granted, pensions in force, and the annual liability for pensions in each of the years ended 30th June, 1959 to 1963.

## WAR PENSIONS: SUMMARY, AUSTRALIA

Year	Pensions granted	Claims rejected	Number of war pensions in force at 30th June				Annual pension liability at 30th June (£'000)
			Incapacitated ex-service-men	Dependants of incapacitated ex-service-men	Dependants of deceased ex-service-men	Total	
1914-18 WAR							
1958-59 .. .. .	2,098	2,767	54,005	51,215	22,240	127,460	21,032
1959-60 .. .. .	2,343	2,638	52,324	49,861	22,528	124,713	22,429
1960-61 .. .. .	2,094	(a) 2,085	50,338	48,205	22,743	121,286	23,017
1961-62 .. .. .	2,422	(a) 1,872	48,670	46,772	23,144	118,586	23,891
1962-63 .. .. .	2,394	1,854	46,606	45,212	23,566	115,384	23,705

## 1939-45 WAR

1958-59 .. .. .	27,829	18,954	151,249	332,691	25,758	509,698	29,905
1959-60 .. .. .	28,397	17,852	155,534	341,985	26,327	523,846	33,057
1960-61 .. .. .	27,202	(a) 14,718	159,727	346,391	27,205	533,323	35,147
1961-62 .. .. .	30,794	(a) 7,030	165,101	350,297	28,506	543,904	38,553
1962-63 .. .. .	32,496	6,125	170,594	345,914	29,723	546,231	40,546

## KOREA AND MALAYA OPERATIONS

1958-59 .. .. .	834	1,193	1,670	2,970	249	4,889	269
1959-60 .. .. .	908	1,174	1,864	3,593	255	5,712	311
1960-61 .. .. .	913	(a) 848	2,043	4,247	261	6,551	392
1961-62 .. .. .	969	(a) 383	2,208	4,919	285	7,412	399
1962-63 .. .. .	1,035	342	2,412	5,618	290	8,320	438

## FAR EAST STRATEGIC RESERVE

1960-61 .. .. .	61	(a) 118	53	62	15	130	7
1961-62 .. .. .	152	(a) 70	104	146	26	276	16
1962-63 .. .. .	193	48	166	264	36	466	24

## TOTAL

1958-59(b) .. .. .	30,761	22,914	206,924	386,876	48,247	642,047	51,206
1959-60(b) .. .. .	31,648	21,664	209,722	395,439	49,110	654,271	55,797
1960-61 .. .. .	30,270	(a) 17,769	212,161	398,905	50,224	661,290	58,523
1961-62 .. .. .	34,337	(a) 9,355	216,083	402,134	51,961	670,178	62,859
1962-63 .. .. .	36,118	8,369	219,778	397,008	53,615	670,401	64,713

(a) For the years 1958-59 and 1959-60, the figures for claims rejected refer to individual claims for each disability. The basis of showing rejected claims was changed during 1960-61 to show the number of claimants who had the claims for all their disabilities rejected.  
(b) Excludes Far East Strategic Reserve pensioners:—1959-16, 1960-65, with annual liability 1959—£1,410, 1960—£3,733.

(ii) *Amount Paid and Place of Payment.* The following table shows, for the years 1958-59 to 1962-63, the amounts paid in pensions and the place where they were paid.

## WAR PENSIONS: AMOUNT PAID

(£'000)

Place of payment	1958-59 (a)	1959-60 (a)	1960-61	1961-62	1962-63 (b)
New South Wales(c) .. .. .	16,813	18,167	20,266	21,010	24,053
Victoria .. .. .	15,201	16,101	18,322	18,420	20,908
Queensland .. .. .	7,216	7,742	8,916	9,039	10,375
South Australia(d) .. .. .	4,846	5,052	5,686	5,579	6,174
Western Australia .. .. .	3,947	4,236	4,655	4,665	5,255
Tasmania .. .. .	2,229	2,416	2,583	2,494	2,831
Abroad .. .. .	605	648	623	667	769
<b>Total .. .. .</b>	<b>50,857</b>	<b>54,362</b>	<b>61,051</b>	<b>61,874</b>	<b>70,365</b>

(a) Excludes payments to Far East Strategic Reserve pensioners. (b) Includes £5,976,090 domestic allowances paid to widows. (c) Includes the Australian Capital Territory. (d) Includes the Northern Territory.

## § 3. Service Pensions

1. **General.**—The *Repatriation Act* 1920-1963 provides for a service pension to be paid, subject to a means test of income and property, to the following persons.

A male ex-serviceman aged 60 years or over who served in a theatre of war, or an ex-servicewoman aged 55 years or over who served abroad. No pension is payable to the wife or children under 16 years of age of an ex-serviceman granted a service pension on account of age.

An ex-serviceman who is permanently unemployable and who served in a theatre of war (or in the case of an ex-servicewoman, who served abroad). Service pensions are also payable to a pensioner's wife and up to four children under 16 years of age.

An ex-serviceman suffering incapacity from pulmonary tuberculosis whether or not the person served in a theatre of war. (Only those persons who qualify in this group are entitled to receive both service and invalid pensions at the same time, subject to the maximum permissible income.) Service pensions are also payable to a pensioner's wife and up to four children under 16 years of age.

2. **Rate of Pension.**—The maximum rate of service pension is the same as that for age and invalid pensions paid by the Department of Social Services, namely, single ex-serviceman, £5 15s.; married ex-serviceman, £5 5s.; wife, £3. The rate for eligible children is 15s. a week for the first child and 2s. 6d. for each other child up to and including the fourth child. Eligible child means a child under 16 years of age, or a child under the age of 18 years who is not receiving an invalid pension and is undergoing full-time education, in which case pension may continue up to the end of the calendar year in which the child reaches 18 years of age.

If an ex-serviceman is receiving a service pension on the ground of being permanently unemployable, his service pension may be increased by 15s. a week in respect of each child other than the first, whether or not such children are eligible for pension in their own right.

An allowance of 10s. a week may be paid as supplementary assistance under certain conditions, if an unmarried pensioner pays board or rent.

The means test sets limits to the amount of income or property which a pensioner may have for the purpose of service pension. The amount of service pension payable depends upon the claimant's "means as assessed", which consist of his annual rate of income plus a property component equal to 9d. a fortnight for each complete unit of £10 of net value of property above £200. For married couples, except where they are separated or in other special circumstances, the income and property of each for purposes of applying the means test is taken to be half the total income and property of both, even if only one is a pensioner or claimant. A person's "means as assessed" may consist entirely of income, entirely of property, or of both income and property components. If his "means as assessed" do not exceed £3 10s. a week, the claimant receives the maximum rate of pension. If his "means as assessed" exceed £3 10s. a week, the rate payable is the maximum rate less the amount by which "means as assessed" exceed £3 10s. a week. If his "means as assessed" are £9 5s. a week or more, or in the case of a married couple £18 10s. a week or more, no service pension is payable.

Income means earnings and other forms of income derived from any source, with certain exceptions, of which the principal are—certain income derived from property, gifts or allowances from children, parents, brothers or sisters, benefits from friendly societies, child endowment, Commonwealth health benefits. The value of board and lodgings received by a pensioner is assessed as income at 12s. 6d. a week. Property includes all real and personal property, such as houses, land, money in hand, in a bank or on loan, shares, investments or legacies, vehicles used for business purposes, livestock. Property does not include an applicant's home, furniture or personal effects, the surrender value of life insurance policies (up to £750), the value of any reversionary interest, the capital value of any life interest, annuity or contingent interest, or vehicles maintained only for personal use.

Eligibility for service pensions was extended on 1st November, 1941, to veterans of the South African War 1899–1902, and in 1943 to members of the Forces of the 1939–45 War. Members of the Forces who served in Korea, and those who served in Malaya prior to the commencement of the *Repatriation (Far East Strategic Reserve) Act 1956–1963* are also eligible.

An ex-serviceman or ex-servicewoman in receipt of a service pension is entitled, with certain exceptions, to free medical benefits for disabilities not caused by war. These benefits include general practitioner service, specialist service where necessary, full pharmaceutical benefits, surgical aids and appliances (including spectacles), dental treatment and treatment in Repatriation General Hospitals.

3. **Operations, 1962–63.**—The following table gives a summary of service pensions during 1962–63.

Claims granted during year—						
Ex-servicemen .. .. .	..	..	..	..	..	8,058
Wives .. .. .	..	..	..	..	..	1,978
Children .. .. .	..	..	..	..	..	1,449
<i>Total</i> .. .. .	..	..	..	..	..	<b>11,485</b>
Claims rejected during year (i.e. number of claimants who had their claims for all their disabilities rejected) .. .. .						
Service pensions cancelled or discontinued during year .. .. .	..	..	..	..	..	1,739
Deaths of pensioners during year .. .. .	..	..	..	..	..	4,595
Pensions in force at 30th June, 1963 .. .. .	..	..	..	..	..	3,274
Annual pension liability at 30th June, 1963 .. .. .	..	..	..	..	..	62,161
						£11,379,285

4. **Number of Service Pensions and Amount Paid.**—(i) *Summary, Australia.* The following table shows the number of service pensions in force and the annual liability for pensions for the five years 1958–59 to 1962–63.

**SERVICE PENSIONS: NUMBER OF PENSIONS AND ANNUAL LIABILITY, AUSTRALIA**

Year	Number of service pensions at 30th June payable to—						Annual pension liability at 30th June
	Aged ex-servicemen	Ex-servicemen who are—		Dependants <sup>(a)</sup> of ex-servicemen where the ex-serviceman is—		Total	
		Permanently unemployable	Suffering from pulmonary tuberculosis	Permanently unemployable	Suffering from pulmonary tuberculosis		
1958–59 .. .. .	16,973	11,898	1,433	11,956	2,112	44,372	£'000
1959–60 .. .. .	18,193	12,140	1,379	12,080	2,026	45,818	6,245
1960–61 .. .. .	22,125	12,645	1,273	12,520	1,739	50,302	8,344
1961–62 .. .. .	27,479	13,603	1,246	13,597	1,663	57,588	10,430
1962–63 .. .. .	30,818	14,278	1,160	14,368	1,537	62,161	11,379

(a) Includes dependants of deceased service pensioners.

(ii) *Amount Paid and State where Paid.* The following table shows for the years 1958-59 to 1962-63 the amount paid in pensions and the State where paid.

**SERVICE PENSIONS: AMOUNT PAID**  
(£'000)

State where paid	1958-59	1959-60	1960-61	1961-62	1962-63
New South Wales(a) ..	2,234	2,360	2,735	3,156	3,547
Victoria .. .. .	1,387	1,518	1,731	2,122	2,475
Queensland .. .. .	995	1,080	1,213	1,625	1,681
South Australia(b) ..	584	644	763	1,097	1,243
Western Australia ..	776	875	1,051	1,344	1,464
Tasmania .. .. .	244	271	290	368	419
<b>Australia .. .. .</b>	<b>6,220</b>	<b>6,748</b>	<b>7,783</b>	<b>9,712</b>	<b>10,829</b>

(a) Includes Australian Capital Territory.

(b) Includes Northern Territory.

#### § 4. Medical Treatment for Ex-Servicemen and Dependants of Ex-Servicemen

1. **General.**—In-patient treatment for eligible patients is provided at the Repatriation General Hospitals in each State, at the auxiliary hospitals in New South Wales, Victoria and Western Australia, and at the sanatoria in Queensland and South Australia. For long-term patients, Anzac Hostels are maintained in Queensland and Victoria.

2. **Staff.**—Details regarding the number of full-time staff in Repatriation General Hospitals and other Repatriation institutions are given in the following table.

**REPATRIATION HOSPITALS AND INSTITUTIONS: FULL-TIME STAFF,**  
30th JUNE, 1963

Particulars	N.S.W.	Vic.	Qld	S.A.	W.A.	Tas.	Aust.
<b>General Hospitals—</b>							
Medical staff .. .. .	72	50	23	20	20	6	191
Nursing staff .. .. .	573	347	222	144	185	45	1,516
Other staff .. .. .	1,033	818	484	287	401	98	3,121
<b>Total .. .. .</b>	<b>1,678</b>	<b>1,215</b>	<b>729</b>	<b>451</b>	<b>606</b>	<b>149</b>	<b>4,828</b>
<b>Other in-patient institutions(a)</b>	190	98	79	38	29	..	434
<b>Out-patient clinics(a) ..</b>	158	101	24	34	23	..	340
<b>Limb and appliance centres(a) ..</b>	59	68	28	17	16	12	200
<b>Grand Total .. .. .</b>	<b>2,085</b>	<b>1,482</b>	<b>860</b>	<b>540</b>	<b>674</b>	<b>161</b>	<b>5,802</b>

(a) Total staff.

3. **In-patients Treated.**—The following table gives details of in-patients treated at Repatriation General Hospitals and other Repatriation institutions in each State. The figures shown refer to cases, e.g., a person who is admitted to hospital twice during a year is counted twice.

**REPATRIATION GENERAL HOSPITALS AND INSTITUTIONS: IN-PATIENTS TREATED, 1962-63**

Particulars	N.S.W.	Vic.	Qld.	S.A.	W.A.	Tas.	Aust.
<b>REPATRIATION GENERAL HOSPITALS</b>							
In-patients at beginning of year	1,284	803	555	293	437	92	3,464
Admissions and re-admissions during year .. .. .	19,751	11,302	8,482	4,185	6,143	1,194	51,057
<i>Total in-patients treated</i>	<i>21,035</i>	<i>12,105</i>	<i>9,037</i>	<i>4,478</i>	<i>6,580</i>	<i>1,286</i>	<i>54,521</i>
Discharges .. .. .	18,742	10,612	8,162	3,884	5,863	1,106	48,369
Deaths .. .. .	891	679	361	283	274	77	2,565
In-patients at end of year .. .. .	1,402	814	514	311	443	103	3,587
Average daily number resident	1,248	768	519	285	415	99	3,334
<b>OTHER REPATRIATION INSTITUTIONS</b>							
In-patients at beginning of year	127	137	80	36	34	..	414
Admissions and re-admissions during year .. .. .	961	633	314	98	127	..	2,133
<i>Total number of in-patients treated</i> .. .. .	<i>1,088</i>	<i>770</i>	<i>394</i>	<i>134</i>	<i>161</i>	<i>..</i>	<i>2,547</i>
Average daily number resident	163	136	79	33	29	..	440

In addition, during 1962-63, 12,101 repatriation in-patients were treated at other metropolitan and country hospitals, and there were 489,707 attendances for treatment as out-patients.

### § 5. General Benefits and Miscellaneous

1. **Other Departmental Activities.**—(i) *General.* During the 1939-45 War, the ordinary activities of the Department in respect of general benefits for the welfare of ex-servicemen and dependants were carried on without interruption. These activities concern mainly:—education and training of children under the Soldiers' Children Education Scheme (see 3, p. 1212), medical benefits for widows and children of deceased ex-servicemen and for widowed mothers of deceased unmarried ex-servicemen, funeral expenses for certain classes of ex-servicemen and dependants, and allowances to certain classes of dependants.

These and new benefits designed for the re-establishment of servicemen and servicewomen after discharge were extended and made available by legislation passed in June, 1940, to servicemen and servicewomen engaged in the 1939-45 War, in November, 1950, to those engaged in the Korea and Malaya operations, and in May, 1963, to those serving in such other areas as may be prescribed under the "Special Overseas Service" amendment to the *Repatriation Act 1920-1963*. The re-establishment benefits administered by the Repatriation Commission are:—payment of re-employment allowance while awaiting employment; provision of tools of trade and equipment where they are necessary to employment; transportation expenses to meet the cost of fares and removal of household belongings where an ex-serviceman takes up training, employment, or a business, or settles on the land; supplementing wages of apprentices whose apprenticeships were interrupted

by war service; re-establishment loans to enable ex-servicemen and widows to establish themselves in business, practices or occupations, including (until the Division of War Service Land Settlement began operations early in 1946) agricultural occupations; payment of re-establishment allowance during the early stages of establishment in business; gifts up to £75 for furniture to ex-servicemen who are blind or totally and permanently incapacitated, also to widows with children under 16 years of age; and free passages to Australia for wives, widows and children of ex-servicemen who married abroad (and passages outward from Australia in certain cases of ex-servicemen and dependants).

In 1949, the Department took over the functions of the Re-establishment Division of the former Department of Post-War Reconstruction and became responsible for the co-ordination of all matters relating to training under the Commonwealth Reconstruction Training Scheme. This scheme is now concluded, the prescribed time limits for eligibility having expired. Re-establishment of the more seriously disabled, where ordinary training is not sufficient, continues to be a function of the Department, and special means have to be found to overcome each problem.

(ii) *General Repatriation Benefits.* The following table gives a summary of expenditure during the five years 1958-59 to 1962-63 on the more important general repatriation benefits for all wars.

**EXPENDITURE ON GENERAL REPATRIATION BENEFITS: SUMMARY**  
(£'000)

Year ended 30th June—	Medical treatment	Employment and vocational training	Business loans and furniture	Soldiers' Children Education Scheme	Domestic allowances	Other benefits	Total
1959..	11,231	368	37	608	3,532	239	16,015
1960..	12,730	295	23	646	4,230	268	18,192
1961..	14,643	215	7	730	5,070	276	20,941
1962..	16,963	156	5	824	5,528	313	23,789
1963..	19,696	85	3	959	(a)	176	20,919

(a) Included in War Pensions.

2. *Expenditure by the Repatriation Department, 1962-63.*—The net expenditure by the Department for the year ended 30th June, 1963, was £107,748,227 distributed as follows.

	£'000
Pensions, allowances and other benefits .. .. .	82,484
Treatment .. .. .	19,696
Administration .. .. .	4,097
Works, rent and maintenance .. .. .	1,471
	107,748

3. *Soldiers' Children Education Scheme.*—(i) *General.* The Soldiers' Children Education Scheme was established in 1921 and operates with the assistance of voluntary Education Boards in each State. These Boards consist of representatives of government and non-government education authorities and of ex-service and other organizations which have a general interest in the welfare of the children of ex-servicemen. The objects of the scheme are to assist and encourage eligible children in acquiring a standard of education compatible with their aptitude and ability, and to prepare them to enter an agricultural, commercial, professional or industrial calling of their own choice.

(ii) *Eligible Children.* Eligible children are children of ex-servicemen whose deaths have been accepted as due to war service; or of ex-servicemen who died from causes not due to war service but who were receiving at the date of death a war pension at a special rate for blindness, total and permanent incapacity, or for pulmonary tuberculosis, or for amputation of two or more limbs; or of ex-servicemen who, as the result of war service, are blinded, totally and permanently incapacitated or receiving the special rate pension for pulmonary tuberculosis and are likely to receive such pension for a period of three years.

(iii) *General Benefits.* From the commencement of primary education up to twelve years, school requisites and fares are provided. From the age of 12 years, while the child continues with primary or secondary education, an education allowance is payable.

Further assistance beyond, or parallel with the later years of, secondary education is provided where an approved beneficiary continues with a course of specialized education or training necessary to fit the child for a career.

Specialized education covers a wide range and may include: professional degree or diploma courses at universities and technical colleges; theological training; cadet and pupilage training, i.e. training combined with employment, such as nursing, pharmacy and journalism; industrial, including apprenticeship, training, and other courses of trade and business training approved by an Education Board; and agricultural training at an agricultural college.

At this stage of training, in addition to the education allowance, fees are paid and text books, essential equipment, and other minor benefit provided.

The scale of allowances payable to eligible children at various stages of education is as follows.

**SOLDIERS' CHILDREN EDUCATION SCHEME: WEEKLY RATES OF ALLOWANCES, OCTOBER, 1963**

Type of training	Living at home			Living away from home		
	£	s.	d.	£	s.	d.
At school—						
Aged 12–14 years .. .. .	0	19	0	3	3	3
Aged 14–16 years .. .. .	1	8	9	3	3	3
Aged 16–18 years .. .. .	3	3	3	4	17	9
Professional (university, etc.) .. .. .	4	15	0	7	7	6
Agricultural .. .. .				1	11	9
Industrial (apprenticeship, etc.) .. .. .	1	3	0	2	6	0

(iv) *Expenditure.* The following table shows the costs of education under the scheme for the year ended 30th June, 1963.

**SOLDIERS' CHILDREN EDUCATION SCHEME: EXPENDITURE, 1962-63**

(£)

Particulars	N.S.W.	Vic.	Qld	S.A.	W.A.	Tas.	Aust.
Cost of education of beneficiaries—							
Under 12 years of age .. .. .	3,007	3,641	2,959	1,750	1,035	460	12,852
Over 12 years of age .. .. .	281,481	246,159	135,712	84,708	56,240	23,779	828,079
<b>Total Expenditure .. .. .</b>	<b>284,488</b>	<b>249,800</b>	<b>138,671</b>	<b>86,458</b>	<b>57,275</b>	<b>24,239</b>	<b>840,931</b>



(v) *Number Receiving Benefit.* The next table shows the number of children in receipt of benefit at 30th June, 1963.

**SOLDIERS' CHILDREN EDUCATION SCHEME: NUMBER RECEIVING BENEFIT AT 30th JUNE, 1963**

Type of training	N.S.W.	Vic.	Qld	S.A.	W.A.	Tas.	Aust.
At school—							
Aged 12–14 years .. ..	928	628	491	249	207	144	2,647
Aged 14–16 years .. ..	1,090	772	496	288	226	125	2,997
Aged 16–18 years .. ..	418	401	244	152	93	37	1,345
<i>Total</i> .. ..	<i>2,436</i>	<i>1,801</i>	<i>1,231</i>	<i>689</i>	<i>526</i>	<i>306</i>	<i>6,989</i>
Professional .. ..	320	240	143	114	75	8	900
Agricultural .. ..	20	13	5	1	7	..	46
Industrial .. ..	880	13	98	92	95	3	1,181
<i>Grand Total</i> .. ..	<i>3,656</i>	<i>2,067</i>	<i>1,477</i>	<i>896</i>	<i>703</i>	<i>317</i>	<i>9,116</i>

4. **Settlement of Returned Service Personnel on the Land.**—Reference to the settlement of returned service personnel on the land will be found in Chapter IV. Land Tenure and Settlement, pages 87–9 of this Year Book.

5. **The Services Canteens Trust Fund.**—(i) *General.* The Services Canteens Trust Fund was established under the *Services Trust Funds Act 1947*. Its funds are derived from the assets and profits of wartime Services canteens, mess and regimental funds of disbanded units, and several other sources.

The total amount transferred to the Fund to 31st December, 1963, was £5,526,974. The Act prescribed that, of this, £2,500,000 and such further amounts as the trustees of the Fund might from time to time decide, should be devoted to the provision of education facilities for the children of eligible ex-service men and women, and that the balance of the Fund should be used to provide relief for ex-service men and women and their dependants in necessitous circumstances.

The Fund is administered by ten honorary trustees, appointed by the Governor-General. The trustees have power to determine the persons or groups of persons to benefit from the Fund and the extent of benefits to be granted within the provisions of the Act, and to appoint regional committees to assist with the administration. Members of regional committees are all persons who served in the 1939–45 War or are widows of men who served during the war. They serve in an honorary capacity.

(ii) *Assistance from the Fund.* (a) *General.* Persons eligible for assistance from the Fund are those who, between 30th September, 1939, and 30th June, 1947, served in the Australian Naval, Military or Air Forces, including members of the Canteens Staff of any ship of the Royal Australian Navy, persons duly accredited to any part of the Defence Force who served in an official capacity on full-time paid duty, and their dependants.

The trustees have introduced schemes for providing welfare relief for ex-service men and women who are eligible for benefits, and for their dependants; benefits for children of eligible ex-service men and women who are suffering from serious and incapacitating afflictions; and education benefits for the children of eligible ex-service men and women. From its inauguration in 1947, the Fund is to be available for 40 years for welfare relief and for 30 years for educational benefits.

(b) *Welfare Relief.* The trustees have prescribed a policy for welfare relief which makes assistance available only to those who are in genuine distress from which they cannot extricate themselves by their own efforts.

To 31st December, 1963, £1,401,473 had been granted as welfare relief from the Fund, £965,093 to ex-servicemen and their dependants, and £436,380 to widows and orphans. The amount granted during 1963 was £98,503. A total of 30,550 ex-service men and women and 12,950 widows and orphans were granted welfare assistance from the Fund to 31st December, 1963.

(c) *Assistance under Afflicted Children's Scheme.* The Fund assists dependent children suffering from afflictions which permanently disable or seriously retard their progress, or prevent the enjoyment of normal health and strength, and who face a prospect of dependence on others for all or part of their lives. The extent to which assistance will be granted in a particular case depends largely on the nature of the child's affliction, the facilities available, the family circumstances, and the funds that can be made available. Up to 31st December, 1963, 2,411 afflicted children had been assisted under the Afflicted Children's Scheme, involving an expenditure of £125,058. The number of new children granted assistance in 1963 was 89.

(d) *Educational Assistance Scheme.* Educational assistance is restricted to children who are 15 years of age and over, except in exceptional circumstances. In the case of orphans, assistance may commence from the age of 12 years. The object is to assist eligible children to obtain the highest education within their capacity. Assistance is in the form of awards ranging from £5 to £200 a year depending on the cost of the course undertaken and the family circumstances. These awards are granted for practically every type of course of education, whether secondary, tertiary or commercial. They are designed to cover, or contribute towards, the cost of essential books, fees in cases where government school courses are not available, fares between the child's home and school, essential equipment and material, a uniform allowance in certain cases, and a maintenance allowance for the child while at school. Higher training education awards are provided for selected students for post-graduate study in Australia or overseas in the ancillary services to medicine, welfare and science. Provision also exists for one post-graduate scholarship each year for study overseas, valued at £1,000 per annum for up to three years.

The number of children assisted under the educational scheme to 31st December, 1963, was 41,063, and the expenditure on educational awards, post-graduate scholarships and higher training education awards to 31st December, 1963, was £2,234,290. The number granted in 1963 was 6,570 at a value of £246,917.

## § 6. Miscellaneous War Pensions

The Commission is responsible for the payment of pensions and allowances to beneficiaries under the Seamen's War Pensions and Allowances Act, the Interim Forces Benefits Act, the Native Members of the Forces Benefits Act, and Cabinet decisions granting eligibility to persons who were attached to the armed forces during war time.

Details of the pensions paid under the various Acts are shown in the following table.

**MISCELLANEOUS WAR PENSIONS: NUMBER OF PENSIONS AND ANNUAL LIABILITY, AUSTRALIA, 30th JUNE, 1963**

Particulars	Number of pensions in force at 30th June, 1963				Annual pension liability (£)
	Members	Dependants of members	Dependants of deceased members	Total	
Act of grace .. .. .	135	172	57	364	50,154
Seamen's war pension .. .. .	65	110	77	252	28,333
New Guinea civilians .. .. .	1	..	92	93	27,773
Interim forces .. .. .	11	26	..	37	1,052
Native members of the forces	16	50	5	71	4,630
<b>Total .. .. .</b>	<b>228</b>	<b>358</b>	<b>231</b>	<b>817</b>	<b>111,942</b>

## CHAPTER XXIX

### INTERNATIONAL RELATIONS

#### § 1. Relations with Commonwealth and Other Countries

1. **Commonwealth Relations.**—Australia's international relations have developed as a natural concomitant of Australia's growth from colonial status to independent nationhood. During this process Australia has remained on terms of close friendship and understanding with the United Kingdom. This intimate association, together with close co-operation with other countries of the Commonwealth of Nations remains a basic principle of Australia's foreign policy.

Australia is represented at meetings of Commonwealth Prime Ministers and of Commonwealth Finance and Foreign Ministers. It is a member of the Commonwealth Economic Consultative Council, belongs to the Sterling Area, retains, with limitations, the system of judicial appeal to the Privy Council, and maintains High Commissioners in the majority of other Commonwealth countries.

Between meetings of Commonwealth Prime Ministers, the Australian Prime Minister has authority to consult with other Commonwealth Prime Ministers on any subject. In addition, there is a constant flow of messages between the Australian Government and governments of other Commonwealth countries. In defence matters, Australia's armed services send representatives to discussions by Commonwealth Chiefs of Staff; Australian naval ships take part in combined exercises with the navies of other Commonwealth members, and Australian officers maintain liaison with the Services of other Commonwealth countries.

2. **Relations with the United States of America.**—An important feature of Australia's international relations is her relationship with the United States of America. This relationship is formally expressed in a treaty known as the ANZUS Treaty which was signed pursuant to Articles 51 and 52 of the United Nations Charter, and provides that in the event of armed attack on any one of them in the Pacific, the U.S.A., Australia and New Zealand would act to meet the common danger in accordance with its constitutional processes. The Treaty is designed to establish a closer working relationship between the three countries concerned. The ANZUS partners, in their consultations, make no attempt to decide matters affecting the vital interest of other countries. The machinery of the ANZUS Treaty consists of a Council composed of the three Foreign Ministers or their deputies, which meets periodically to discuss matters of mutual concern.

3. **Australia and Asia.**—Australia's geographical location to the south of Asia has become an increasingly important factor in Australia's foreign policy. Australia has sought to develop close relations and understanding with her Asian neighbours. This was evidenced by Australia's inclusion in 1963 as a full regional member of the Economic Commission for Asia and the Far East (ECAFE), and an increasing recognition by Asian leaders of Australia's concern with, and contribution to, the solution of the problems of the region.

4. **SEATO.**—Following the cessation of fighting in Indo-China in 1954, Australia, with other countries situated in the South-East Asian region, or having responsibilities there, supported a proposal to form a collective defence alliance to guarantee the peace and security of the region from external aggression. On 8th September, 1954, Australia, France, New Zealand, Pakistan, the Philippines, Thailand, the United Kingdom and the United States signed the South-East Asian Collective Defence Treaty at Manila. They also signed a Pacific Charter stating the principles on which they had acted. A Protocol to the Treaty extended its operation to Cambodia, Laos and the free territory under the jurisdiction of the State of Vietnam, although no action on their territories would be taken except at the invitation or with the consent of the government concerned.

While primary emphasis has been placed on the defence significance of the Treaty, an organization has been established in Bangkok to co-ordinate activities to combat subversion both by counter-propaganda and security training and by the development of the economic and social welfare of the peoples of the Treaty Area. To facilitate this task, the Australian Government in 1956 instituted a SEATO Aid Programme, under which by 30th June, 1964, aid to the value of £5½ millions had been given to member countries in Asia to help develop their capacity to resist aggression and subversion and to stimulate economic development.

A further £1,000,000 will be spent under the Programme during the financial year 1964-65. Under the scheme Australia is providing two geodetic survey vessels to the Philippines, a military technical training school, a vehicle base repair shop and two 50-kW. radio transmitters to Thailand, telecommunication and technical training equipment to Pakistan, and barbed wire, corrugated iron and blacksmith's tools for the strategic hamlet programme in Vietnam. Australia has also provided military training, and technical training in the fields of engineering, telecommunications, naval architecture and dockyard maintenance, security procedures, and surveying for nearly 200 trainees from Asian member countries. In addition, a number of senior service officers of other member countries have visited Australia to foster understanding and to develop co-operation between the armed forces.

## § 2. The Colombo Plan

1. General.—The Colombo Plan originated at a meeting of Commonwealth Foreign Ministers in Colombo in January, 1950. The meeting set up a Consultative Committee to review economic development in South and South-East Asia. The task of this Committee was to devise the most effective means of tackling the problems of economic development in the area and of focusing world attention on them.

Membership of the Consultative Committee is now made up of Australia, Canada, Ceylon, India, New Zealand, Pakistan, the United Kingdom, Malaysia, the United States, Burma, Cambodia, Indonesia, Japan, Laos, Nepal, the Philippines, Thailand, Vietnam, Korea, Bhutan, the Maldive Islands and Afghanistan.

Australian assistance under the Colombo Plan to 30th June, 1964, amounted to £53,425,067. Of this, £38,476,594 had been spent on economic development projects and £14,948,473 had been spent under the Technical Co-operation Scheme. Australia has placed emphasis on the importance of technical assistance in providing a base for economic development. A summary of expenditure, by country and under different heads, is set out in the following table.

### AUSTRALIA'S EXPENDITURE ON THE COLOMBO PLAN TO 30th JUNE, 1964 (£)

Particulars	Economic development	Technical assistance					Grand total
		Training	Experts	Equipment	Miscellaneous	Total	
<b>Country—</b>							
Afghanistan .. ..		878	..	..	..	878	878
Bhutan .. ..	66,907						66,907
Brunei .. ..		34,386	523			34,909	34,909
Burma .. ..	1,065,732	586,458	59,088	212,084		857,630	1,923,362
Cambodia .. ..	854,772	49,098	82,096	75,913		207,107	1,061,879
Ceylon .. ..	3,538,746	372,311	186,951	158,771		718,033	4,256,779
India .. ..	13,208,802	750,944	98,741	271,036		1,120,721	14,329,523
Indonesia .. ..	3,587,461	1,828,526	473,113	236,004		2,537,643	6,125,104
Korea .. ..		36,282				36,282	36,282
Laos .. ..	391,145	48,269	25,215	88,711		162,195	553,340
Malaysia .. ..	845,253	2,606,309	897,141	681,874		4,185,324	5,030,577
Nepal .. ..	132,477	56,613	25,477	13,035		95,125	227,602
Pakistan .. ..	11,289,766	595,499	218,445	313,556		1,127,500	12,417,266
Philippines .. ..	42,679	450,364	61,702	225,746		737,812	780,491
Thailand .. ..	1,598,915	604,193	120,582	323,744		1,048,519	2,647,434
Vietnam .. ..	1,546,154	368,717	170,934	422,778		962,429	2,508,583
Mekong survey .. ..			170,000	65,000		235,000	235,000
<b>General—</b>							
Economic development ..	307,785						307,785
Colombo Plan Bureau ..					31,538	31,538	31,538
Colombo Plan International Training Centre ..					12,630	12,630	12,630
English Language Training Centre .. ..					21,914	21,914	21,914
International House .. ..					50,000	50,000	50,000
Publicity and Publications ..					26,020	26,020	26,020
Administrative and incidental expenses ..					721,391	721,391	721,391
Asian Institute of Economic Development ..					17,873	17,873	17,873
<b>Total .. ..</b>	<b>38,476,594</b>	<b>8,388,847</b>	<b>2,590,008</b>	<b>3,088,252</b>	<b>881,366</b>	<b>14,948,473</b>	<b>53,425,067</b>

2. **Economic Development Aid.**—Most of Australia's contribution under the Colombo Plan has been spent on providing predominantly Australian-made equipment for development projects or on gifts of commodities such as wheat, flour, fertilizer, coal, copper and condensed milk which have been sold in the recipient country to raise counterpart funds for agreed developmental projects.

The projects assisted by Australia cover a wide range, including irrigation and preparation of land for food crops, irrigation and electric power projects, secondary industries, municipal services, road building, transport and communications facilities, broadcasting equipment and lignite mining.

A Technical Co-operation Scheme has been an integral part of the Colombo Plan since its inception in 1950. Co-ordination of technical assistance is provided by a Council for Technical Co-operation, which meets regularly in Colombo, served by a Colombo Plan Bureau. An Australian is currently Director of the Bureau.

3. **Technical Assistance.**—(i) *Training.* Australia had spent a total of £8,388,847 on training awards under the Colombo Plan up to 30th June, 1964. A total of 5,235 awards for training in Australia had been made. The main fields of study include engineering, public administration, education, nursing, science, medicine and health, and agriculture. Substantial numbers have also been trained in such fields as accountancy, arts, economics, food technology, social studies and industry.

At 30th June, 1964, a total of 3,797 awards had been granted under the correspondence scholarship scheme inaugurated by Australia in 1955. Main fields of study are accountancy, engineering, English, and trade courses. Burma, Ceylon, India, Indonesia, Malaysia, the Philippines and Thailand have joined the correspondence scheme. Malaysia has established a correspondence education scheme of its own, for which key personnel were trained in Australia under the Colombo Plan.

In February, 1963, the Colombo Plan English Teaching Centre was opened in North Sydney to provide intensive three-month courses in oral and written English for Colombo Plan students nominated by their governments. Up to 30th June, 1964, 118 students from Afghanistan, Burma, Cambodia, Korea, Laos, Malaysia, Malawi and Thailand have attended courses at the Centre.

(ii) *Experts.* Australia has spent a total of £2,590,008 on experts and advisers up to 30th June, 1964. This involved the services of 504 experts and 119 advisers on 831 assignments. Of these numbers, 60 experts and one adviser were in the field at 30th June, 1964. The majority were in Malaysia and Thailand.

The following table shows the number of training awards and experts provided to Colombo Plan countries by Australia up to 30th June, 1964.

**AUSTRALIA: TRAINING AWARDS AND EXPERTS PROVIDED UNDER COLOMBO PLAN TO 30th JUNE, 1964**

Country	Training awards	Correspondence awards	Expert assignments
Afghanistan .. .. .	6	..	..
Brunei .. .. .	24	13	1
Burma .. .. .	402	348	14
Cambodia .. .. .	29	..	19
Ceylon .. .. .	304	473	57
India .. .. .	604	297	31
Indonesia .. .. .	943	284	52
Korea .. .. .	82	..	..
Laos .. .. .	42	..	6
Malaysia .. .. .	1,444	2,231	251
Nepal .. .. .	28	..	3
Pakistan .. .. .	414	..	51
Philippines .. .. .	380	71	26
Thailand .. .. .	358	80	54
Vietnam .. .. .	175	..	20
Regional (Mekong Project) .. .. .	..	..	25
<b>Total .. .. .</b>	<b>5,235</b>	<b>3,797</b>	<b>610</b>

(iii) *Equipment.* At 30th June, 1964, a total of 385 requests for technical equipment had been or were being met, at a total cost of £3,088,252. The range of items supplied includes text books and Australian reference books for schools, universities and technical training institutions; equipment and tools for technical education; livestock and equipment for breeding programmes; radio receivers for use in remote areas; film projectors and visual aids for training centres; X-ray equipment for hospitals; and agricultural research equipment.

(iv) *Miscellaneous.* In addition to training awards, experts and equipment, technical assistance funds have been spent on contributions to the Colombo Plan Bureau, publications, International House, training centres and the ECAFE Asian Economic Development Institute.

### § 3. Participation in the United Nations

1. *Australia's Contributions to United Nations.*—Australia played an active part in drafting the Charter of the United Nations at the Conference on International Organization in San Francisco in 1945 and has been a consistent supporter of the principles and objectives of the United Nations since its foundation. Australia's influence in the affairs of the United Nations has been exerted primarily through the annual debates in the General Assembly, through membership of the Security Council (1946–47 and 1956–57), the Economic and Social Council (1948–50, 1953–55 and for a three-year term from January 1, 1962), and through the Trusteeship Council. In virtue of responsibilities for administration of the Trust Territories of Nauru and New Guinea, Australia has been a member of the Trusteeship Council since it was established. In 1961, Australia was appointed a member of the "Committee of Seventeen" subsequently expanded to the "Committee of Twenty-four"—a committee established by the General Assembly to implement Resolution 1514 (xv), the declaration on the granting of independence to colonial countries and peoples.

In 1950, Australia joined fifteen other member States in answering the Security Council's call to help the Republic of Korea to repel Communist aggression from the north. Australia has also been directly involved in United Nations activities in Greece (1947), Palestine (1947), Indonesia (1948–49), Kashmir (1947), the Arab States and Israel (1948), Hungary (1956–57), Cyprus (1964). Australia has contributed its share of the costs, both assessed and voluntary, of the United Nations military operation in the Congo which began in 1960. In addition, Australia has made a voluntary contribution of \$750,000 to the civil programme. Australia has also paid its share of the costs of the United Nations Emergency Force (UNEF) in the Middle East, and made a voluntary contribution of \$112,000 to the costs of maintaining the United Nations Force in Cyprus (UNFICYP) for the first three months of its operation and \$100,000 in respect of the second three months. To help meet the financial difficulties of the United Nations arising mainly from the costs of these operations and the failure of a number of member States to pay their share, Australia has bought four million dollars of United Nations bonds, the proceeds of which could be used to finance peace-keeping operations.

In the economic, social and cultural sphere, Australia has contributed to the work of the United Nations through membership of its specialized agencies and of the Economic and Social Council. Australia is a foundation member of one of the four Regional Economic Commissions—The Economic Commission for Asia and the Far East, the 4th and 15th Sessions of which were held in Australia. In 1963, Australia became a regional member of ECAFE.

Australia has had varying periods of service as a member of the executive bodies of the principal specialized agencies. As a leading agricultural country, Australia played a large part in the establishment of the Food and Agriculture Organization (FAO). Australia is a member of the Board of Governors of the International Atomic Energy Agency. Australia served as a member of the governing body of the International Labour Organisation either as a Titular Government member or as a Deputy member for 1945–60, and in 1963 was again elected to the Governing Body as a Titular Government member for a further three-year term. Australia has also been a prominent member of the International Civil Aviation Organization since its inception, and in 1962 was re-elected to the Council as one of the nine States of principal civil aviation importance.

2. *Australia's Contributions in International Aid.*—Australia's contributions towards various forms of international aid through the United Nations and other international organizations for 1963–64 will amount to over \$21,000,000. This is additional to the funds provided for the Colombo Plan and the cash grant of £25,250,000 for the development of Papua and New Guinea in 1963–64.

The Australian Government has contributed £3,315,921 to the United Nations Expanded Programme of Technical Assistance from the inception of the Programme in 1950 up to June, 1964. This was spent on the provision of experts, training, supplies, and equipment and supplemented Australian aid under the Technical Co-operation Scheme of the Colombo Plan.

Australian experts sent abroad under the United Nations Technical Assistance programme up to 30th June, 1963, totalled 309. A total of 573 United Nations trainees had come to Australia up to 30th June, 1964.

Other contributions by Australia (as at June, 1964) have included £22,522,000 to the United Nations Relief and Rehabilitation Administration (UNRRA), £3,297,056 to the International Refugee Organization, £1,830,000 to Post-UNRRA Relief, £6,307,993 for food and medical supplies to the United Nations Children's Fund (UNICEF), which has been helping the under-privileged children of the world since its establishment in 1946; £1,799,000 of essential supplies to the United Nations Korean Reconstruction Agency; £1,300,000 of supplies to the United Nations Relief and Works Agency for Palestine refugees; £553,950 for the programmes of the United Nations High Commissioner for Refugees; £155,000 for the relief of Hungarian refugees; £47,500 for the WHO Malaria Eradication Special Account; and £375,000 to the United Nations Special Fund. Australia's assistance to the United Nations Children's Fund was recognized by the election of an Australian as chairman of the Executive Board for 1959. Australia was a member of the Board from 1947 to 1961.

Australia has also contributed £264,985 to the Inter-Governmental Committee for European Migration's programme for providing transportation from Hong Kong to countries of resettlement for refugees of European origin coming out of Mainland China.

In addition, Australia has made significant contributions to the development funds of international financial institutions; to June, 1964, these amounted to £21,265,000 to the International Bank for Reconstruction and Development, £998,000 to the International Finance Corporation and £3,272,000 to the International Development Association.

In 1962, Australia supported the establishment of the UN/FAO World Food Programme and will contribute £669,000 in cash and kind for the three years of the Programme. Australia contributed £1.2 million by the end of 1963 to the Freedom from Hunger Campaign and this money will be used on projects in South and South-East Asia.

#### § 4. Diplomatic Representation

1. *General.*—The Department of External Affairs is responsible for advising the Minister for External Affairs and the Australian Government on the conduct of foreign Affairs and relations with foreign Governments. Its officers staff the Australian diplomatic service and the consular and administrative service.

2. *Australian Missions Overseas.*—At the beginning of 1964, Australia maintained the following diplomatic and consular missions abroad.

#### AUSTRALIAN MISSIONS OVERSEAS

##### Embassies (26)

*Argentina*—Calle Rivadavia 1829, Piso 5, Buenos Aires.

*Austria*—Tienfaltstrasse 1, Vienna 1.

*Belgium*—Boulevard Brand Whitlock, No. 4 Woluwe—St. Pierre, Brussels.

*Brazil*—Caixa Postal 251—ZC—00, Rio de Janeiro.

*Burma*—88 Strand Road, Rangoon.

*Cambodia*—94 Moha Vithei Preah Norodom, Phnom Penh.

*France*—13 Rue Las Cases, Paris 7E.

*Germany, Federal Republic of\**—Kolner Strasse 157, Bad Godesburg, Bonn.

*Greece*—15 Valaoritou Street, Athens.

*Indonesia*—Pegangsaan Barat 14, Djakarta.

*Ireland*—33 Fitzwilliam Square, Dublin.

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\* The Australian Ambassador is also head of the Australian Military Mission in Berlin.



- Israel*—145 Hayarkon Street, Tel Aviv.  
*Italy*—Via Sallustiana 26, Rome.  
*Japan*—No. 9 Mita, Tsuna-Machi, Minato-ku, Tokyo.  
*Korea*—32-10 Songwol-dong, Sudaee Moon-Koo, Seoul.  
*Laos*—Quartier Phone Xay, Vientiane.  
*Nepal\**—C/o Australian High Commission, New Delhi, India.  
*The Netherlands*—Lange Voorhout 18, The Hague.  
*The Philippines*—L & S Building, 1414 Dewey Boulevard, Manila.  
*South Africa*—Standard Bank Building, Church Square, Pretoria.  
*Sweden*—Sergels Torg 12, Stockholm C.  
*Thailand*—323 Silom Road, Bangkok.  
*Union of Soviet Socialist Republics*—13 Kropotkinsky Pereulok, Moscow.  
*United Arab Republic*—1097 Corniche el Nil, Garden City, Cairo.  
*United States of America*—1700 Massachusetts Avenue, Washington, D.C.  
*Vietnam*—Caravelle Building, Place Lam Son, Saigon.

#### High Commissions (10)

- Britain†*—Australia House, The Strand, London, W.C.2.  
*Canada*—Royal Bank Chambers, 90 Sparks Street, Ottawa.  
*Ceylon*—3 Cambridge Place, Colombo, 1.  
*Ghana*—Ghana House, Accra.  
*India\**—9/48 Sardar Patel Road, Chanakyapuri.  
*Malaysia*—44 Ampang Road, Kuala Lumpur.  
*Singapore Office*—MacDonald House, Orchard Road, Singapore 9.  
*New Zealand*—Government Life Insurance Building, Customs House Quay, Wellington 4.  
*Nigeria*—Investment House, 21/25 Broad Street, Lagos.  
*Pakistan*—9 Kutchery Road, Karachi 4.  
*Tanganyika*—Bank House, Independence Avenue, P.O., Box 2996.

#### Other (12)—

- Military Mission in Berlin‡*—Olympia Stadium, Charlottenburg 9, Berlin.  
 Mission to—  
*European Economic Community*—Boulevard Brand Whitlock, No. 4 Woluwe, St. Pierre, Brussels.  
*United Nations (New York)*—750 Third Avenue, New York 17, N.Y.  
*United Nations (Geneva)*—254 route de Lausanne, Pregny, Geneva.  
 Consulate-General in—  
*Spain*—Calle de General, Sanjurjo, 44 Madrid 3.  
*Switzerland*—254 route de Lausanne, Pregny, Geneva.  
*New York*—International Building, 636 Fifth Avenue, New York 20, N.Y.  
*San Francisco*—Qantas Building, 350 Post Street, Union Square, San Francisco, California.  
 Consulate in—  
*Denmark*—Norrevold 68, Copenhagen.  
*New Caledonia*—45 Tce. Rue du Verdun, Noumea.  
*Portuguese Timor*—Dili.  
 Commission in—  
*Fiji*—Hotel Grand Pacific, 584-618, Victoria Parade, Suva.

\* The Australian High Commissioner in India is currently Ambassador to Nepal.

† Administered by Prime Minister's Department.

‡ The Australian Ambassador is also head of the Australian Military Mission in Berlin.

The Department of External Affairs is responsible for the control and administration of all the diplomatic and consular missions listed above with the exception of the High Commission, London, which is the responsibility of the Prime Minister's Department, and the Australian Consulate in Copenhagen, which is the responsibility of the Department of Immigration.

Specialist officers of the Trade Commissioner Service, other Commonwealth Government Departments and the Defence Services stationed abroad are attached to Australian diplomatic or consular missions. Senior attached officers are in some cases accredited to the missions with diplomatic or consular ranks approved by the Minister for External Affairs. In addition, the Department of Trade and Industry maintains Trade Commissioner posts which engage in trade promotion in a number of cities where Australia does not have diplomatic or consular representations (for complete list of Trade Commissioner posts, see p. 1225).

The Department of Immigration similarly maintains migration missions which engage in recruitment of migrants in the following cities where Australia does not have diplomatic or consular representation: Hong Kong, Nairobi, and Valletta (see p. 1226).

3. **Diplomatic Representatives in Australia.**—There are 32 non-Commonwealth and eight Commonwealth countries represented by diplomatic missions in Australia.

The following list shows the addresses of the overseas representatives in Australia. Full details of Commonwealth and foreign representation in Australia may be obtained from publications issued by the Department of External Affairs, Canberra. Consular representatives are not included. Particulars of these are contained in a publication *Consular Representatives and Trade Commissioners in Australia*, issued by the Department of External Affairs, Canberra. There are more than 180 such representatives in Australia, and 53 countries are represented.

#### DIPLOMATIC REPRESENTATIVES IN AUSTRALIA.

##### Embassies (27)

- Argentina*—5a Arkana Street, Yarralumla, Canberra, A.C.T.
- Austria*—Ainslie Building, Ainslie Avenue, Civic Centre, Canberra, A.C.T.
- Belgium*—19 Arkana Street, Yarralumla, Canberra, A.C.T.
- Brazil*—31 Jardine Street, Kingston, Canberra, A.C.T.
- Burma*—85 Mugga Way, Red Hill, Canberra, A.C.T.
- Cambodia*—5 Canterbury Crescent, Deakin, Canberra, A.C.T.
- China*—70 Empire Circuit, Forrest, A.C.T.
- France*—6 Darwin Avenue, Acton, Canberra, A.C.T.
- Germany, Federal Republic of*—Empire Circuit, Yarralumla, Canberra, A.C.T.
- Greece*—22 Arthur Circle, Forrest, Canberra, A.C.T.
- Indonesia*—4 Hotham Crescent, Deakin, Canberra, A.C.T.
- Ireland*—Ainslie Building, 39 Ainslie Avenue, Civic Centre, Canberra, A.C.T.
- Israel*—Turrana Street, Yarralumla, Canberra, A.C.T.
- Italy*—27 State Circle, Deakin, Canberra, A.C.T.
- Japan*—3 Tennyson Crescent, Forrest, Canberra, A.C.T.
- Korea*—50 Darling Point Road, Darling Point, N.S.W.
- The Netherlands*—120 Empire Circuit, Yarralumla, Canberra A.C.T.
- The Philippines*—1 Arkana Street, Yarralumla, Canberra, A.C.T.
- Portugal*—22 Bougainville Street, Manuka, Canberra, A.C.T.
- South Africa*—Green Square, Jardine Street, Kingston, Canberra, A.C.T.
- Sweden*—Tarrana Street, Yarralumla, Canberra, A.C.T.
- Switzerland*—37 Stonehaven Crescent, Deakin, Canberra A.C.T.
- Thailand*—1 Fraser Place, Yarralumla, Canberra, A.C.T.
- Union of Soviet Socialist Republics*—78 Canberra Avenue, Griffith, Canberra, A.C.T.
- United Arab Republic*—83 Endeavour Street, Red Hill, Canberra, A.C.T.
- United States of America*—Yarralumla, Canberra, A.C.T.
- Vietnam*—39 National Circuit, Forrest, Canberra, A.C.T.

**High Commissioners (7)**

*Britain*—Commonwealth Avenue, Canberra, A.C.T.

*Canada*—Commonwealth Avenue, Canberra, A.C.T.

*Ceylon*—35 Empire Circuit, Forrest, Canberra, A.C.T.

*India*—63 Mugga Way, Red Hill, Canberra, A.C.T.

*Malaysia*—71 State Circle, Acton, Canberra, A.C.T.

*New Zealand*—M.L.C. Building, London Circuit, Civic Centre, Canberra, A.C.T.

*Pakistan*—Franklin Street, Forrest, Canberra, A.C.T.

**Legations (5)**

*Chile*—3 Aston Gardens, Bellevue Hill, Sydney, N.S.W.

*Denmark*—115 Pitt Street, Sydney, N.S.W.

*Finland*—537 New South Head Road, Double Bay, Sydney, N.S.W.

*Peru*—5 Grey Street, Deakin, A.C.T.

*Uruguay*—55 Mugga Way, Red Hill, Canberra, A.C.T.

**Other (1)**

Commissioner for—

*Malta*—31 Clowes Street, South Yarra, Melbourne, Vic.

4. **Agents-General for States.**—From early times, the Australian colonies maintained agents in London to encourage immigration and to carry out commercial and financial negotiations. Since federation, the States have continued to maintain Agents-General in London, all of whom work in close co-operation with the High Commissioner for Australia at Australia House, The Strand, London. The addresses of the Agents-General are as follows: New South Wales—56–57 The Strand, London, W.C.2; Victoria—Victoria House, Melbourne Place, The Strand, London, W.C.2; Queensland—Marble Hall, 409–10 The Strand, London, W.C.2; South Australia—South Australia House, 50 The Strand, London, W.C.2; Western Australia—Savoy House, 115 The Strand, London, W.C.2; Tasmania—457 The Strand, Charing Cross, London, W.C.2.

## § 5. Oversea Trade Representation

1. **The Australian Trade Commissioner Service.**—The Department of Trade maintains Trade Commissioners in 28 countries. The first permanent Trade Commissioner Post was set up in Canada in 1929. Before that, Australia's only official trade representatives abroad were in the High Commission Office in London and at the Office of the Commissioner General for Australia in New York. By May, 1964, Trade Commissioners were established at the following posts: United States of America—New York, Washington and San Francisco; Canada—Vancouver, Ottawa and Montreal; West Indies—Trinidad; Britain and Europe—London, Athens, Paris, Bonn, Stockholm and Rome; Persian Gulf—Bahrain; Africa—Accra, Nairobi, Salisbury and Johannesburg; United Arab Republic—Cairo; Lebanon—Beirut; India—New Delhi, Bombay and Calcutta; Ceylon—Colombo; South-East Asia—Singapore, Djakarta, Kuala Lumpur, Bangkok and Hong Kong; Japan—Tokyo; New Zealand—Wellington, Christchurch and Auckland; Philippines—Manila; Pakistan—Karachi; South America—Caracas and Lima. Twenty-eight editions of the Department of Trade's promotion periodical "Austral News" now circulate in 80 countries in three languages. (*See also* Australian Trade Missions, § 4 of Chapter XIV. Oversea Trade, p. 517.)

The addresses of Australian Trade Commissioner Posts overseas, and of Trade Commissioners of overseas governments in Australia, are shown in the following lists. The former include some recent additions to the posts mentioned above.

**Trade Commissioner Service of the Commonwealth of Australia**

*Britain*—Australia House, The Strand, London, W.C.2.

*Bahrain*—Almoayyed Buildings, Government Road, Bahrain.

*Canada*—1155 Dorchester Boulevard West, Montreal, P.Q.; Burrard Building, 1030 W. Georgia Street, Vancouver 5, B.C.; Royal Bank Chambers, 90 Sparks Street, Ottawa.

*Ceylon*—3 Cambridge Place, Colombo.

*France*—2nd Floor, 26 Rue de la Pepiniere, Paris, 8E.

*Germany, Federal Republic of*—Kolner Strasse 157, Bad Godesberg, Bonn; 2000 Hamburg 36, Neuer Wall 391, Hamburg.

*Ghana*—Ghana House, Church Street, Accra.

*Greece*—15 Valaoritu Street, Athens.

*Hong Kong*—Union House, Connaught Road Central, Hong Kong.

*India*—Mercantile Bank Building, 52 Mahatma Gandhi Road, Bombay 1; 2 Fairlie Place, Calcutta 1; 34 Golf Links Road, New Delhi.

*Indonesia*—Djalan Nusantara 39, Djakarta.

*Italy*—Via Sallustiana 26, Rome.

*Japan*—9 Mita Tsuna-Machi, Shiba, Minato-ku, Tokyo.

*Kenya*—Silo Park House, Queensway, Nairobi.

*Lebanon*—L'Union de Paris Building, Rue Maamari, Beirut.

*Malaysia*—44 Ampang Road, Kuala Lumpur; MacDonald House, Orchard Road, Singapore 9.

*Netherlands*—Lange Voorhout 18, The Hague.

*New Zealand*—London and Lancashire Building, 56 Shortland Street, Auckland; Phoenix Building, 91 Worcester Street, Christchurch; Government Life Insurance Building, Customs House Quay, Wellington.

*Pakistan*—9 Kutchery Road, Karachi 4.

*Peru*—Monterosa Buildings, Jiron Arica 837, Lima.

*Philippines*—L. & S. Building, 1414 Dewey Boulevard, Manila.

*Southern Rhodesia*—Central Africa House, Cnr. First Street and Gordon Avenue, Salisbury.

*South Africa*—Cavendish Chambers, Jeppe and Kruis Streets, Johannesburg.

*Sweden*—Sergels Torg 12, Stockholm 40.

*Thailand*—323 Silom Road, Bangkok.

*United Arab Republic*—1097 Corniche el Nil, Garden City, Cairo.

*United States of America*—3148 Cleveland Avenue, Washington, D.C.; International Building, 630 Fifth Avenue, New York 20, N.Y.; 350 Post Street, Union Square, San Francisco, Cal.; 3500 Wilshire Boulevard, Los Angeles 5, Cal.

*Venezuela*—Apartado 6481, Caracas.

*West Indies, Federation of*—72-74 South Quay, Port of Spain, Trinidad.

2. **Australian Trade Correspondents and Marketing Officers.**—Australian Trade Correspondents and Marketing Officers have no official status but supplement the work of the Trade Commissioner Service. Correspondents are located in Suva, Fiji; Taipei, Taiwan; Valletta, Malta; Port Louis, Mauritius; Mexico City, Mexico; Montevideo, Uruguay; Madrid, Spain; and Istanbul, Turkey. Marketing Officers are located in Rangoon, Burma; Port Louis, Mauritius; and Los Angeles, U.S.A.

**3. Trade Commissioners of Oversea Governments in Australia.**

*Britain*—Senior British Trade Commissioner—Commonwealth Avenue, Canberra, A.C.T.

British Trade Commissioners—Assurance House, 16–20 Bridge Street, Sydney, N.S.W.; 224 Queen Street, Melbourne, Vic.; M.L.C. Building, Cnr. Adelaide and Edward Streets, Brisbane, Qld.; F.C.A. Building, Franklin Street, Adelaide, S.A.; Prudential Building, 189 St. George's Terrace, Perth, W.A.

*Canada*—Canadian Trade Commissioners—A.M.P. Building, Circular Quay, Sydney, N.S.W.; 2 City Road, South Melbourne, Vic.

*Ceylon*—Ceylon Trade Commissioner—The Wales House, 66 Pitt Street, Sydney, N.S.W.

*India*—Indian Trade Commissioner—Caltex House, 167–187 Kent Street, Sydney, N.S.W.

*Malaya*—Malayan Trade Commissioner—71 State Circle, Acton, A.C.T.

*New Zealand*—Senior New Zealand Trade Commissioner—14 Martin Place, Sydney, N.S.W.

New Zealand Government Trade Commissioner—428 Collins Street, Melbourne, Vic.

**§ 6. Commonwealth Migration Offices**

The Australian diplomatic missions to Britain, the Netherlands, Germany, Italy, Greece, Austria, and Spain have Chief Migration Officers attached to them. Senior Migration Officers are attached to the missions to Denmark, Sweden, and the United Arab Republic, and Migration Officers to the missions to Switzerland, Belgium, and France.

A Migration Officer is attached to the office of the Australian Trade Commissioner in Hong Kong, and migration business in Kenya is handled by the Administrative Officer of the Trade Commission there. In Malta, the Migration Officer is located at the Australian Migration Office, Airways House, Gaiety Lane, Cnr. High Street, Sliema, Valletta.

In other countries where Australia has diplomatic representation, migration inquiries are handled by the diplomatic staff.

## CHAPTER XXX

## MISCELLANEOUS

NOTE.—This chapter comprises miscellaneous statistics and other descriptive information not directly related to the subjects of the preceding chapters, arranged in sections as follows:—

1. Valuation of Australian Production; 2. Indexes of Production; 3. Consumption of Foodstuffs and Beverages; 4. Retail Trade; 5. Interstate Trade; 6. Statistical Organization in Australia; 7. Statistical Publications of Australia.

In issues of the Year Book prior to No. 49 (*see* No. 48, p. 1166), a list of *Australian Books* was included. This list, compiled by the Librarian of the Commonwealth National Library is available from the Library, but considerations of space preclude its publication in this issue.

## § 1. Valuation of Australian Production

1. General.—The value of production for Australia is computed in accordance with the decisions reached at the Conferences of Australian Statisticians and principally at the Conference held in 1935. The figures published in the following tables have been compiled by the Statisticians in the various States from the latest and best data available, and are on a substantially uniform basis. However, marketing costs are not on a completely comparable basis between States and, in addition, accurate information is difficult to obtain for many items. In consequence, differences between States in the relationships of local to gross value should be treated with some reserve.

Attention is directed to the fact that the values shown in the tables herein refer only to the production of primary industries and factories, and exclude the building and construction industry, those industrial establishments not classified as factories, and certain agricultural and farmyard produce obtained from areas of less than one acre.

The following is a brief explanation of the terms used.

- (a) *Gross Value of Production* is the value placed on recorded production at the wholesale price realized at the principal markets. In cases where primary products are consumed at the place of production or where they become raw material for a secondary industry, these points of consumption are presumed to be the principal markets.
- (b) *Local Value* (i.e., gross production valued at the place of production) is ascertained by deducting marketing costs from the gross value. Marketing costs include freight, cost of containers, commission, and other charges incidental thereto.
- (c) *Net Value of Production* represents local value less value of materials used in the process of production. Materials used in the process of production include seed, power, power kerosene, petrol and other oils, fodder consumed by farm stock, manures, dips, sprays and other costs. No deductions have been made for depreciation or certain maintenance costs as particulars are not available for all States. The net value of production is the only satisfactory measure to use when comparing or combining the value of primary industries with those of other industries.

For the years shown in the following tables, no allowance for power, power kerosene, petrol and other oils has been made in New South Wales. In the case of the mining and quarrying industry, however, this allowance has been made in all States. Marketing costs for mining and quarrying, and costs of materials used in the process of production in respect of bee-farming, trapping, forestry, and fishing and whaling, are not available for all States. Local values have been used for these industries, with consequent understatement in gross value for the mining and quarrying industry and overstatement in net value for the other industries.

2. Value of Production, Australia, 1962-63.—The following table shows particulars of the gross, local and net values of production in Australia by industry.

**GROSS, LOCAL AND NET VALUE OF PRODUCTION OF PRIMARY INDUSTRIES AND FACTORIES: AUSTRALIA, 1962-63**

(£'000)

Industry	Gross production valued at principal markets	Local value—gross production valued at place of production	Net value of production (without deduction of depreciation or maintenance)
Agriculture .. .. .	568,313	482,138	415,207
Pastoral .. .. .	654,880	599,218	539,349
Dairying .. .. .	219,689	201,977	153,679
Poultry .. .. .	61,815	54,017	26,418
Bee-farming .. .. .	1,740	1,495	(a) 1,495
<i>Total, Rural</i> .. .. .	<i>1,506,437</i>	<i>1,338,845</i>	<i>1,136,148</i>
Trapping .. .. .	6,380	5,708	(a) 5,708
Forestry .. .. .	57,023	51,762	(a) 51,762
Fishing and whaling .. .. .	17,042	15,311	(a) 15,311
Mining and quarrying .. .. .	(a) 187,569	187,569	145,514
<i>Total, Non-rural</i> .. .. .	<i>268,014</i>	<i>260,350</i>	<i>218,295</i>
<i>Total, All Primary</i> .. .. .	<i>1,774,451</i>	<i>1,599,195</i>	<i>1,354,443</i>
Factories .. .. .	(b) 2,398,191	(b) 2,398,191	2,398,191
<b>Grand Total</b> .. .. .	<b>4,172,642</b>	<b>3,997,386</b>	<b>3,752,634</b>

(a) Local value.

(b) Net value; excludes Northern Territory and Australian Capital Territory.

3. Net Value of Production, States, 1962-63.—The following tables show the total net value of production, and the net value per head of population, for each industry and State.

**NET(a) VALUE OF PRODUCTION OF PRIMARY INDUSTRIES AND FACTORIES, 1962-63**

(£'000)

Industry	N.S.W.	Vic.	Q'land	S. Aust.	W. Aust.	Tas.	N.T.	A.C.T.	Aust.
Agriculture ..	113,036	96,986	92,864	46,679	54,253	11,156	84	149	415,207
Pastoral ..	201,830	132,563	100,261	51,995	41,290	7,542	2,996	872	539,349
Dairying ..	51,950	55,067	24,611	9,879	4,507	7,506	31	128	153,679
Poultry ..	9,872	12,406	1,744	671	893	617	100	115	26,418
Bee-farming(b) ..	634	240	111	199	266	44	..	1	1,495
<i>Total, Rural</i> ..	<i>377,322</i>	<i>297,252</i>	<i>219,591</i>	<i>109,423</i>	<i>101,209</i>	<i>26,865</i>	<i>3,211</i>	<i>1,265</i>	<i>1,136,148</i>
Trapping(b) ..	1,929	2,750	307	256	147	229	90	..	5,708
Forestry(b) ..	13,988	16,811	5,988	4,058	5,081	5,657	50	129	51,762
Fishing and whaling	3,800	1,624	1,922	1,473	5,564	885	43	..	15,311
Mining and quarrying ..	62,609	16,197	29,003	13,207	16,122	6,117	2,072	187	145,514
<i>Total, Non-rural</i> ..	<i>82,326</i>	<i>37,382</i>	<i>37,220</i>	<i>18,994</i>	<i>26,914</i>	<i>12,888</i>	<i>2,255</i>	<i>316</i>	<i>218,295</i>
<i>Total, All Primary</i> ..	<i>459,648</i>	<i>334,644</i>	<i>256,811</i>	<i>128,417</i>	<i>128,123</i>	<i>39,753</i>	<i>5,466</i>	<i>1,581</i>	<i>1,354,443</i>
Factories ..	1,037,443	801,467	190,483	189,571	108,211	71,016	(c)	(c)	2,398,191
<b>Grand Total</b> ..	<b>1,497,091</b>	<b>1,136,111</b>	<b>447,294</b>	<b>317,988</b>	<b>236,334</b>	<b>110,769</b>	<b>5,466</b>	<b>1,581</b>	<b>3,752,634</b>

(a) See letterpress on p. 1227.

(b) Local value.

(c) Not available for publication.

NET(a) VALUE OF PRODUCTION OF PRIMARY INDUSTRIES AND FACTORIES  
PER HEAD OF POPULATION, 1962-63

(£ )

Industry	N.S.W.	Vic.	Q'land	S. Aust.	W. Aust.	Tas.	Australia (b)
Agriculture ..	28.2	32.1	59.9	46.7	71.0	30.8	38.4
Pastoral ..	50.3	43.9	64.6	52.0	54.0	20.8	49.9
Dairying ..	12.9	18.2	15.9	9.9	5.9	20.8	14.2
Poultry ..	2.5	4.1	1.1	0.7	1.2	1.7	2.5
Bee-farming(c) ..	0.1	0.1	0.1	0.2	0.3	0.1	0.1
<i>Total, Rural</i> ..	<i>94.0</i>	<i>98.4</i>	<i>141.6</i>	<i>109.5</i>	<i>132.4</i>	<i>74.2</i>	<i>105.1</i>
Trapping(c) ..	0.5	0.9	0.2	0.2	0.2	0.6	0.5
Forestry(c) ..	3.5	5.5	3.8	4.1	6.7	15.6	4.8
Fishing and whaling(c) ..	0.9	0.5	1.2	1.5	7.2	2.5	1.4
Mining and quarrying ..	15.6	5.4	18.7	13.2	21.1	16.9	13.5
<i>Total, Non-rural</i> ..	<i>20.5</i>	<i>12.3</i>	<i>23.9</i>	<i>19.0</i>	<i>35.2</i>	<i>35.6</i>	<i>20.2</i>
<i>Total, All Primary Factories</i> ..	<i>114.5</i> <i>258.4</i>	<i>110.7</i> <i>265.2</i>	<i>165.5</i> <i>122.8</i>	<i>128.5</i> <i>189.8</i>	<i>167.6</i> <i>141.6</i>	<i>109.8</i> <i>196.1</i>	<i>125.3</i> <i>223.8</i>
<b>Grand Total</b> ..	<b>372.9</b>	<b>375.9</b>	<b>288.3</b>	<b>318.3</b>	<b>309.2</b>	<b>305.9</b>	<b>349.1</b>

(a) See letterpress on p. 1227.  
with the exception of factories.(b) Includes Northern Territory and Australian Capital Territory  
(c) Local value.

4. Net Value of Production, Australia, 1958-59 to 1962-63.—The following table shows the net value of production for Australia.

NET(a) VALUE OF PRODUCTION OF PRIMARY INDUSTRIES AND  
FACTORIES: AUSTRALIA

(£'000)

Industry	1958-59	1959-60	1960-61	1961-62	1962-63
Agriculture ..	328,943	291,951	391,861	366,503	415,207
Pastoral ..	443,622	536,215	458,169	481,338	539,349
Dairying ..	141,944	152,193	142,131	136,497	153,679
Poultry ..	27,360	30,424	30,998	24,872	26,418
Bee-farming(b) ..	1,605	2,060	1,458	1,613	1,495
<i>Total, Rural</i> ..	<i>943,474</i>	<i>1,012,843</i>	<i>1,024,617</i>	<i>1,010,823</i>	<i>1,136,148</i>
Trapping(b) ..	6,362	6,881	6,601	5,888	5,708
Forestry(b) ..	54,358	56,001	53,975	50,937	51,762
Fishing and whaling(b) ..	11,243	12,325	12,813	14,294	15,311
Mining and quarrying ..	118,336	126,155	139,027	137,245	145,514
<i>Total, Non-rural</i> ..	<i>190,299</i>	<i>201,362</i>	<i>212,416</i>	<i>208,364</i>	<i>218,295</i>
<i>Total, All Primary Factories</i> ..	<i>1,133,773</i> <i>1,842,601</i>	<i>1,214,205</i> <i>2,074,882</i>	<i>1,237,033</i> <i>2,169,804</i>	<i>1,219,187</i> <i>2,194,938</i>	<i>1,354,443</i> <i>2,398,191</i>
<b>Grand Total</b> ..	<b>2,976,374</b>	<b>3,289,087</b>	<b>3,406,837</b>	<b>3,414,125</b>	<b>3,752,634</b>

(a) See letterpress on p. 1227.

(b) Local value.



In the chapters dealing with the respective industries, tables will be found showing the value of production and the value per head of population for the industry, by State.

## § 2. Indexes of Production

In the first two tables in this section, indexes of price and quantum (i.e., value at constant prices) of production are given for the following industrial groups:—Agriculture, Pastoral, Dairying, poultry and bee-farming, and All farming combined (including separate indexes for Wool and Products other than wool). In the third table, indexes of quantum (i.e., value at constant prices) of production, exports and consumption of farm products for food use are shown.

1. Farm Production Price Indexes.—The Farm Production Price Indexes shown in the following table relate to average "prices" of agricultural, pastoral, dairying, poultry and bee-farming products realized at the principal markets of Australia. The "price" data used are average unit values for the total quantities of the relevant commodities produced or marketed in each year, and the index numbers therefore measure both the effects of changes in prices (as such) and of variations in the quality, type, usage, etc., of products marketed. The index numbers for any year relate to the average values of products produced or marketed in that year, irrespective of the periods in which payment is received by producers.

The indexes have been calculated by the fixed-base weighted aggregative method. "Prices" for each commodity in any year are obtained by dividing gross value of production by the quantity produced in that year. In the original published series of Production Price Index Numbers, the average quantities of the relevant commodities *produced* in the period 1923–24 to 1927–28 were used as fixed weights. This series, re-computed to the base, average 1936–37 to 1938–39 = 100, was published in earlier issues of the Year Book (see No. 43, p. 1050). For 1936–37 and later years, the original series was replaced in December, 1952, by a revised series in which average quantities of each product *marketed* during the period 1946–47 to 1950–51 were used as fixed weights. In the revised series, the regimen was extended and modified to include farm products (as defined by Australian Statisticians) in all cases. Certain other refinements were also incorporated in the revised indexes, the principal of which was the omission from the weights used for the All Farming Index of quantities of crops marketed for livestock feeding in Australia.

### FARM PRODUCTION: INDEXES OF PRICES AT PRINCIPAL MARKETS, AUSTRALIA

(Base: Average 1936–37 to 1938–39 = 100)

Year	Agri- culture	Pastoral	Dairying, poultry and bee- farming	All farming	Wool (shorn and dead)	Products other than wool
1948–49	234	313	197	260	366	225
1949–50	272	396	228	316	483	261
1950–51	291	818	258	505	1,098	308
1951–52	355	501	332	410	552	363
1952–53	364	531	387	440	623	379
1953–54	324	534	395	429	621	365
1954–55	316	489	371	401	540	355
1955–56	330	451	392	397	468	373
1956–57	336	536	386	432	607	374
1957–58	336	435	382	388	473	359
1958–59	322	396	386	369	370	369
1959–60	329	464	402	403	440	391
1960–61	349	443	402	401	397	403
1961–62	348	421	373	385	412	376
1962–63	334	450	387	396	449	378

2. **Indexes of Quantum (i.e. Value at Constant Prices) of Farm Production.**—The indexes shown in the following table relate to gross output of farm products valued at constant prices. They have been calculated by revaluing quantities of each farm product included in the indexes at the average unit gross value of each product for the base years.

In the original published series, the period 1923–24 to 1927–28 was adopted as the base for revaluing each farm product. This series, re-computed to the base, average 1936–37 to 1938–39 = 100, was published in earlier issues of the Year Book (*see* No. 43, p. 1051). For 1936–37 and later years, the original series was replaced in December, 1952, by a revised series in which average unit values for the period 1936–37 to 1938–39 were used. The regimen used for the revised series was extended and modified to include farm products (as defined by Australian Statisticians) in all cases. Certain other refinements were incorporated in the revised indexes, the principal of which was the omission, in calculating the All Farming Index, of quantities of crops fed to livestock in Australia.

### INDEXES OF QUANTUM<sup>(a)</sup> OF FARM PRODUCTION, AUSTRALIA

(Base: Average 1936–37 to 1938–39 = 100)

Year	Agriculture	Pastoral	Dairying, poultry and bee-farming	All farming	Wool (shorn and dead)	Products other than wool
1948–49 .. .. .	108	105	111	109	108	109
1949–50 .. .. .	117	112	111	115	115	115
1950–51 .. .. .	108	109	106	109	116	107
1951–52 .. .. .	103	105	97	103	112	100
1952–53 .. .. .	121	126	108	121	131	118
1953–54 .. .. .	129	123	107	122	128	120
1954–55 .. .. .	120	127	117	123	132	120
1955–56 .. .. .	134	136	120	131	146	127
1956–57 .. .. .	120	148	117	131	164	121
1957–58 .. .. .	109	142	114	124	148	116
1958–59 .. .. .	165	159	119	149	164	145
1959–60 .. .. .	140	163	123	144	172	136
1960–61 .. .. .	177	152	120	152	165	148
1961–62 .. .. .	163	160	128	155	174	150
1962–63 .. .. .	191	163	129	166	170	165

(a) Indexes of value at constant prices, i.e., quantities revalued at average unit values for the base years (*see* text preceding table).

3. **Farm Products for Food Use: Indexes of Quantum (i.e. Value at Constant Prices) of Production, Exports and Consumption.**—The indexes shown in the following table have been calculated by revaluing quantities of each farm product included in the indexes at the average unit gross value of each product for the years 1936–37 to 1938–39. The items included comprise products in the form in which they are sold from farms in all cases except livestock sold for slaughter for meat, which are included in terms of dressed carcass weight of meat. Quantity data relating to exports include exports of processed food in terms of farm product equivalent. The indexes of production relate basically to gross output of farm products for food use, including crops exported for stock-feeding overseas.

**FARM PRODUCTS FOR FOOD USE: INDEXES OF QUANTUM<sup>(a)</sup> OF  
PRODUCTION, EXPORTS AND CONSUMPTION**

*(Base: Average 1936-37 to 1938-39 = 100)*

Year	Production		Exports		Consumption in Australia	
	Total	Per head of total population	Total	Per head of total population	Total	Per head of total population
1948-49..	110	97	112	99	111	98
1949-50..	116	99	116	99	114	98
1950-51..	109	90	104	86	120	99
1951-52..	100	81	70	57	119	96
1952-53..	118	93	113	89	119	94
1953-54..	122	94	102	79	124	96
1954-55..	121	91	117	89	127	96
1955-56..	129	95	131	97	131	97
1956-57..	123	88	118	85	136	98
1957-58..	115	81	90	64	139	98
1958-59..	146	101	137	94	142	98
1959-60..	138	93	132	89	145	98
1960-61..	148	98	170	112	143	95
1961-62..	154	99	161	104	150	97
1962-63p	168	107	187	119	155	99

*(a)* Indexes of value at constant prices, i.e., quantities revalued at average unit values for the base years (see text preceding table).

### § 3. Consumption of Foodstuffs and Beverages

1. **Quantities Consumed.**—The estimates of total consumption and consumption per head of population in Australia in the two tables which follow have been compiled by deducting net exports from the sum of production and imports and allowing for recorded movements in stocks of the respective commodities. While the estimates may be generally accepted as being reasonably accurate, there are some deficiencies to which attention should be directed. These relate chiefly to the quantities of poultry, game and fish (fresh and shell) and the quantities of certain oils and fats entering consumption. In addition, little information is available on the quantities of vegetables, fruit, eggs, etc., which householders produce for their own requirements and the extent of wastage occurring in the marketing of foodstuffs. In all these cases, careful estimates have been compiled from the best available data, and the quantities shown as entering consumption in Australia have been adjusted to allow for these circumstances. The absence of particulars for stocks of certain commodities has resulted in some inaccuracies in the estimates of annual consumption. Consumption of foodstuffs is measured in general at "producer" level. As a result, no allowance is made for wastage before the foodstuffs are consumed. In recent years, wastage of foodstuffs has possibly been less than previously because of more efficient distribution and storage methods. Furthermore, it is likely that the quantities of foodstuffs shown in the following pages as available for consumption have been supplemented by production by householders for their own requirements. In most cases, broad estimates of non-commercial (householders') production have been made. Except in a few special cases, no adjustment has been made for changes in stocks held by wholesalers and retailers. Where no allowance is made, it is considered unlikely that these stocks would make any appreciable difference to consumption estimates. Allowance has not been made for the purchase of foodstuffs for dispatch overseas as gifts in bulk and by parcel post. These deficiencies, however, do not seriously impair the accuracy of the estimates compiled.

The estimates of consumption per head of population shown in the second of the following tables have been derived by dividing the total apparent consumption of each commodity or commodity group in a given year by the mean population of Australia in the same period.

More detailed information on the consumption of foodstuffs and beverages is contained in the statistical bulletin: *Report on Food Production and the Apparent Consumption of Foodstuffs and Nutrients in Australia*, issued by this Bureau.

The following tables show the average annual consumption during the three-year periods ended 1938-39, 1948-49, and 1958-59, together with the data for each of the years 1960-61, 1961-62 and 1962-63.

**ESTIMATED QUANTITY OF FOODSTUFFS AND BEVERAGES AVAILABLE FOR CONSUMPTION ANNUALLY: AUSTRALIA**

Commodity	Average three years ended—			1960-61	1961-62	1962-63 (a)
	1938-39	1948-49	1958-59			
Milk and milk products—						
Fluid whole milk .. .. mill. gals.	161	233	276	298	303	300
Fresh cream .. .. '000 tons	19.7	5.1	8.7	9.3	9.5	9.7
Full cream milk products—						
Condensed, concentrated and evaporated full cream milk—						
Sweetened .. .. "	13.2	11.9	11.3	11.3	11.9	10.8
Unsweetened .. .. "		13.6	27.6	29.7	32.5	31.6
Powdered full cream milk .. .. "	8.1	11.0	11.0	11.7	12.7	12.1
Infants' and invalids' foods .. .. "	3.0	4.3	9.4	11.8	11.5	13.7
Milk by-products—						
Condensed, concentrated and evaporated skim milk .. .. "	n.a.	n.a.	5.6	4.7	5.4	8.6
Powdered skim milk .. .. "		1.9	10.7	20.5	20.5	18.0
Cheese .. .. "	13.4	18.8	25.0	29.8	30.7	32.0
<i>Total (in terms of milk solids)</i> .. .. "	120.5	167.4	212.4	239.0	244.5	241.7
Meat—						
Beef and veal(b) .. .. "	430.3	372.7	538.4	396.1	441.0	485.2
Mutton(b) .. .. "	184.1	154.0	221.6	293.0	261.9	248.4
Lamb(b) .. .. "	46.0	86.1	127.7	177.2	203.4	203.0
Pigmeat(b) .. .. "	26.2	24.3	43.6	53.0	64.3	57.0
Offal .. .. "	25.7	30.3	49.7	50.6	53.2	60.2
Canned meat (canned weight) .. .. "	6.5	9.0	17.9	19.3	18.0	19.0
Bacon and ham (cured carcass weight) .. .. "	31.5	39.9	30.5	31.7	32.9	35.2
<i>Total (in terms of carcass equivalent weight)</i> .. .. "	769.9	736.9	1,054.1	1,040.2	1,096.1	1,131.4
Poultry, game and fish—						
Poultry and rabbits (dressed weight) .. .. "	29.8	54.0	50.9	54.5	55.6	56.7
Fish(c)—						
Fresh—						
Australian origin .. .. "	19.7	19.4	13.8	14.3	14.7	15.8
Imported .. .. "			9.0	14.0	12.6	13.2
Cured (including smoked and salted) .. .. "	(d)	(d)	3.8	5.1	4.4	4.8
Crustaceans and molluscs .. .. "	2.1	2.1	3.8	5.3	4.7	6.1
Canned—Australian origin .. .. "	12.4	10.5	3.3	3.4	3.8	4.5
Imported .. .. "			7.4	12.0	9.6	9.3
<i>Total (edible weight)</i> .. .. "	51.5	63.2	76.2	85.5	81.9	86.4
Eggs and egg products—						
Shell eggs .. .. "	78.7	86.5	92.1	(e)113.3	(e)116.2	(e)119.4
Liquid whole egg(f) .. .. "	2.9	8.6	5.7	(e) 8.3	(e) 7.7	(e) 6.5
Egg powder(f) .. .. "			0.2	(e) 0.3	(e) 0.3	(e) 0.5
<i>Total (shell egg equivalent)</i> .. .. mill. doz.	81.6 139.3	95.1 162.3	98.0 167.3	(e)121.9 182.1	(e)124.2 185.5	(e)126.4 188.7
Fats and oils—						
Butter .. .. '000 tons	100.8	84.7	118.4	116.3	113.8	115.6
Margarine—						
Table .. .. "	2.8	3.0	15.5	16.2	15.3	16.0
Other .. .. "	12.2	18.7	21.2	27.0	28.6	30.0
Vegetable oils and other fats .. .. "	14.4	13.8	19.6	20.9	21.3	21.7
<i>Total (fat content)</i> .. .. "	115.5	105.5	148.3	135.9	152.8	156.6

For footnotes see next page.

ESTIMATED QUANTITY OF FOODSTUFFS AND BEVERAGES AVAILABLE FOR CONSUMPTION ANNUALLY: AUSTRALIA—*continued*

Commodity	Average three years ended—			1960-61	1961-62	1962-63 (a)
	1938-39	1948-49	1958-59			
<b>Sugar and syrups—</b>						
Refined sugar—						
As sugar .. .. . '000 tons	216.5	234.6	259.0	249.2	253.0	253.9
In manufactured products .. .. . "	110.1	174.2	226.1	249.3	273.1	273.7
Honey, glucose and syrups (sugar content) .. .. . "	17.3	19.1	22.8	26.1	24.5	23.9
<i>Total (sugar content) .. .. . "</i>	<i>343.9</i>	<i>427.9</i>	<i>507.9</i>	<i>524.6</i>	<i>550.6</i>	<i>551.5</i>
<b>Pulse and nuts—</b>						
Dried pulse .. .. . "	4.5	7.2	10.7	10.3	13.1	13.2
Peanuts (weight without shell) .. .. . "	2.8	8.7	7.2	9.7	13.5	11.1
Edible tree nuts (weight without shell) .. .. . "	2.6	4.4	6.7	8.2	9.1	8.7
Cocoa (raw beans) .. .. . "	6.3	11.6	12.1	14.8	15.1	16.9
<i>Total .. .. . "</i>	<i>16.2</i>	<i>31.9</i>	<i>36.7</i>	<i>43.0</i>	<i>50.8</i>	<i>49.9</i>
<b>Fruit—</b>						
Citrus fruit(g) .. .. . "	97.8	127.2	153.8	164.8	203.0	229.9
Other fresh fruit .. .. . "	288.2	297.5	341.4	399.6	412.1	405.5
Jams .. .. . "	35.1	42.5	37.5	39.0	38.4	38.7
Dried fruit .. .. . "	24.8	30.4	26.4	29.9	29.1	35.8
Canned fruit .. .. . "	31.9	37.3	59.4	81.3	77.4	98.3
<i>Total (fresh fruit equivalent) .. .. . "</i>	<i>532.3</i>	<i>607.9</i>	<i>691.4</i>	<i>804.1</i>	<i>840.9</i>	<i>915.6</i>
<b>Vegetables—</b>						
Leafy and green vegetables .. .. . "	n.a.	154.0	172.1	182.3	202.8	206.6
Tomatoes(g) .. .. . "	(h) 48.0	86.3	124.4	141.5	139.4	137.6
Root and bulb vegetables .. .. . "	n.a.	143.7	152.8	141.2	155.8	160.6
Potatoes—						
White .. .. . "	318.5	424.3	495.4	400.7	459.6	590.5
Sweet .. .. . "	7.4	5.3	6.1	6.5	6.6	6.8
Other vegetables .. .. . "	n.a.	162.8	178.4	172.1	170.7	176.5
<i>Total .. .. . "</i>	<i>n.a.</i>	<i>976.4</i>	<i>1,129.2</i>	<i>1,044.3</i>	<i>1,134.9</i>	<i>1,278.6</i>
<b>Grain products—</b>						
Flour (including wheatmeal for baking and sharps) .. .. . "	574.0	689.7	789.1	781.9	803.1	808.1
Breakfast foods .. .. . "	32.5	45.8	58.8	65.5	67.4	66.8
Rice (milled) .. .. . "	12.2	3.0	16.1	17.2	17.5	17.9
Tapioca, sago, etc. .. .. . "	3.7	2.3	1.4	1.1	0.8	1.1
Pearl barley .. .. . "	3.0	1.7	2.0	1.8	1.4	1.8
Edible starch (cornflour) .. .. . "	4.3	4.9	2.7	3.0	n.a.	n.a.
<i>Total .. .. . "</i>	<i>629.7</i>	<i>747.4</i>	<i>870.1</i>	<i>870.5</i>	<i>890.2</i>	<i>895.7</i>
<b>Beverages—</b>						
Tea .. .. . "	21.1	22.1	26.1	27.3	27.3	27.9
Coffee .. .. . "	2.0	3.4	5.9	8.0	9.5	9.6
Beer .. .. . " mill. gals.	80.1	129.5	221.0	234.6	238.4	245.9
Wine .. .. . "	4.2	9.8	11.1	11.7	12.0	12.6
Spirits .. .. . " mill. pf. gals.	1.5	2.4	2.8	3.3	3.4	3.5

(a) Subject to revision. (b) Carcass weight. (c) Edible weight. (d) Included with fresh. (e) Not comparable with data prior to 1960-61, in which year the average weight of an egg was altered in calculations from 1.75 oz. to 2 oz. (f) In terms of weight of shell eggs. (g) Includes fresh equivalent of manufactured products. (h) Probably understated owing to lack of complete data.

ESTIMATED QUANTITY OF FOODSTUFFS AND BEVERAGES AVAILABLE FOR CONSUMPTION ANNUALLY PER HEAD OF POPULATION: AUSTRALIA

Commodity	Average three years ended—			1960-61	1961-62	1962-63 (a)	
	1938-39	1948-49	1958-59				
Milk and milk products—							
Fluid whole milk .. .. .	gallons	23.4	30.5	28.3	28.7	28.5	27.8
Fresh cream .. .. .	..	6.1	1.5	2.0	2.0	2.0	2.0
Full cream milk products—	..						
Condensed, concentrated and evaporated full cream milk	..						
Sweetened .. .. .	..	4.2	3.5	2.6	2.4	2.5	2.2
Unsweetened .. .. .	..		4.0	6.4	6.4	6.9	6.6
Powdered full cream milk .. .. .	..	2.6	3.2	2.5	2.5	2.7	2.5
Infants' and invalids' foods .. .. .	..	1.0	1.3	2.2	2.5	2.4	2.8
Milk by-products—							
Condensed, concentrated and evaporated skim milk .. .. .	..	n.a.	n.a.	1.3	1.0	1.1	1.8
Powdered skim milk .. .. .	..	..	0.6	2.5	4.4	4.3	3.7
Cheese .. .. .	..	4.4	5.5	5.7	6.4	6.5	6.6
<i>Total (in terms of milk solids)</i> .. .. .	..	39.3	49.1	48.7	51.4	51.6	50.1
Meat—							
Beef and veal(b) .. .. .	..	140.3	109.1	123.8	85.4	93.1	100.5
Mutton(b) .. .. .	..	60.0	45.1	51.0	63.2	55.3	51.5
Lamb(b) .. .. .	..	15.0	25.2	29.3	38.2	43.0	42.1
Pigmeat(b) .. .. .	..	8.5	7.1	10.1	11.4	13.6	11.8
Offal .. .. .	..	8.4	8.9	11.4	10.9	11.2	12.0
Canned meat (canned weight) .. .. .	..	2.1	2.6	4.1	4.2	3.8	3.9
Bacon and ham (cured carcass weight) .. .. .	..	10.2	11.7	7.1	6.8	6.9	7.3
<i>Total (in terms of carcass equivalent weight)</i> .. .. .	..	250.9	215.7	242.4	224.2	231.5	234.0
Poultry, game and fish—							
Poultry and rabbits (dressed weight) .. .. .	..	9.7	15.8	11.7	11.7	11.7	11.7
Fish(c)—							
Fresh—							
Australian origin .. .. .	..	6.4	5.7	3.2	3.1	3.1	3.3
Imported .. .. .	..			2.1	3.0	2.7	2.7
Cured (including smoked and salted) .. .. .	..	(d)	(d)	0.9	1.1	0.9	1.0
Crustaceans and molluscs .. .. .	..	0.7	0.6	0.9	1.2	1.0	1.3
Canned—							
Australian origin .. .. .	..	4.1	3.0	0.8	0.7	0.8	0.9
Imported .. .. .	..			1.7	2.6	2.0	1.9
<i>Total (edible weight)</i> .. .. .	..	16.8	18.5	17.7	18.5	17.3	17.9
Eggs and egg products—							
Shell eggs .. .. .	..	25.7	25.4	21.2	(e) 24.4	(e) 24.6	(e) 24.7
Liquid whole egg(f) .. .. .	..	0.9	2.5	1.3	(e) 1.8	(e) 1.6	(e) 1.3
Egg powder(f) .. .. .	..	..	..	..	(e) 0.1	(e) 0.1	(e) 0.1
<i>Total (shell egg equivalent)</i> .. .. .	no.	26.6	27.9	22.5	(e) 26.3	(e) 26.3	(e) 26.3
		243	255	206	210	210	210
Fats and oils—							
Butter .. .. .	lb.	32.9	24.8	27.2	25.1	24.0	24.0
Margarine—							
Table .. .. .	..	0.9	0.9	3.6	3.5	3.2	3.3
Other .. .. .	..	4.0	5.2	4.9	5.8	6.0	6.2
Vegetable oils and other fats .. .. .	..	6.4	5.3	4.5	4.5	4.5	4.5
<i>Total (fat content)</i> .. .. .	..	37.6	30.9	34.1	33.1	32.2	32.5
Sugar and syrups—							
Refined sugar—							
As sugar .. .. .	..	70.6	68.7	59.5	53.7	53.4	52.6
In manufactured products .. .. .	..	35.9	51.0	52.0	53.7	57.7	56.7
Honey, glucose and syrups (sugar content) .. .. .	..	5.5	5.6	5.2	5.6	5.2	4.8
<i>Total (sugar content)</i> .. .. .	..	112.0	125.3	116.7	113.0	116.3	114.1

For footnotes see next page.

ESTIMATED QUANTITY OF FOODSTUFFS AND BEVERAGES AVAILABLE  
FOR CONSUMPTION ANNUALLY PER HEAD OF POPULATION:  
AUSTRALIA—continued

Commodity	Average three years ended—			1960-61	1961-62	1962-63 (a)
	1938-39	1948-49	1958-59			
<b>Pulse and nuts—</b>						
Dried pulse .. .. lb.	1.5	2.0	2.5	2.3	2.7	2.7
Peanuts (weight without shell) .. .. "	0.9	2.5	1.7	2.1	2.9	2.3
Edible tree nuts (weight without shell) .. .. "	0.8	1.3	1.5	1.8	1.9	1.8
Cocoa (raw beans) .. .. "	2.1	3.4	2.7	3.2	3.2	3.5
<i>Total .. .. .</i>	<i>5.3</i>	<i>9.2</i>	<i>8.4</i>	<i>9.4</i>	<i>10.7</i>	<i>10.3</i>
<b>Fruit—</b>						
Citrus fruit(g) .. .. "	31.9	37.2	35.4	35.5	42.9	47.6
Other fresh fruit .. .. "	94.0	87.1	78.4	86.1	87.0	84.0
Jams .. .. .	11.4	12.4	8.6	8.4	8.1	8.0
Dried fruit .. .. .	8.1	8.7	6.0	6.4	6.2	7.4
Canned fruit .. .. .	10.4	11.0	13.6	17.5	16.4	20.4
<i>Total (fresh fruit equivalent) .. .. .</i>	<i>173.6</i>	<i>178.0</i>	<i>157.6</i>	<i>173.3</i>	<i>177.6</i>	<i>189.7</i>
<b>Vegetables—</b>						
Leafy and green vegetables .. .. "	n.a.	45.1	39.5	39.3	42.8	42.8
Tomatoes(g) .. .. "	(h) 15.7	25.3	28.6	30.5	29.4	28.5
Root and bulb vegetables .. .. "	n.a.	42.1	35.1	30.4	32.9	33.3
<b>Potatoes—</b>						
White .. .. .	103.8	124.2	113.8	86.4	97.1	122.4
Sweet .. .. .	2.4	1.5	1.4	1.4	1.4	1.4
Other vegetables .. .. .	n.a.	47.7	41.0	37.1	36.0	36.5
<i>Total .. .. .</i>	<i>n.a.</i>	<i>285.9</i>	<i>259.4</i>	<i>225.1</i>	<i>239.6</i>	<i>264.9</i>
<b>Grain products—</b>						
Flour (including wheatmeal for baking and sharps) .. .. "	187.1	201.9	181.4	168.6	169.6	167.4
Breakfast foods .. .. .	10.6	13.4	13.5	14.2	14.3	13.7
Rice (milled) .. .. .	4.0	0.9	3.7	3.7	3.7	3.7
Tapioca, sago, etc. .. .. .	1.2	0.7	0.3	0.2	0.2	0.2
Pearl barley .. .. .	1.0	0.5	0.4	0.4	0.3	0.4
Edible starch (cornflour) .. .. .	1.4	1.4	0.6	0.7	n.a.	n.a.
<i>Total .. .. .</i>	<i>205.3</i>	<i>218.8</i>	<i>199.9</i>	<i>187.8</i>	<i>188.1</i>	<i>185.4</i>
<b>Beverages—</b>						
Tea .. .. .	6.9	6.5	6.0	5.9	5.8	5.8
Coffee .. .. .	0.6	1.0	1.3	1.7	2.0	2.0
Beer .. .. . gallons	11.7	16.9	22.7	22.6	22.5	22.7
Wine .. .. .	0.6	1.3	1.1	1.1	1.1	1.2
Spirits .. .. . pf. gals.	0.2	0.3	0.3	0.3	0.3	0.3

(a) Subject to revision. (b) Carcass weight. (c) Edible weight. (d) Included with fresh. (e) Not comparable with data prior to 1960-61, in which year the average weight of an egg was altered in calculations from 1.75 oz. to 2 oz. (f) In terms of weight of shell eggs. (g) Includes fresh equivalent of manufactured products. (h) Probably understated owing to lack of complete data.

2. **Level of Nutrient Intake.**—The table below shows details of the estimated supplies of nutrients available for consumption in Australia during annual periods since 1960-61 in comparison with the annual averages for the three-year periods ended 1938-39, 1948-49 and 1958-59. The table has been compiled by the Nutrition Section of the Commonwealth Department of Health and is based on the estimates of the quantity of foodstuffs available for consumption per head of population shown in the preceding table.

ESTIMATED SUPPLIES OF NUTRIENTS AVAILABLE FOR CONSUMPTION:  
AUSTRALIA

(Per Head per Day)

Nutrient	Average three years ended—			1960-61	1961-62	1962-63 (a)
	1938-39	1948-49	1958-59			
Calories .. .. no.	3,117	3,245	3,297	3,226	3,287	3,258
Protein—						
Animal .. .. gm.	58.7	57.4	59.6	58.8	59.8	57.3
Vegetable .. .. "	30.9	35.3	32.3	31.4	31.6	31.8
Total .. .. "	89.6	92.7	91.9	90.2	91.4	89.1
Fat .. .. "	133.5	121.7	131.7	132.0	133.2	131.6
Carbohydrate .. .. "	377.4	424.8	416.7	398.0	409.9	408.6
Calcium .. .. mgm.	642	785	817	900	898	861
Iron .. .. "	15.4	15.1	14.0	13.5	13.9	14.1
Vitamin A(b) .. .. I.U.	4,905	4,630	4,568	4,165	4,166	4,173
Ascorbic acid .. .. mgm.	86	96	89	85	93	96
Thiamine .. .. "	1.4	1.5	1.3	1.3	1.3	1.3
Riboflavin .. .. "	1.7	1.9	1.8	1.9	1.9	1.9
Niacin .. .. "	18.7	17.6	18.6	18.0	18.3	18.8

(a) Subject to revision. (b) The Vitamin A figures for all periods prior to 1960-61 have been revised on the new basis introduced in 1960-61 of estimating total Vitamin A activity, by summing the Vitamin A content and one-third of the carotene value.

## § 4. Retail Trade

1. General.—The statistics in this section relate to the number of retail establishments throughout Australia and the value of retail sales of goods by these establishments.

Information of this nature was first collected in respect of the year ended 30th June, 1948, by a full census of all retail establishments. As this was the first census of its type in Australia, its scope and the data sought were the minima consistent with the objective of securing a record of the number of such establishments, their type, their geographical distribution, their aggregate sales of goods, and a simple commodity dissection, together with a record of the value of certain services provided. This census was followed by a second census of all retail establishments trading during the year ended 30th June, 1949.

Further censuses were taken in respect of the years ended 30th June, 1953 and 1957. In these censuses, retailers were asked to furnish more detailed information concerning the dissection of their turnover into commodity groups, and questions were asked about stocks of goods on hand, the number of persons engaged in retail activities, and credit sales. In addition, the 1956-57 census included questions relating to purchases, customers' indebtedness, and type of organization.

The most recent census was taken in respect of the year ended 30th June, 1962, and results have been published for all States and Australia. With the exception of some modifications to the scope of the collection (see p. 1238), the 1961-62 census followed the same general principles adopted for the previous census.

In general terms, the census covered the retail trading activities of establishments which normally sell goods by retail to the general public from fixed premises (i.e., shops, rooms, kiosks and yards). Retail activities of wholesalers and manufacturers were included if they sold regularly by retail to the general public. Sales by itinerant vendors (e.g., hawkers, street sellers, etc.) and sales from casual stalls or booths were excluded. Organizations such as clubs and societies making sales to their own members were excluded from the main census collection, but a supplementary collection was made, covering sales by licensed clubs, and separate details are included in this section.



In general, establishments with retail sales of goods amounting to less than £500 in the census year are not included in the census tabulations. However, some "service" establishments with retail sales of less than £500, but with takings of £500 or more from repairs, meals, or hairdressing, are included in tables relating to these items. The types of establishments in this category are boot repairers, repair-only garages, cafés and restaurants, and hairdressers.

The design of the census is such that particulars of retail sales relate principally to sales to the final consumer of new and second hand goods generally used for household and personal purposes. For this reason, sales of building materials, farm and industrial machinery and equipment, earth-moving equipment, etc., have been excluded from the censuses. For the same reason, and also because of difficulties in obtaining reliable and complete reporting, sales of builders' hardware and supplies, business machines and equipment, grain feed, fertilizer and agricultural supplies, and tractors were excluded from the 1961-62 census. Retail sales of motor vehicles, parts, etc., have been included, whether for industrial, commercial, farm or private use.

During the period between censuses, variations in the value of retail sales have been measured by means of quarterly sample surveys. Annual totals derived from these surveys, adjusted to a basis comparable in scope with the 1961-62 census, and some of the results of the 1961-62 census, are included in this section.

2. Value of Retail Sales in Each Commodity Group, Australia.—The following table shows the value of retail sales of goods in each of the commodity groups specified in the years 1958-59 to 1963-64 on a comparable basis throughout. The figures for the year 1961-62 were obtained from the census, whereas figures for the other years shown are estimates based on sample surveys.

#### VALUE OF RETAIL SALES: COMMODITY GROUPS, AUSTRALIA(a)

(£ million)

Commodity group	1958-59	1959-60	1960-61	1961-62	1962-63	1963-64
Groceries .. .. .	368.8	391.1	416.4	429.2	442.8	465.6
Butchers' meat .. .. .	178.2	193.3	210.7	211.1	219.7	229.1
Other food (b) .. .. .	308.3	335.0	352.7	365.1	376.0	388.8
<i>Total, Food and Groceries</i> ..	<i>855.3</i>	<i>919.4</i>	<i>979.8</i>	<i>1,005.4</i>	<i>1,038.5</i>	<i>1,083.5</i>
Beer, wine and spirits (c) .. .. .	247.5	262.8	269.3	272.9	285.9	294.9
Clothing and drapery .. .. .	397.4	434.1	450.4	450.0	459.3	497.9
Footwear .. .. .	64.6	71.9	76.7	77.2	80.9	84.1
Hardware, china and glassware (d) ..	65.6	70.6	72.6	73.1	76.8	76.5
Electrical goods (e) .. .. .	154.9	187.0	177.3	174.0	179.9	190.1
Furniture and floor coverings .. .. .	97.7	114.6	117.0	115.0	118.0	129.4
Chemists' goods .. .. .	96.9	107.9	121.5	132.9	140.4	150.4
Newspapers, books and stationery ..	72.4	77.6	80.1	83.2	84.7	94.7
Other goods(f) .. .. .	205.0	226.6	241.8	244.9	253.3	267.9
<i>Total (excluding Motor Vehicles)</i>	<i>2,257.3</i>	<i>2,472.5</i>	<i>2,586.5</i>	<i>2,628.6</i>	<i>2,717.7</i>	<i>2,869.4</i>
Motor vehicles, parts, petrol, etc. (g) ..	691.1	827.3	824.8	801.5	966.8	1,045.0

(a) Excludes Northern Territory and Australian Capital Territory. (b) Includes fresh fruit and vegetables, confectionery, soft drinks, ice cream, cakes, pastry, cooked provisions, fish, etc., but excludes some delivered milk and bread. (c) Excludes sales made by licensed clubs. (d) Excludes basic building materials, builders' hardware, and supplies such as tools of trade, paint, etc. (e) Includes radios, television and accessories, musical instruments, domestic refrigerators, etc. (f) Includes tobacco, cigarettes, etc., jewellery, sporting goods, etc., but excludes grain and produce, and business machines. (g) Includes new and used motor vehicles, parts, petrol, etc., but excludes tractors, farm machinery and implements, earth-moving equipment, etc.

3. Number of Retail Establishments which Sold Goods in each Commodity Group and Value of Retail Sales in each Commodity Group, 1961-62, States, etc.—The following tables show the number of establishments which sold goods in each of the commodity groups specified and the value of retail sales during the year ended 30th June, 1962, for each State and Territory.

NUMBER OF ESTABLISHMENTS WHICH SOLD GOODS IN EACH COMMODITY GROUP SPECIFIED(a), 1961-62

Commodity group	N.S.W.	Vic.	Q'land	S.A.	W.A.	Tas.	N.T.	A.C.T.	Aust.
<b>Foodstuffs—</b>									
Groceries (incl. bacon, butter, etc.) ..	12,533	8,819	4,699	3,480	2,343	1,347	82	78	33,381
Butchers' meat (incl. frozen packaged meat) ..	5,111	3,674	1,890	1,439	1,272	599	48	41	14,074
Fresh fruit and vegetables ..	8,302	4,429	3,989	2,050	1,684	1,095	56	50	21,655
Bread, cakes and pastry ..	10,621	7,725	4,224	2,696	1,875	948	60	65	28,214
Confectionery, ice cream, soft drinks (incl. milk drinks) ..	16,431	10,434	6,537	4,172	3,223	1,773	102	100	42,772
Other types of food (fish, poultry, smallgoods, wrapped lunches, etc.) ..	9,247	5,606	3,734	2,491	1,714	658	54	49	23,553
<b>Beer, tobacco, etc.—</b>									
Beer, wine and spirits ..	2,678	2,106	1,241	740	757	314	62	46	7,944
Tobacco, cigars and cigarettes	23,081	16,003	8,715	6,046	4,499	2,247	147	171	60,909
<b>Clothing, drapery, etc.—</b>									
Clothing—men's and boys' wear (incl. mercery) ..	3,156	2,376	1,458	1,125	947	394	55	37	9,548
Clothing—women's, girls' and infants' wear (incl. hand bags) ..	4,443	3,502	1,540	1,206	871	459	54	53	12,128
Drapery, piece goods, manchester, blankets, soft furnishings, haberdashery, etc.	3,066	2,327	1,423	1,048	902	355	43	30	9,194
Footwear—men's and boys' ..	2,302	1,724	1,237	831	644	352	40	32	7,162
Footwear—women's, girls' and infants' ..	2,019	1,453	962	783	551	318	32	26	6,144
<b>Hardware(b), electrical goods, etc.—</b>									
Domestic hardware, kitchenware, china and glassware (incl. gardening equipment)	3,883	3,247	1,877	1,587	1,086	494	47	49	12,270
Radios, radiograms and record players ..	1,521	1,244	723	487	510	182	20	24	4,711
Television and accessories (incl. antennas and installation) ..	1,257	1,226	400	400	259	194	..	23	3,759
Musical instruments, records, sheet music, etc. ..	741	503	355	236	170	55	11	7	2,078
Domestic refrigerators (incl. non-electrical) ..	1,445	1,175	646	428	330	162	16	17	4,219
Other electrical goods and accessories ..	2,835	2,303	1,193	945	769	335	29	37	8,446
<b>Furniture and floor coverings—</b>									
Furniture (incl. mattresses) ..	1,263	1,076	577	407	413	152	12	22	3,922
Floor coverings ..	1,011	827	366	360	257	145	9	18	2,993
<b>Other goods—</b>									
Chemists' goods (incl. toiletries, cosmetics and dispensing) ..	5,774	3,990	2,720	1,832	1,490	622	58	48	16,534
Newspapers, periodicals, books and stationery ..	3,988	3,524	2,560	1,805	1,131	560	47	41	13,656
Sporting requisites and travel goods ..	1,861	1,275	803	656	551	204	22	20	5,392
Jewellery, watches and clocks, silverware, etc. ..	1,940	1,396	830	668	580	217	30	32	5,693
Other goods (not specified above) ..	3,779	3,500	1,381	1,064	796	375	44	57	10,996
<i>Total (excl. Motor Vehicles, etc.) ..</i>	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>
<b>Motor vehicles, etc.(c)—</b>									
New motor vehicles (incl. motor cycles, etc.) ..	1,311	852	616	470	342	104	22	19	3,736
Used motor vehicles (incl. motor cycles, etc.) ..	1,713	1,130	721	611	424	125	23	19	4,766
Motor parts, accessories, tyres, tubes, etc. ..	5,050	3,795	2,166	1,531	1,337	503	54	44	14,480
Petrol, oils, motor lubricants, etc. ..	5,769	4,262	2,518	1,715	1,455	619	61	35	16,434
<i>Total Motor Vehicles, etc.</i>	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>
<b>Grand Total(d)</b> ..	<b>46,209</b>	<b>37,268</b>	<b>17,065</b>	<b>11,812</b>	<b>8,559</b>	<b>4,270</b>	<b>309</b>	<b>432</b>	<b>125,924</b>

(a) Figures refer to establishments with total retail sales of £500 or more. (b) Excludes basic building materials, builders' hardware and supplies such as tools of trade, paint, etc. (c) Excludes tractors, farm machinery and implements, earth-moving equipment, etc. (d) Total number of individual establishments. Many establishments showed sales in more than one commodity group. Thus the number of establishments selling goods in each commodity group does not add down to the total number of individual establishments.

VALUE OF RETAIL SALES OF GOODS: COMMODITY GROUPS(a), 1961-62  
(£'000)

Commodity group	N.S.W.	Vic.	Q'land	S.A.	W.A.	Tas.	N.T.	A.C.T.	Aust.
<b>Foodstuffs—</b>									
Groceries (incl. bacon, butter, etc.)	167,974	116,304	62,401	35,506	32,712	14,277	1,519	2,703	433,396
Butchers' meat (incl. frozen packaged meat)	82,494	61,927	28,714	17,599	13,493	6,928	586	1,149	212,890
Fresh fruit and vegetables	38,088	28,374	13,050	7,434	7,077	2,213	420	569	97,225
Bread, cakes and pastry	32,536	27,449	11,045	8,154	5,519	2,853	283	343	88,182
Confectionery, ice cream, soft drinks (incl. milk drinks)	37,709	37,742	12,922	10,488	6,750	3,568	314	469	109,962
Other types of food (fish, poultry, smallgoods, wrapped lunches, etc.)	29,497	19,209	11,159	6,405	4,328	1,393	204	450	72,645
Beer, wine and spirits	106,927	75,851	37,314	23,640	20,712	8,489	1,538	1,315	275,786
Tobacco, cigars and cigarettes	48,353	36,585	16,508	10,779	8,443	4,095	490	797	126,050
<b>Clothing, drapery, etc.—</b>									
Clothing—men's and boys' wear	55,366	39,041	17,285	12,091	9,219	4,643	346	944	138,935
Clothing—women's, girls' and infants' wear (incl. hand bags)	84,807	63,149	24,394	19,837	12,786	7,590	362	1,213	214,138
Drapery, piece goods, Manchester, blankets, soft furnishings, haberdashery, etc.	39,809	27,155	14,940	8,396	6,681	2,825	152	649	100,607
Footwear—men's and boys'	10,299	7,887	3,072	2,524	1,738	928	82	151	26,681
Footwear—women's, girls' and infants'	19,648	15,664	6,072	4,470	3,337	1,696	63	269	51,219
<b>Hardware(b), electrical goods, etc.—</b>									
Domestic hardware, kitchenware, china and glassware (incl. gardening equipment)	29,070	19,952	10,885	6,149	4,926	2,039	247	502	73,770
Radios, radiograms and record players	7,492	4,280	2,665	1,676	1,207	497	60	212	18,089
Television and accessories (incl. antennas and installation)	19,122	13,792	5,272	3,829	3,690	1,720	..	496	47,921
Musical instruments, records, sheet music, etc.	4,739	2,730	1,659	1,016	717	291	27	92	11,271
Domestic refrigerators (incl. non-electrical)	13,445	9,414	5,588	3,180	3,432	1,011	87	202	36,359
Other electrical goods and accessories	23,336	17,029	8,912	5,508	4,931	1,808	154	485	62,163
<b>Furniture and floor coverings—</b>									
Furniture (incl. mattresses)	30,936	22,350	9,779	6,950	5,494	2,222	90	660	78,481
Floor coverings	16,007	10,726	3,347	3,362	2,482	1,388	14	555	37,881
<b>Other goods—</b>									
Chemists' goods (incl. toiletries, cosmetics and dispensing)	54,712	36,844	18,511	11,307	7,796	3,741	302	808	134,021
Newspapers, periodicals, books and stationery	33,518	25,854	10,762	5,321	4,994	2,746	231	742	84,168
Sporting requisites and travel goods	7,651	5,570	2,165	1,573	1,316	633	115	118	19,141
Jewellery, watches and clocks, silverware, etc.	12,697	8,788	3,846	2,452	2,054	843	81	217	30,978
Other goods (not specified above)	23,974	24,914	8,554	6,136	4,318	2,593	207	584	71,280
<b>Total (excl. Motor Vehicles, etc.)</b>	<b>1,030,206</b>	<b>758,580</b>	<b>350,821</b>	<b>225,782</b>	<b>180,152</b>	<b>83,030</b>	<b>7,974</b>	<b>16,694</b>	<b>2,653,239</b>
<b>Motor vehicles, etc.(c)—</b>									
New motor vehicles (incl. motor cycles, etc.)	117,590	85,750	39,429	26,769	27,631	10,114	1,136	2,814	311,233
Used motor vehicles (incl. motor cycles, etc.)	83,882	57,495	29,447	20,718	19,828	8,501	670	1,680	222,221
Motor parts, accessories, tyres, tubes, etc.	42,613	25,348	17,637	8,866	7,796	2,936	598	540	106,334
Petrol, oils, motor lubricants, etc.	67,456	47,023	22,492	15,219	11,672	5,385	511	1,452	171,210
<b>Total Motor Vehicles, etc.</b>	<b>311,541</b>	<b>215,616</b>	<b>109,005</b>	<b>71,572</b>	<b>66,927</b>	<b>26,936</b>	<b>2,915</b>	<b>6,486</b>	<b>810,998</b>
<b>Grand Total</b>	<b>1,341,747</b>	<b>974,196</b>	<b>459,826</b>	<b>297,354</b>	<b>247,079</b>	<b>109,966</b>	<b>10,889</b>	<b>23,180</b>	<b>3,464,237</b>

For footnotes see previous table.

4. Number of Retail Establishments, Value of Retail Sales and Value of Retail Stocks, by Type of Business, 1961-62, States, etc.—The following tables show the number of establishments and the value of retail sales during the year ended 30th June, 1962 and the value of retail stocks at 30th June, 1962, in each State and Territory, by type of business. In general, the classification of establishments according to type of business was based on the predominant type of goods sold or service rendered, although in some cases the description given by the proprietor was also taken into account.

NUMBER OF RETAIL ESTABLISHMENTS: TYPES OF BUSINESS(a), 1961-62

Type of business	N.S.W.	Vic.	Q'land	S.A.	W.A.	Tas.	N.T.	A.C.T.	Aust.
<b>Food stores—</b>									
Grocers .. .. .	9,590	4,381	3,632	2,011	1,454	1,046	60	51	22,225
Butchers .. .. .	3,272	2,628	1,363	1,034	733	357	13	28	9,428
Fruiters .. .. .	2,341	2,135	604	613	357	93			6,166
Bakers .. .. .	1,576	1,350	668	392	317	158	13	31	4,482
Confectioners and milk bars ..	2,329	4,007	844	1,059	574	307			9,153
Cafés .. .. .	1,148	675	332	117	182	59			2,540
Fishmongers and poulterers ..	819	730	253	177	128	44	33	45	2,160
Other food stores .. .. .	941	811	307	252	127	53			2,500
<b>Hotels, tobacconists, etc.—</b>									
Hotels, wine saloons, etc. ..	2,157	1,798	1,175	650	545	311	31	11	6,678
Tobacconists .. .. .	558	414	164	70	98	21	(b)	(b)	1,336
Tobacconist and hairdressers ..	897	1,125	162	319	186	51	(b)	(b)	2,747
<b>Department stores, clothiers, drapers, etc.—</b>									
Department stores .. .. .	89	47	27	12	14	6	..	3	198
Clothiers and drapers .. .. .	4,902	4,123	1,486	988	700	336	41	57	12,633
Footwear stores .. .. .	741	818	219	209	103	78	(b)	(b)	2,185
<b>Hardware, electrical goods, furniture stores, etc.—</b>									
Domestic hardware stores ..	933	1,078	301	274	162	43	(b)	(b)	2,804
Electrical goods, radios and musical instruments stores ..	1,449	1,108	688	402	309	157	14	16	4,143
Furniture and floor coverings stores .. .. .	799	739	341	184	158	80	(b)	(b)	2,328
<b>Other goods stores—</b>									
Chemists .. .. .	1,874	1,390	675	466	303	124	7	20	4,859
Newsagents and booksellers ..	1,123	922	487	237	298	121	10	19	3,217
Sports goods stores .. .. .	332	234	120	64	44	23			825
Watchmakers and jewellers ..	695	528	235	138	97	54			1,761
Cycle stores .. .. .	103	156	68	51	30	8	20	42	417
Florists and nurserymen .. ..	386	437	83	85	63	44			1,106
Other types of business .. .. .	1,157	1,259	387	290	207	120			3,451
<b>Total (excl. Motor Vehicle Dealers, Garages and Service Stations, etc.) ..</b>	<b>40,211</b>	<b>32,893</b>	<b>14,621</b>	<b>10,094</b>	<b>7,189</b>	<b>3,694</b>	<b>257</b>	<b>383</b>	<b>109,342</b>
<b>Motor vehicle dealers, garages and service stations, etc.—</b>									
New motor vehicle dealers, garages and service stations	5,008	3,717	2,010	1,405	1,061	476	41	36	13,754
Used motor vehicle dealers ..	435	308	162	154	140	48		13	1,255
Motor parts and tyre dealers ..	555	350	272	159	169	52	11		1,573
<b>Total Motor Vehicle Dealers, Garages and Service Stations, etc. ..</b>	<b>5,998</b>	<b>4,375</b>	<b>2,444</b>	<b>1,718</b>	<b>1,370</b>	<b>576</b>	<b>52</b>	<b>49</b>	<b>16,582</b>
<b>Grand Total .. .. .</b>	<b>46,209</b>	<b>37,268</b>	<b>17,065</b>	<b>11,812</b>	<b>8,559</b>	<b>4,270</b>	<b>309</b>	<b>432</b>	<b>125,924</b>

(a) Figures refer to establishments with total retail sales of £500 or more.

(b) Not available for publication.

## VALUE OF RETAIL SALES OF GOODS: TYPES OF BUSINESS(a), 1961-62

(£'000)

Type of business	N.S.W.	Vic.	Q'land	S.A.	W.A.	Tas.	N.T.	A.C.T.	Aust.
<b>Food stores—</b>									
Grocers .. .. .	232,363	136,333	93,085	48,832	46,420	21,095	3,078	2,967	584,173
Butchers .. .. .	79,866	61,105	27,443	16,811	12,442	6,871	506	1,094	206,138
Fruiters .. .. .	35,940	27,636	9,042	7,171	5,920	1,483	390	798	87,947
Bakers .. .. .	23,546	20,452	7,850	6,339	4,305	2,182			265
Confectioners and milk bars ..	24,706	52,676	7,765	12,661	5,312	2,936	282	282	
Cafés .. .. .	5,780	2,758	1,601	492	623	282			440
Fishmongers and poultryers ..	7,656	5,693	2,236	1,370	1,146	440	1,220	702	
Other food stores .. .. .	17,874	13,212	6,284	3,147	1,220	702			
<b>Hotels, Tobacconists, etc.—</b>									
Hotels, wine saloons, etc. ..	111,569	77,377	39,748	24,799	21,543	9,191	1,550	1,271	287,048
Tobacconists .. .. .	6,373	3,537	1,647	811	718	228	(d)	(d)	13,457
Tobacconist and hairdressers ..	2,133	3,357	289	809	377	164	(d)	(d)	7,141
<b>Department stores, clothiers, drapers, etc.—</b>									
Department stores .. .. .	122,962	82,398	36,629	34,524	21,246	5,982	793	2,349	306,090
Clothiers and drapers .. .. .	129,095	98,343	42,938	22,742	20,619	12,384			(d)
Footwear stores .. .. .	16,436	15,819	5,157	3,839	3,376	1,856			
<b>Hardware, electrical goods, furniture stores, etc.—</b>									
Domestic hardware stores ..	11,732	11,423	4,409	2,638	1,513	1,164	(d)	(d)	33,227
Electrical goods, radios and musical instruments stores ..	56,002	36,494	21,538	12,209	14,114	4,488	356	1,071	146,272
Furniture and floor coverings stores .. .. .	35,375	27,419	8,801	7,473	4,235	3,297	(d)	(d)	87,745
<b>Other goods stores—</b>									
Chemists .. .. .	46,804	31,168	15,052	9,163	5,969	2,947	261	714	112,078
Newsagents and booksellers ..	30,910	22,646	9,188	3,513	4,526	2,509	183	803	74,278
Sports goods stores .. .. .	5,223	3,843	1,424	807	547	492	284	670	12,501
Watchmakers and jewellers ..	9,667	6,498	2,799	1,477	1,471	626			50
Cycle stores .. .. .	504	978	362	426	248	50	1,385	702	
Florists and nurserymen .. .. .	2,491	2,985	539	518	396	205			
Other types of business .. .. .	13,645	13,743	4,813	2,566	2,274	1,385			38,906
<b>Total (excl. Motor Vehicle Dealers, Garages and Service Stations, etc.)(b) ..</b>	<b>1,028,652</b>	<b>757,893</b>	<b>350,639</b>	<b>225,137</b>	<b>180,560</b>	<b>82,959</b>	<b>8,029</b>	<b>16,641</b>	<b>2,650,510</b>
<b>Motor vehicle dealers, garages and service stations, etc.—</b>									
New motor vehicle dealers, garages and service stations	252,025	177,883	86,527	55,423	51,265	20,048	2,659	5,708	651,538
Used motor vehicle dealers ..	44,525	29,348	15,714	12,913	11,536	5,956	201	831	120,724
Motor parts and tyre dealers	16,545	9,072	6,946	3,881	3,718	1,003			
<b>Total Motor Vehicle Dealers, Garages and Service Stations, etc.(c) .. .. .</b>	<b>313,095</b>	<b>216,303</b>	<b>109,187</b>	<b>72,217</b>	<b>66,519</b>	<b>27,007</b>	<b>2,860</b>	<b>6,539</b>	<b>813,727</b>
<b>Grand Total .. .. .</b>	<b>1,341,747</b>	<b>974,196</b>	<b>459,826</b>	<b>297,354</b>	<b>247,079</b>	<b>109,966</b>	<b>10,889</b>	<b>23,180</b>	<b>3,464,237</b>

(a) Figures refer to establishments with total retail sales of £500 or more. They relate to the *total* value of all commodities sold by retail by establishments classified to the types of business shown. (b) These figures differ from their counterparts in the table on p. 1240 because they include retail sales of motor vehicles, etc., made by establishments other than motor dealers, garages and service stations, etc., and exclude retail sales of goods other than of motor vehicles, etc., made by motor vehicle dealers, etc. (c) See footnote (b). (d) Not available for publication.

VALUE OF RETAIL STOCKS: TYPES OF BUSINESS(a), 30th JUNE, 1962

(£'000)

Type of Business	N.S.W.	Vic.	Q'land	S.A.	W.A.	Tas.	N.T.	A.C.T.	Aust.
<b>Food Stores—</b>									
Grocers .. .. .	23,395	13,526	8,430	5,991	4,978	2,684	343	244	59,591
Butchers .. .. .	721	493	322	185	127	71	19	7	1,945
Fruiters .. .. .	784	480	300	167	184	63	10	20	1,993
Bakers .. .. .	498	522	159	194	94	57			1,539
Confectioners and milk bars ..	1,272	2,742	369	624	282	178	25	37	5,497
Cafés .. .. .	493	222	129	37	51	20			968
Fishmongers and poulterers ..	84	88	45	27	21	13			282
Other food stores .. .. .	1,630	519	701	130	36	29			3,057
<b>Hotels, tobacconists, etc.—</b>									
Hotels, wine saloons, etc. ..	3,862	2,531	1,291	1,097	846	388	101	64	10,180
Tobacconists .. .. .	493	317	130	92	84	23	(b)	(b)	1,154
Tobacconist and hairdressers ..	273	395	23	88	40	23	(b)	(b)	843
<b>Department stores, clothiers, drapers, etc.—</b>									
Department stores .. .. .	27,514	12,803	7,444	5,245	4,300	1,487		420	59,213
Clothiers and drapers .. .. .	28,967	25,688	11,058	5,491	4,775	2,983	281	539	79,782
Footwear stores .. .. .	5,011	4,937	1,717	1,294	1,109	608	(b)	(b)	14,782
<b>Hardware, electrical goods, furnitures stores, etc.—</b>									
Domestic hardware stores ..	2,922	3,236	1,025	655	408	299	(b)	(b)	8,617
Electrical goods, radios and musical instruments stores ..	9,871	7,095	3,933	2,424	2,431	931	70	143	26,898
Furniture and floor coverings stores .. .. .	7,548	6,687	1,570	1,825	777	728	(b)	(b)	19,347
<b>Other goods stores—</b>									
Chemists .. .. .	7,647	5,242	2,717	1,528	959	421	47	123	18,684
Newsagents and booksellers ..	3,830	2,881	1,336	651	717	413	43	124	9,995
Sports goods stores .. .. .	1,214	985	345	227	149	144			3,100
Watchmakers and jewellers ..	4,242	3,078	1,204	721	720	339			10,392
Cycle stores .. .. .	119	217	78	170	56	17	66	160	659
Florists and nurserymen .. ..	248	267	38	25	65	22			671
Other types of business .. .. .	3,595	2,763	1,468	740	612	390			9,662
<i>Total (excl. Motor Vehicle Dealers, Garages and Service Stations, etc.) ..</i>	<i>136,233</i>	<i>97,714</i>	<i>45,832</i>	<i>29,628</i>	<i>23,821</i>	<i>12,331</i>	<i>1,093</i>	<i>2,199</i>	<i>348,851</i>
<b>Motor vehicle dealers, garages and service stations, etc.—</b>									
New motor vehicle dealers, garages and service stations ..	21,525	17,026	8,462	5,711	4,952	2,066	361	340	60,443
Used motor vehicle dealers ..	3,646	3,234	1,551	1,630	1,210	526	30	92	11,859
Motor parts and tyre dealers ..	2,660	1,459	1,297	734	609	142			6,961
<i>Total Motor Vehicle Dealers, Garages and Service Stations, etc. ..</i>	<i>27,831</i>	<i>21,719</i>	<i>11,310</i>	<i>8,075</i>	<i>6,771</i>	<i>2,734</i>	<i>391</i>	<i>432</i>	<i>79,263</i>
<b>Grand Total .. .. .</b>	<b>164,064</b>	<b>119,433</b>	<b>57,142</b>	<b>37,703</b>	<b>30,592</b>	<b>15,065</b>	<b>1,484</b>	<b>2,631</b>	<b>428,114</b>

(a) Figures refer to establishments with total retail sales of £500 or more. They relate to the total value of all goods held for retail sale (including stocks of materials for use in repairs to customers' goods, and foodstuffs for the provision of meals and refreshments) at 30th June, 1962. (b) Not available for publication.

5. Number of Establishments Which Recorded Takings for Hairdressing, Repair Work, and Meals and Accommodation, and Value of These Takings, 1961-62, States, etc.—The following tables show the number of establishments which recorded takings for hairdressing, repair work, and meals and accommodation, and the value of these takings during the year ended 30th June, 1962, in each State and Territory.

**NUMBER OF ESTABLISHMENTS WHICH RECORDED TAKINGS FOR HAIRDRESSING, REPAIR WORK, AND MEALS AND ACCOMMODATION(a), 1961-62**

Nature of takings	N.S.W.	Vic.	Q'land	S.A.	W.A.	Tas.	N.T.	A.C.T.	Aust.
Hairdressing .. ..	3,159	2,754	1,150	888	536	232	19	36	8,774
Boot repairs .. ..	1,098	950	315	259	165	88	2	9	2,886
Motor repairs .. ..	5,197	3,821	2,317	1,567	1,181	552	38	43	14,716
Other repairs .. ..	1,791	1,502	934	501	370	174	11	23	5,306
<i>Total Repairs</i> .. ..	<i>8,086</i>	<i>6,273</i>	<i>3,566</i>	<i>2,327</i>	<i>1,716</i>	<i>814</i>	<i>51</i>	<i>75</i>	<i>22,908</i>
Meals in cafés, restaurants and other eating houses(b)	2,850	1,876	984	572	597	198	42	33	7,152
Meals and accommodation in hotels .. ..	1,803	1,509	1,030	555	436	269	28	10	5,640

(a) Figures refer to establishments with total retail sales or "other takings" of £500 or more.  
 (b) Includes 1,067 cafés which served meals only.

**VALUE OF TAKINGS FOR HAIRDRESSING, REPAIR WORK, AND MEALS AND ACCOMMODATION(a), 1961-62**

(£'000)

Nature of takings	N.S.W.	Vic.	Q'land	S.A.	W.A.	Tas.	N.T.	A.C.T.	Aust.
Hairdressing .. ..	9,200	7,298	2,464	2,249	1,576	679	40	160	23,666
Boot repairs(b) .. ..	2,955	2,157	690	547	398	232	4	53	7,036
Motor repairs(b) .. ..	44,967	31,993	18,181	11,050	8,733	3,501	349	718	119,492
Other repairs(b) .. ..	6,196	4,344	3,246	1,636	1,195	494	42	76	17,229
<i>Total Repairs(b)</i> .. ..	<i>54,118</i>	<i>38,494</i>	<i>22,117</i>	<i>13,233</i>	<i>10,326</i>	<i>4,227</i>	<i>395</i>	<i>847</i>	<i>143,757</i>
Meals in cafés, restaurants and other eating houses	25,695	14,418	6,634	3,366	3,435	1,320	271	363	55,502
Meals and accommodation in hotels .. ..	13,742	10,674	6,121	3,493	2,882	1,631	440	920	39,903

(a) Figures refer to establishments with total retail sales or "other takings" of £500 or more.  
 (b) Includes value of materials used and labour.

6. Retail Sales of Groceries—Self-service and Other: States, Metropolitan Areas, etc., 1961-62.—The following tables show the number of self-service stores and other retail establishments which sold groceries and the value of the retail sales of groceries during the year ended 30th June, 1962, in each State and in the metropolitan areas of each State.

**NUMBER OF SELF-SERVICE STORES AND OTHER RETAIL ESTABLISHMENTS WHICH SOLD GROCERIES AND VALUE OF THEIR RETAIL SALES OF GROCERIES, 1961-62.**

State	Self-service stores which sold groceries		Other retail establishments which sold groceries		All retail establishments which sold groceries	
	Number of establishments	Value of retail sales of groceries	Number of establishments	Value of retail sales of groceries	Number of establishments	Value of retail sales of groceries
		£'000		£'000		£'000
New South Wales .. ..	1,668	78,277	10,865	89,697	12,533	167,974
Victoria .. ..	1,385	76,374	7,434	39,930	8,819	116,304
Queensland .. ..	751	31,932	3,948	30,469	4,699	62,401
South Australia .. ..	431	15,885	3,049	19,621	3,480	35,506
Western Australia .. ..	429	20,403	1,913	12,309	2,342	32,712
Tasmania .. ..	161	5,981	1,186	8,296	1,347	14,277
<i>Australia(a)</i> .. ..	<i>4,867</i>	<i>231,385</i>	<i>28,514</i>	<i>202,011</i>	<i>33,381</i>	<i>433,396</i>

(a) Includes Northern Territory and Australian Capital Territory.

**NUMBER OF SELF-SERVICE STORES AND OTHER RETAIL ESTABLISHMENTS WHICH SOLD GROCERIES AND VALUE OF THEIR RETAIL SALES OF GROCERIES IN THE METROPOLITAN AREA OF EACH STATE, 1961-62**

Capital city	Self-service stores which sold groceries		Other retail establishments which sold groceries		All retail establishments which sold groceries	
	Number of establishments	Value of retail sales of groceries	Number of establishments	Value of retail sales of groceries	Number of establishments	Value of retail sales of groceries
		£'000		£'000		£'000
Sydney .. .. .	910	48,846	5,549	41,094	6,459	89,940
Melbourne .. .. .	892	53,019	4,662	21,908	5,554	74,927
Brisbane .. .. .	294	13,448	1,491	8,835	1,785	22,283
Adelaide .. .. .	293	11,085	1,763	9,372	2,056	20,457
Perth .. .. .	272	14,768	928	4,484	1,200	19,252
Hobart .. .. .	54	2,384	321	2,153	375	4,537

7. *Licensed Clubs, States, 1961-62.*—The following table shows details of the number of *licensed* clubs, the value of their retail sales of goods and the value of their takings from meals and accommodation in the year ended 30th June, 1962. Details for licensed clubs are compiled from a supplementary collection and are not included in the other tables in this section.

**NUMBER OF LICENSED CLUBS AND VALUE OF TAKINGS, 1961-62**

State	Number of establishments	Retail sales of goods <sup>(a)</sup>	Takings from meals and accommodation
		£'000	£'000
New South Wales .. .. .	1,265	24,566	2,497
Victoria .. .. .	243	5,051	1,255
Queensland .. .. .	454	3,417	230
South Australia .. .. .	33	557	138
Western Australia .. .. .	199	2,968	96
Tasmania .. .. .	117	1,134	40
Northern Territory .. .. .	10	423	} 18
Australian Capital Territory .. .. .	21	651	
<b>Australia .. .. .</b>	<b>2,342</b>	<b>38,767</b>	<b>4,274</b>

<sup>(a)</sup> Includes sales of beer, wine and spirits, tobacco, cigars and cigarettes, confectionery and other goods.

### § 5. Interstate Trade

Prior to the federation of the Australian Colonies (now States), each Colony published statistics of its trade with the other Colonies. A similar record was continued by the Commonwealth Government under the provisions of the Constitution (section 93). On the expiry of the "book-keeping" period, these records were discontinued as from 13th September, 1910, and the last published statements were for the year 1909. Later, the Governments of Western Australia and Tasmania revived the records, and relevant statistics are available again for those States. A detailed collection for Queensland was re-introduced from July, 1953.



At the Conference of Statisticians held in January, 1928, it was resolved that efforts should be made in other States to record the interstate movement of certain principal commodities.

Complete interstate trade statistics are now published in detail for Queensland, Western Australia and Tasmania by the Deputy Commonwealth Statisticians in those States, and incomplete statistics, relating mainly to trade with Western Australia and Tasmania, by the Deputy Commonwealth Statisticians in the remaining States.

## § 6. Statistical Organization in Australia.

1. **Early Development of Australian Statistics.**—(i) *Crown Colony "Blue Books"*. Statistical organization in Australia was founded in the "Blue Books" which, in the Crown Colony days, were prepared annually for the information of the Colonial Office. Although intended primarily for administrative purposes, these documents have been important sources of statistical data, even though some important matters are not covered, and others only partially so. These "Blue Books" formed the basis from which later statistical publications were developed. This led to an element of uniformity in statistical compilation within the British Empire.

(ii) *Statistical Registers*. Following the advent of responsible government, which was granted during the period 1851–1860 to all Australian States except Western Australia—and to that State in 1890—the "Blue Book" was succeeded in all States by "Statistical Registers". These were in many respects the old "Blue Books" in a new form, and were largely confined to summaries of the "by-product" statistics of government administrative departments.

The first example of extensive government organization for purely statistical purposes was the taking of periodic population censuses, which were initiated in all States under the Crown Colony regime. The growing need for quantitative data concerning the progress of the several young communities of Australia led eventually to the appointment of official Statisticians commissioned to prepare and publish such data.

(iii) *Statistical Conferences*. To provide for the interchange of ideas between States and to obtain uniform State statistics which could be aggregated to Australian totals, conferences were held in the several States from as early as 1861. Altogether, six conferences were held prior to the formation of the Commonwealth Bureau of Census and Statistics in 1906. These were held in 1861, 1875, 1890, 1900, 1902 and 1903. The holding of these conferences has been continued since the formation of the Commonwealth Bureau, and a representative from New Zealand attended up to 1928.

2. **Creation of the Commonwealth Bureau of Census and Statistics.**—Under the provisions of section 51 of the Commonwealth Constitution, power is conferred on the Commonwealth Parliament "to make laws for the peace, order and good government of the Commonwealth with respect to—" (*inter alia*) "(XI.) Census and statistics". In compliance with this provision, the *Census and Statistics Act* 1905 was passed, and in 1906 the Commonwealth Bureau of Census and Statistics was created. A conference of Statisticians in 1906 defined the relations between the Commonwealth and State Bureaux, and in each case the State Statistician became the representative in his own State of the Commonwealth Statistician for the purpose of administering the Commonwealth Act. In addition, each State has its own "Statistics Act", and although these are not identical in all States, they embody common principles. The Commonwealth Bureau did not attempt to duplicate the existing statistical organization, but endeavoured to use the services of the State statistical offices whenever possible, and to undertake the initial collection of statistics only in fields not already occupied by the States, or in which efficiency demanded complete centralization.

3. **Integration of Statistical Services.**—The creation and development of the Commonwealth Bureau of Census and Statistics, the frequent conferences of Commonwealth and State Statisticians, and the close and increasing liaison between officers dealing with the same subjects in the State and Commonwealth fields did much to promote uniformity in the official statistical collections and methods employed throughout Australia. The complete realization of this aim could not, however, be achieved, even with the utmost co-operation of those concerned, while seven distinct statistical systems operated.

This became apparent after the 1914–18 War, when the economic problems that then arose drew attention to deficiencies in Australian statistical data. With a view to overcoming these weaknesses, the Prime Minister of the day proposed to the Premiers' Conference that State statistical offices be transferred to the Commonwealth. Tasmania alone agreed to this, and the transfer was effected in 1924. Since then, an amalgamated office has functioned satisfactorily in that State as a Commonwealth office which also serves State statistical needs.

The boom of the 1920's, the depression of the 1930's, the 1939–45 War, and the post-war boom, each with its special economic problems, imposed a severe strain on the Commonwealth and State statistical systems. Moreover, the development during and since the 1939–45 War of a very considerable volume of new statistics added greatly to the complexities of the several administrations in their efforts to secure, and maintain, uniformity in statistical collections. The establishment of Commonwealth statistical offices in some State capitals eased the situation to some extent—indeed, without their establishment, the new and expanded statistical collections could not have been carried out at all. However, this did not solve the problem and constituted only one of a number of improvisations devised to obtain uniform data essential for national purposes, and to satisfy urgent demands for new series of statistics. Furthermore, the excessive amount of time and effort entailed in such improvisations made it impossible to devote the necessary time to the major question of meeting growing statistical needs promptly.

The emergence of the problem of providing uniform statistical services throughout Australia, adequate to meet present-day demands, was foreseen during the 1939–45 War, and in 1949 discussions with the Premiers were initiated by the Prime Minister, with the object of integrating the statistical services of the Commonwealth and the States by agreement. These negotiations were continued by correspondence, and subsequently all State Governments accepted the terms of draft agreements to integrate their respective statistical offices with that of the Commonwealth.

The *Statistics (Arrangements with States) Act 1956* provided for parliamentary approval of the making of arrangements with individual States for, and the setting up of, integrated statistical services. After passing through all stages of Parliament, it became law on 12th May, 1956. This legislation, permissive in nature, was designed to enable the Commonwealth to enter into an agreement with any State to effect an amalgamation of Commonwealth and State statistical offices and services. The object of such an agreement was that, in each State accepting it, there would be an integrated statistical service operated by Commonwealth statistical officers under the immediate direction of a statistician in the State who would hold office under both the Commonwealth and State Governments. Both Commonwealth and State were to be adequately served with statistics, and no State would be required to surrender its existing powers in the field of statistics. The rights of officers transferred under any agreement entered into were provided for.

Integration of the Commonwealth and State statistical services was finally accomplished when the integration arrangement with Victoria came into effect on 15th September, 1958.

**4. Scope of the Commonwealth Bureau of Census and Statistics.**—The scope of the Commonwealth Bureau of Census and Statistics has constantly been widened, more particularly during the 1939–45 War, when the Bureau responded to the urgent demands of administration for immediate and accurate statistical information in various fields. Since the War, requirements in the administrative, industrial, financial and scientific spheres have led to the development of many new statistical collections. All the activities of the Bureau are covered by the Census and Statistics Act, which confers authority to collect information and contains stringent provisions to ensure that the information obtained is treated in strictest secrecy.

For administrative purposes, the Commonwealth Bureau, Canberra, is divided into a number of Divisions and Branches dealing with specific fields of statistics or providing services for the Bureau as a whole. The organizational patterns of the State Offices are broadly similar, although local requirements have naturally given rise to differences in detail.

**5. Relation of the Bureau to other Commonwealth Departments.**—In October, 1950, the Commonwealth Public Service Board issued a circular relative to the compilation of statistics in other Commonwealth Departments, in which it stated that the Commonwealth Statistician should be the co-ordinating authority on all statistics in Commonwealth Departments, and that, as a general principle, where any new statistical field is to be established involving the regular collection of statistics, the Commonwealth Statistician should be consulted to ensure that they are necessary and that they are based on sound

statistical methods; furthermore, that the Commonwealth Statistician should make a regular inspection, at least once every twelve months, of all statistical work done by Departments to ensure that their needs are met by the most economical means and without duplication of effort.

This project of co-ordination is being implemented as statistical developments require and as time and circumstances permit.

### § 7. Statistical Publications of Australia

1. **General.**—The official statistical publications of Australia may be divided bibliographically into two main divisions, namely:—(i) Commonwealth publications dealing both individually and collectively with the several States of Australia; and (ii) State publications dealing with individual States only.

Commonwealth publications containing statistics may be grouped under two heads, namely:—(i) publications issued by the Commonwealth Statistician; and (ii) Parliamentary and Departmental Reports and Papers.

2. **Publications issued by the Commonwealth Statistician.**—The following is a list of the principal statistical publications issued from the Commonwealth Bureau of Census and Statistics since its inauguration.

*Australian Capital Territory Statistical Summary.*—Annually; 1963 and 1964.

*Balance of Payments, Australian.*—Statements Nos. 1 to 3, 1928–29 to 1951–52.

\**Banking and Currency.*—Annually; first issue, 1961–62 and 1962–63.

*Census (1911) Results.*—Bulletins. Vols. I. (Statistician's Report), II., and III., with Appendix *Mathematical Theory of Population*.

*Census (1921) Results.*—Bulletins, Nos. 1 to 26. Parts I. to XVI., forming Vol. I., and Parts XVII. to XXIX., forming, with the Statistician's Report, Vol. II. NOTE.—Part XXVII., Life Tables.

*Census (1933) Results.*—Bulletins, Nos. 1 to 25. Parts I. to XIV., forming Vol. I., Parts XV. to XXVIII., forming Vol. II., and Parts XXIX. to XXXVII., forming, with the Statistician's Report and Australian Life Tables, 1932–1934, Vol. III.

*Census (1947) Results.*—Bulletins, Nos. 1 to 25. Parts I. to XVI., forming Vol. I., Parts XVII. to XIX., forming Vol. II., and Parts XX. to XXVIII., forming with the Statistician's Report and Australian Life Tables, 1946–1948, Vol. III.

*Census (1954) Results.*—Bulletins, Nos. 1 to 3. Vols. I. to VI., comprising respectively Parts I. to V. for each State; Vol. VII., comprising Parts I. to V. for the Australian Territories; Vol. VIII., comprising Parts I. to III. for Australia, Australian Life Tables, 1953–1955, and the Statistician's Report.

*Census (1961) Results.*—Bulletins Nos. 1 to 36 (mimeographed, see p. 1251)†; Vols. I. to VI., comprising respectively Parts I. to V. for each State; Vol. VII., comprising Parts I. to V. for the Australian Territories; and Vol. VIII., comprising Parts I. to III. for Australia, Australian Life Tables, 1960–1962, and the Statistician's Report (printed). The complete series of printed publications has not yet been issued; for publications already issued see back pages of this volume.

†*Conference of British Commonwealth Statisticians, 1951, Report of Proceedings.*

†*Dairying Industry* (formerly *Summary of Dairying Industry*).—Statistical Bulletin, monthly; first issue, September, 1937.

*Demography.*—Bulletin, annually, 1911 to 1962.

†*Digest of Current Economic Statistics.*—August, 1959 onward.

*Exports, Australian.*—Annually, 1958–59 to 1963–64.

†*Factories, Principal Statistics, Summary.*—Annually, 1948–49 to 1962–63.

*Finance.*—Bulletin, 1907 to 1916–17 annually; 1917–18 and 1918–19 (one vol.); 1919–20 and 1920–21 (one vol.); 1922–23 to 1960–61 annually. From 1955–56 issued in two parts: Part I., Public and Private Finance; Part II., Commonwealth Taxation. From 1960–61, issued as five separate bulletins, see Banking, Finance, Insurance, and Taxation.

\**Finance, Commonwealth.*—Annually; first issue, 1961–62 and 1962–63.

\**Finance and Government Securities, State, Territories, and Local Government Authorities.*—Annually; first issue, 1961–62 and 1962–63.

\* Previously included in Finance, Part I.

† Distributed by Commonwealth Statistician—for methods of obtaining other publications still in print see back pages of this volume.

- \**Food Production and the Apparent Consumption of Foodstuffs and Nutrients in Australia, Report on.*—Statistical Bulletin, half-yearly, 1946–47 to 1947–48; annually, 1948–49 to 1962–63.
- \**Fruit Growing Industry (formerly Summary of Fruit Growing Industry).*—Statistical Bulletin, annually, 1944–45 to 1962–63.
- Imports Cleared for Home Consumption.*—Annually, 1950–51 to 1963–64.
- \*\**Insurance and Other Private Finance (other than Banking and Currency).*—Annually; first issue, 1961 and 1962.
- Labour and Industrial Statistics, Memoranda and Reports, various, to 1922.*
- Labour Report.*—Annually, 1913 to 1962.
- Life Tables, Australian, 1901–1910.* *Australian Joint Life Tables, 1901–1910.*
- Life Tables, Australian, 1920–1922.*
- Life Tables, Australian, 1932–1934.* *Australian Joint Life Tables, 1932–1934.*
- Life Tables, Australian, 1946–1948.*
- Life Tables, Australian, 1953–1955.*
- \**Livestock Numbers (formerly Summary of Livestock Statistics).*—Statistical Bulletin, annually, 1943 to 1964.
- Local Government in Australia.*—July, 1919.
- \**Manufacturing Industries.*—Bulletins on Individual Industries, annually, 1936–37 to 1939–40, 1940–41 (issue incomplete) and 1944–45 to 1962–63.†
- ‡*Mineral Industry, The Australian (formerly Minerals and Metals Bulletin).*—Part 2—*Quarterly Statistics* of a quarterly bulletin issued jointly with the Bureau of Mineral Resources.
- Monthly Review of Business Statistics.*—October, 1937 onward.
- Motor Vehicles, Census of 31st December, 1955.* Bulletins Nos. 1 to 8.
- Motor Vehicles, Census of 31st December, 1962.* Preliminary Statements Nos. 1 to 9 (mimeographed, see p. 1252)\*; Bulletins Nos. 1 to 9 (printed).
- \**Motor Vehicles, Survey of (1947–48) Results.*—Bulletins Nos. 1 to 7.)
- National Accounts, Australian (National Income and Expenditure, 1948–49 to 1961–62 (mimeographed)\*; 1962–63 (printed).*
- Northern Territory Statistical Summary.*—Annually, 1960 to 1964.
- \**Occupation Survey (1945) Results.*—Detailed tables.
- Official Year Book of the Commonwealth of Australia.*—Annually, 1907 to present issue (No. 50). Issues Nos. 40 to 50 also published in parts.
- Pocket Compendium of Australian Statistics (formerly Statistical Digest).*—1913, 1914, 1916, and 1918 to 1964, annually.
- Population and Vital Statistics.*—Bulletins and Reports, various, 1906–1910.
- Primary Industries.*—Bulletins, annually, 1950–51 to 1961–62, in two parts—Part I. Rural Industries; Part II. Non-Rural Industries and Value of Production.
- Primary Industries, Australian.*—Report prepared for the Empire Producers Conference, Sydney, March, 1938.
- Production.*—Bulletin, annually, 1906 to 1949–50. From 1936–37 to 1949–50 issued in two parts—Part I. Secondary Industries; Part II. Primary Industries (including Total Recorded Production); thereafter separate Bulletins (see *Primary Industries and Secondary Industries*).
- Professional Papers.*—Various. A full list appears in Official Year Book No. 13, page 3.
- \**Publications of the Commonwealth Bureau of Census and Statistics.*—Annually (since 1964 in printed form).
- Quarterly Summary of Australian Statistics (replaced Monthly Summary of Australian Statistics).*—December, 1917 onward.
- \**Retail Establishments, Census of (1947–48) Results.*—Bulletins, Nos. 1 to 7.
- \**Retail Establishments, Census of (1948–49) Results.*—Bulletins, Nos. 1 to 7.
- \**Retail Establishments, Census of (1952–53) Results.*—Bulletins, Nos. 1 to 14.
- Retail Establishments, Census of (1956–57) Results.*—Bulletins, Nos. 1 to 8 (mimeographed)\* and 9 to 15 (printed).
- Retail Establishments, Census of (1961–62) Results.*—Bulletins Nos. 8 and 9; Preliminary Statements, Nos. 1 to 14; Supplementary Collections, Nos. 1 to 3; (all mimeographed, see pp. 1251–2)\*; Bulletins Nos. 1 to 7 (printed).
- Rural Holdings, Classification by Size and Type of Activity, 1959–60.*—Bulletins, Nos. 1 to 7.
- \**Rural Holdings, Size Classification of, 1955–56.*—Bulletins Nos. 1 to 7.

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NOTE.—For footnotes see next page.

- \* *Rural Land Use and Crop Production* (formerly *Summary of Crop Statistics*).—Statistical Bulletin, annually, 1943–44 to 1962–63.
- Secondary Industries*.—Bulletin, annually, 1950–51 to 1961–62 (since 1960–61 in two parts—Part I. Factory and Building Operations; Part II. Materials Used and Articles Produced in Factories).
- Social Insurance*.—Report to the Hon. the Minister for Trade and Customs, 1910.
- Social Statistics*.—Bulletin, 1907 to 1915 annually, and 1918.
- Superannuation for the Commonwealth Public Service*.—Report to the Hon. the Minister for Home Affairs, 1910.
- § *Taxation, Commonwealth*.—Annually; first issue, 1961–62.
- Trade, Oversea*.—Bulletin, annually, 1906 to 1963–64.
- \* *Trade Oversea*.—Preliminary Bulletin. Annually, 1952–53 to 1963–64.  
(See also *Australian Exports and Imports Cleared for Home Consumption*.)
- Transport and Communication*.—Bulletin, 1906, 1908 to 1916 annually, 1919 to 1930 annually, and 1932 to 1962–63 annually.
- Wealth*.—The Private Wealth of Australia and its Growth as ascertained by various methods, together with a Report on the War Census in 1915.
- \* *Wheat Industry* (formerly *Summary of the Wheat Situation*).—Statistical Bulletin, periodically; first issue, July, 1936.
- \* *Wool Production and Utilization*.—Bulletin, annually, 1952–53 to 1962–63.

The foregoing list includes all the printed publications issued from the Bureau, and certain more important mimeographed publications issued for the most part annually. Minor changes in the titles of several publications have not been referred to above. Copies of a number of these publications, particularly earlier issues, are not available.

Other mimeographed statements are distributed by the Commonwealth Statistician and deal with a wide variety of subjects, as follows.

*Triennially*.—Tractors on Rural Holdings.

*Annually*.—Agricultural Statistics (Preliminary); Bee Farming; Consumption of Tea and Coffee; Factory Products (Principal); Factory Statistics (Preliminary); Farm Machinery on Rural Holdings; Fire, Marine and General Insurance; Fishing and Whaling; Fruit Statistics (Preliminary); Livestock Statistics (Preliminary); Milking Machines on Rural Holdings; Mining and Quarrying; Oversea Investment; Registrations of New Motor Vehicles; Rural Statistics of the Australian Capital Territory; Survey of Private Pension and Retiring Allowance Schemes; Survey of Selected Large Private Pension Funds; Taxation Collections; Trade of Australia with Eastern Countries; University Statistics; Value of Primary Production (Preliminary); Value of Production and Indexes of Price and Quantum of Farm Production; Wine and Brandy Statistics; Wool Production.

*Half-yearly*.—Australian Balance of Payments; Labour Turnover; Road Traffic Accidents; Trade of Australia with the United Kingdom.

*Quarterly*.—Aerial Agriculture; Australian Oversea Trade with Major Groups of Countries; Balance of Payments; Building; Building—Australian Capital Territory; Building—Northern Territory; Capital and Maintenance Expenditure; Consumer Price Index; Industrial Disputes; Instalment Credit for Retail Sales; National Income and Expenditure; New Agricultural Machinery; New Capital Raisings; New Tractors; Retail Sales of Goods; Unit Trusts, Land Trusts and Mutual Funds.

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\* Distributed by the Commonwealth Statistician—for methods of obtaining other publications still in print see back pages of this volume. † The series for 1962–63 comprises:—Nos. 1. Cement and Cement Goods, 2. Bricks, Tiles, Pottery and Earthenware, 3. Chemicals, Drugs and Medicines, 4. White Lead, Paints and Varnish, 5. Chemical Fertilizers, 6. Soap and Candles, 7. Basic Metal Industries, 8. Metal Fabricating Industries, 9. Motor Vehicles and Cycles, 10. Cotton Mills, 11. Woollen Mills, 12. Rope and Cordage, 13. Tanneries, 14. Boots and Shoes, 15. Clothing (including Hosiery and Knitted Goods), 16. Flour and Other Grain Mills, 17. Biscuits, 18. Confectionery, 19. Jam, Fruit, Vegetables, Pickles, Sauces, Condiments, etc., 20. Bacon Curing, 21. Butter, Cheese and Condensed, Concentrated, etc., Milk, 22. Aerated Waters and Cordials, 23. Meat and Fish Preserving, 24. Breweries, 25. Wineries and Distilleries, 26. Tobacco, Cigars and Cigarettes, 27. Sawmilling, 28. Pulp and Paper Making, 29. Rubber Works, 30. Brooms and Brushes, 31. Electric Light and Power Works, 32. Gas Works, 33. Plastic Moulding and Products, 34. Leather Goods (including Saddlery and Belting), 35. Printing and Stationery.

‡ Copies available from the Department of National Development in each capital city (6s. each).

§ Previously Finance, Part II.

\*\* Previously included in Finance, Part I.

*Monthly.*—Banking (General); Building Approvals; Employment and Unemployment; Exports of Wool; Export Price Index; Gold Mining Industry; Instalment Credit for Retail Sales; Life Insurance; Meat Industry; Oversea Trade; Production Statistics; Production Summaries\*; Registrations of New Motor Vehicles; Retail Sales of Goods (Total); Savings Banks; Wage and Salary Earners in Civilian Employment; Wage Rates and Earnings; Wholesale Price (Basic Materials and Foodstuffs) Index.

*Periodically.*—Demographic Review (separate issues cover population and vital statistics, births, deaths, marriages, and overseas arrivals and departures); Social Statistics, including Schools, Universities, Hospitals (all annual) and Divorces (quarterly).

Summarized results of the Population Census, 30th June, 1961, the Census of Retail Establishments and Other Services, year ended 30th June, 1962, and the Census of Motor Vehicles, 31st December, 1962, have been published in a series of preliminary mimeographed bulletins. Details are as follows:—

#### Population Census, 30th June, 1961—

##### Census Bulletins—

- Nos. 1, 3–18, 20, 21, 24. Summary of Population and Dwellings, individual States and Territories.
- No. 2. Population and Dwellings in Local Government Areas.
- No. 2. (Revised) Population and Dwellings in Local Government Areas (Final Figures).
- No. 19. Occupied Dwellings According to Class in Local Government Areas, etc.
- No. 22. Summary of Dwellings for Australia.
- No. 23. Summary of Population for Australia.
- No. 25. Ages of the Population (Single Years and Five-Year Groups).
- No. 26. Density of Population and Occupied Dwellings in Local Government Areas, etc.
- No. 27. Nationality (i.e. Allegiance) of the Population of Australia by States and Territories
- No. 28. Birthplaces of the Population of Australia by States and Territories.
- No. 29. Industry of the Population: Australia, States and Territories.
- No. 30. Summary of Population and Dwellings for Tropical Australia.
- No. 31. Conjugal Condition of the Population in conjunction with Age: Australia, States and Territories.
- No. 32. Occupations of the Population: Australia, States and Territories.
- No. 33. Occupational Status of the Population in conjunction with Age and Conjugal Condition: Australia, States and Territories.
- No. 34. Australia: Males and Females in the Work Force classified according to Industry in conjunction with Occupational Status.
- No. 35. Occupied Private Dwellings according to Facilities: Local Government Areas, etc.
- No. 36. Race of the Population: Australia, States and Territories.

#### Census of Retail Establishments and Other Services, year ended 30th June, 1962—

##### Preliminary Statements—

- No. 1. Australia, States and Territories.
- No. 2. Australian Summary.
- No. 3. New South Wales.
- No. 4. Victoria.
- No. 5. Queensland.

\* The current series comprises:—Nos. 2. Chemicals, etc., 3. Plastic and Synthetic Resins and Plasticisers, 4. Paints and Other Surface Coatings, 6. Soap, Detergents and Glycerine, 7. Internal Combustion Engines, 8. Lawn Mowers, 9. Electric Appliances, 10. Motor Bodies and Trailers, 11. Pedal Cycles, 12. Meters, 13. Building Fittings, 14. Cotton Goods, 15. Wool-scouring, Carbonizing and Fellmongering, 16. Woollen and Worsted Carding, Combing and Spinning, 17. Wool Weaving, 18. Hosiery, 19. Men's and Boys' Women's and Maids' Girls', Infants' and Babywear, Shirts, Cardigans, Pyjamas, Underclothing, etc., 20. Rayon and Synthetic Fibre Woven Fabrics and Spun Synthetic Yarns, 21. Paper and Paper Boards, 22. Floor Coverings, 23. Electric Motors, 24. Men's, Youths' and Boys' Outer Clothing, 25. Foundation Garments, 27. Gloves (other than Rubber), 28. Footwear (excluding Sandshoes, Goloshes, and Gum-boots, etc., of Rubber), 29. Biscuits, Ice Cream, Confectionery, 30. Storage Batteries, 31. Assembly of Motor Vehicle Chassis, 32. Perambulators (including Pushers and Strollers), 34. Radios, Television and Cabinets, 35. Mattresses, 36. Preserved Milk Products, 38. Canned Fish, 39. Jams and Preserved Fruit and Vegetables, 40. Cereal Breakfast Foods, Cereal Products and Flour Milling, 41. Margarine and Other Edible Processed Fats, 42. Malt and Beer, 43. Stock and Poultry Meals (Other than Cereal), 45. Gramophone Records, 47. Aerated and Carbonated Waters, Cordials and Syrups and Concentrated Cordial Extract, 48. Sports Goods, 49. Building Materials, 51. Hides and Skins used in Tanneries, 55. Butter and Cheese, 56. Canned Meat, 58. Steel Wire and Wire Products, 59. Non-ferrous Rolled, Extruded and Drawn Products.

- No. 6. South Australia.
- No. 7. Western Australia.
- No. 8. Tasmania.
- No. 9. New South Wales—Local Government Areas, etc.
- No. 10. Victoria—Local Government Areas, etc.
- No. 11. Queensland—Local Government Areas, etc.
- No. 12. Tasmania—Local Government Areas, etc.
- No. 13. South Australia—Local Government Areas, etc.
- No. 14. Western Australia—Local Government Areas, etc.

Census Bulletins—

- No. 8. Australian Capital Territory.
- No. 9. Northern Territory.

Supplementary Collections—

- No. 1. Licensed Clubs.
- No. 2. Laundries and Dry Cleaners.
- No. 3. Motion Picture Theatres.

Census of Motor Vehicles, 31st December, 1962—

Preliminary Statements—

- No. 1. Northern Territory.
- No. 2. Australian Capital Territory.
- No. 3. Tasmania.
- No. 4. South Australia.
- No. 5. Summary for Australia, States and Territories.
- No. 6. Queensland.
- No. 7. Victoria.
- No. 8. New South Wales.
- No. 9. Western Australia.

*Occasional Publications.*—In addition to the publications listed on pages 1248–51, most of which are issued regularly, there have been a number of statements issued by this Bureau which contain the results of special surveys or new statistical series and descriptions thereof. The more recent of these are listed below.

Special Business Survey No. 16. Incidence of Industrial Awards, Determinations and Agreements, May, 1963. Year Book No. 49 included a list of previous Surveys in this series, but they are now for the most part out of print or included in regular publications.

Survey of Retail Establishments, Australian Capital Territory, 1962–63; Canberra and Queanbeyan Population Count, 1st July, 1963; Gross National Product, Estimates at current and average 1959–60 Prices, 1962–63 (Preliminary); Survey of Retail Establishments, Australian Capital Territory, 1963–64; Population Count of Canberra, 30th June, 1964; Population Count of Darwin, Alice Springs, Tennant Creek, Katherine and Batchelor, 30th June, 1964; Minimum Wage Rates, January, 1960, to June, 1963; Wage and Salary Earners in Employment, June, 1954, to June, 1962; Wage and Salary Earners in Employment July, 1962 to June, 1964.

Further information on current publications of the Commonwealth Bureau of Census and Statistics is contained in *Publications of the Commonwealth Bureau of Census and Statistics*, February, 1964, available free, on request, from the Commonwealth Statistician, Canberra. This contains a list of all Bureau publications and also a subject index to show the publications in which information on the various subjects dealt with by the Bureau is to be found. Publications issued by the State Offices of the Commonwealth Bureau of Census and Statistics are also listed therein.

3. Publications issued by the Deputy Commonwealth Statisticians.—A list of the publications issued by the Deputy Commonwealth Statistician of each State appears in Year Book No. 48 (see p. 1163) and in *Publications of the Commonwealth Bureau of Census and Statistics*, February, 1964.

4. Commonwealth and State Parliamentary and Departmental Reports and Papers.—No comprehensive list of current publications of this nature is available, but the Commonwealth National Library issues an annual publication *Australian Government Publications*, a list of official publications of the Commonwealth, States and Territories, compiled from records of material received by the Library during the year.

# NATIONAL ACCOUNTS

## NATIONAL INCOME AND EXPENDITURE

National accounting aims at providing a systematic summary of the transactions taking place in the economy, especially of those that relate to the production and use of goods and services, and to transfers of income or capital between sectors of the economy.

Estimates of national income and expenditure have been compiled by the Bureau since 1944-45, and have been published annually as papers entitled *National Income and Expenditure* accompanying the Commonwealth Budgets. Detailed annual estimates of national income and expenditure on a revised basis are published in *Australian National Accounts, National Income and Expenditure, 1948-49 to 1962-63*. Preliminary estimates for 1963-64 were published in a Budget Paper. Quarterly estimates are published in *Quarterly Estimates of National Income and Expenditure*.

The following article is in three main Parts. Part I describes the conceptual framework and structure of the accounts; the tables are shown in Part II; and Part III contains definitions and explanatory notes on the items in the tables.

### PART I. THE CONCEPTS AND STRUCTURE OF THE AUSTRALIAN NATIONAL ACCOUNTS

#### § 1. The Concepts of National Product, Income and Expenditure

1. **The Concept of Gross National Product.**—The concept of production is fundamental to a system of national accounting. Production in this context is not confined to the production of goods by farms, mines, factories, etc. It includes also the provision of services of all kinds which either add to the value of goods (such as transport and merchandizing services), or are of monetary value in their own right (such as the services of doctors, teachers, entertainers, etc.). Production is the process whereby the labour, the natural resources, the accumulated capital assets and knowledge are applied to the provision of valuable goods and services.

Production is not, however, limited to the provision of goods and services with a monetary value. The existence of a monetary value is obvious in the case of goods and services which become the subject of a market transaction. However, it is not necessary for goods and services to be actually marketed for them to be regarded as possessing a monetary value and coming within the boundary of production. Most of the goods and services provided by public authorities (as distinct from public enterprises such as government railways) are not normally sold but are nevertheless regarded as part of production. Since these goods and services are not sold, the only practicable method of valuing them is at cost, that is, the total of the wages and salaries paid to public authority employees and the cost of purchased goods and services used. (In this valuation it is not usual to impute any income or depreciation to assets owned by public authorities.) The production of financial enterprises, which are described more fully later, is treated in a manner very similar to that of public authorities. These enterprises derive their incomes not from selling their services, but from the excess of their property income receipts over payments. The output of these enterprises is therefore also valued at cost, namely the wages and salaries of their employees



and the cost of goods and services used. Similarly with services provided by non-profit organizations which do not sell the services but are financed by gifts and property income: these services also are regarded as production and are valued at cost. Goods and services produced by persons in the course of their normal occupation and consumed by them are also included (e.g. farm production consumed on the farm). Another important exception is associated with owner-occupied dwellings. Rented dwellings provide a marketed service which is regarded as a part of production, and it is usual to impute a rent also to owner-occupied dwellings so that all dwellings are treated in a similar manner. This prevents any change in the scope of production from occurring as a result of the increasing proportion of owner-occupied houses in recent years. In effect, owner-occupiers (like other owners of dwellings) are regarded as operating businesses; they receive rents (from themselves as consumers), pay expenses, and make a net contribution to the value of production which accrues to them as owners.

In measuring the total value of all production in the community, there are various problems of valuation to be faced. Many goods and services are bought by enterprises for further use in their own productive activities. If the value of all goods and services actually sold (including the imputations mentioned above) were added together, there would be serious duplication, because some goods and services would, in effect, be added in several times at successive stages of production. It is therefore clear that the value of these so-called intermediate goods and services must be deducted and only the value added taken into account, if the resulting total is to be free of such duplication. *Gross National Product at Market Prices*, hereafter referred to simply as *Gross National Product*, is therefore defined as the total market value of goods and services produced in Australia after deducting the cost of goods and services (other than capital equipment) used in the process of production. In concept, it is the sum for all producers of the value of their sales (including any indirect taxes levied thereon), plus increases in their stocks, less their purchases of goods and services from other producers. For those producers, like public authorities and financial enterprises, who do not actually sell their output, it includes their output, instead of their sales, valued at cost. In addition to representing the total value added by production, gross national product is necessarily equal to the incomes (wages, profits, etc.) and other costs (depreciation and indirect taxes) appropriated out of it. In fact, in Australia, gross national product is in the main estimated by adding up estimates of these incomes and costs rather than by making direct estimates of values added, the major exception to this rule being a direct estimate of value added in farm enterprises.

The total market value of goods and services includes a substantial element of indirect taxation, and hence the contribution of an enterprise to gross national product defined as above does not accrue wholly to the factors of production employed in the enterprise. On the other hand, government payments to an enterprise in the form of subsidies accrue to the factors of production but are not part of market value. *Gross National Product at Factor Cost* is therefore equivalent to gross national product at market prices less indirect taxes, but with the addition of subsidies, and is the value added by the factors of production in the process of production. This concept corresponds to the value of production of an individual enterprise which excludes indirect taxation and which, by appropriate classification of enterprises, becomes the basis for estimates of gross national product at factor cost by industry of origin. It is the nearest equivalent in the national accounts to what is called value of production in factory statistics. This latter, however, still includes some purchased services (e.g. telephones, postage) and some elements of indirect taxation (e.g. rates, payroll tax).

Finally, there is the question of the cost of capital equipment. In the foregoing definition of gross national product, the cost of capital equipment is disregarded. The process of production, of course, requires the use of capital equipment, but it would be misleading to deduct the whole cost of this in the year of purchase. The cost of such equipment is normally charged against production by way of depreciation allowances, spread over the normal useful life of the equipment. If depreciation as well as indirect taxes be deducted from gross national product, the resulting aggregate is referred to as *Net National Product*. Thus *Net National Product* is that part of the value added by factors of production which accrues as income to their suppliers after allowing for depreciation. However, there are several possible concepts of depreciation, and whereas gross national product at market prices or factor cost is not affected by the concept of depreciation used, net national product and national income are dependent to some extent on the concept. (Gross national product would, however, be affected by any significant change in practice as between charging costs of purchases currently or by way of depreciation.) In these estimates, allowances for

depreciation are restricted to public and private enterprises, and no depreciation is attributed to assets used by public authorities, non-profit making organizations, etc. The concept of depreciation used is described in the notes in Part III.

2. **The Concept of National Income.**—Gross national product, as defined above on a geographical basis corresponds to what the Statistical Office of the United Nations in its *System of National Accounts*\* calls gross domestic product, and is not affected by changes in the extent of ownership of factors of production by non-residents. However, the value of net national product is the source of the income which accrues to the factors of production, and it is obviously of importance that some of this income accrues ultimately to persons overseas (and that Australian residents receive some income from overseas). To make allowance for this, therefore, the value of net national product less total income payable overseas in the form of interest, dividends, undistributed income, etc., and plus income receivable from overseas in these forms can be expressed as *National Income*. In principle, adjustments should also be made to deduct other factor incomes (wages and professional earnings, etc.) earned in Australia by non-residents and add similar incomes earned abroad by persons normally resident in Australia. (The earnings of Australian diplomatic representatives and of members of the Australian forces serving abroad are included in gross national product.) Subject to only minor conceptual difference, this aggregate is the same as national income as defined in the United Nations Statistical Office *System of National Accounts*.

The references above to factors of production call for some comments on the subject of factor incomes and transfer incomes. Net national product is the source of all factor incomes, and is therefore equal to the total factor income accruing to the factors of production employed. Enterprises are envisaged as paying out factor incomes to labour in the form of salaries and wages, and being left with a net operating surplus which is the factor income earned by the enterprise. Part of this surplus is transferred to the final recipients in the form of rent, interest, dividends, and direct taxes. Property incomes are thus classed as transfer incomes. Such incomes are therefore not included in tables showing the composition of gross national product, since these are shown in terms of the original factor incomes, namely wages and operating surpluses. This general treatment has the effect (which is desirable and important, for example, when considering gross national product by industry of origin) of making the contribution of an enterprise to gross national product independent of whether it owns or rents its buildings and equipment and of whether it finances its operations with borrowed money or with the owners' (shareholders') own funds. Wages and salaries paid by governments, financial enterprises and non-profit bodies are of course included in factor incomes, as services provided by these bodies have been defined as production.

It should be noted that national income is derived by deducting from net national product the whole of net income payable overseas, including interest on public debt paid to oversea holders of Australian government securities. As indicated above, the whole of (net) property income paid overseas is deducted in arriving at the estimate of national income. To the extent that this income accrues from the provision of capital for productive enterprises (including public enterprises), this is quite consistent with the treatment of property income payments as transfers. However, in this case no distinction is made between interest on public debt and other forms of property income. All are treated as though they were appropriations of part of the national product for payment to factors of production owned or supplied by non-residents, despite the fact that no product is attributed to the loan funds and capital assets employed by the government.

3. **Concept of Gross National Expenditure.**—As pointed out above, from the gross national product are appropriated three aggregates of funds available for use within Australia: national income, depreciation allowances, and indirect taxes less subsidies. Also available for use within Australia are the funds accruing during the period from our oversea capital transactions: net capital inflow, and any withdrawal of monetary reserves. The sum of these funds, after deduction of net donations overseas by persons or governments, is spent during the period on goods for use within Australia. The spending of the funds is not necessarily done by the original recipients, as they change hands through taxation and other transfers, and through the lending and borrowing of savings. These processes are set out in the sector accounts, described in §2. However, the funds are in fact all spent during the period, either on current purchases by consumers, public authorities or financial enterprises, or for capital purposes, in the form of gross fixed capital expenditure or additions to stocks. The sum of this expenditure is *Gross National Expenditure*, which is defined as the total expenditure on final goods and services bought for use in the Australian economy.

\* Studies in Methods, Series F No. 2 Rev. 1, *A System of National Accounts and Supporting Tables*: United Nations Statistical Office, 1960.

**4. The Concept of National Turnover of Goods and Services.**—Gross national product has been defined above as the total market value of goods and services produced in Australia, after deduction of the cost of goods and services (other than capital equipment) used in the process of production. For the economy as a whole, therefore, it is possible to describe the total annual flow of goods and services free of duplication, which is here referred to as the *National Turnover of Goods and Services*, as the sum of gross national product and the value of all goods and services imported. The value of imported raw materials, components of manufactures, etc., finished goods imported by Australian distributors, and the cost of imported services such as freight or insurance paid to non-residents, all become part of the value of the goods and services sold by these enterprises for final use in Australia. Goods imported directly by their final users (e.g. direct imports of capital equipment by enterprises, direct purchases overseas by governments or persons) are also included here, as though they were bought overseas and then sold in Australia, although the value added to these by productive activity in Australia is nil. The same is true of oversea tourist expenditure by Australian residents, which is part of the value of imported services.

In the study of gross national product, interest is centred on the production of goods and services as a result of economic activity in Australia and on the distribution to factors of production of rewards arising from that activity. In the study of gross national expenditure, on the other hand, interest is turned to the final uses to which the goods and services resulting from this productive activity are put during the period in question. In both cases, it is the same complex of goods and services which is being examined, namely the national turnover of goods and services as just defined.

The final uses to which the national turnover of goods and services are put are divided between exports (i.e. goods and services sold to oversea buyers) and *Gross National Expenditure*.

Thus Gross national product *plus* Imports of goods and services  
 = National turnover of goods and services  
 = Gross national expenditure *plus* Exports of goods and services.

**5. Definition and Relationship of Main Aggregates.**—The concepts discussed above may now be defined and expressed in equivalents as follows.

*Gross National Product* is the total market value of goods and services produced in Australia within a given period after deduction of the cost of goods and services, other than capital equipment, used in the process of production. Thus Gross National Product, as here defined, is "at market prices".

*Gross National Product at Factor Cost* is that part of the cost of producing the gross national product which consists of gross payments to factors of production (labour, land, capital or enterprise). It represents the value added by these factors in the process of production and is equivalent to gross national product less indirect taxes plus subsidies.

*Net National Product* is that part of the value added within a given period by factors of production (labour, land, capital or enterprise) which accrues as income to their suppliers after allowing for the depreciation of capital equipment. It is equivalent to gross national product at factor cost less allowance for depreciation.

*National Income* is the net income accruing within a given period to Australian residents from their services in supplying factors of production (labour, land, capital or enterprise) in Australia or overseas. It is equivalent to net national product plus income receivable from overseas less income payable overseas.

*National Turnover of Goods and Services* within a given period is the total flow of final goods and services in the Australian economy as a whole, derived from production in Australia and imports. This value is equivalent to gross national product plus imports of goods and services or, alternatively, to gross national expenditure plus exports of goods and services.

*Gross National Expenditure* is the total expenditure within a given period on final goods and services bought for use in the Australian economy. It is equivalent to the gross national product, plus imports of goods and services less exports of goods and services.

The relationship of these aggregates may be illustrated diagrammatically as follows:—

NATIONAL TURNOVER OF GOODS AND SERVICES

IMPORTS OF GOODS AND SERVICES	IMPORTS OF GOODS AND SERVICES	IMPORTS OF GOODS AND SERVICES	IMPORTS OF GOODS AND SERVICES	EXPORTS OF GOODS AND SERVICES	
GROSS NATIONAL PRODUCT	INDIRECT TAXES LESS SUBSIDIES	INDIRECT TAXES LESS SUBSIDIES	INDIRECT TAXES LESS SUBSIDIES	GROSS NATIONAL EXPENDITURE	
	GROSS NATIONAL PRODUCT AT FACTOR COST	DEPRECIATION ALLOWANCES	DEPRECIATION ALLOWANCES		
		NET NATIONAL PRODUCT	NET INCOME PAYABLE OVERSEAS		NET INCOME PAYABLE OVERSEAS
			NATIONAL INCOME		NATIONAL INCOME

6. Product and Expenditure in Terms of a "Production Account".—The commentary to this point has focussed attention on the nature of some of the principal aggregates used for the analysis of economic activity. However, the system of national accounts aims also at presenting the transactions taking place in the economy in the form of a set of balanced accounts, some of which are closely analogous to those used by business management to record their operations from period to period. It is therefore useful to consider the national production account for Australia as a whole as a consolidation of the production accounts of individual enterprises.

An enterprise engaged in trading (whether in production in the narrow sense, or distribution, or in the provision of other services) will have a "production or trading account" which in very simplified form will be something like the following:—

PRODUCTION ACCOUNT OF A TRADING ENTERPRISE

	£		£
Opening stock .. ..	..	Sales .. ..	..
Wages and salaries ..	..	Closing stock .. ..	..
Current purchases ..	..		
Indirect taxes .. ..	..		
Gross operating surplus ..	..		
	_____		_____
	_____		_____

The two sides balance, the balancing item being gross operating surplus.

This account can be simply re-arranged to show the "gross product" of the enterprise, that is, its contribution to gross national product. Instead of "opening stock" and "closing stock", the appropriate entry now becomes "increase in value of stock" (during

the accounting period). Each side now adds up to the total turnover of the business (additions to stock being treated as turnover for this purpose). The "gross product" of the enterprise is now the sum of wages and salaries paid, the gross operating surplus and indirect taxes paid, and can be written in as a sub-total. Re-arranged, the account now shows the following:—

**PRODUCTION ACCOUNT OF A TRADING ENTERPRISE—ALTERNATIVE FORM**

	£		£
Wages and salaries .. ..	..	Sales .. .. .	..
Indirect taxes .. ..	..	Increase in value of stocks ..	..
Gross operating surplus ..	..		
	_____		
Gross product .. ..	..		
Current purchases .. ..	..		
	_____		
Total turnover .. ..	..	Total turnover .. ..	..
	_____		_____

If production accounts in this form for all trading enterprises are consolidated, the following results are obtained. Current purchases by trading enterprises from other trading enterprises (that is, purchases other than for capital purposes) which appear as both current purchases and sales, cancel out on both sides, and purchases from overseas (imports of goods and services) remain on the left hand side, together with any charges paid for services of financial enterprises, e.g. bank service charges. On the right hand side, the only sales left are export sales, sales to buyers other than trading enterprises, that is, to consumers, public authorities and financial enterprises, and sales to trading enterprises for capital purposes, that is, purchases by these enterprises which are not currently charged to production account. (Problems associated with charges by financial enterprises are discussed below.)

**CONSOLIDATED PRODUCTION ACCOUNT FOR ALL TRADING ENTERPRISES**

	£		£
Wages and salaries .. ..	..	Sales to:	
Gross operating surplus ..	..	consumers .. ..	..
Indirect taxes .. ..	..	public authorities ..	..
	_____	financial enterprises ..	..
Gross product .. ..	..	trading enterprises for capi-	..
Charges for services by financial	..	tal purposes .. ..	..
enterprises .. ..	..	overseas (exports) ..	..
Imports of goods and services	..	Increase in value of stocks ..	..
	_____		
Total turnover .. ..	..	Total turnover .. ..	..
	_____		_____

The next stage is to develop a production account for the whole economy. The main additions needed are production accounts for public authorities and financial enterprises. (Public enterprises like railways, the Post Office, electricity and water supply undertakings, etc., are regarded as trading enterprises.) Financial enterprises are businesses whose main function is the borrowing and lending of money, rather than trading, and whose main source of income therefore is net interest receipts; they consist mainly of banks (cheque-paying and savings banks, and the Reserve Bank), life insurance and superannuation funds, and other money-lending companies (engaged in instalment credit, lending on mortgages, etc.).

The "production account" for public authorities and financial enterprises would be on the following lines.

**PRODUCTION ACCOUNT FOR PUBLIC AUTHORITIES (AND FINANCIAL ENTERPRISES)**

	£		£
Wages and salaries (= gross product) .. ..	..	Charges made for services to:	
Current purchases from trading enterprises .. ..	..	consumers .. ..	..
Imports of goods and services ..	..	trading enterprises ..	..
	_____	Balance .. ..	..
	_____		



business, persons and government, and this charge is balanced by imputed payments of interest of equal amount. If the charges are treated as part of the production account, the effect of this is to balance the receipts against expenses of the financial enterprises, or to produce an operating surplus if the imputation is enough to cover a "profit". Correspondingly, the operating surpluses of trading enterprises are reduced and the expenditure of persons and public authorities increased. A similar treatment whereby the cost of much government activity could be imputed as a cost to enterprises (or persons) is not normally applied, although it has at times been advocated on theoretical grounds. In this Year Book, neither of these categories of expenditure is allocated by means of such imputations. They are, instead, both treated as part of the final use of goods and services by the nation, that is, as part of communal consumption or capital expenditure. They are treated in this way because the services provided by these bodies (after deduction of charges actually made) are paid for by methods other than the use of the normal market price mechanism.

## § 2. The Structure of Sector Accounts

**1. General Framework.**—The previous section has demonstrated the significance of gross national production and expenditure as seen from the standpoint of a productive enterprise. It has shown the enterprise buying its materials and selling its own output of goods and services, the difference between its purchases and sales representing its own contribution to production, or value added, out of which it pays wages and appropriates its own profits. The obverse of these transactions could be seen by analysing the accounts of the groups who receive these incomes arising from production and in turn spend them on the goods and services produced.

When both sides of the transactions are looked at in this way there is in effect a closed circle. Materials and the services of factors of production are flowing into the enterprises and other productive units and final goods and services are flowing out into consumption, investment, etc. These flows of goods and services are matched by reverse flows of money. Producers are paying for their materials and also paying out factor incomes, and these (after a number of transfers, such as income taxes, and borrowing and lending transactions) are flowing back as payments from the final purchasers.

If it is realised that changes in stocks are allowed for in the pattern of final demand and that expenditure in excess of income is supported by an inflow of capital funds or withdrawal from overseas reserves, then these flows can be treated as a closed system which is completely balanced in any period of time. It is, therefore, usual to show these flows of goods and services within a wider framework of sector accounts which provide also a summary of many transactions in the economy other than those involving goods and services. In this way, it is possible to give a more comprehensive and useful picture of the main transactions and to indicate how the gross national product and expenditure aggregates are related to them.

It should be emphasized, however, that a great number of types of transactors can be distinguished, and each enters into many different types of transactions. Any system of accounts which can be presented in a convenient statistical summary form therefore involves a high degree of consolidation both of sectors and transactions. In the process of consolidation much detail is necessarily lost. This detail can be regained by a finer subdivision of the sectors and an elaboration of the accounts and transactions shown for each sector.

To understand the summary accounts, it is necessary to have an understanding of the general framework of the accounting structure which implicitly underlies them. In setting up such a framework, it is necessary to distinguish between a classification into sectors according to the nature of the transactors and a classification of transactions into accounts according to the nature of the activity with which they are concerned. In some cases, the distinction between these two classifications is quite clear-cut and obvious, but in other cases this is not so, and some compromise between the two is necessary. Thus it is clear that a production account records the transactions relevant to a particular type of activity, and that a number of different types of transactors can and do engage in production and so have production accounts. Companies would be one such group, and it is apparent that companies will, in addition to production accounts, have other accounts such as appropriation accounts to record the distribution of their operating surpluses, and capital accounts to record their purchases of capital assets and their borrowing and lending. Again, it is reasonable to regard persons or households as a sector in respect of their activities in receiving and spending incomes. But some of these persons also engage in operating unincorporated enterprises, an activity quite different from that of the majority in the group and one that

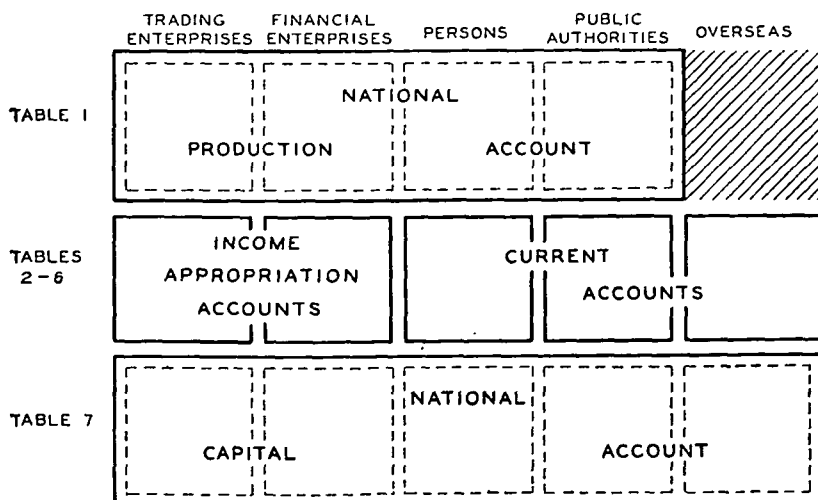
grades almost imperceptibly into that of the small family company. In this case, it is largely a matter of choice whether these productive activities should be recorded in a production account for a personal sector or divided off into a production account for an enterprises sector. Or again, if a public authority builds a school, it is appropriate to record this in a production account, the output of which can be transferred (sold) to a capital expenditure account, but if the school is built by contract, it is a matter of choice whether the transaction is passed through a public authority production account or shown as being sold direct from an enterprise production account to a public authority capital account.

In the summary accounts herein, four internal sectors are distinguished—persons, public authorities, financial enterprises and trading enterprises. In addition, there is an overseas sector which shows a summary of the transactions which overseas governments, persons and businesses enter into with Australian residents. All the sectors (except the overseas sector) engage in productive activity, but in the summary tables a national production account for the whole economy is shown instead of separate accounts for each sector. Similarly, the tables show only a national capital account for the economy, but a current (or income appropriation) account is shown for each sector. The system of accounts as thus envisaged is a completely articulated system in that a credit in any account involves a corresponding debit in some other account—or in the same account if a complete consolidation of the transactions appropriate to that account has not been carried through.

The framework of sectors and accounts underlying the form of social accounts shown in this Year Book is set out in the following diagram. As stated in the previous paragraph, each sector could be envisaged as having separate production, appropriation and capital accounts, but in the tables illustrated below the production and capital accounts have been combined. In the diagram, the solid rectangles depict the actual form of the summary tables, and the remaining rectangles show the full amount of detail which would be needed to provide the complete articulation of the accounts. The appropriate number of each table in Part II is shown on the left of the diagram.

ARTICULATION OF AUSTRALIAN NATIONAL ACCOUNTS

(THE TABLE NUMBERS REFER TO THE TABLES IN PART II)



The following paragraphs give a general account of the sectors and types of transactions, but details in regard to particular items are given in Part III in the notes on such individual items.

2. Definitions of the Sectors.—(i) The *personal sector* includes all persons and private non-profit organizations serving persons other than those included in the financial enterprises sector. Private non-profit organizations include bodies such as private schools, churches, trade unions and sporting and other clubs and societies, but exclude mutual life insurance societies and trustees of superannuation funds which are included in financial enterprises.



In the treatment of the activities of unincorporated enterprises, the convention is adopted here that current operations of these businesses are included in the trading enterprises sector, and the whole of the net income is regarded as transferred to the owners and included in the personal sector. All saving and investment activities of such owners, including capital expenditure in connexion with their businesses, are included in the national capital account. There is no item of saving corresponding to the undistributed income item of companies because of the practical and conceptual difficulties involved in separating the retained income of persons, as households, from that of the owners of the unincorporated enterprise.

The information available of the transactions of many non-profit organizations is inadequate, and in consequence of this, the actual statistical treatment may not be strictly in accord with the conceptual basis. However, most of these bodies are regarded as engaged in productive activity, and to this extent their transactions are included in the combined production account rather than in the personal current account. In principle, the current expenditure of these bodies is included as part of consumption expenditure and is recorded as a purchase by the personal current account from the national production account. Wages and salaries paid are included in the national production account. The wages of domestic servants, etc., are also recorded as purchases by the personal current account from the national production account.

(ii) The *public authority sector* excludes the current operations of public financial and trading enterprises, which are included in other sectors, but otherwise includes the whole of the activities of the Commonwealth Government, State and local governments and semi-governmental bodies set up or controlled by Commonwealth or State governments. *Local government authorities* are elected bodies set up under local government Acts to carry out government functions in defined areas. *Semi-governmental authorities* are other bodies created by or under legislation to carry out defined activities on behalf of a government, or bodies taken over and controlled by governments for the purpose of carrying on such activities. They are engaged mostly in running business enterprises, but not necessarily so; they include also universities, public hospitals, public libraries, parks, etc. *Public enterprises* (trading and financial) are defined as bodies which aim at covering the bulk of their expenses by revenue either from sales of goods and services (trading), or by charges for services and net interest receipts (financial). Their current operations are included in the two enterprise sectors whether their accounts are included in the government budgets (railways, Postmaster-General's Department, etc.), or whether they are semi-governmental authorities. However, the whole of their net income is regarded as transferred to the public authority sector.

(iii) The *financial enterprises sector* includes both private and public financial enterprises. These are organizations which are regarded as providing the financial mechanism for the functioning of the economy rather than producing or distributing goods and services. In one way or another, they are engaged mainly in the borrowing and lending of money. This borrowing and lending may be of the comparatively short-term and constantly changing type, as in the case of banks, instalment credit companies, and short-term money market companies, or it may be long-term, as in the case of co-operative building societies, life insurance companies and superannuation funds. It might be noted too, that this sector includes both profit-making bodies such as banks and instalment credit companies, non-profit making organizations such as co-operative housing societies and trustees of superannuation funds, and mutual life insurance societies in which the whole of the profits after tax, are distributed to the policy holders.

It is a feature of most of these enterprises that they do not charge directly, or at least not in full, for the services they render, and their expenditure is largely financed by net receipts of interest, etc. As already explained, the output of financial enterprises is, by the convention, adopted, valued at cost. Since the profits of these enterprises are attributable to their property income (which is treated as transfer income, not as factor income), no item of operating surplus is included in the national production account, nor therefore in gross national product, to which their contribution is measured by wages and salaries paid.

The wages and other expenses of life insurance companies are regarded as being met out of a charge on premium income and are included in personal consumption expenditure. (The same treatment could reasonably be applied to the expenses of separately constituted private superannuation funds, but in practice these are normally paid by the employer as part of his operating expenses.) For the other financial enterprises there appears no satisfactory way of apportioning these expenses between the borrowers and the lenders. The

expenses of these enterprises have therefore been treated as a final use of goods and services in the same way as government expenditure, and are shown as a purchase in the financial enterprises income appropriation account from the national production account.

Net premium income (after deduction of expenses) and benefits paid by life insurance and superannuation funds are treated as transfers between persons and financial enterprises on capital account. Life insurance and superannuation funds are therefore included in the financial enterprises appropriation account only in respect of their investment income, their net company income, and their saving (retained investment income of insurance funds).

Enterprises at present included in this sector include banks (including the Reserve Bank of Australia), short-term money market companies, life insurance companies, superannuation funds, instalment credit companies, building societies, and the mortgage lending departments of housing commissions and other public authorities. There are other groups primarily engaged in borrowing and lending activities but not included here mainly because there is inadequate information. These are development finance, factoring and investment companies. In the absence of specific analysis, these companies are included with trading enterprises. General insurance companies are not included in the financial enterprise sector as their main activity is not the borrowing and lending of money. Unit trusts are regarded as part of the personal sector.

(iv) The *trading enterprises sector* includes all business undertakings engaged in producing goods and services. Thus it includes undertakings engaged in primary production, mining, secondary industries, building and construction, and service industries (transport, trade, general insurance, entertainment, professional services, etc.). Enterprises include companies, public enterprises, partnerships and self-employed persons, including farmers. Owners of all dwellings are included for reasons given above.

(v) The *oversea sector* accounts record all transactions between Australian persons, businesses and governments, and oversea residents. Their scope is therefore the same as those of the balance of payments. However, within the framework of the national accounts this sector is treated differently from a normal balance of payments table, in that it records transactions from the oversea point of view. Thus Australian imports appear as credits to non-residents, and exports as debits to non-residents. The oversea balance on current account is the equivalent of an Australian deficit on current account, and is shown in the national capital account as representing a source of capital funds to Australia. (See also pp. 547-52 of this Year Book.)

3. Description of the Accounts.—(i) *National Production Account*. In this Year Book, as explained, the national production account is a consolidation of the production accounts of each sector. The production account is shown as receiving revenue from the sale of goods and services to final buyers; all intermediate goods and services are cancelled out, since, as pointed out above, they represent a cost to one producer to offset the revenue of the other. On the payments side are shown the payments of indirect taxes, and, since the accounts are presented from the point of view of the producing unit, the wages and salaries paid to employees. The balance is the gross operating surplus which is carried to the trading enterprises income appropriation account.

The inclusion in the production account of the gross operating surpluses of various types of business according to legal form of organization suggests the possibility of a division of the production account for these sub-sectors. However, any such division presents difficulties of data, because purchases and sales of intermediate products do not cancel out within a sub-sector and must therefore be identified and entered in the accounts. A dissection of the production account by industry is frequently made, and when fully carried through leads to an input-output type of presentation. This cuts across the sectors used here since all productive units are classified by industry in such a presentation, without regard to institutional form.

(ii) *The Trading Enterprises Income Appropriation Account* is shown as receiving the gross operating surpluses from the national production account, and dividends, non-dwelling rent and interest from other sectors. The allocation of this total to depreciation allowances, and to various transfer payments (taxes, dividends, interest, etc.) is shown on the appropriation side. As pointed out above, all net income of unincorporated enterprises is treated as being transferred to persons. Any income of trading companies not distributed but retained for use in the business is shown as undistributed income and transferred to the national capital account either directly or by way of the oversea current account (where accruing to non-residents).

As far as possible, interest, non-dwelling rent and dividends are recorded on a fully consolidated basis in this account. Dividend receipts are therefore only dividends received from financial enterprises and from overseas, since other inter-company payments cancel out. Similarly, rent and interest items include only receipts and payments between the trading enterprise sector and the other four sectors.

(iii) The *Financial Enterprises Income Appropriation Account* is in the main similar to the preceding account. There is, however, no operating surplus, as property income is the sole receipt. The net expenditure of these enterprises is shown on the outlay side, for reasons given above. The retained investment income (i.e., after payment of taxes, interest, etc.) of life insurance and superannuation funds is shown here as a transfer to the national capital account. Superannuation contributions and life insurance premiums (net of administrative costs) are treated as a capital transfer from persons to financial enterprises, and claims as a capital transfer to persons, and therefore do not appear in this account. Rent, interest, and dividends received by persons are assumed to be on personal account, and consequently there are no unincorporated financial enterprises and no net income of unincorporated enterprises in this sector.

(iv) The *Personal Current Account* records all the receipts on current account whether of factor incomes (wages and salaries) or transfer incomes (interest, etc., dividends, net business incomes, cash benefits from public authorities and remittances from overseas). On the payments side are shown current payments for goods and services and transfer payments (taxes, interest, etc., remittances to overseas). The balance is transferred to the national capital account under the heading of saving.

The treatment of life insurance and superannuation insofar as it affects the personal current account has been commented on above. Instalment credit companies are included in the financial enterprises sector, and their charges are treated as property income. Personal consumption expenditure is valued at the cash price, excluding these charges. The difference between the cash price and the deposit is treated as borrowing from financial enterprises which is subsequently repaid by instalments, and consequently is reflected in saving.

Since estate and gift duties are treated as current receipts by governments, they are for the sake of simplicity shown as current payments by persons even though the payers may regard them as of a capital nature. All personal gifts and similar transfers to or from overseas are also treated as current, so that the current account for the overseas sector in this publication is identical in concept with the corresponding accounts in the *Australian Balance of Payments*. Personal remittances to and from overseas include items such as legacies and migrants' funds and effects, which the persons concerned may think of as of a capital nature, but which do not result in the creation of any overseas assets or liabilities.

The current expenditure of non-profit organizations serving persons is included in personal consumption expenditure. Expenditure on buildings (e.g. churches, private schools, clubs, etc.) is treated as capital expenditure and excluded from this account.

(v) The *Public Authorities Current Account* reflects a distinction between current and capital expenditure, which is necessarily arbitrary in some measure, and has been made on the basis of excluding from the current account expenditure on public works and increase in stocks. Expenditure on public works is taken to include new buildings, construction, plant and machinery and any replacement of assets charged to loan funds or capital works votes. It includes capital expenditure of public enterprises, including replacements of assets charged to depreciation reserves but not those charged directly to working expenses. It includes all expenditure on roads, for which a satisfactory distinction between new works and maintenance cannot be made, but excludes all defence expenditure, which is included in the current account. As was indicated earlier, no attempt is made to attribute income or depreciation to assets acquired and used by public authorities.

The income of public enterprises shown in this account is derived by deducting from their operating surplus any depreciation shown by these enterprises in their published accounts except in the case of enterprises (e.g. railways and Postmaster-General's Department) whose accounts are included in the Commonwealth or State budgets and are for the present analysed on the basis of these cash accounts in which depreciation is not deducted. These depreciation provisions are included in the capital account. As in the case of persons, all overseas gifts are included in current account. These include gifts for international relief, technical assistance, etc., grants, and other expenditure in connexion with the administration of Papua and New Guinea.

(vi) The *Overseas Current Account* records all transactions of a current nature between Australian and overseas residents. Items in this account have for the most part been commented on in the sections dealing with the internal sectors and accounts, and are dealt with more fully in the Bureau's publications on balance of payments. It should be emphasized that this account is shown here from the point of view of overseas residents, i.e. receipts from Australia are shown as credits, and payments to Australia as debits. Australians temporarily overseas are regarded as residents, and visitors to Australia as non-residents.

(vii) Capital transactions of the four domestic sectors and the net deficit on current account with overseas are shown in the *National Capital Account*. On the receipts side are shown the savings of the various sectors—saving by enterprises (mainly depreciation allowances and undistributed income of companies), personal saving (including the excess of life insurance and superannuation contributions over claims and administrative expenses, and funds devoted to capital formation by private non-profit institutions), the retained investment income of insurance funds (life insurance and superannuation), and the public authority surplus on current account. This last item includes any retained income of public enterprises, since the whole of their income has been treated as transferred to public authorities and not to a separate capital account for these enterprises. Apparent net capital inflow from overseas and withdrawal from monetary reserves is also reflected in the item "deficit on current account with overseas". On the payments side are shown the purchases by all sectors of new buildings and capital equipment and the increase in the value of stocks. The private component of capital expenditure includes new dwellings and major alterations to dwellings and expenditure of a capital nature by private non-profit institutions (churches, schools, clubs, etc.), but excludes motor vehicles for personal use and other durable consumer goods, which are included in personal consumption expenditure.

4. **Statistical Discrepancy.**—Direct estimates of gross national expenditure have been compiled, and gross national product has been estimated, by adding estimates of factor incomes, depreciation and indirect taxes. However, when the best estimates have been made of all the income and expenditure items in the national income and expenditure accounts, and adjusted for the difference between imports and exports of goods and services, there remains a discrepancy between the two totals. This discrepancy is shown explicitly. Its inclusion on the expenditure side of the national production account implies nothing in regard to the relative accuracy of the estimates of gross national product or expenditure. Similarly, its inclusion in the capital account does not imply that the estimates in this table are less accurate than those in other tables, or that capital expenditure estimates are less accurate than the estimates on the receipts side of this account.

### § 3. Gross National Product and Expenditure, Estimates at Constant Prices

1. **General.**—Estimates of gross national expenditure at constant prices are shown for the main components. The table is included to meet the need for estimates of the principal aggregates in which the direct effects of the changes in prices which have occurred over the period have been removed. This amounts to an attempt to express every component item of expenditure as the product of a price and a quantity, instead of only as a value, and to substitute for the actual current prices the prices that ruled in the chosen base year. For various reasons this can only be done by means of approximations and assumptions, and this should be borne in mind in the interpretation and use of the results.

2. **Estimates of Gross National Expenditure at Constant Prices.**—Over a considerable part of personal consumption expenditure, it is possible to identify specific units of quantity and price, and revalue the quantities at base-year prices. For example, the value of personal expenditure on most items of food, drink and tobacco has been estimated as the product of quantities consumed and prices paid, and it is comparatively easy and straightforward to revalue at 1959–60 prices by multiplying the quantities throughout by the average prices of that year. For items where the value, but not quantities, of personal consumption expenditure was available (for example clothing), the method used was to divide the values by a price index relevant to the item. As the available price indexes were of the type in which the prices are weighted by consumption in a base period, the results of this division were an approximation only to the desired results. (It can be shown that for consistency with the direct revaluation, a price index should be weighted by consumption in the given year

rather than by that of the base year.) Further approximation is involved in the numerous cases where the composition of an item, or the quality of the goods and services which it comprises, had changed during the period. Difficult cases of this sort include expenditure on television, the advent of which changed the composition of the electrical goods item substantially. In addition, there were changes in the type and quality of television sets themselves, as there were also in motor cars and other consumer durable goods. For certain other items of personal consumption expenditure, the lack of homogeneous units of consumption prevented either quantity or relevant price series from being used (e.g. gambling, household insurance), and in these cases the values were divided by "implicit price indexes" for the remainder of personal consumption expenditure. The latter group, however, was a relatively small proportion of personal consumption expenditure, the great bulk of which was expressed at constant prices either by dividing values by price indexes or by revaluing quantities directly.

With the remaining components of gross national expenditure, a greater degree of approximation and assumption was involved. For many items of capital expenditure by public and private sectors, homogeneous and standard components of expenditure do not exist. In these cases, it is not possible to express the values in successive years as the products of prices and standard units of quantity at all. Major civil engineering projects such as dams do not form a homogeneous series, nor do power stations, public buildings, blast furnaces or steel mills. Even standard models of such items as aeroplanes and diesel locomotives are replaced in time by entirely new models. In these circumstances, it was possible to proceed only by making assumptions about the changes in prices which would have occurred had prices for the component in question existed. An example will serve to illustrate the various types of alternative assumptions possible, depending on the data available.

Expenditure on the construction of power stations might conceivably be measured by generating capacity installed, valued at the cost per unit of capacity in the base year; or it might be measured by the value of the expenditure divided by an index of the cost per unit of capacity; or it might be broken down into component operations, such as excavation, or the pouring of concrete, for each of which standard contract prices may be available; or it might be broken down into the cost of the component items of labour and materials, for each of which price indexes may be available. It is apparent that the results which follow from one assumption may be very different from those which follow from another. Costs in terms of labour and materials may have risen; but costs per unit of capacity may well have fallen because of the installation of larger and more efficient generators, or because profit margins or plant overheads in the construction industry have fallen, or because of increased efficiency of construction. For most items of public capital expenditure, and for private construction expenditure other than housing, lack of data made it necessary to adopt the assumption that the expenditure could be revalued in terms of the prices of labour and materials. The estimates resulting from such a method therefore have considerable limitations for many uses, for example, in studies of productivity.

With current expenditure by public authorities, it was necessary to decide whether the quantities and prices required were those for goods and services bought by public authorities (for example, stationery, schoolteachers' services, small arms) or for those supplied by them (e.g. education, defence). It was decided that it was impracticable to measure and revalue the goods and services supplied by public authorities, and the revaluation was applied to the goods and services bought by them, including the services of employees. Defence presented particularly difficult problems in this respect, for reasons similar to those discussed above.

There is a particular difficulty associated with estimation of changes in stocks at constant prices, because it involves dividing changes in the value of stocks between changes in the physical quantities of all component items and changes due to fluctuations in the prices at which stocks are valued. This second component may be due to a revaluation of existing stocks, or more commonly, to the replacement of stocks used or disposed of with new stocks at different prices. In either case, it has something of the nature of a capital gain or loss, but accounting methods, especially for taxation purposes, frequently have the effect of treating such gains and losses as income.

The information available on which to base an estimate of stock revaluation is very limited, and hence any estimate made is subject to an appreciable margin of error. Because of this and because of the difficulties of allocating any estimate of the revaluation component by industry and by type or organization, such a revaluation adjustment was not carried through in the current price estimates of gross national product and expenditure. Consequently, it was necessary to estimate and eliminate the total of such stock revaluation in the estimates at constant prices.

The method adopted was to revalue opening stocks at prices applicable to the closing stocks of the same year, using whatever available indexes were considered to be the most appropriate in each category. The difference between the revalued figure obtained in this manner and the book value of stocks at the beginning of the year was taken as an estimate of stock revaluation. These amounts were then deducted from the total change in the book value of stocks to arrive at a figure which was assumed to measure changes due to changes in quantities only, and an estimate based on this latter component alone was included in the constant price estimate.

The difficulties encountered in expressing at constant prices a considerable proportion of gross national expenditure, it will be seen, are due to reasons other than lack of data, as well as to data problems. The user of the resulting estimates should bear this in mind in assessing their precision in relation to the intended use. This precision, such as it is, rests mainly on the fact that, for a high proportion of the components of the estimates (principally components of personal consumption expenditure), reasonably homogeneous series are conceivable—and available—for the measurement of quantities of goods and services going into final use—or reasonably good price series for the revaluation of expenditure on them.

**3. Estimation of Gross National Product at Constant Prices.**—The aggregates at constant prices discussed above have all been essentially flows of goods and services taking place during the period in question, namely, those goods and services forming part of gross national expenditure, or, in other words, entering final use in the economy. The same is not true of gross national product. The essential nature of gross national product is that it is the value added to goods and services by productive activity in the economy. It is not in itself a flow of goods and services. The question then is how it can be expressed at constant prices, since it has no units of quantity to be revalued. Gross national product can be thought of in two senses. In the first, it is the source of the major forms of income, namely, wages and salaries and gross operating surplus, and in this sense it cannot be expressed at constant prices.

However, it can also be thought of as the difference between the value of output and the value of materials used in production, that is, as the difference between the values of two flows of goods and services. By revaluing each of these flows it is possible to revalue gross national product in this sense.

The nature of gross national product and its relationship to gross national expenditure were illustrated earlier by reference to simplified production accounts. The contribution to gross national product of a trading enterprise was shown to be the difference between the value of its sales (and stock change) and its current purchases. Consolidated for all trading enterprises, and supplemented by the contribution to gross national product of other sectors of the economy this relationship was shown to lead to the identity:—

Gross national product = Gross national expenditure *plus* Exports of goods and services *minus* Imports of goods and services.

This relationship has been used in the estimation of gross national product at constant prices in this Year Book. The identity holds for constant-price revaluations, as well as for the original values of the aggregates, apart from the approximations of measurement. If price and quantity data were available, each item of sales and purchases of trading enterprises could be revalued at the prices of a base year. Consolidated, and supplemented as above, this would lead to the same identity, with the items expressed at constant prices.

Availability of data at present makes it more practicable to take the aggregate estimates of gross national expenditure at constant prices supplemented by similar estimates for exports and imports of goods and services for the whole economy, than to attempt to revalue the sales and purchases of trading enterprises firm by firm or industry by industry. Hence the "aggregate" revaluation adopted in this Year Book.

Gross national product at constant prices as just described (and as shown in the table) varies with changes in the quantities of goods and services produced. There is, however, a way in which "gross national product" considered as a source of incomes, is sometimes expressed, not at constant prices, but "in real terms". Considered as a source of factor incomes, gross national product can be expressed in terms of the purchasing power of factor incomes over the types of goods and services on which they tend to be spent. This is an extension of the meaning underlying such terms as "real wages" or "real personal income", where these income items are expressed in terms of their purchasing power over consumable goods and services by being divided by an index of consumer prices. Extended to gross national product, this concept would require the use of an index of the prices of all the types

of goods and services on which the factor incomes derived from gross national product may ultimately be spent—in other words the whole range of goods and services entering final use in the economy, that is, all the components of gross national expenditure. An estimate of gross national product adjusted in this way, unlike the estimates at constant prices given in this Year Book, will increase or decrease with changes in the terms of international trade, since such changes affect the purchasing power of incomes without in themselves directly affecting the quantities of goods and services produced.

#### § 4. Reliability and Future Revisions

Estimates of national income and expenditure are necessarily prepared from a very wide range of statistical information, some of which is available quickly, some of it only with a delay of several years after the period to which it relates. Some of it is closely related to the desired national income concepts, but some of it is not completely satisfactory in various respects, including coverage, concepts and timing. Efforts are being made constantly to improve both the quality and quantity of the basic data. In addition, considerable efforts have been made in recent years to increase the speed with which statistics become available. This has tended to make some of the preliminary estimates of national income and expenditure items more reliable. However, not all data can be speeded up significantly and estimates for the most recent years are necessarily subject to revision.

This applies particularly to estimates based on taxation statistics—income of companies, non-farm unincorporated enterprises, depreciation and part of gross private fixed investment—which are subject to substantial revisions for the last two years, as taxation statistics tabulations are not available until about 22 months after the end of the financial year. Estimates relating to unincorporated enterprises are subject to further minor adjustments when results of late assessments are incorporated into the estimates another four years later.

It is not possible to put precise limits on the degree of revision likely in any particular series, nor to state degrees of reliability in any exact statistical sense. These depend in large part on the range and quality of the basic statistical data. The following are examples only of the sort of problems which can arise in relation to reliability and revisions, and are not intended as a comprehensive survey in any sense.

(i) Estimates of wages are based on pay-roll tax and other returns of employment and wages. These returns are considered to be reliable and year-to-year revisions in estimates of wages are normally small. The returns, however, cover only some 80 to 90 per cent. of total employment, and must be supplemented by estimates of the remainder. Where employment estimates are revised as a result of a census of population, or for other reasons, there will be a corresponding revision to wage estimates for past years.

(ii) Estimates of incomes of unincorporated enterprises are based largely on tax data. There is an inevitable delay of about two years in the availability of the main tax tabulations (and longer for the final tabulations), so that the estimates are subject to revision for several years. In addition, there are considerable uncertainties in regard to the total number of income earners in this category and on the degree of evasion and understatement in the returns, which means that even the final estimates are not exact.

(iii) Company income estimates are also based on tax data. Although these are thought to be much more complete and reliable than the corresponding data for unincorporated enterprises, they are subject to the limitation that they do not refer to a uniform year but to the various accounting years of individual companies. This must obviously have some effect on the reliability of year-to-year changes, and it is proposed to make a change in this respect as soon as data from alternative sources are available over a sufficient period to enable adjustments to be made.

(iv) Figures for the public authority sector are based mostly on published data for Commonwealth and State Governments and semi-governmental authorities and collected data for local government. The quality of the data is good, and the coverage in respect of semi-governmental bodies is satisfactory. However, Commonwealth and State accounts are on a cash basis, and this at times distorts movements from year to year, and involves some inconsistencies with data for other sectors which are generally on an accrual basis.

## PART II. TABLES

NOTE.—Items in these tables are consecutively numbered from 1 to 28, with or without the addition of a letter, and this system is used to identify the corresponding credit and debit entries in the accounts, and as a key to the notes on pages 1277–82. In some cases the items correspond exactly, while in other cases an entry in one table is the sum of two or more entries in other tables; here the total is given a number, and the components have a number and a letter. In the remaining type of case, all entries are given the same number and a distinguishing letter, because in this group one item is not the sum of one or more entries. The relationship between these items can still be traced through because the sum of all credit entries must equal the sum of all debit entries.

TABLE I  
NATIONAL PRODUCTION ACCOUNT  
(£ million)

	1958–59	1959–60	1960–61	1961–62	1962–63
1 Wages, salaries and supplements .. ..	3,115	3,453	3,720	3,826	4,040
Gross operating surplus of trading enterprises—					
2a Companies .. .. .	824	963	937	958	1,053
2b Unincorporated enterprises .. .. .	1,261	1,332	1,366	1,358	1,494
2c Dwellings owned by persons .. .. .	205	221	246	268	287
2d Public enterprises .. .. .	132	157	186	191	242
Gross National Product at Factor Cost	5,537	6,126	6,455	6,601	7,116
3 Indirect taxes less subsidies .. .. .	692	769	811	787	859
Gross National Product .. .. .	6,229	6,895	7,266	7,388	7,975
4 Imports of goods and services .. .. .	972	1,132	1,290	1,090	1,287
<i>National Turnover of Goods and Services</i>	<i>7,201</i>	<i>8,027</i>	<i>8,556</i>	<i>8,478</i>	<i>9,262</i>
Net current expenditure on goods and services—					
5 Personal consumption .. .. .	3,991	4,363	4,605	4,727	4,995
6 Financial enterprises .. .. .	70	88	92	96	96
7 Public authorities .. .. .	603	660	714	770	820
Gross fixed capital expenditure—					
8 Private .. .. .	949	1,065	1,178	1,127	1,250
9 Public enterprises .. .. .	317	331	326	365	382
10 Public authorities .. .. .	220	242	272	292	307
11 Increase in value of stocks .. .. .	166	121	256	–95	156
12 Statistical discrepancy(a) .. .. .	–37	97	42	–20	29
Gross National Expenditure .. .. .	6,279	6,967	7,485	7,262	8,035
13 Exports of goods and services .. .. .	922	1,060	1,071	1,216	1,227
<i>National Turnover of Goods and Services</i>	<i>7,201</i>	<i>8,027</i>	<i>8,556</i>	<i>8,478</i>	<i>9,262</i>

(a) See Note to item 12, page 1278.



TABLE 2  
 TRADING ENTERPRISES INCOME APPROPRIATION ACCOUNT  
 (£ million)

—		1958-59	1959-60	1960-61	1961-62	1962-63
2	Gross operating surplus ..	2,422	2,673	2,735	2,775	3,076
15b, 17b, 18b	Interest, etc., and dividends received and undistributed income accruing from overseas ..	39	41	48	50	52
	<i>Total Receipts</i> .. ..	<i>2,461</i>	<i>2,714</i>	<i>2,783</i>	<i>2,825</i>	<i>3,128</i>
14a	Depreciation allowances ..	471	509	556	591	624
15a	Interest, etc., paid .. ..	179	206	231	248	265
	Company income—					
16a	Income tax payable .. ..	211	273	261	257	284
17a	Dividends payable .. ..	195	209	209	242	263
18a	Undistributed income .. ..	217	254	207	173	197
	<i>Total Company Income</i> ..	<i>623</i>	<i>736</i>	<i>677</i>	<i>672</i>	<i>744</i>
19	Unincorporated enterprises income	981	1,038	1,058	1,042	1,164
20	Personal income from dwelling rent	116	120	133	140	151
21a	Public enterprises income ..	91	105	128	132	180
	<i>Total Outlay</i> .. ..	<i>2,461</i>	<i>2,714</i>	<i>2,783</i>	<i>2,825</i>	<i>3,128</i>

TABLE 3  
 FINANCIAL ENTERPRISES INCOME APPROPRIATION ACCOUNT  
 (£ million)

—		1958-59	1959-60	1960-61	1961-62	1962-63
15d, 17d, 18d	Interest, etc., and dividends received and undistributed income accruing from overseas ..	289	338	389	425	455
	<i>Total Receipts</i> .. ..	<i>289</i>	<i>338</i>	<i>389</i>	<i>425</i>	<i>455</i>
14b	Depreciation allowances ..	3	4	5	6	7
6	Net current expenditure on goods and services .. ..	70	88	92	96	96
15c	Interest paid .. ..	77	89	110	130	134
	Company income—					
16b	Income tax payable .. ..	15	20	21	19	20
17c	Dividends payable .. ..	17	18	19	18	19
18c	Undistributed income .. ..	10	13	16	14	19
	<i>Total Company Income</i> ..	<i>42</i>	<i>51</i>	<i>56</i>	<i>51</i>	<i>58</i>
21b	Public enterprises income ..	35	36	45	45	49
22	Retained investment income of life insurance funds, etc. ..	62	70	81	97	111
	<i>Total Outlay</i> .. ..	<i>289</i>	<i>338</i>	<i>389</i>	<i>425</i>	<i>455</i>

TABLE 4  
PERSONAL CURRENT ACCOUNT  
(£ million)

	1958-59	1959-60	1960-61	1961-62	1962-63
1 Wages, salaries and supplements .. .. .	3,115	3,453	3,720	3,826	4,040
15f Interest, etc., received .. .. .	117	134	149	163	168
17e Dividends .. .. .	142	157	158	168	186
Unincorporated enterprises income—					
19a Farm .. .. .	471	482	494	466	558
19b Other .. .. .	510	556	564	576	606
20 Income from dwelling rent .. .. .	116	120	133	140	151
23b Remittances from overseas .. .. .	27	31	34	36	39
25 Cash benefits from public authorities .. .. .	349	376	416	456	475
<i>Total Receipts</i> .. .. .	<i>4,847</i>	<i>5,309</i>	<i>5,668</i>	<i>5,831</i>	<i>6,223</i>
5 Personal consumption expenditure .. .. .	3,991	4,363	4,605	4,727	4,995
15e Interest paid .. .. .	59	79	96	93	97
16c Income tax payable .. .. .	386	438	498	492	542
16d Estate and gift duties .. .. .	43	50	51	57	61
23a Remittances overseas .. .. .	24	26	27	27	30
24 Saving .. .. .	344	353	391	435	498
<i>Total Outlay</i> .. .. .	<i>4,847</i>	<i>5,309</i>	<i>5,668</i>	<i>5,831</i>	<i>6,223</i>

TABLE 5  
PUBLIC AUTHORITIES CURRENT ACCOUNT  
(£ million)

	1958-59	1959-60	1960-61	1961-62	1962-63
3a Indirect taxes .. .. .	718	795	847	834	900
16e Income tax, estate and gift duties received	650	720	857	884	870
15h Interest, etc., received .. .. .	29	32	35	38	35
21 Public enterprises income .. .. .	126	141	173	177	229
<i>Total Receipts</i> .. .. .	<i>1,523</i>	<i>1,688</i>	<i>1,912</i>	<i>1,933</i>	<i>2,034</i>
7 Net current expenditure on goods and services .. .. .	603	660	714	770	820
3b Subsidies .. .. .	26	26	36	47	41
15g Interest, etc., paid .. .. .	160	177	186	200	215
23c Oversea grants .. .. .	18	20	23	26	32
25 Cash benefits to persons .. .. .	349	376	416	456	475
26 Grants towards private capital expenditure	4	4	4	6	5
27 Surplus on current account .. .. .	363	425	533	428	446
<i>Total Outlay</i> .. .. .	<i>1,523</i>	<i>1,688</i>	<i>1,912</i>	<i>1,933</i>	<i>2,034</i>

TABLE 6  
OVERSEA CURRENT ACCOUNT  
(£ million)

		1958-59	1959-60	1960-61	1961-62	1962-63
4a	Imports f.o.b. .. ..	781	911	1,035	857	1,032
4b	Transportation .. ..	122	136	164	139	155
4c	Travel .. ..	29	36	42	41	45
4d	Government transactions ..	21	29	26	27	28
4e	Other goods and services ..	19	20	23	26	27
4	Total imports of goods and services .. ..	972	1,132	1,290	1,090	1,287
15j, 17g	Interest, etc., paid, and dividends payable and profits remitted overseas .. ..	92	100	106	117	122
18f	Undistributed income accruing to overseas residents .. ..	63	69	58	30	52
23a	Personal remittances overseas ..	24	26	27	27	30
23c	Public authority grants ..	18	20	23	26	32
<i>Total Credits to Non-residents</i>		<i>1,169</i>	<i>1,347</i>	<i>1,504</i>	<i>1,290</i>	<i>1,523</i>
13a	Exports f.o.b... ..	807	932	926	1,067	1,065
13b	Transportation .. ..	67	71	82	81	89
13c	Travel .. ..	8	10	14	16	15
13d	Government transactions ..	15	22	20	22	24
13e	Other goods and services ..	25	25	29	30	34
13	Total exports of goods and services .. ..	922	1,060	1,071	1,216	1,227
15i, 17f	Interest, etc., received and dividends receivable from overseas	25	23	27	36	31
18e	Undistributed income accruing from overseas .. ..	3	3	4	4	5
23b	Personal remittances from overseas	27	31	34	36	39
28	Oversea balance on current account .. ..	192	230	368	-2	221
<i>Total Debits to Non-residents</i>		<i>1,169</i>	<i>1,347</i>	<i>1,504</i>	<i>1,290</i>	<i>1,523</i>

TABLE 7  
NATIONAL CAPITAL ACCOUNT  
(£ million)

	1958-59	1959-60	1960-61	1961-62	1962-63
14 Depreciation allowances .. .. .	474	513	561	597	631
16f, 17h Increase in dividend and income tax provisions .. .. .	12	63	-30	-49	48
18g Undistributed company income accruing to residents .. .. .	164	198	166	157	164
22 Retained investment income of life insurance funds, etc. .. .. .	62	70	81	97	111
24 Personal saving .. .. .	344	353	391	435	498
26 Public authority grants towards private capital expenditure .. .. .	4	4	4	6	5
27 Public authorities surplus on current account .. .. .	363	425	533	428	446
Deficit on current account with overseas—					
28a Withdrawal from oversea monetary reserves(a) .. .. .	- 8	- 8	40	-89	-74
28b Net apparent capital inflow .. .. .	200	238	328	87	295
<i>Total Capital Funds Accruing ..</i>	<i>1,615</i>	<i>1,856</i>	<i>2,074</i>	<i>1,669</i>	<i>2,124</i>
Gross fixed capital expenditure—					
Private—					
8a Dwellings .. .. .	267	303	329	293	320
8b Other building and construction	168	211	239	229	260
8c All other .. .. .	514	551	610	605	670
9 Public enterprises .. .. .	317	331	326	365	382
10 Public authorities .. .. .	220	242	272	292	307
<i>Total Gross Fixed Capital Expenditure .. .. .</i>	<i>1,486</i>	<i>1,638</i>	<i>1,776</i>	<i>1,784</i>	<i>1,939</i>
Increase in value of stocks—					
11a Farm .. .. .	88	-12	34	-43	44
11b Other .. .. .	78	133	222	-52	112
<i>Total Use of Funds .. .. .</i>	<i>1,652</i>	<i>1,759</i>	<i>2,032</i>	<i>1,689</i>	<i>2,095</i>
12 Statistical discrepancy(b) .. .. .	-37	97	42	-20	29
<i>Total Capital Funds Accruing ..</i>	<i>1,615</i>	<i>1,856</i>	<i>2,074</i>	<i>1,669</i>	<i>2,124</i>

(a) Minus sign (-) indicates an addition to reserves.

(b) See Note to item 12, page 1278.

TABLE 8

VALUE OF MAIN AGGREGATES AT CURRENT AND AVERAGE 1959-60 PRICES  
(£ million)

	1958-59	1959-60	1960-61	1961-62	1962-63
<b>AT CURRENT PRICES</b>					
Personal consumption expenditure .. ..	3,991	4,363	4,605	4,727	4,995
Current expenditure by financial enterprises and public authorities .. ..	673	748	806	866	916
Gross fixed capital expenditure—					
Public .. ..	537	573	598	657	689
Private—					
Dwellings .. ..	267	303	329	293	320
Other .. ..	682	762	849	834	930
Increase in value of stocks .. ..	166	121	256	-95	156
Statistical discrepancy .. ..	-37	97	42	-20	29
<b>Total Gross National Expenditure ..</b>	<b>6,279</b>	<b>6,967</b>	<b>7,485</b>	<b>7,262</b>	<b>8,035</b>
Gross National Expenditure after stock valuation adjustment .. ..	6,253	6,830	7,498	7,280	7,992
Plus Exports of goods and services .. ..	922	1,060	1,071	1,216	1,227
Less Imports of goods and services .. ..	972	1,132	1,290	1,090	1,287
<b>Gross National Product after stock valuation adjustment .. ..</b>	<b>6,203</b>	<b>6,758</b>	<b>7,279</b>	<b>7,406</b>	<b>7,932</b>

**AT AVERAGE 1959-60 PRICES<sup>(a)</sup>**

Personal consumption expenditure .. ..	4,102	4,363	4,441	4,536	4,780
Current expenditure by financial enterprises and public authorities .. ..	732	748	778	814	850
Gross fixed capital expenditure—					
Public .. ..	551	573	575	607	633
Private—					
Dwellings .. ..	273	303	314	274	294
Other .. ..	698	762	828	807	898
Statistical discrepancy .. ..	-38	97	41	-19	28
Gross National Expenditure after stock valuation adjustment .. ..	6,472	6,830	7,238	6,946	7,592
Plus Exports of goods and services .. ..	992	1,060	1,133	1,274	1,256
Less Imports of goods and services .. ..	969	1,132	1,325	1,120	1,359
<b>Gross National Product after stock valuation adjustment .. ..</b>	<b>6,495</b>	<b>6,758</b>	<b>7,046</b>	<b>7,100</b>	<b>7,489</b>

(a) See Note, page 1281.

TABLE 9  
RELATIONSHIP OF MAIN AGGREGATES  
(£ million)

	1958-59	1959-60	1960-61	1961-62	1962-63
Net current expenditure on goods and services ..	4,664	5,111	5,411	5,593	5,911
Gross fixed capital expenditure .. ..	1,486	1,638	1,776	1,784	1,939
Increase in value of stocks .. .. .	166	121	256	-95	156
Statistical discrepancy .. .. .	-37	97	42	-20	29
Gross National Expenditure .. .. .	6,279	6,967	7,485	7,262	8,035
<i>Plus</i> Exports of goods and services ..	922	1,060	1,071	1,216	1,227
National Turnover of Goods and Services ..	7,201	8,027	8,556	8,478	9,262
<i>Less</i> Imports of goods and services ..	972	1,132	1,290	1,090	1,287
Gross National Product .. .. .	6,229	6,895	7,266	7,388	7,975
<i>Less</i> Indirect taxes <i>less</i> subsidies .. ..	692	769	811	787	859
Gross National Product at Factor Cost ..	5,537	6,126	6,455	6,601	7,116
<i>Less</i> Depreciation allowances of trading enterprises .. .. .	471	509	556	591	624
Net National Product .. .. .	5,066	5,617	5,899	6,010	6,492
<i>Less</i> Net income payable overseas .. ..	127	143	133	107	138
National Income .. .. .	4,939	5,474	5,766	5,903	6,354
<i>Plus</i> Net income payable overseas .. ..	127	143	133	107	138
Net National Product .. .. .	5,066	5,617	5,899	6,010	6,492
<i>Less</i> Net operating surplus of companies and public enterprises .. .. .	744	883	852	856	980
<i>Less</i> Interest, etc., paid by unincorporated enterprises and dwellings owned by persons ..	110	123	136	146	157
<i>Plus</i> interest received by persons .. .. .	117	134	149	163	168
Dividends received by persons .. .. .	142	157	158	168	186
Cash benefits to persons .. .. .	349	376	416	456	475
Remittances from overseas .. .. .	27	31	34	36	39
Personal Income .. .. .	4,847	5,309	5,668	5,831	6,223

TABLE 10

## MAIN AGGREGATES AT CURRENT PRICES, 1948-49 TO 1962-63

(£ million)

Year	1 Personal consumption	2 Net current expenditure on goods and services by public authorities and financial enterprises	3 Private gross fixed capital expenditure	4 Public gross fixed capital expenditure	5 Increase in value of stocks	6 Statistical discrepancy	7 (1 to 6) Gross national expenditure
1948-49 ..	1,496	197	244	141	73	5	2,156
1949-50 ..	1,723	234	319	200	157	23	2,656
1950-51 ..	2,094	317	449	288	265	- 6	3,407
1951-52 ..	2,495	433	559	396	385	54	4,322
1952-53 ..	2,651	499	560	387	-90	-103	3,904
1953-54 ..	2,911	478	651	398	22	- 46	4,414
1954-55 ..	3,161	515	728	423	139	50	5,016
1955-56 ..	3,399	576	794	451	172	5	5,397
1956-57 ..	3,630	601	845	467	24	-65	5,502
1957-58 ..	3,806	623	925	489	- 1	- 6	5,836
1958-59 ..	3,991	673	949	537	166	-37	6,279
1959-60 ..	4,363	748	1,065	573	121	97	6,967
1960-61 ..	4,605	806	1,178	598	256	42	7,485
1961-62 ..	4,727	866	1,127	657	-95	-20	7,262
1962-63 ..	4,995	916	1,250	689	156	29	8,035

Year	8 Exports of goods and services	9 Imports of goods and services	10 (7 + 8 - 9) Gross national product	11 National income	12 Personal income	13 Wages, salaries and supplements	14 Net income payable overseas
1948-49 ..	570	490	2,236	1,868	1,874	1,085	40
1949-50 ..	651	630	2,677	2,206	2,217	1,234	51
1950-51 ..	1,041	862	3,586	3,029	3,028	1,551	59
1951-52 ..	739	1,219	3,842	3,201	3,163	1,961	63
1952-53 ..	922	654	4,172	3,515	3,498	2,119	60
1953-54 ..	893	800	4,507	3,733	3,634	2,256	80
1954-55 ..	847	987	4,876	4,007	3,898	2,474	82
1955-56 ..	863	974	5,286	4,322	4,242	2,711	94
1956-57 ..	1,087	864	5,725	4,658	4,534	2,867	95
1957-58 ..	914	957	5,793	4,595	4,507	2,974	93
1958-59 ..	922	972	6,229	4,939	4,847	3,115	127
1959-60 ..	1,060	1,132	6,895	5,474	5,309	3,453	143
1960-61 ..	1,071	1,290	7,266	5,766	5,668	3,720	133
1961-62 ..	1,216	1,090	7,388	5,903	5,831	3,826	107
1962-63 ..	1,227	1,287	7,975	6,354	6,223	4,040	138

## PART III. EXPLANATORY NOTES

## Tables 1 to 7.

*Item 1. Wages, salaries and supplements.*—Payments in the nature of wages and salaries as defined for pay-roll tax, including allowances for income in kind (board and quarters, etc.), together with supplements to wages, and pay and allowances of members of the forces. In addition to wages and salaries paid by employers subject to pay-roll tax, it includes wages and salaries paid by employers not subject to pay-roll tax, based on estimates of employment and average earnings. Supplements consist of employers' contributions to pension and superannuation funds, direct payments of pensions and retiring allowances, and amounts paid as workers' compensation for injuries. Pay and allowances of members of the forces consist of active pay, field allowances, subsistence allowances, dependants' allowances and the value to the members of the forces of food, clothing, normal medical attention, etc., supplied in kind.

*Item 2. Gross operating surplus of trading enterprises.*—The operating surplus, before deduction of depreciation provisions or of dividends, interest, rent and royalties and direct taxes payable, of all trading enterprises operating in Australia. Trading enterprises include all companies, public enterprises, partnerships and self-employed persons engaged in the production of goods and services for sale, but exclude financial enterprises. Public trading enterprises are government undertakings which attempt to cover all, or a substantial part, of their costs through charges made to the public for the sale of goods and services. All owners of dwellings are included whether they let the dwellings or occupy them themselves. Trading enterprises' gross operating surplus is shown separately for companies (item 2a), unincorporated enterprises (item 2b), dwellings owned by persons (item 2c) and public enterprises (item 2d).

*Item 3. Indirect taxes less subsidies.*—Indirect taxes comprise taxes on purchases, sales or other transactions, or on the ownership of property, etc., paid by enterprises, public authorities and persons. Includes licence fees in respect of rights conferred, such as liquor licenses, etc. Subsidies are transfer payments made with the object of assisting certain industries. Such payments may take the form of bounties on goods produced, subsidies to producers to ensure a guaranteed price, payments to transport undertakings to permit a reduction of freights on certain classes of goods, assistance to producers, etc.

*Item 4. Imports of goods and services.*—The value of goods imported from overseas and amounts payable overseas for services. The item is shown sub-divided into the following.

*Item 4a. Imports f.o.b.* are the recorded trade figures adjusted for the purpose of balance of payments estimates. The principal adjustments are the addition of unrecorded imports, including ships and aircraft for use on overseas routes, the subtraction from the trade figures of films imported on a rental basis, imports of gold, goods for repair and goods intended for re-export, and the deduction of a "valuation adjustment" representing the excess of the recorded value of imports (based on value for duty) over the estimated "selling price" value to the importer as shown on invoices accompanying customs entries.

*Item 4b. Transportation* includes freight payable to foreign carriers and shipping companies on goods imported into Australia and transported between Australian ports, fares payable in Australia, the overseas expenditure of Australian ships, and premiums (less claims) on marine insurance payable overseas on imports into Australia, less the net earnings on marine insurance business undertaken by Australian firms in respect of both exports and imports.

*Item 4c. Travel* is the net remittances in the form of travellers' cheques, etc., by Australians visiting overseas for pleasure and for business.

*Item 4d. Government transactions* comprise defence expenditure overseas, including the pay and allowances of personnel serving overseas, etc., expenditure overseas on diplomatic, consular and trade representation, contributions to international organizations, government pensions paid abroad, overseas expenditure on immigration and miscellaneous payments for services.

*Item 4e. Other goods and services* include cinema and television film rentals payable overseas, business expenses of Australian firms transacting business overseas, commissions, brokerage, value of repairs on goods previously exported for repair and return, etc.



*Item 5. Net current expenditure on goods and services—personal consumption.*—Net expenditure on goods and services for purposes of consumption by persons and private non-profit-making bodies serving persons. Excludes purchase of dwellings and capital expenditure by non-profit-making bodies (included in item 8), and maintenance of dwellings (treated as expenses of private enterprises), but includes personal expenditure on motor vehicles and other durable goods and the imputed dwelling rent of owner-occupiers. Purchase of motor vehicles is the estimated expenditure by persons on new motor vehicles, secondhand motor vehicles purchased from business enterprises and public authorities, and the net dealers' margins on purchases and sales of motor vehicles within the personal sector. Motor vehicles include cars and station wagons, commercial vehicles bought by persons, motor cycles and motor scooters. The value of income in kind (e.g. food produced and consumed on farms, board and lodging provided to employees) is included in both personal income and personal consumption expenditure, but goods chargeable to business (expense) accounts are excluded.

*Item 6. Net current expenditure on goods and services—financial enterprises.*—The current expenditure of banks, instalment credit companies, short-term money market companies and building societies after deduction of bank charges to customers. Charges by instalment credit companies are treated as interest receipts and therefore not offset against expenditure. Includes wages, salaries and supplements, indirect taxes and other payments for goods and services. Public financial enterprises are government businesses (mainly banks, including the Reserve Bank) which operate in a manner analogous to other financial enterprises, in that their current expenditure is largely financed by the net receipt of interest. The interest received by government housing authorities is treated as a receipt by government financial enterprises, but their other receipts, including net profit on sale of houses, and all their expenditure, are included in those of government trading enterprises.

*Item 7. Net current expenditure on goods and services—public authorities.*—Expenditure by public authorities (not public enterprises) which does not result in the creation of fixed tangible assets or in the acquisition of land, buildings or secondhand goods (other than imported). It comprises expenditure on wages, salaries, and supplements, and on currently produced goods and services; fees, etc., charged by public authorities for goods sold and services rendered are offset against purchases. Net expenditure overseas by public authorities and purchases from public enterprises are included. All expenditure on defence is classified as current.

*Item 8. Gross fixed capital expenditure—private.*—Expenditure on fixed capital assets whether for replacement of, or addition to, existing assets. Includes expenditure on dwellings (item 8a), other building and construction (item 8b), and vehicles, plant, machinery, etc. (item 8c). Includes expenditure on secondhand assets (other than houses purchased from public authorities) as well as new assets, less sales of existing assets. Expenditure on ordinary repair and maintenance of fixed assets is excluded as being chargeable to current account. Major additions are, however, regarded as capital expenditure. New dwellings purchased by persons from public housing authorities are included in private capital expenditure.

*Item 9. Gross fixed capital expenditure—public enterprises.*—Expenditure on fixed capital assets, including wages and salaries paid by public enterprises in connexion with capital works.

*Item 10. Gross fixed capital expenditure—public authorities.*—Expenditure on durable fixed assets other than for defence purposes. All expenditure on roads, including maintenance, is classified as capital expenditure. Expenditure on housing, included in this item, includes the estimated expenditure on construction of dwellings for rental purposes, and hostels for migrants and others, but excludes houses built for sale, which are included in private capital expenditure. Also excludes advances by War Service Homes Division and other authorities for financing home purchase schemes.

*Item 11. Increase in value of stocks.*—The change in book value of non-farm stocks held by trading enterprises and public authorities (item 11b), and the change in the value of farm stocks (item 11a).

*Item 12. Statistical discrepancy.*—The difference between the sum of the estimates of gross national product and imports of goods and services on the one hand and the sum of the estimates of components of gross national expenditure and exports of goods and services on the other hand. Conceptually these two totals should be the same. Inclusion of the discrepancy on the expenditure side of the national production account implies nothing in regard to the relative accuracy of the estimates of gross national product and expenditure.

Similarly its inclusion in the capital account does not indicate that the estimates in this table are less accurate than those in other tables, or that capital expenditure estimates are less accurate than the estimates on the receipts side of this account.

*Item 13. Exports of goods and services.*—The value of goods exported to overseas, and receipts from overseas for other goods and services. The item is shown sub-divided into the following.

*Item 13a. Exports f.o.b.* are the recorded trade figures adjusted for balance of payments purposes. The adjustments made are similar to those made to the recorded import figures except that no change is made to the basis of valuation. The adjustment for non-recorded exports includes exports of uranium ores.

*Item 13b. Transportation* comprises the overseas earnings of ships owned or chartered by Australian operators, the overseas remittances to Australian domestic and international airline operators and the expenditure of overseas carriers in Australian ports.

*Item 13c. Travel* is net receipts of travellers' cheques, etc., from persons visiting Australia for pleasure and for business.

*Item 13d. Government transactions* include receipts for services rendered by the Australian Government to other governments, and other payments in Australia by foreign governments on diplomatic, consular and trade representation and for pensions paid in Australia.

*Item 13e. Other goods and services* include the value of Australian gold production less net industrial usage, business expenses of overseas firms in Australia and commissions, brokerage, etc.

*Item 14. Depreciation allowances.*—The financial provisions made for depreciation which are deducted to obtain net income. The estimates represent, in the main, amounts allowed under Income Tax legislation. Include the estimated depreciation on tenanted and owner-occupied dwellings owned by persons and provisions made by public enterprises. This item is divided into depreciation allowances of trading enterprises (item 14a) and of financial enterprises (item 14b).

*Item 15. Interest, etc.*—Comprises interest, non-dwelling rent and royalties. This item appears in most accounts as receipts and payments of interest, etc., but in the case of some entries the amounts are combined with dividends and overseas profits. The item is shown net of intra-sector receipts and payments. Payments of interest, etc., by public enterprises is included in item 15g. Payments of interest, etc., by trading enterprises (item 15a) include interest charged on borrowing for the purchase of houses by persons, which is treated as an appropriation from the gross operating surplus of dwellings owned by persons. Non-dwelling rent includes only actual payments. It is estimated net of the expenses of the owner of the premises on rates, maintenance, etc., which are treated as working expenses of the enterprises renting the building. Royalties include mining and forestry royalties paid to public authorities, and royalties and fees for use of trade marks, patents, etc., paid overseas.

*Item 16. Income tax, estate and gift duties.*—Income tax payable by trading and financial companies (item 16a and 16b) and persons (item 16c) are amounts payable at rates of taxation applicable in each year. Income tax payable by companies in respect of the most recent year's income has been estimated on the basis of rates of tax applicable in respect of the preceding year's income. The difference between the amounts of income tax payable and the cash receipts by public authorities (part of item 16e) is included in item 16f. Income taxes payable by persons (item 16c) include the total income taxes payable by individuals on all forms of income whether wages, business income or property income. Estate and gift duties (item 16d) are the amounts actually paid by persons in each year.

*Item 17. Dividends.*—All receipts and payments of dividends, including dividends payable overseas and the remitted profits of Australian branches of overseas enterprises. Dividends payable are the amount of dividends declared by trading and financial companies in respect of the current year. Receipts of dividends (other than dividends from overseas subsidiaries) are cash receipts, and the difference between the amount payable and received is included in item 17h. The items are shown net of intra-sector receipts and payments.

*Item 18. Undistributed income.*—The undistributed income of companies comprising trading enterprises (item 18a) and financial enterprises (item 18c) is the balance of total company income, including profits receivable from overseas (items 18b and 18d) after deducting income tax and dividends payable, and is equal to the sum of undistributed income accruing to oversea residents (item 18f) and undistributed company income accruing to residents (item 18g). Profits receivable from overseas are the unremitted part of profits earned by oversea branches of Australian companies and undistributed profits of oversea subsidiaries.

*Item 19. Unincorporated enterprises income.*—The gross operating surplus of unincorporated enterprises less interest, etc., paid, and depreciation allowances. It is divided into the income of farm unincorporated enterprises (item 19a), and the income of all other unincorporated enterprises (item 19b).

*Item 20. Personal income from dwelling rent.*—The gross operating surplus accruing to dwellings owned by persons less interest, etc., paid, and depreciation allowances.

*Item 21. Public enterprises income.*—Includes income of public trading enterprises (item 21a) and income of public financial enterprises (item 21b). For trading enterprises it is equal to gross operating surplus after the deduction of depreciation allowances; for financial enterprises it is the net income after depreciation allowances, interest paid, and net current expenditure on goods and services by government banks are deducted from total receipts of interest and non-dwelling rent. Depreciation allowances deducted in arriving at the income of public trading enterprises are those shown in their published accounts, except in the case of enterprises whose accounts are included in the Commonwealth or State budgets and are analysed on the basis of their cash accounts in which depreciation is not deducted. In particular, no amount is included for the Post Office, or most railways, since cash accounts for these enterprises have been used.

*Item 22. Retained investment income of life insurance funds, etc.*—Total dividends, interest, etc., received by life insurance offices and superannuation funds less depreciation allowances, income tax and dividends payable, and the undistributed income of non-mutual life insurance companies.

*Item 23. Oversea gifts.*—All transfers to or from overseas on public authority or private account which are not payments for goods and services or payments of dividends, interest, etc.

*Personal remittances overseas (item 23a)* include gifts of money by resident persons and private institutions, payments for sustenance and transfers of emigrants' funds and legacies from Australia to overseas, together with the value of goods exported as personal effects and gifts.

*Personal remittances from overseas (item 23b)* include gifts of money received from non-resident persons and private institutions, receipts for sustenance and transfers of immigrants' funds and legacies from overseas to Australia, together with the value of goods imported as personal effects and gifts.

*Public authority overseas grants (item 23c)* include grants to, and payments made on behalf of, the Territories of Papua and New Guinea, and expenditure overseas in respect of technical assistance and relief under the Colombo Plan and United Nations projects. Payments to United Nations and other organizations due by virtue of membership of these organizations are included in net current expenditure on goods and services.

*Item 24. Personal saving.*—The excess of personal income over personal consumption expenditure, interest paid, income tax payable and estate and gift duties paid and remittances overseas. It includes saving through life insurance and superannuation funds (defined as premiums, etc., paid less claims, etc., received and administrative expenses of life insurance offices) and the increase in assets of marketing authorities. It includes also changes in holdings of cash and securities, the net increase in bank deposits less advances, the reduction in the outstanding advances of instalment credit companies to persons and unincorporated enterprises, and the increase in the equity of persons in dwellings and in capital equipment, buildings and stocks of unincorporated enterprises. Personal saving is the balancing item in the personal current account.

*Item 25. Cash benefits.*—These are current transfers to persons from public authorities in return for which no services are rendered or goods supplied. Principal components are scholarships; hospital, medical, pharmaceutical, maternity, sickness and unemployment benefits; child endowment; widows', age, invalid and repatriation pensions; and attendance money for waterside workers.

*Item 26. Grants towards private capital expenditure.*—Grants to meet part of capital costs of e.g., homes for aged persons and property for War Service Land Settlement.

*Item 27. Public authorities surplus on current account.*—This is the excess of revenue, including income of public enterprises, over current outlay. Current outlay includes current expenditure on goods and services, as defined in item 7, and transfer payments (interest, cash benefits, subsidies, and overseas grants). The surplus is transferred to the capital account where it becomes part of total funds available for capital outlay.

*Item 28. Oversea balance on current account.*—The excess of payments to the rest of the world on current account over receipts from the rest of the world. In the National Capital Account it is shown divided into that part financed by drawing on Australia's overseas monetary reserves (item 28a) and net apparent capital inflow (item 28b).

**Table 8. Value of Main Aggregates at Current and Average 1959-60 Prices.**

This table shows estimates of gross national product and gross national expenditure and the principal components of the latter at current and average 1959-60 prices. Estimates at constant prices can be made only on the basis of approximations and assumptions, and this should be borne in mind in the interpretation and use of the results.

Where possible, the method adopted is to make a direct revaluation of each item at constant prices instead of the prices at which quantities are bought or consumed. However, particularly for many items of capital expenditure by public and private sectors, for which homogeneous and standard components of expenditure do not exist, it is not possible to express the values in successive years as the product of prices and standard units of quantity. Where this is not practicable, the method adopted is to divide the values by an appropriate price index, or by a substitute index of cost of production based on materials and wages. The estimates resulting from such a method therefore have considerable limitations for many uses, for example in studies of productivity. A broadly similar treatment was adopted in respect of current expenditure by public authorities, including expenditure on defence.

The information available on which to base an estimate of changes in stocks at constant prices is very limited and the estimate made is subject to an appreciable margin of error. It involves adjustment for stock revaluation, arising out of the replacement during the year of trading stocks with equivalent new stocks of a value different from that of the original stocks at the beginning of the year.

§ 3 of Part I (pp. 1265-8) contains a fuller discussion of the conceptual problems involved in making these estimates, and Appendix C of *Australian National Accounts, National Income and Expenditure, 1948-49 to 1962-63* contains a brief account of the sources and methods used in preparing the estimates.

**Table 9. Relationship of Main Aggregates.**

*Gross National Expenditure* is the total market value of all goods and services bought for use within the Australian economy. These goods and services are bought for current use by persons, financial enterprises and public authorities; for replacing or adding to capital equipment (gross fixed capital expenditure, public and private); and for adding to stocks.

*Gross National Product* is the total market value of goods and services produced in Australia after deducting the cost of goods and services (other than capital equipment) used in the process of production.

*Gross National Product at Factor Cost* is that part of the cost of producing the gross national product which consists of gross payments to factors of production (labour, land, capital or enterprise). It represents the value added by these factors in the process of production and is equivalent to gross national product less indirect taxes plus subsidies.

*Net National Product* is that part of the value added within a given period by factors of production (labour, land, capital or enterprise) which accrues as income to their suppliers after allowing for the depreciation of capital equipment. It is equivalent to gross national product at factor cost less depreciation allowances of trading enterprises.

*National Income* is the net income accruing to Australian residents from their services in supplying factors of production (labour, land, capital or enterprise) in Australia or overseas. It is equivalent to net national product less income payable overseas, plus income receivable from overseas.

*Personal Income* is the total income, whether in cash or kind, received by persons normally resident in Australia. It includes both income received in return for productive activity (such as wages, incomes of unincorporated enterprises, etc.) and transfer incomes (such as cash social service benefits, interest, etc.). Personal income also includes any property income received by non-taxable organizations such as private schools, churches, charitable organizations, etc.

## DIARY OF PRINCIPAL ECONOMIC EVENTS, 1963-64

The principal economic events in earlier years were shown in the following issues:—

YEARS	OFFICIAL YEAR BOOK No.				PAGES		
1931 to 1938 .. .. .	33	..	..	..	..	..	968-77
1939 to 1944 .. .. .	36	..	..	..	..	..	1129-41
1945 to 1948 .. .. .	37	..	..	..	..	..	1235-45
1949 to 1951 .. .. .	39	..	..	..	..	..	1331-40
1952 to 1955 .. .. .	42	..	..	..	..	..	1149-60
1956 to 1958 .. .. .	46	..	..	..	..	..	1185-92
1958-59 to 1961-62 .. .. .	48	..	..	..	..	..	1188-1200
1962-63 .. .. .	49	..	..	..	..	..	1253-56

To conserve space, information for years prior to 1963-64 has been omitted from this issue.

The events of 1963-64 took place in a climate of continued economic expansion. As in 1962-63, there were substantial increases in most components of national expenditure and product. Gross national expenditure increased by about 7 per cent. and exports of goods and services by 27 per cent., while gross national product and imports of goods and services both increased by about 9 per cent.

Civilian employment rose substantially during the year, and at June, 1964, was 148,000 (about 4.5 per cent.) higher than in June, 1963. Over the same period the number of persons receiving unemployment benefit fell from 38,200 to 18,100.

Production in many industries set up new output records. In rural industries production of wheat (328 million bushels), milk (1,494 million gallons), and wool (1,782 million lb.) were all at record levels while a small decrease in sugar cane production was more than offset by a large rise in export prices. Building and construction industries were operating at a high level at the beginning of the year, and kept on rising. Between 1962-63 and 1963-64, the number of new houses and flats commenced rose from 88,300 to 107,400, and the value of other new building approved rose from £256 million to £297 million. The motor vehicle industry was buoyant with registrations of new vehicles totalling 405,000, which was 55,000 more than in 1962-63. Production of steel, copper and zinc and most building materials and fittings increased.

Retail sales (excluding motor vehicles parts, petrol, &c.) increased by 5 per cent. over 1962-63.

Imports of merchandise rose again, but exports rose even more, reflecting the high levels of rural and mining production and increased prices for many exports. As adjusted for balance of payments estimates, exports exceeded imports by £250 million and the deficit on current account declined from £226 million to £19 million. International reserves rose by £228 million.

However, costs and prices were also tending to rise. By the end of June, the index of average minimum weekly wage rates was 5.3 per cent. higher than a year earlier (reflecting the recent increase in the basic wage), and the average weekly earnings per employed male unit were also about 5 per cent. higher in 1963-64 than in 1962-63. The consumer price index was nearly 2 per cent. higher in the June quarter, 1964, than the June quarter, 1963. The use of instalment credit to finance retail transactions also continued to increase and, despite a record level for bank deposits (trading and savings banks combined) of over £4,500 million, outstanding balances of transactions financed by non-retail finance businesses were £469 million at the end of June, an increase of £54 million during the year.

*10th July.*—Australia's membership of ECAFE formally confirmed. Commonwealth Treasurer announced increase in Australian trading banks' term loan funds from £57 million to £76 million.

*11th July.*—Victorian premier announced plans for a £37.5 million water conservation scheme.

*18th July.*—Interest rate on new housing loans made by State Government Authorities in South Australia reduced by  $\frac{1}{4}$  per cent. to 5 per cent.

*20th July.*—Pilot scheme for Ord River (Western Australia) development scheme opened by Prime Minister.

*23rd July.*—Commonwealth cash loan of £45 million opened, issued at £99 5s. with coupons at  $3\frac{1}{4}$  per cent. to  $4\frac{1}{2}$  per cent. and periods 3 to 23 years; oversubscribed £29.5 million.

*25th July.*—Queensland Main Roads Department announced details of Road Plan, to cost £200 million over 10 years.

*30th July.*—Western Australian Government signed £78 million contract for the establishment and development of a new iron and steel industry in the State.

*5th August.*—Australia signed a new three-year trade agreement with Japan. Export Payments Insurance Corporation announced a reduction of 10 per cent. on all premiums on capital goods as from 1st July, 1963. Queensland Minister for Mines and Development announced details of expansion to be made in alumina refinery at Gladstone. (Further expansion announced 26th November to total cost of £50 million.)

*12th August.*—Commonwealth Banking Corporation announced that unsecured advances up to £360 would be available to its savings bank depositors. A similar scheme was announced by the Bank of New South Wales.

*13th August.*—Commonwealth Budget for 1963–64 introduced into House of Representatives. In 1962–63, receipts of the Consolidated Revenue Fund were £1,685.4 million and expenditure (excluding the payment of £26.4 million to the Loan Consolidation and Investment Reserve) amounted to £1,659 million. The main items of revenue (1961–62 figures shown in parentheses) were: income taxes £810.6 million (£828.2 million); excise duties £274.4 million (£265.6 million); customs duties £105.1 million (£85.2 million); sales tax £156.5 million (£148.8 million); and pay-roll tax £63.3 million (£61.0 million). The main items of expenditure were:—payments to or for the States £423.2 million (£396.6 million); social and health services £379.3 million (£365.2 million); defence services (excluding £66.1 million provided from loan fund in 1962–63) £148 million (£179.4 million); war and repatriation services £111.2 million (£104.3 million); and works services £166.5 million (£161.6 million). The Budget for 1963–64 provided for an estimated expenditure of £2,190.7 million, of which £1,837.2 million would be provided from the Consolidated Revenue Fund and £353.5 million from the Loan Fund.

Commonwealth and New South Wales Governments reached agreement on Blowring Dam project.

*15th August.*—Treasurer announced amendments to Savings Bank Regulations reducing minimum proportion of depositors' balances required to be held in cash, deposits with Reserve Bank or government securities to 65 per cent. and allied amendments designed to insure steady increase in savings bank loans available for housing.

*20th August.*—C.B.C. Savings Bank announced increase in limit of home advances to £3,750.

*22nd August.*—Minister for Primary Industry announced new wheat stabilization plan which extended guaranteed price to 150 million bushels instead of previous limit of 100 million bushels.

*29th August.*—1963–64 Budget introduced into Tasmanian House of Assembly. The transactions of the Consolidated Revenue Fund in 1962–63 resulted in a deficit of £0.5 million. Receipts of the Consolidated Revenue Fund totalled £31.5 million and expenditure £32 million. For 1963–64, it was estimated that expenditure would be £34.7 million and revenue £34.0 million, leaving a deficit of £0.7 million.

*3rd September.*—1963–64 Budget introduced into South Australian House of Assembly. In 1962–63, revenue amounted to £97.6 million and expenditure to £97.3 million, leaving a surplus of £0.3 million. For 1963–64, it was estimated that revenue would be £102.8 million and expenditure £103.3 million, leaving a deficit of £0.5 million.

**11th September.**—1963–64. Budget introduced into Victorian Legislative Assembly. In 1962–63 revenue and expenditure both amounted to £207.1 million. The Budget for 1963–64 provided for a total expenditure of £220.6 million and revenue of £218.2 million. Railway operating expenses and income were estimated at £44.8 million and £44.1 million respectively and it was anticipated that the Railway Equalization Account would have to provide the balance of £0.7 million.

Minister for Primary Industry announced details of new cotton bounty arrangements.

**18th September.**—Commonwealth Treasurer announced nomenclature and denominations of proposed decimal currency. Australian Wheat Board announced a cash sale of 58.5 million bushels of wheat to the U.S.S.R.

**24th September.**—Plans approved for construction of £15 million wool storage centre in Merrylands (Sydney) area to occupy approximately 300 acres. Centre, which is to be financed by eight wool selling companies, will replace existing stores at Pymont.

**25th September.**—1963–64 Budget introduced into New South Wales Legislative Assembly. During 1962–63, the transactions of the Consolidated Revenue Fund, Railways, Metropolitan and Newcastle Transport Services, and Maritime Services Board resulted in a surplus of £0.2 million. After providing for debt charges, there was a deficit of £2.4 million on the Metropolitan and Newcastle Transport Services and a surplus of £0.1 million from the operations of the Maritime Services Board. The 1963–64 Budget provided for an overall surplus of £17,000. After meeting debt charges, it was estimated that there would be a surplus of £700,000 on the transactions of the Consolidated Revenue Fund, a deficit of £25,000 on the Railways and a deficit of £2.2 million on the Metropolitan and Newcastle Transport Services.

**26th September.**—1963–64 Budget introduced into Western Australian Legislative Assembly. Financial transactions for the year 1962–63 resulted in a deficit of £0.8 million. For 1963–64, it was estimated that expenditure would be £83.8 million and revenue £83.1 million resulting in a deficit of £0.7 million.

1963–64 Budget introduced into Queensland Legislative Assembly. In 1962–63, receipts and expenditure of the Consolidated Revenue Fund were £122.8 million. For 1963–64, it was estimated that both revenue and expenditure would amount to £125.4 million.

**2nd October.**—Commonwealth negotiated 19 year loan in London of £Stg. 20 million, issued at 98½ per cent. with interest at 5½ per cent. per annum. Fully subscribed.

**10th October.**—Moura opencut coalfield (Queensland) commenced large-scale production at 80,000 tons a month. Commonwealth £60 million Cash Loan opened, issued at par, with coupons 3½ per cent. to 4½ per cent. and periods 2½ to 23 years; oversubscribed by £9.4 million.

**14th October.**—Completion of £35 million direct telephone link (Compac) between Australia and New Zealand, North America, Britain, and Europe. (Officially opened 3rd December.)

**16th October.**—Commonwealth Government approved plan submitted by Council of Egg Marketing Authorities for Commonwealth egg stabilization levy in place of existing State levies.

**17th October.**—*Currency Bill* 1963 introduced in House of Representatives. (Assented to 30th October but not yet proclaimed.)

**29th October.**—First trade mission from Israel arrived in Australia. South Australian House of Assembly passed bill ratifying Chowilla Dam agreement with New South Wales, Victoria, and the Commonwealth.

**4th November.**—Queensland Forestry Department signed a contract to supply 4.7 million super. ft. of timber per annum for new pulp wood industry to be established in Petrie-Glasshouse area. Operations were expected to begin early in 1964.

**10th November.**—Minister for National Development announced plans for commencement of second stage (Snowy-Murray section) of Snowy Mountains Hydro-electric Scheme; this stage is expected to cost £40 million.

**13th November.**—Cobalt lode discovered at Mount Isa (Queensland).

**21st November.**—Plans released for extension of inner harbour at Fremantle at a cost of £7.2 million.

**22nd November.**—£4.5 million to be spent at Port Kembla on installation of high-speed rolling mill.



*23rd November.*—Queensland Minister for Primary Industries announced plans for construction of new bulk stores, with total capacity of about 380,000 tons of sugar at Bundaberg, Mackay, and Townsville, the cost being estimated at £4 million. Australian Wheat Board sold further 41 million bushels of wheat to mainland China bringing total sales to China since 1960 to over 300 million bushels (valued at about £230 million).

*25th November.*—B.H.P. Co. installed a 140" plate mill as first part of £18 million project to increase production by 400,000 tons a year.

*13th December.*—Qantas Empire Airways signed contract for three new Boeing 707 jet aircraft worth £3 million each.

*14th December.*—Contract signed for export of 5.1 million tons of iron ore (valued at £29 million) from Western Australia to Japan.

*20th December.*—Treasurer issued details of dimensions and composition of decimal coins.

*21st December.*—First Commonwealth award covering officers employed by private banks approved by Arbitration Commission.

*23rd December.*—Australian Shipbuilding Board called tenders for four bulk carriers of a total deadweight tonnage of 47,000 tons, to be built in Australian shipyards.

*30th December.*—Plans announced by Queensland Minister for Industrial Development for construction of State's first synthetic ammonia plant, estimated to cost £3 million, at Pinkenba.

*5th January.*—United States signed £1 million contract for use of Jindivik pilotless aircraft.

*7th January.*—Reserve Bank called up additional £25 million from trading banks to reduce liquidity.

*8th January.*—£12.5 million to be spent on wool promotion and research in 1964–65 (£7.25 million from proceeds of wool levy, £5.25 million from government subsidy).

*13th January.*—Tariff on imported timber raised by 3s. a 100 super. ft.

*20th January.*—Large deposit of copper discovered near Rum Jungle (Northern Territory).

*24th January.*—Victorian Bill introduced to amend Companies Act as it affected note issuing companies.

*27th January.*—Minister for Primary Industry announced plans for levy on meat producers to assist search for new markets for meat.

*28th January.*—Work started on £3.25 million shopping centre at Miranda, largest single centre in New South Wales.

*30th January.*—New South Wales Housing Commission to build £28 million satellite town at Mount Druitt, New South Wales.

*3rd February.*—Reserve Bank called up additional £42 million from trading banks, the second call up of bank funds within a month.

*4th February.*—Orders placed with Australian Shipbuilding Board for construction of three tankers.

*5th February.*—£2 million plan announced to build new wheat silos in New South Wales.

*6th February.*—Commonwealth Special Bonds Series J issued at par with coupons rising from 3½ to 4½ per cent. and optimal redemption prices par to 103 per cent. at maturity.

*7th February.*—Agreement signed with India for shipment of 170,000 tons of wheat by June, 1964.

*13th February.*—£70 million Cash Loan opened, issued at from £99 12s. 6d. to par, with interest rates from 3½ to 4½ per cent. per annum. Oversubscribed by £7.5 million. General Motors Holden's announced £22 million expansion programme.

*18th February.*—New South Wales employees granted four weeks annual leave.

*19th February.*—New meat agreement signed with United States of America guaranteeing Australia and New Zealand access to United States market.

*20th February.*—Commonwealth Treasurer announced that Government would meet the whole cost of converting cash registers, accounting machines, etc., for decimal currency. Details of Commonwealth home subsidy scheme announced by Minister for Housing.

*21st February.*—Le Tourneau-Westinghouse contracted for supply of £1.6 million earth-moving plant to Egypt.

*24th February.*—First Indonesian Trade ship arrives from West Irian.

*26th February.*—Eight major Australian trading banks, supported by Reserve Bank, planned joint Export Re-finance Corporation to strengthen the banks' ability to extend medium and long-term export credit.

*28th February.*—Reserve Bank called up further £32 million from trading banks making total called up for year £99 million. Statutory Reserve Deposit Ratio increased to 15.5 per cent. as from 4th March.

*29th February.*—First shipment of alumina from Kwinana (Western Australia) reached Geelong refinery.

*2nd March.*—Australia represented as full regional member of ECAFE for the first time at 20th Conference in Teheran.

*6th March.*—Orders placed for building of two 19,000 d.w.t. tankers through Australian Shipbuilding Board.

*10th March.*—Child endowment increased for third and subsequent children and full-time student children.

*12th March.*—Commonwealth negotiated \$25 million loan with consortium of banks in the United States for Qantas Empire Airways Ltd. The loan is repayable in half-yearly instalments from 1966 to 1972, with interest from 4½ per cent. to 5½ per cent.

*13th March.*—General Motors Acceptance Corporation reduced interest rate from 7 per cent. to 6 per cent.

Premiers Conference met at Canberra.

Commonwealth Government decided to establish a Commonwealth Bureau of Roads to make a full and continuous study of the roads problem.

*16th March.*—£420 million to be spent on roads over next five years (£375 million by Commonwealth, £45 million by States).

*18th March.*—Reserve Bank reduced charges for forward exchange contracts.

*19th March.*—Malaysia-Australia air services agreement signed in Kuala Lumpur.

*20th March.*—Kembla Coal and Coke won contract to supply £9 million worth of coke to Japan in next three years.

*25th March.*—Moonie to Brisbane oil pipeline opened, and Australia's first commercial oil production started.

*3rd to 8th April.*—Industrial dispute involving 2,000 Sydney postal workers disrupted mail handling.

*4th April.*—Plans approved for £4 million shopping centre in Preston (Victoria).

*6th April.*—Sale reported of a further £16 million worth of wheat to Mainland China. Victorian Government to spend £1.6 million over next three years on development of Melbourne's third University (Latrobe University).

*8th April.*—Maximum rates of interest payable by trading banks on new fixed deposits increased by ½ per cent. per annum. Contracts worth £4 million let for supply of Nepean River-Prospect Reservoir water pipes.

*13th April.*—Issue price of Treasury notes reduced by 1s. to £99 3s.

*14th April.*—Qantas Empire Airways signed contract and paid deposit on four Concorde jet aircraft worth about £4 million each.

*15th April.*—Queensland Alumina Ltd. negotiated loan of £52 million from American banks.

*17th April.*—Commonwealth and State Ministers agreed to spend an additional £260,000 a year for coal utilization research. Minister for Primary Industry announced details of new U.K.—Australia cereals agreement to operate from 1st July, 1964.

*22nd April.*—Australian National Shipping Line to build two £3.75 million ships for the coastal service.

*27th April.*—Maximum trading bank overdraft rate rose by ½ per cent. (to 7 per cent.)

*30th April.*—£10 million Whyalla steel industry expansion programme announced.

1st May.—Plan announced to have 95 per cent. Australian content of Australian manufactured motor vehicles by 1970.

5th May.—Home Savings Grants bill introduced in House of Representatives. Ansett-A.N.A. and T.A.A. each to purchase third £3 million Boeing 727 for delivery in 1965.

14th May.—£40 million Cash Loan opened issued at from £99 per £100 to par with coupons  $4\frac{1}{4}$  per cent. to  $4\frac{3}{8}$  per cent. and periods 3 to 20 years. Undersubscribed £6.3 million.

27th May.—First shipment of oil from Moonie (Queensland) reached Sydney.

1st June.—Savings bank interest on deposits rose by  $\frac{1}{4}$  per cent. (to  $3\frac{1}{4}$  per cent.)

9th June.—Conciliation and Arbitration Commission announced Basic Wage increase of £1 a week. The *Musgrave Range*, 21,400 d.w.t., the largest bulk carrier ever to be built in an Australian shipyard, launched at the B.H.P. Coy. Ltd. shipyard at Whyalla (South Australia).

(NOTE.—Loan Council meeting was not held until 2nd July, 1964. Borrowing approved £290 million.)

## CHRONOLOGICAL TABLE

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### CHRONOLOGICAL TABLE OF CHIEF EVENTS IN AUSTRALIA SINCE 1945

NORES.—In issues of the Year Book up to No. 48 (*see* No. 48, p. 1201), this table covered events back to the establishment of settlement in Australia in 1788. To conserve space, these details have been omitted from the present volume.

For each earlier year, this Table rarely contains more than two or three items; for recent years, however, in order to provide a wide cover of events, etc., it includes a much greater number. Both the nature of the Table and considerations of space render necessary a continual reduction in these items and for more information the reader should therefore consult earlier issues.

#### Year

- 1945 Captain Cook Dock opened, Sydney. *Re-establishment and Employment Act 1945* passed. Australia ratified United Nations Charter. Cessation of hostilities in Europe, 8th May. Cessation of hostilities against Japan, 15th August.
- 1946 Australian National University founded at Canberra. Constitution Alteration Referendum granted powers in respect of social services to Commonwealth.
- 1947 Census of Australia—first since 1933. Australian National Antarctic Research Expedition established scientific research station at Heard Island. First "displaced persons" reached Australia.
- 1948 Forty-hour week effective throughout Australia. Membership of Commonwealth Parliament increased.
- 1949 *Nationality and Citizenship Act 1948* operative. Broadcasting Control Board came into operation. Commencement of Snowy Mountains Hydro-electric Power Scheme. Australia's population reached 8,000,000.
- 1950 Australian forces in vicinity of Korea were placed at disposal of United Nations to assist South Korea. Adult franchise adopted for Victorian Legislative Council.
- 1951 Transfer of Heard Island and Macdonald Islands to Australia. Double dissolution of Commonwealth Parliament, second in history of the Commonwealth (first in 1914). Security Treaty between United States of America, Australia and New Zealand for action in the event of an armed attack in the Pacific. Opening of new Legislative Council of Papua and New Guinea, including representatives of the indigenes.
- 1952 High grade uranium deposits discovered in Northern Territory and South Australia. Severe restrictions imposed on imports and on oversea travel funds.
- 1953 Atomic Energy Commission established. Britain and Australia signed agreement for reciprocity in social services benefits. Commonwealth Court of Conciliation and Arbitration abandoned the system of automatic adjustment of the basic wage in accordance with retail price index numbers.
- 1954 Her Majesty Queen Elizabeth the Second, with H.R.H. the Duke of Edinburgh, made first tour of Australia by reigning sovereign. Australian National Antarctic Research Expedition established research station at Mawson. Australian population census taken. Australia signed Manila treaty pledging collective defence against aggression in South-East Asia and South-West Pacific.
- 1955 First power generated by Snowy Mountains Hydro-electric Authority. Australian population reached 9,000,000. Cocos (Keeling) Islands became Territory under authority of Commonwealth.
- 1956 Amendment to Conciliation and Arbitration Act separated judicial functions from conciliation and arbitration functions.

## Year

- 1957 High Court ruled that interstate vehicles could not be compelled to register, but upheld validity of tax on commercial vehicles, including those engaged in interstate trade, imposed solely for the maintenance of roads. National Capital Development Commission set up to co-ordinate development of Canberra as centre of government.
- 1958 Prime Minister officially opened Australia's first nuclear reactor at Lucas Heights, near Sydney. Christmas Island (Indian Ocean) transferred to Australian Administration. New South Wales Act passed providing for equal pay for male and female workers performing similar tasks.
- 1959 *Annual Holidays Act 1944-1958* provided for three weeks annual holiday for all New South Wales workers. Commonwealth plan for expenditure of £720,000,000 on roads and bridges accepted by Premiers' Conference. Population reached 10,000,000. First major station of Snowy Mountains Scheme commenced operation. Australian Universities Commission constituted. Australia signed Antarctic Treaty at Washington.
- 1960 Provision made for Social Service benefits to be paid to Australian Aborigines. *Commonwealth Banks Act 1959* and *Reserve Bank Act 1959* proclaimed (see p. 830). Goods comprising 90 per cent. of Australia's current imports exempted from licensing provisions. Australia joined International Development Association as foundation member. National Service training ended. Changes made in Constitution of Papua and New Guinea providing for an increase in number of native members of Legislative Council to eleven, including six elected by indigenes. Warragamba and Keepit Dams, New South Wales, opened. Commonwealth Government announced special economic measures designed to counter inflationary trend and safeguard overseas funds.
- 1961 Australia's first guided missile base established at Williamstown (New South Wales). Western Australia announced plans for £10,000,000 iron industry to produce iron for export. *Commonwealth Matrimonial Causes Act 1959* unifying State Acts, became operative (see p. 654). Bank interest rates rose by about 1 per cent. Monash University (Melbourne) opened. Commonwealth Government announced tax concessions to exporters for promotional expenses in developing overseas export markets. New radio telescope, second largest in world, brought into operation at Parkes (New South Wales). Oil discovered in south-west Queensland. Contract let for construction of dam in New Guinea, first to develop hydro-electric potential of the Laloki River. Australian population census taken. Reserve Bank reduced statutory reserve deposits by 1 per cent. to 12½ per cent. Australia sold interest in Tasman Empire Airways Ltd. to New Zealand. Iron ore deposits estimated at 1,800 million tons discovered at Pilbara (Western Australia).
- 1962 Regular services commenced on new standard gauge railway between Melbourne and Sydney. Five-day week for banks introduced in all States except Victoria. Minister for External Affairs announced that Australia would take up \$4 million of United Nations Bonds. Western Australian Premier signed agreement with American companies for 21-year lease to extract and export up to 15 million tons of iron ore from Pilbara deposits. Commonwealth Electoral Act amended to provide for votes for Aborigines. New South Wales Government announced details of £6 million plan for flood mitigation on coastal rivers. Work began on standardization of rail gauge from Kwinana to Kalgoorlie (Western Australia). Co-axial telephone link opened between Melbourne, Canberra and Sydney. Commonwealth Government abolished need for tax clearances for persons leaving Australia for travel overseas. Commonwealth provided £1,765,000 grants to States for assistance to universities in development of training facilities for medical students in teaching hospitals. First production of bauxite ore from Weipa deposits. Act passed by Western Australian parliament giving voting rights to Aborigines. New South Wales Government announced plans to spend £100 million on roads over six years. Foote report on political development of Papua and New Guinea published. Minister for Defence outlined proposals for new defence plan to cost £650 million, providing for increases in the strength of all services. H.R.H. the Duke of Edinburgh opened Seventh British Empire and Commonwealth Games at Perth. First major International Labour Office Conference held in Australia opened in Melbourne. Aborigines exercised voting rights in Northern Territory for first time.

Year

- 1963 Australia ordered four Oberon class submarines from United Kingdom and a third guided missile destroyer from United States. Negotiations between Britain and members of E.E.C. concerning Britain's entry into European Economic Community discontinued. Her Majesty, Queen Elizabeth II and His Royal Highness the Duke of Edinburgh made second Royal Tour of Australia and attended the jubilee celebrations of the founding of Canberra. Commonwealth Committee of Economic Enquiry appointed to investigate broad aspects of the Australian economy. Composition and objectives of commission to inquire into higher education in Papua and New Guinea announced. First meeting of recently formed Australian Water Resources Council. Large underground water supplies discovered near Alice Springs capable of irrigating large areas of farm land. South Australian school leaving age raised to 15 years. Minister for External Affairs attended S.E.A.T.O. Council in Paris. Approval given to agreement for United States to establish, maintain and operate a naval communications station at North West Cape, Western Australia. Commonwealth Treasurer announced details of new decimal currency (see p. 825). Prime Minister announced that Commonwealth would provide finance for standardization of rail link between Broken Hill and Port Pirie. Construction begun of Australian Mint in Canberra. Prime Minister left for talks with United Kingdom, Canada, and United States of America. Australian Consulate-General established in Madrid, Spain. Australia's membership of ECAFE formally confirmed. Prime Minister opened pilot scheme for the Ord River (Western Australia) development scheme. Construction of £15.5 million U.S. Radio Base begun in Western Australia. Contract let for construction of U.S. Space Tracking Station at Tidbinbilla, near Canberra. Australian Embassy established in Argentina. Queensland Main Roads Department announced details of Road Plan, to cost £200 million over 10 years. Western Australian Government signed £78 million contract for the establishment and development of a new iron and steel industry in the State. Minister for External Affairs announced signing of Nuclear Test Ban Treaty. Commonwealth and New South Wales Governments reached agreement on Blowering Dam project. Thai Parliamentary Delegation visited Australia. New South Wales Premier announced that an immediate start would be made on the construction of a fourth University at Ryde. *Uniform Marriage Act 1961* came into effect. Treasurer announced nomenclature and denominations of proposed decimal currency (see p. 826). Lake Burley Griffin (Canberra) dam gates closed. Minister for the Navy announced the placing of a contract for the construction of two submarines in Scotland. Minister for External Affairs left for New York to lead Australian delegation to United Nations Assembly. Prime Minister of Japan paid official visit to Australia. Secretary-General of ELDO made visit of inspection to Woomera rocket range. Treasurer introduced decimal currency legislation into House of Representatives. Prime Minister announced agreement to purchase first supersonic bombers for R.A.A.F. First Trade Mission arrived from Israel. South Australian House of Assembly passed bill ratifying Chowilla Dam agreement with New South Wales, Victoria and the Commonwealth. Minister for National Development announced plans for commencement of second stage (Snowy-Murray section) of Snowy Mountains Hydro-electric Scheme. Australian population reached 11 million. Qantas Empire Airways signed contract for three new 707 jet aircraft. Treasurer issued details of dimension and composition of decimal coins. First Commonwealth award covering officers employed by private banks approved by Arbitration Commission.
- 1964 Australia gave £179,000 to Laos Government to help stabilize economy. Agreement to concluded with United States of America on establishment of meteorological research station at Pearce (Western Australia) R.A.A.F. Base. United States signed £1 million contract for the use of Jindivik pilotless aircraft. Defence Minister announced arrangements for training of Malaysian Army personnel in Australia. Establishment of a new Division of Northern Development approved for Department of National Development. Sydney-Hobart vehicular ferry, *Empress of Australia*, launched by the Hon. Catherine Sidney. 37th ANZAAS Conference held in Canberra. Victorian Bill introduced to amend Companies Act as it affected note issuing companies. First two Australian assembled Mirages handed over to R.A.A.F. Order placed in United States for £7 million destroyer. New South Wales Housing Commission to build

to  
30th  
June

## Year

1964  
*contd.*

£28 million satellite town at Mount Druitt, New South Wales. Carnarvon space tracking station had first assignment. Orders placed with Australian Shipbuilding Board for construction of five tankers for local companies. Australian Defence Mission sent to Malaysia. R.A.N. Destroyer *Voyager* sunk in collision off Jervis Bay with loss of 82 lives. Air pollution controls proclaimed for industry in New South Wales. First general election from common roll in Papua-New Guinea. New South Wales Government employees granted four weeks annual leave. Australian Water Resources Council to seek establishment of network of stream gauging stations throughout Australia. Britain lent destroyer to Australia as interim replacement for *Voyager*. Australia represented as full regional member of ECAFE for the first time at 20th Conference in Teheran. Australian Wool Board offered technical aid to Mainland China. Commonwealth Government announced programme of assistance for schools for teaching of science. Australian Mission to Greece raised to Embassy status. Minister for Supply announced that new Space Tracking and Data Acquisition Station would be built in Orroral Valley (Australian Capital Territory). Child endowment increased for third and subsequent children and full-time student children. Minister for External Affairs announced Australian contribution of £50,000 to Cyprus peace-keeping costs. Commonwealth Bureau of Roads to be set up to make a full and continuous study of the roads problem. First "Caribou" aircraft leave Toronto for delivery to R.A.A.F. Minister for Defence announced £3 million military aid grant to Malaysia. Malaysia-Australia air services agreement signed in Kuala Lumpur. New South Wales Premier officially opened £13 million oil refinery at Kurnell. Moonie to Brisbane oil pipeline opened and Australia's first commercial oil production started. Australian School of Nuclear Technology established at Lucas Heights, near Sydney. Strike by 2,000 Sydney postal workers disrupted mail handling. Third University planned for Melbourne. Australia granted £4.7 million to India-Pakistan Indus Basin Development Fund. Additional naval, army and air-force units made available for service in Malaysia. Australian National Shipping Line to build two £3.75 million ships for the coastal service. Russian whaling fleet paid five-day visit to Melbourne. Soviet Trade Mission stationed in Sydney. Australian Embassy opened in Vienna. Contract signed for £2.7 million Kingsford-Smith Airport runway extension. Advance party of army engineers left for Sabah (North Borneo). Australia purchased £3 million worth of Bloodhound missiles. Northern Territory Legislative Council passed legislation removing discrimination against Aborigines. Police contingent left for service with United Nations force in Cyprus. Minister for External Affairs visited Indonesia for talks with President Sukarno. Blue Streak rocket successfully launched at Woomera. New 64-member House of Assembly for Papua-New Guinea opened. Contract let for construction of jet-port at Tullamarine (Victoria).

# STATISTICAL SUMMARY: AUSTRALIA

NOTE.—(1) In most cases where figures are available back to 1861, these were shown in Year Book No. 39, pp. xviii-xxix.

(2) The statistics in this summary relate in general to the periods shown in the table headings; where the statistics relate to other periods, this is indicated in the footnotes.

Item	Year ended 30th June—							
	1902	1912	1922	1932	1942	1952	1962	1964
<b>DEMOGRAPHY(a)—</b>								
Population(b) { '000 males ..	2,005	2,382	2,799	3,333	3,599	4,311	5,355	5,557
{ '000 females ..	1,820	2,192	2,712	3,220	3,545	4,217	5,249	5,466
{ '000 persons ..	3,825	4,574	5,511	6,553	7,144	8,528	10,604	11,023
Natural increase .. '000	56.6	74.3	82.1	61.9	63.3	111.5	151.0	140.8
Net oversea migration .. '000	3.0	74.4	17.5	-10.1	5.2	111.4	61.5	71.6
Marriages .. '000	28	39	47	39	75	77	77	81
Divorces(d) and judicial separations .. '000	7.3	8.8	8.6	6.0	10.6	9.2	7.3	7.4
Births .. '000	398	509	1,490	1,969	3,351	7,330	6,711	7,446
{ rate(c) ..	103	122	136	119	135	193	240	236
Deaths .. '000	27.2	27.2	25.0	18.2	18.9	23.0	22.9	21.6
{ rate(c) ..	46	48	54	57	71	82	89	95
Infant deaths .. '000	12.2	10.7	9.9	8.7	10.0	9.7	8.5	8.7
{ rate(e) ..	10.7	8.4	9.0	5.0	5.3	4.9	4.7	4.6
{ rate(e) ..	103.6	68.5	65.7	42.1	39.7	25.2	19.5	19.6
<b>WAGES (ADULT MALES)(b)—</b>								
Minimum weekly wage rate index numbers(f) ..	n.a.	n.a.	n.a.	n.a.	38.5	85.8	129.5	132.8
<b>PRODUCTION—</b>								
<b>Agricultural(g)—</b>								
Wheat .. { area mill. acs.	5.1	7.4	9.7	14.7	12.0	10.4	14.7	16.4
{ yield mill. bus.	39	72	129	191	167	160	247	331
{ av. yield bus.	7.5	9.6	13.3	12.9	13.9	15.4	16.8	20.2
{ area '000 acs.	461	617	733	1,085	1,460	2,365	3,097	3,292
Oats .. { yield mill. bus.	9.8	9.6	12.1	15.2	22.3	34.5	55.1	68.8
{ av. yield bus.	21.2	15.5	16.6	14.0	15.3	14.6	17.8	20.9
{ area '000 acs.	75	116	299	342	784	1,118	2,383	2,027
Barley .. { yield mill. bus.	1.5	2.1	6.1	6.3	18.0	21.9	41.5	39.6
{ av. yield bus.	20.4	17.7	20.4	18.4	23.0	19.6	17.4	19.4
{ area '000 acs.	295	340	305	269	301	170	211	209
Maize .. { yield mill. bus.	7.0	8.9	7.8	7.1	7.4	4.0	7.3	7.5
{ av. yield bus.	23.9	26.3	25.7	26.2	24.7	23.7	34.7	35.7
{ area '000 acs.	1,688	2,518	2,995	2,635	2,758	1,549	2,274	2,720
Hay .. { yield '000 tons	2,025	2,868	3,902	3,167	3,575	2,345	3,693	4,717
{ av. yield tons	1.20	1.14	1.30	1.20	1.30	1.51	1.62	1.73
{ area '000 acs.	110	130	149	145	99	118	94	114
Potatoes .. { yield '000 tons	323	301	388	397	333	509	526	667
{ av. yield tons	2.94	2.31	2.60	2.74	3.35	4.31	5.57	5.86
{ area '000 acs.	87	101	128	242	255	282	387	402
Sugar-cane(h) .. { yield '000 tons	1,368	1,682	2,437	4,213	5,154	5,327	9,577	12,736
{ av. yield tons	15.7	16.7	19.0	17.4	20.3	18.9	24.8	31.7
{ area '000 acs.	64	61	92	115	130	136	133	134
Vineyards .. { wine mill. gals.	5.3	5.0	8.5	14.2	15.6	35.3	41.7	29.9
Total Area of Crops .. mill. acs.	8.4	12.1	15.4	21.2	20.5	19.7	29.6	32.1
<b>Pastoral, dairying, etc.—</b>								
Livestock(i) { horses mill.	1.6	2.3	2.4	1.8	1.6	0.9	0.6	0.5
{ cattle ..	8.5	11.8	14.4	12.3	13.6	14.9	18.0	19.0
{ sheep ..	72	97	86	111	125	118	158	165
{ pigs ..	0.9	1.1	1.0	1.2	1.4	1.0	1.7	1.5
Wool(j) .. { mill. lb.	(a) 539	(a) 798	723	1,007	1,167	1,080	1,699	1,782
Butter .. { '000 tons	(a) 46	(a) 95	(a) 119	175	168	135	199	204
Cheese .. { ..	(a) 5.3	(a) 7.1	(a) 14.6	14.0	30.1	40.6	55.3	57.7
<b>Meat(k)—</b>								
Beef and veal ..			339	350	534	582	791	970
Mutton and lamb ..			218	307	372	282	587	583
Pigmeat ..			51	70	121	85	120	111
Total Meat ..			608	727	1,027	949	1,498	1,664

(a) Year ended previous December. (b) At 31st December of previous year. (c) Number per 1,000 of mean population. (d) Decreases made absolute, including decrees for nullity of marriage. (e) Number per 1,000 live births. (f) New series. Base: Year 1954 = 100. Excludes rural industry. (g) Season ended in year shown. (h) Cane cut for crushing. (i) As at 31st December of previous year for years to 1942, at 31st March thereafter. (j) In terms of greasy. (k) Carcass weight in terms of fresh meat. (l) Except for wheat, crop figures shown are for 1963 season.



## STATISTICAL SUMMARY: AUSTRALIA—continued

NOTE.—See headnotes on page 1293.

Item	Year ended 30th June—								
	1902	1912	1922	1932	1942	1952	1962	1964	
<b>PRODUCTION—continued</b>									
Mineral(a)(b)—									
Copper(c) .. '000 tons	n.a.	n.a.	n.a.	13.5	20.9	18.1	95.6	112.7	
Gold(c) .. '000 fine oz.	3,300	2,484	758	595	1,497	896	1,076	1,023	
Lead(c) .. '000 tons	n.a.	222.0	57.7	162.6	275.5	212.0	269.7	410.3	
Zinc(c) .. (d)		190.3	20.7	97.5	170.0	189.2	311.2	351.4	
Black coal .. 'mill. tons	6.9	10.5	12.8	8.4	14.2	17.6	24.0	24.9	
Brown coal .. " "	..	(d)	0.1	2.2	4.6	7.8	16.3	18.5	
<b>Forestry—</b>									
Sawn output of Australian grown timber mill. sup. ft.	(a) 452	(a) 605	590	237	914	1,393	1,352	1,456	
<b>Factories—</b>									
Number of factories '000								(j)	
Persons employed .. "	(e)	{	14.5	18.0	21.7	27.0	45.8	58.5	59.1
Salaries and wages paid £m.			312	379	337	725	978	1,121	1,167
Net value of production(f) £m.			28	68	56	180	612	1,143	1,222
Chemicals, etc. .. "	} n.a.	}	1.1	3.2	7.9	24.8	63.7	182.2	205.7
Industrial metals, etc. .. "			12.0	23.6	22.8	119.9	413.1	884.7	978.9
Textiles, etc. .. "			7.5	19.2	6.9	21.0	56.6	105.6	116.9
Clothing .. "			11.1	23.6	81.1	126.2	133.2		
Food, etc. .. "			11.8	27.2	28.7	53.2	141.1	297.7	318.5
Paper, etc. .. "			4.2	9.0	9.6	17.1	68.2	163.5	175.5
All Groups .. "	29.1	47.5	112.5	111.0	316.5	1,024.9	2,194.9	2,398.2	
Value of land and buildings .. "	} n.a.	}	32.5	67.3	106.6	156.3	360.2	1,403.8	1,502.5
Value of plant and machinery, .. "			31.4	78.1	121.5	169.2	412.5	1,524.8	1,642.2
<b>Net value of production(g)—</b>									
Agriculture .. £m.	23.8	38.8	81.9	49.7	64.0	246.7	366.5	415.2	
Pastoral .. "	27.2	52.7	75.1	43.0	85.4	400.5	481.3	539.3	
Dairying .. "	7.6	16.1	35.3	22.6	34.3	103.8	136.5	153.7	
Poultry .. "	2.0	4.0	9.0	5.7	6.5	31.5	24.9	26.4	
Bee-farming .. "	0.1	0.1	0.1	0.1	0.4	0.8	1.6	1.5	
Total, Rural .. "	60.7	111.7	201.4	121.1	190.6	783.3	1,010.8	1,136.1	
Trapping .. "	n.a.	n.a.	n.a.	1.5	5.0	6.7	5.9	5.7	
Forestry .. "	} 2.8	}	4.8	9.1	3.9	10.2	37.9	50.9	51.8
Fishing and whaling .. "			1.1	1.4	1.4	1.8	5.7	14.3	15.3
Mining and quarrying .. "			22.0	23.3	20.0	13.5	33.4	97.2	137.2
Total, Non-rural .. "	24.8	29.2	30.5	20.3	50.4	147.5	208.4	218.3	
Total, Primary .. "	85.5	140.9	231.9	141.4	241.0	930.8	1,219.2	1,354.4	
Factories(f) .. "	29.1	47.5	112.5	111.0	316.5	1,024.9	2,194.9	2,398.2	
Grand Total .. "	114.6	188.4	344.4	252.4	557.5	1,955.7	3,414.1	3,752.6	
<b>OVERSEA TRADE—</b>									
Imports .. £m. f.o.b.	(a) 38	(a) 61	94	52	174	1,053	885	1,188	
Exports .. " "	50	79	128	108	169	675	1,077	1,393	
<b>Principal exports(h)—</b>									
Wool .. { mill. lb.(i) ..	529	734	946	903	938	1,036	1,460	1,509	
.. { £m. f.o.b. ..	15	26	48	32	58	323	373	481	
Wheat .. { '000 tons ..	543	1,477	2,677	3,413	598	1,685	5,442	6,801	
.. { £m. f.o.b. ..	2.8	9.6	28.6	19.2	4.6	55.3	142.4	181.2	
Flour .. { '000 short tons	97	176	360	611	414	789	579	684	
.. { £m. f.o.b. ..	0.6	1.4	5.5	3.8	4.2	33.0	17.4	21.1	
Butter .. { mill. lb. ..	35	102	127	202	130	25	175	197	
.. { £m. f.o.b. ..	1.4	4.6	8.0	10.3	8.1	4.6	23.5	27.4	
Hides and skins £m. f.o.b. ..	1.3	3.2	3.1	2.3	6.0	17.1	32.2	45.9	

(a) Year ended previous December. (b) Breaks in the continuity of the series occurred in 1931 and 1951. (c) Mine production, i.e., metal content of minerals produced. (d) Less than 0.05. (e) Owing to variation in classification effective comparison is impossible. (f) For definition see page 144. (g) Gross value from 1901 to 1921–22. Prior to 1922, figures are for years ended previous December. For definitions of gross and net value see page 1227. (h) Australian produce except gold, which includes re-exports. (i) In terms of greasy. (j) Factory figures and net value of production are for 1962–63.

STATISTICAL SUMMARY: AUSTRALIA—continued

NOTE.—See headnotes on page 1293.

Item	Year ended 30th June—							
	1902	1912	1922	1932	1942	1952	1962	1964
<b>OVERSEA TRADE—continued</b>								
<b>Principal exports(b)—continued</b>								
Meats .. .. .	2.6	4.3	5.5	6.4	14.1	35.5	89.7	121.9
Fruit(c) .. .. .	0.2	0.5	3.0	4.8	4.0	19.5	35.6	44.8
Sugar .. .. .	(d)	(d)	(d)	2.5	2.6	6.9	33.9	78.3
Gold .. .. .	14.3	12.0	3.5	11.9	9.2	7.0	9.0	7.1
Silver and lead(e) .. .. .	2.3	3.2	2.7	2.9	7.4	32.1	23.5	33.2
Ores and concentrates(f) .. .. .	(d)	3.7	0.8	0.2	1.3	17.0	20.2	21.0
<b>Principal imports</b>								
Vegetable foodstuffs, etc. .. .. .	3.6	3.7	4.0	2.6	6.1	25.0	28.1	30.8
Apparel, etc. .. .. .	10.9	16.2	31.0	15.4	32.7	203.6	104.2	117.7
Oil, etc. .. .. .	1.2	1.6	4.7	5.5	16.2	87.5	109.9	126.5
Metals, etc. .. .. .	7.8	14.0	22.8	7.4	71.8	393.4	315.3	473.5
Rubber, etc. .. .. .	0.5	1.4	1.7	0.8	3.2	34.0	17.8	23.2
Paper, etc. .. .. .	1.6	2.6	4.4	4.4	4.3	68.8	57.9	71.1
<b>TRANSPORT AND COMMUNICATION—</b>								
<b>Shipping—</b>								
Oversea vessels } no. .. .. .	4,028	4,174	3,111	3,057	2,544	4,136	7,210	6,762
entrances and } mill. tons	6.5	10.0	9.1	11.4	10.8	18.2	37.7	37.6
Oversea cargo—								
Discharged } mill. tons(g)		n.a.	2.4	3.0	5.5	14.4	20.3	22.9
Shipped } " (g)		n.a.	5.8	6.7	4.2	5.7	18.7	17.0
Interstate vessels } no. .. .. .	n.a.	9,605	9,782	7,957	9,100	7,524	10,127	9,866
entrances and } mill. tons		13.1	12.8	11.1	12.9	15.8	19.7	19.8
clearances } .. .. .								
Interstate cargo shipped } mill. tons(g)		n.a.	5.5	4.0	10.0	9.0	14.8	15.4
Government railways—								
Route-miles (j) .. .. .	12.8	16.8	23.5	27.0	27.2	26.8	25.6	25.5
Passenger-journeys .. .. .	115	228	335	303	475	501	443	442
Goods and livestock carried } mill. tons	15.5	25.5	31.5	26.1	38.9	44.3	55.6	55.9
Train-miles run } mill.	38.2	55.2	56.1	63.8	88.5	93.4	92.6	92.9
<b>Tramways and omnibuses—</b>								
Passenger-journeys—								
Trams and trolley-buses mill.	n.a.	360	569	589	874	663	265	250
Omnibuses(k) .. .. .		n.a.	n.a.	n.a.	193	356	453	462
Motor vehicles on the register(j) .. .. .								
Cars .. .. .		n.a.	102	420	451	1,026	2,203	2,304
Commercial vehicles .. .. .				96	251	585	q 817	q 830
<b>Civil aviation (internal)—</b>								
Plane-miles flown .. .. .				2.5	7.8	41.8	41.2	43.7
Passengers carried .. .. .				57	152	1,829	2,666	2,833
Passenger-miles .. .. .				n.a.	76	722	1,119	1,221
Freight car- <sup>r</sup> '000 short tons } .. .. .				0.1	1.2	57.5	57.2	59.4
ried } mill. ton-miles				n.a.	0.9	26.7	26.1	28.3
<b>Postal—</b>								
Postal matter dealt with(l) .. .. .								
mill. articles	365	680	778	887	1,124	1,482	2,101	2,203
Telegrams and cablegrams mill.	9.9	13.3	16.8	13.9	26.1	29.8	21.6	21.8
<b>Telephones—</b>								
Instruments .. .. .	29	103	259	485	739	1,301	2,382	2,522
Lines .. .. .	25	85	196	364	531	928	1,719	m 1,919
Calls—trunk .. .. .	n.a.	n.a.	14.0	28.9	45.3	69.4	76.5	84.5
local .. .. .	n.a.	n.a.	221	369	664	968	1,650	1,609
Broadcast listeners' licences(j)'000 .. .. .			(n) 36	369	1,320	1,961	2,220	m 2,302
Television viewers' licences(j)'000 .. .. .							1,424	m 1,882
<b>PUBLIC FINANCE—</b>								
<b>Commonwealth—</b>								
<b>Consolidated Revenue Fund—</b>								
Revenue .. .. .	(l) 11	(l) 21	64	72	210	1,017	1,642	1,905
Expenditure .. .. .	4	15	64	72	210	1,017	1,642	1,905
Net loan fund expenditure(o) .. .. .	9	1	5	4	213	55	91	113
Taxation collections .. .. .		16	50	54	180	934	1,417	1,599

(a) Year ended previous December. (b) Australian produce except gold, which includes re-exports. (c) Excludes fruit juices. (d) Less than 0.05. (e) Includes concentrates. (f) Excludes lead and silver-lead ores and concentrates. See note (e). (g) Tons weight plus tons measurement. (h) 1962-63. (i) Year ended 30th June. (j) At end of period. (k) Government and municipal only. (l) Letters, post-cards, letter-cards, newspapers, packets, parcels and registered articles. (m) 1963-64. (n) 1923-24. (o) Loan expenditure on works, services, etc. (p) Cars and station wagons. (q) Utilities, vans, trucks, etc. (r) 31st December, 1962.

## STATISTICAL SUMMARY: AUSTRALIA—continued

NOTE.—See headnotes on page 1293.

Item	Year ended 30th June—								
	1902	1912	1922	1932	1942	1952	1962	1964	
<b>PUBLIC FINANCE—continued</b>									
State—									
Consolidated Revenue Funds—									
Revenue ..	£m.	28	41	85	100	152	388	805	847
Expenditure ..	"	29	41	87	121	149	392	808	848
Net loan expenditure(b)	"	9	16	34	6	8	198	198	203
Taxation collections ..	"	3	5	18	33	57	63	177	197
Govt. securities on issue(c)—									
Commonwealth ..	£m.	..	6	354	319	670	1,919	1,560	1,586
State ..	"	213	279	519	789	1,019	1,496	2,981	3,345
Total ..	"	213	285	873	1,108	1,689	3,415	4,541	4,931
Overseas ..	"	n.a.	194	412	522	656	556	712	772
In Australia ..	"	n.a.	91	461	586	1,033	2,859	3,829	4,159
<b>PRIVATE FINANCE—</b>									
Commonwealth note issue (f) £m.	"	..	8	54	51	103	303	431	437
All cheque-paying banks—									
Advances(g)	"	94	119	182	261	324	817	1,132	1,284
Deposits(g)	"	93	150	289	319	483	1,353	1,941	2,327
Bank clearings(h)	"	338	662	1,702	1,581	2,828	12,160	25,108	32,364
Savings bank deposits(c)	"	31	59	154	198	274	892	1,735	2,238
Life insurance(h)(i)—									
Ordinary—									
Policies ..	'000	414	484	730	871	1,340	2,554	4,202	4,290
Sum assured ..	£m.	108	109	181	285	463	1,212	4,372	4,927
Industrial—									
Policies ..	'000	236	467	973	1,550	2,780	3,843	3,199	3,076
Sum assured ..	£m.	5	10	30	67	127	254	353	372
Total—									
Policies ..	'000	650	951	1,703	2,421	4,120	6,397	7,401	7,366
Sum assured ..	£m.	113	119	211	352	590	1,466	4,725	5,299
<b>SOCIAL STATISTICS—</b>									
Commonwealth social services—									
Age and invalid pensions—									
Pensioners ..	'000(c)	..	90	144	256	336	420	691	725
Amount paid ..	£m.	..	2.2	5.4	11.1	19.3	59.8	180.2	199.9
Child endowment—									
Endowed children ..	'000(c)	..	..	..	..	910	2,518	3,420	3,510
Endowment paid ..	£m.	..	..	..	..	11.3	46.6	66.4	84.4
Total Commonwealth health and social services(k) £m.									
..	£m.	..	2.2	6.1	11.5	30.9	137.6	365.2	416.3
War pensions									
..	'000(c)	..	..	225	274	220	525	670	669
..	£m.	..	..	7.0	7.4	7.5	31.8	61.9	77.4
Service pensions									
..	'000(c)	..	..	..	..	14	17	58	65
..	£m.	..	..	..	..	0.6	1.8	9.7	12.1
State social services(l)—									
Education(h)—									
Government schools—									
Schools ..	'000	7.0	8.0	9.4	10.1	9.5	7.6	7.9	7.9
Staff ..	"	14.5	17.0	26.1	33.8	32.1	36.7	60.0	67.5
Students ..	"	638	639	819	937	887	1,013	1,663	1,756
Non-government schools—									
Schools ..	'000	2.5	1.9	1.7	1.8	1.9	1.9	2.1	2.2
Staff ..	"	8.3	7.8	8.8	10.0	11.4	13.3	18.1	20.1
Students ..	"	149	161	199	221	257	326	525	550
Universities—									
Number ..	"	4	5	6	6	8	10	10	10
Staff(m) ..	"	n.a.	249	482	703	1,416	3,132	3,901	4,677
Students ..	'000	1.8	3.4	8.0	9.8	13.9	31.7	57.7	75.1
Public hospitals—									
Number ..	"	285	355	404	513	566	675	739	746
Staff—medical ..	'000	n.a.	1.1	1.5	3.2	3.9	6.9	10.5	11.4
nursing ..	"	n.a.	5.1	6.8	9.3	15.4	24.6	39.1	40.2
In-patients, cases treated	"	(n)	91	134	215	371	595	896	1,278
<b>POLICE AND PRISONS(h)—</b>									
Police ..	'000	5.8	6.4	6.9	8.6	9.7	12.3	15.9	16.7
Prisons ..	"	n.a.	104	91	85	70	69	75	73
Prisoners ..	'000	4.3	3.1	2.9	4.2	3.2	4.8	7.2	7.5

(a) 1962-63. (b) Loan expenditure on works, services, etc. (c) At 30th June.  
 (d) Expressed in Australian currency equivalents at ruling rates of exchange. (e) 1963-64. (f) At end of June.  
 (g) Figures are for the June quarter. (h) Year ended previous December. (i) Existing business in Australia. (j) 1962. (k) Excludes war and service pensions. (l) Includes Northern Territory and Australian Capital Territory. (m) Teaching and research staff. Includes part-time until 1952, thereafter full-time only. (n) South Australia includes Adelaide Hospital only. (o) 1963. (p) Year ended previous 30th June.

## APPENDIX

NOTE.—Some recent information which has come to hand since the various chapters were sent to press is given hereunder in summarized form. For further or more detailed information, and for the latest available statistics, reference should be made to other publications issued by this Bureau, e.g., the *Monthly Review of Business Statistics*, the *Quarterly Summary of Australian Statistics*, the *Digest of Current Economic Statistics* and the various mimeographed statements issued on particular subjects.

### CHAPTER I. DISCOVERY, COLONIZATION AND FEDERATION OF AUSTRALIA

Areas of States and Territories.—Revised statistics for the areas of the Australian Territories have recently been made available by the Director of National Mapping. The only revision affecting the area of Australia is that relating to the Northern Territory, whose area has been revised from 523,620 square miles to 520,280 square miles, a decrease of 3,340 square miles. In consequence, the area of Australia has been reduced from 2,971,081 square miles to 2,967,741 square miles. *These revisions, which will affect rates based on areas which appear in various parts of this Year Book, have not been taken into account in this issue, but will be incorporated in the next issue.* The table following shows the latest figures available for the areas of the States and Territories of Australia.

AUSTRALIA: AREAS OF STATES AND TERRITORIES

State or Territory	Area	Percentage of total area	External Territories	Area
	Sq. miles			Sq. miles
New South Wales .. ..	309,433	10.43	Norfolk Island .. ..	(a) 14
Victoria .. ..	87,884	2.96	Papua—Mainland .. ..	83,325
Queensland .. ..	667,000	22.48	Islands .. ..	2,775
South Australia .. ..	380,070	12.80	Total .. ..	86,100
Western Australia .. ..	975,920	32.89	New Guinea (Trust Territory)—Mainland .. ..	69,095
Northern Territory .. ..	520,280	17.53	Islands .. ..	23,065
Australian Capital Territory .. ..	939	0.03	Total .. ..	92,160
<i>Mainland</i> .. ..	<i>2,941,526</i>	<i>99.12</i>	Nauru .. ..	(a) 8½
Tasmania .. ..	26,215	0.88	Cocos (Keeling) Islands .. ..	(a) 5½
			Christmas Island .. ..	(a) 52
<b>Australia</b> .. ..	<b>2,967,741</b>	<b>100.00</b>		

(a) Approximate.

In addition to the Territories listed above, there are: the Territory of Ashmore and Cartier Islands—Ashmore Reef, area approximately 60 square miles (to the limit of the reef), Cartier Islands, area approximately 17 square miles (to the limit of the reef); the Territory of Heard and McDonald Islands—Heard Island, approximately 27 miles long and 13 miles wide, McDonald Islands, small, rocky and precipitous; and the Australian Antarctic Territory.

## CHAPTER II. PHYSIOGRAPHY

## § 2. Climate and Meteorology of Australia

**Rainfall: Australian Capital Cities, p. 49.**—Rainfall recorded in Australian capital cities during 1963 was as follows:—Perth, 39.14 ins.; Darwin, 52.46 ins.; Adelaide, 24.43 ins.; Brisbane, 49.09 ins.; Sydney, 80.11 ins.; Canberra, 25.37 ins.; Melbourne, 29.04 ins.; Hobart, 15.51 ins. The corresponding numbers of rain days were, respectively, 140, 109, 118, 134, 169, 141, 149 and 129.

## CHAPTER III. GENERAL GOVERNMENT

## § 3. Administration and Legislation

**Commonwealth Ministries, p. 75.**

The Menzies Ministry was reconstituted as from 13th June, 1964, as follows.

- |   |  |
|---|--|
| * <i>Prime Minister</i> —<br>THE RT. HON. SIR ROBERT MENZIES,<br>K.T., C.H., Q.C., M.P. (Vic.).   | <i>Minister for Shipping and Transport</i> —<br>THE HON. G. FREETH, M.P. (W.A.).                               |
| * <i>Minister for Trade and Industry</i> —<br>THE RT. HON. J. McEWEN, M.P. (Vic.).  | <i>Minister for Immigration</i> —<br>THE HON. H. F. OPPERMAN, O.B.E., M.P.<br>(Vic.)                           |
| * <i>Treasurer</i> —<br>THE RT. HON. H. E. HOLT, M.P. (Vic.).   | <i>Minister for Social Services</i> —<br>THE HON. H. S. ROBERTON, M.P.<br>(N.S.W.).                            |
| * <i>Minister for External Affairs</i> —<br>THE HON. P. M. C. HASLUCK, M.P.<br>(W.A.).  | <i>Minister for Repatriation</i> —<br>THE HON. R. W. C. SWARTZ, M.B.E.,<br>E.D., M.P. (Qld.).                  |
| * <i>Minister for Labour and National Service<br/>and Vice-President of the Executive<br/>Council</i> —<br>THE HON. W. McMAHON, M.P. (N.S.W.).  | <i>Attorney-General</i> —<br>THE HON. B. M. SNEDDEN, M.P. (Vic.).  |
| * <i>Minister for Primary Industry</i> —<br>THE HON. C. F. ADERMANN, M.P. (Qld.).   | <i>Minister for Territories</i> —<br>THE HON. C. E. BARNES, M.P. (Qld.).                                       |
| * <i>Minister for Defence</i> —<br>SENATOR THE HON. S. D. PALTRIDGE<br>(W.A.).  | <i>Minister for Housing</i> —<br>THE HON. L. H. E. BURY, M.P. (N.S.W.).  |
| * <i>Minister for Health</i> —<br>SENATOR THE HON. H. W. WADE (Vic.).   | <i>Minister for the Army and Assisting the<br/>Treasurer</i> —<br>THE HON. A. J. FORBES, M.C., M.P.<br>(S.A.). |
| * <i>Minister for Supply</i> —<br>THE HON. A. FAIRHALL, M.P. (N.S.W.).  | <i>Minister for the Interior</i> —<br>THE HON. J. D. ANTHONY, M.P. (N.S.W.).                                   |
| * <i>Minister for Civil Aviation</i> —<br>SENATOR THE HON. N. H. D. HENTY (Tas.).   | <i>Minister for the Navy</i> —<br>THE HON. F. C. CHANEY, A.F.C., M.P.<br>(W.A.).                               |
| * <i>Postmaster-General</i> —<br>THE HON. A. S. HULME, M.P. (Qld.).   | <i>Minister for Air</i> —<br>THE HON. P. HOWSON, M.P. (Vic.).  |
| * <i>Minister for National Development</i> —<br>THE HON. D. E. FAIRBAIRN, D.F.C., M.P.<br>(N.S.W.).   | <i>Minister for Customs and Excise</i> —<br>SENATOR THE HON. K. M. ANDERSON<br>(N.S.W.).                       |
| <i>Minister for Works, and under the Prime<br/>Minister, Minister-in-Charge, Common-<br/>wealth Activities in Education and Re-<br/>search</i> —<br>SENATOR THE HON. J. G. GORTON (Vic.). |  |

\* Minister in the Cabinet.

## State Ministers, p. 76.

(i) *New South Wales*. As from 30th April, 1964, following the resignation of the Hon. R. J. Heffron, M.L.A., the Hon. J. B. Renshaw, M.L.A., became Premier, Treasurer, and Minister for Industrial Development and Decentralization. The Minister for Local Government and Highways, the Hon. P. D. Hills, M.L.A., became Deputy Premier, and the Hon. T. P. Murphy, M.L.A., was appointed as Assistant Minister.

(ii) *Victoria*. The Bolte Ministry, as from 31st July, 1964, was reconstituted as follows.

<i>Premier and Treasurer—</i> THE HON. H. E. BOLTE, M.P.	<i>Minister of Transport and a Vice-President of the Board of Land and Works—</i> THE HON. E. R. MEAGHER, M.B.E., E.D., M.P.
<i>Chief Secretary and Attorney-General—</i> THE HON. A. G. RYLAH, E.D., M.P.	<i>Minister for Local Government—</i> THE HON. R. J. HAMER, M.L.C.
<i>Minister for Agriculture and a Vice-President of the Board of Land and Works—</i> THE HON. G. L. CHANDLER, C.M.G., M.L.C.	<i>Commissioner of Crown Lands and Survey, Minister of Soldier Settlement, Minister for Conservation, and President of the Board of Land and Works—</i> THE HON. J. C. M. BALFOUR, M.P.
<i>Minister of Housing and Minister of Forests—</i> THE HON. L. H. S. THOMPSON, M.L.C.	<i>Minister of Water Supply and Minister of Mines—</i> THE HON. T. A. DARCY, M.P.
<i>Minister of Education—</i> THE HON. J. S. BLOOMFIELD, M.P.	<i>Assistant Minister of Education—</i> THE HON. J. F. ROSSITER, M.P.
<i>Minister of Labour and Industry and Minister of Electrical Undertakings—</i> THE HON. G. O. REID, M.P.	<i>Minister of Immigration—</i> THE HON. V. F. WILCOX, M.P.
<i>Commissioner of Public Works and a Vice-President of the Board of Land and Works—</i> THE HON. M. V. PORTER, M.P.	<i>Minister of State Development—</i> THE HON. V. O. DICKIE, M.L.C.
<i>Minister of Health—</i> THE HON. R. W. MACK, M.L.C.	

(iii) *Queensland*. Following on the death of the Hon. H. W. Noble, M.L.A., the Hon. S. D. Tooth was appointed as Minister for Health on 14th April, 1964.

(iv) *Tasmania*. Following the 1964 elections the ministry was reconstituted from 13th May, 1964, by the inclusion of the Hon. B. K. Miller, M.L.C., in place of the Hon. J. B. Connolly, M.L.C., and the Hon. M. G. Everett, Q.C., in place of the Hon. W. D. McNeil.

**Parliamentary Salaries, p. 66.**—As from October, 1964, basic annual salaries of members were increased to £2,300 in the Tasmanian Parliament and £3,500 in the Commonwealth Parliament. Electorate allowances were increased also to range from £300 to £925 for Tasmania and from £1,050 to £1,300 for the Commonwealth.

## CHAPTER IV. LAND TENURE AND SETTLEMENT

## § 3. Alienation and Occupation of Crown Lands

*Tasmania, p. 92 and Summary, p. 93.*—Revised land tenure figures for Tasmania as at 30th June, 1962, together with the figures for Australia incorporating the consequent adjustments, are shown below.

## ALIENATION AND OCCUPATION OF CROWN LANDS, 1962

State or Territory	Private lands				Crown lands				Total area '000 acres
	Alienated		In process of alienation		Leased or licensed		Other		
	'000 acres	Per cent.	'000 acres	Per cent.	'000 acres	Per cent.	'000 acres	Per cent.	
Tasmania (a)	6,417	38.2	197	1.2	1,497	8.9	8,667	51.7	16,778
Australia (b)	165,404	8.7	28,045	1.5	1,048,199	55.1	659,844	34.7	1,901,492

(a) 30th June, 1962.  
on page 1297.

(b) Takes no account of revision of Northern Territory area figures referred to

## CHAPTER VI. MANUFACTURING INDUSTRY

## § 1. General

Factory Development, p. 146.—The following table gives a summary of operations in manufacturing industries during 1962–63.

## FACTORIES: SUMMARY, 1962-63

Particulars		N.S.W.	Vic.	Q'land	S. Aust.	W. Aust.	Tas.	Aust.
Factories . . . . .	No.	23,729	17,500	5,895	5,766	4,492	1,764	59,146
Persons employed(a) . . . . .	"	475,249	397,156	104,998	105,265	53,435	30,755	1,166,858
Salaries and wages paid(b) £'000	"	513,608	418,550	97,915	110,034	49,940	32,419	1,222,466
Value of power, fuel, light, etc., used . . . . .	"	98,755	51,761	17,599	16,036	10,860	7,218	202,229
" materials used . . . . .	"	1,314,824	988,885	356,864	251,430	139,878	78,038	3,129,919
" production(c) . . . . .	"	1,037,443	801,468	190,483	189,571	108,211	71,016	2,398,192
" output . . . . .	"	2,451,022	1,842,114	564,946	457,037	258,949	156,272	5,730,340
" land and buildings . . . . .	"	690,036	475,802	96,742	106,482	51,428	81,959	1,502,449
" plant and machinery . . . . .	"	719,361	500,344	140,292	146,804	66,318	69,079	1,642,198

(a) Average over whole year; includes working proprietors. (b) Excludes amounts drawn by working proprietors. (c) Value added in process of manufacture (i.e., value of output less value of materials and fuel used).

## § 8. Value of Production, etc.

Value of Production, p. 169.—The values of production (£'000) in Australia for the various classes of industry in 1962–63 were as follows:—

I., 64,953; II., 50,050; III., 205,688; IV., 978,945; V., 8,623; VI., 116,892; VII., 20,130; VIII., 133,168; IX., 318,458; X., 95,179; XI., 34,994; XII., 175,457; XIII., 41,339; XIV., 2,181; XV., 49,883; XVI., 102,252; Total, all classes, 2,398,192.

## § 10. Principal Factory Products, pp. 175-82

The following table provides an abbreviated list of commodities and the quantities produced in factories in Australia during 1962–63 and 1963–64 (preliminary figures). Figures for 1962–63 may include revisions of figures shown earlier in this Year Book.

**QUANTITY OF PRINCIPAL ARTICLES PRODUCED IN FACTORIES:  
AUSTRALIA**

Article	1962-63	1963-64 p	Article	1962-63	1963-64 p
Acid, sulphuric .. '000 tons	1,256	1,429	Meat, canned(f) .. mill. lb.	95.1	99.2
Beer .. .. mill. gals.	249	(a) 270	Motor bodies (excl. caravans, trailers, etc.) '000	370	403
Biscuits .. .. mill. lb.	185.2	197.1	Motor chassis (all types) '000	365	401
Blankets .. .. thousands	1,845	2,187	Newsprint .. .. '000 tons	90.2	92.0
Bricks, clay .. .. millions	1,056	1,240	Paints, ready mixed and enamels .. '000 gals.	13,788	15,262
Cement, portland .. '000 tons	2,942	3,322	Preserves—		
Cloth, woven, woollen (b) .. mill. sq. yds.	28.3	23.6	Fruit .. .. mill. lb.	430.6	468.2
Confectionery—			Vegetables .. .. " "	129.3	140.9
Chocolate .. .. mill. lb.	83.7	92.5	Refrigerators, domestic .. .. thousands	206.3	207.1
Other .. .. " "	98.2	100.6	Soap .. .. '000 cwt.	1,199	1,206
Electricity .. .. mill. kWh.	29,187	32,087	Socks and stockings—		
Electric motors .. thousands	1,927.5	2,210.9	Men's and youths' '000 doz. prs.	1,643	1,607
Engines, internal combustion(c) .. number	270,953	288,698	Women's .. .. " "	3,644	3,979
Fibrous plaster sheets '000 sq. yds.	15,830	15,245	Children's and infants .. .. " "	898	934
Flour, wheat .. .. '000 tons (2,000 lb.)	1,421	1,663	Stoves, cooking(g)—		
Footwear—			Electric .. .. thousands	112.7	119.0
Boots, shoes and sandals .. '000 prs.	26,687	28,227	Gas .. .. " "	67.4	77.4
Slippers .. .. " "	10,671	11,177	Solid fuel .. .. " "	27.1	28.1
Gas(d) .. .. mill. cub. ft.	51,351	52,595	Sugar, refined(h) .. '000 tons	564	575
Ice-cream .. .. '000 gals.	20,661	22,177	Sulphate of ammonia .. .. " "	93.7	82.5
Iron and steel(e)—			Superphosphate .. .. " "	2,862	3,347
Pig iron .. .. '000 tons	3,400	3,763	Tiles, roofing—		
Steel ingots .. .. " "	4,260	4,755	Terracotta .. .. millions	51.1	54.2
Jams .. .. mill. lb.	92.2	88.4	Cement .. .. " "	61.8	76.7
Lacquers .. .. '000 gals.	1,443	1,514	Timber, sawn .. Australian-grown (i) million sup. ft.	1,390	1,456
Malt, barley and wheaten .. '000 bus.	10,535	11,994	Tobacco, cigars and cigarettes .. mill. lb.	56.9	56.2
Margarine—			Wool, scoured .. .. " "	168	160
Table .. .. '000 lb.	35,703	35,243	Wool tops .. .. " "	48.0	50.9
Other .. .. " "	70,645	73,864	Yarn, woollen and worsted .. .. " "	52.5	52.1

(a) Includes waste beer. (b) Includes mixture cloths predominantly wool. (c) Excludes motor car, motor cycle, truck, tractor, aeroplane and marine engines but includes diesel and semi-diesel. (d) Made in gas-works only. (e) Year ended 31st May. (f) Excludes canned rabbit and poultry. (g) Domestic, excludes stovettes, cookers, etc. (h) Year ended 31st March. (i) Includes sawn sleepers.

## CHAPTER IX. POPULATION

### § 3. Growth and Distribution of Population, § 4. Mean Population

*Growth of Population, p. 268; Mean Population, p. 275.*—Figures for the population at 30th June, 1964, and the mean population for the year ended 30th June, 1964, are as follows. They exclude particulars of full-blood Aborigines.

#### ESTIMATED POPULATION, 30th JUNE, 1964, AND MEAN POPULATION, YEAR ENDED 30th JUNE, 1964

State or Territory	Estimated population at 30th June, 1964			Mean population year ended 30th June, 1964		
	Males	Females	Persons	Males	Females	Persons
New South Wales .. ..	2,068,494	2,048,212	4,116,706	2,053,232	2,033,257	4,086,489
Victoria .. ..	1,573,118	1,557,842	3,130,960	1,552,797	1,538,159	3,090,956
Queensland .. ..	806,883	782,128	1,589,011	799,237	774,173	1,573,410
South Australia .. ..	520,440	511,179	1,031,619	514,618	505,480	1,020,098
Western Australia .. ..	401,102	388,815	789,917	397,319	384,884	782,203
Tasmania .. ..	184,384	180,182	364,566	185,183	181,004	366,187
Northern Territory .. ..	18,779	13,538	32,317	17,661	12,400	30,061
Australian Capital Territory .. ..	41,820	38,593	80,413	40,323	36,906	77,229
<b>Australia .. ..</b>	<b>5,615,020</b>	<b>5,520,489</b>	<b>11,135,509</b>	<b>5,560,370</b>	<b>5,466,263</b>	<b>11,026,633</b>



## § 7. General Characteristics

Other General Characteristics, p. 289.—The following table shows the numbers of males, females and persons at the 1954 and 1961 Censuses classified by race (i.e.ethnic origin).

## POPULATION: RACE, AUSTRALIA

Race	Census, 30th June, 1954			Census, 30th June, 1961		
	Males	Females	Persons	Males	Females	Persons
European .. .. .	4,508,795	4,412,896	8,921,691	5,260,853	5,157,908	10,418,761
Non-European—						
Afghan .. .. .	73	25	98	63	36	99
African, n.e.i. .. .. .	52	5	57	65	19	84
Arab, Persian .. .. .	201	70	271	333	222	555
Asiatic Jew .. .. .	42	27	69	53	48	101
Asiatic, n.e.i. .. .. .	733	169	902	793	325	1,118
Chinese .. .. .	9,150	3,728	12,878	14,237	6,145	20,382
Cingalese, Burgher, Tamil .. .. .	196	72	268	384	279	663
Egyptian .. .. .	30	31	61	42	34	76
Fijian .. .. .	51	13	64	100	38	138
Filipino .. .. .	127	100	227	169	128	297
Indian, Pakistani .. .. .	1,892	317	2,209	2,937	595	3,532
Indonesian, Javanese, Timorese, etc. .. .. .	312	36	348	449	90	539
Japanese .. .. .	247	292	539	949	769	1,718
Malay .. .. .	534	251	785	717	346	1,063
Maori .. .. .	57	29	86	102	92	194
Negro .. .. .	56	13	69	106	26	132
Pacific Islander, n.e.i. (a) .. .. .	934	764	1,698	1,158	1,028	2,186
Papuan, New Guinean .. .. .	28	8	36	72	58	130
Siamese, Thailander .. .. .	163	60	223	180	60	240
Syrian, Lebanese .. .. .	1,374	916	2,290	1,834	1,407	3,241
Torres Strait Islander .. .. .	2,043	2,210	4,253	2,446	2,526	4,972
Other and indefinite .. .. .	37	18	55	77	43	120
Total Non-European .. .. .	18,332	9,154	27,486	27,266	14,314	41,580
European and—(b)						
Afghan .. .. .	69	47	116	56	62	118
African, n.e.i. .. .. .	11	4	15	8	13	21
Arab, Persian .. .. .	18	12	30	23	18	41
Asiatic Jew .. .. .	11	3	14	4	9	13
Asiatic, n.e.i. .. .. .	60	52	112	111	117	228
Australian Aboriginal .. .. .	15,849	15,510	31,359	19,713	19,459	39,172
Chinese .. .. .	1,404	1,276	2,680	1,648	1,538	3,186
Cingalese, Burgher, Tamil .. .. .	58	65	123	124	104	228
Egyptian .. .. .	4	7	11	11	16	27
Fijian .. .. .	15	20	35	21	22	43
Filipino .. .. .	101	100	201	176	220	396
Indian, Pakistani .. .. .	259	179	438	293	240	533
Indonesian, Javanese, Timorese, etc. .. .. .	12	21	33	71	68	139
Japanese .. .. .	114	132	246	497	456	953
Malay .. .. .	214	235	449	313	329	642
Maori .. .. .	89	82	171	126	129	255
Negro .. .. .	77	58	135	60	59	119
Pacific Islander, n.e.i. (a) .. .. .	257	257	514	367	362	729
Papuan, New Guinean .. .. .	10	7	17	33	43	76
Siamese, Thailander .. .. .	25	18	43	17	19	36
Syrian, Lebanese .. .. .	103	96	199	108	108	216
Torres Strait Islander .. .. .	60	49	109	134	111	245
Other and indefinite .. .. .	171	132	303	219	210	429
Total European/Other Races(b) .. .. .	18,991	18,362	37,353	24,133	23,712	47,845
Total Non-European and European/Other Races	37,323	27,516	64,839	51,399	38,026	89,425
Grand Total .. .. .	4,546,118	4,440,412	8,986,530	5,312,252	5,195,934	10,508,186

(a) Includes Pacific Islander, Polynesian and South Sea Islander, so described. (b) This category covers persons with European blood to the extent of one-half and blood of a Non-European race to the extent of one-half.

NOTE.—The characteristic "Race" refers broadly to the ethnic origin of the person irrespective of where born or of what nationality. For this characteristic the basic data do not permit of scientific classification of ethnic origin and the races are named with a geographical rather than a truly ethnological description. Thus "Indian" refers to the ethnic types normally to be found in India. In other words, each racial group described in this fashion is a mixed group when viewed in the light of the hypothetical genetic types from which it is derived. The limitations imposed by the practical need to present the non-European races by their commonly recognized rather than their scientific groupings are further complicated by the necessity of combining as one group all persons of European origin. Census statistics of "Race", cannot, therefore, answer fully the questions which interest the anthropologist and ethnologist, but they do possess utility for governmental administration and other practical purposes. Particulars of full-blood Aboriginals are excluded from this table.

### § 8. Oversea Arrivals and Departures

Excess of Arrivals over Departures, pp. 290-1.—The following table shows the net gain to the population of Australia due to total migration movement for the year 1963, according to age and conjugal condition.

#### EXCESS OF ARRIVALS OVER DEPARTURES: AGE DISTRIBUTION AND CONJUGAL CONDITION, AUSTRALIA, 1963

Particulars	Males	Females	Persons
<b>AGE DISTRIBUTION</b>			
<b>Years—</b>			
0-4 .. .. .	4,081	3,842	7,923
5-14 .. .. .	7,402	6,880	14,282
15-24 .. .. .	10,572	8,973	19,545
25-44 .. .. .	11,499	11,310	22,809
45-64 .. .. .	2,140	3,220	5,360
65 and over .. .. .	525	1,201	1,726
<i>Total</i> .. .. .	<i>36,219</i>	<i>35,426</i>	<i>71,645</i>
<b>CONJUGAL CONDITION</b>			
Never married .. .. .	22,294	19,081	41,375
Married .. .. .	13,686	15,290	28,976
Widowed or divorced .. .. .	239	1,055	1,294
<i>Total</i> .. .. .	<i>36,219</i>	<i>35,426</i>	<i>71,645</i>

## CHAPTER XI. HOUSING AND BUILDING

## § 2. Building

**New Houses, p. 371.**—The number of new houses approved, commenced, completed and under construction in each State and Territory during 1963–64 was as follows.

**NEW HOUSES: NUMBER, 1963-64**  
(INCLUDING OWNER-BUILT HOUSES)

Particulars	N.S.W.	Vic.	Qld	S.A.	W.A.	Tas.	N.T.	A.C.T.	Aust.
Approved ..	30,169	24,718	10,976	12,110	7,447	2,648	463	1,564	90,095
Commenced ..	27,957	23,648	10,181	11,564	7,320	2,550	430	1,624	85,274
Completed ..	25,954	22,799	10,012	10,488	7,276	2,511	310	1,764	81,114
Under construction at 30th June, 1964 ..	12,991	12,912	2,916	5,639	2,923	1,633	359	922	40,295

Of the 81,114 new houses completed during 1963–64, 47,754 had outer walls of brick, brick veneer, concrete or stone, 16,678 of wood (weatherboard, etc.), 16,358 of fibro-cement and 324 of other materials.

**New Flats, p. 374.**—The following table shows the number of new flats approved, commenced, completed and under construction in each State and Territory during 1963–64.

**NEW FLATS: NUMBER, 1963-64**  
(INDIVIDUAL LIVING UNITS)

Particulars	N.S.W.	Vic.	Qld	S.A.	W.A.	Tas.	N.T.	A.C.T.	Aust.
Approved ..	13,315	7,324	1,607	1,634	1,830	165	149	305	26,329
Commenced ..	10,210	7,089	1,311	1,386	1,743	120	128	290	22,277
Completed ..	7,776	4,270	949	989	1,295	164	26	150	15,619
Under construction at 30th June, 1964 ..	7,249	4,951	692	725	1,061	90	121	264	15,153

**Value of New Buildings, p. 376.**—The values of all new buildings approved, commenced, completed and under construction in each State and Territory are shown in the following table for the year 1963–64.

**NEW BUILDINGS: VALUE, 1963-64**  
(INCLUDING ESTIMATED VALUE OF OWNER-BUILT HOUSES)  
(£'000)

Particulars	N.S.W.	Vic.	Qld	S.A.	W.A.	Tas.	N.T.	A.C.T.	Aust.
Approved ..	234,972	196,464	83,621	77,687	57,860	15,949	5,494	21,688	693,735
Commenced ..	257,027	197,349	75,178	74,888	59,278	17,332	5,082	21,200	707,334
Completed ..	235,840	167,415	66,509	59,151	46,434	16,988	3,981	20,082	616,400
Under construction at 30th June, 1964 ..	206,601	153,139	43,944	55,757	35,924	14,547	4,885	26,024	540,821

The value of new buildings completed in Australia during 1963–64, according to type of building, was as follows:—*Houses*—Brick, brick veneer, concrete and stone, £199,332,000; wood (weatherboard, etc.), £55,601,000; fibro-cement, £45,165,000; other, £1,031,000; total, £301,129,000; *Flats*—£41,780,000; *Other Buildings*—Hotels, hostels, etc., £13,909,000;

shops, £25,745,000; factories, £64,213,000; offices, £45,038,000; other business premises, £27,002,000; educational, £40,286,000; religious, £6,999,000; health, £19,301,000; entertainment and recreation, £13,303,000; miscellaneous, £17,695,000; total other buildings, £273,491,000; grand total, new buildings, £616,400,000.

**Persons Working on Jobs Carried out by Builders of New Buildings, p. 379.**—The number of persons working on jobs *carried out by builders of new buildings* in Australia at 30th June, 1964, was as follows:—Carpenters, 52,551; bricklayers, 17,011; painters, 12,763; electricians, 8,036; plumbers, 12,656; builders' labourers, 20,801; other, 21,942; Total, 145,760. Of this total, contractors actually working on jobs numbered 11,491, sub-contractors actually working on jobs, 27,112, and wage earners, 107,157.

## CHAPTER XII. EMPLOYMENT AND UNEMPLOYMENT

### WAGE AND SALARY EARNERS IN EMPLOYMENT

**Civilian Employees, pp. 427-8.**—The following table shows particulars of the estimated numbers of wage and salary earners (excluding employees in rural industry, private domestic service and defence forces) in each State and Territory at June, 1964, with revised figures for June and December, 1963.

### WAGE AND SALARY EARNERS IN CIVILIAN EMPLOYMENT

(EXCLUDING EMPLOYEES IN RURAL INDUSTRY AND PRIVATE DOMESTIC SERVICE, AND DEFENCE FORCES)

('000)

Particulars	N.S.W.	Vic.	Qld	S.A.	W.A.	Tas.	N.T.	A.C.T. (a)	Australia
JUNE, 1963									
Males ..	914.9	675.4	304.8	219.6	159.4	74.9	8.0	20.4	2,377.4
Females ..	369.8	285.0	108.9	80.9	55.5	25.5	2.9	8.7	937.2
Persons ..	1,284.7	960.4	413.7	300.5	214.9	100.4	10.9	29.1	3,314.6
DECEMBER, 1963									
Males ..	932.9	690.5	303.2	224.5	163.4	76.9	8.1	21.4	2,420.9
Females ..	383.5	292.7	110.5	84.1	56.9	26.7	2.9	9.3	966.6
Persons ..	1,316.4	983.2	413.7	308.6	220.3	103.6	11.0	30.7	3,387.5
JUNE, 1964									
Males ..	949.6	704.6	317.5	229.5	163.9	77.2	8.9	21.8	2,473.0
Females ..	390.2	299.9	115.3	86.5	58.4	27.0	3.0	10.0	990.3
Persons ..	1,339.8	1,004.5	432.8	316.0	222.3	104.2	11.9	31.8	3,463.3

(a) Includes persons employed in the Australian Capital Territory who reside in adjoining areas.

## CHAPTER XIII. LABOUR, WAGES AND PRICES

## RETAIL PRICES AND PRICE INDEXES

## § 4. Tabular Statements of Retail Price Index Numbers

Consumer Price Index, p. 434-6.—The following table shows Consumer Price Index numbers for June and September quarters, 1964, for each capital city and the six capital cities combined for each Group and all Groups combined.

CONSUMER PRICE INDEX NUMBERS<sup>(a)</sup>

(Base of each Index: Year 1952-53 = 100.0)

Period	Sydney	Melbourne	Brisbane	Adelaide	Perth	Hobart	Six Capital Cities <sup>(b)</sup>
<b>FOOD</b>							
June quarter, 1964 ..	125.0	129.5	136.1	132.4	128.3	129.5	128.5
September quarter, 1964	127.5	131.6	138.0	133.6	130.3	131.6	130.7
<b>CLOTHING AND DRAPERY</b>							
June quarter, 1964 ..	113.1	115.8	118.4	113.6	113.2	115.7	114.6
September quarter, 1964	113.6	116.3	118.8	113.8	113.6	116.1	115.0
<b>HOUSING</b>							
June quarter, 1964 ..	163.3	166.0	145.4	160.3	157.8	175.9	161.7
September quarter, 1964	165.0	166.9	147.2	161.9	158.1	176.4	163.0
<b>HOUSEHOLD SUPPLIES AND EQUIPMENT</b>							
June quarter, 1964 ..	111.5	113.2	112.3	104.8	105.7	124.1	111.4
September quarter, 1964	110.3	112.6	112.3	104.7	105.8	124.4	110.7
<b>MISCELLANEOUS</b>							
June quarter, 1964 ..	130.4	131.2	135.3	122.9	129.3	128.8	130.3
September quarter, 1964	133.1	133.5	138.6	128.0	131.5	131.8	133.1
<b>ALL GROUPS</b>							
June quarter, 1964 ..	125.8	128.3	130.2	125.1	125.3	130.1	127.0
September quarter, 1964	127.3	129.6	131.9	126.9	126.6	131.7	128.5

(a) The index numbers measure price movements in each city individually and for the weighted average of the six capitals. They do not measure differences in price levels as between cities.

(b) Weighted average.

## WHOLESALE PRICES AND PRICE INDEXES

## § 2. Wholesale Price (Basic Materials and Foodstuffs) Index

Index Numbers, p. 440.—Index numbers for each group of commodities and for All Groups for the index of wholesale prices of basic materials and foodstuffs are shown below for the year 1963-64 and for the months April to August, 1964.

## WHOLESALE PRICE (BASIC MATERIALS AND FOODSTUFFS) INDEX NUMBERS

(Base of each Index: Average of 3 years ended June, 1939 = 100)

Period	Basic Materials						Food-stuffs and Tobacco (a)	Basic Materials and Foodstuffs			
	Metals and Coal	Oils, Fats and Waxes	Textiles	Chemicals	Rubber and Hides	Building Materials		Total	Goods principally imported (b)	Goods principally home produced (a)	Total All Groups (a)
1963-64	383	207	484	286	221	473	339	352	275	376	346
1964—											
April	385	207	488	284	223	486	342	355	276	380	349
May..	384	207	458	284	229	486	340	362	276	384	352
June..	382	205	463	284	230	486	340	365	275	386	353
July..	386	205	463	285	233	496	343	367	279	389	356
Aug.	389	206	464	285	236	498	345	367	278	390	357

(a) Excludes potatoes and onions. See para. 3, p. 439. (b) Represents only such imported commodities as are included in the Wholesale Price Index and does not measure changes in the prices of all imports.

## EXPORT PRICES AND PRICE INDEXES

## § 2. The Current Export Price Index

Index Numbers, p. 444.—Index numbers for each of the groups and "All Groups" for the year 1963-64 and for the months April to August, 1964, are shown in the table below.

## EXPORT PRICE INDEX NUMBERS

(Base of each Index: Year 1959-60 = 100)

Period	Wool	Meats	Dairy Produce	Cereals	Dried and Canned Fruits	Sugar	Hides and Tallow	Metals and Coal	Gold	All Groups
1963-64..	120	p 105	93	107	p 98	p 175	73	101	100	p 114
1964—										
April ..	121	p 111	92	109	p 99	p 165	78	106	100	p 115
May ..	110	p 113	92	108	p 99	p 166	79	111	100	p 110
June ..	112	p 110	92	108	p 101	p 146	81	111	100	p 110
July ..	112	p 108	92	109	p 101	p 139	81	p 115	100	p 110
August	112	p 108	92	110	p 100	p 122	83	p 117	100	p 110



## § 5. Basic Wages in Australia

State Basic Wages, p. 488.—The following table shows State basic wages operative in September, 1964.

## STATE BASIC WAGES: WEEKLY RATES

State and area	September, 1964		
	Date of operation <sup>(a)</sup>	Males	Females
		<i>s. d.</i>	<i>s. d.</i>
New South Wales .. .. .	19.6.64	315 0	236 0
Victoria <sup>(b)</sup> .. .. .	June, 1964 <sup>(c)</sup>	307 0	230 0
Queensland—			
Southern Division—			
Eastern District, including Brisbane ..	13.7.64	300 0	225 0
Western District .. .. .	13.7.64	310 6	233 0
Mackay Division .. .. .	13.7.64	309 0	231 9
Northern Division—			
Eastern District .. .. .	13.7.64	310 6	233 0
Western District .. .. .	13.7.64	332 6	249 6
South Australia <sup>(d)</sup> .. .. .	22.6.64	303 0	227 0
Western Australia—			
Metropolitan Area .. .. .	22.9.64	308 0	231 0
South-West Land Division .. .. .	22.9.64	308 0	231 0
Goldfields and other areas .. .. .	22.9.64	308 0	231 0
Tasmania <sup>(b)</sup> .. .. .	June, 1964 <sup>(c)</sup>	314 0	235 6

<sup>(a)</sup> Rates are operative from the beginning of the first pay-period commencing after the date shown, or during the month shown. <sup>(b)</sup> No basic wage declared. Rates shown are those adopted by most Wages Boards. <sup>(c)</sup> Wages Boards adopted the Commonwealth rate. <sup>(d)</sup> The "living wage" declared for the metropolitan area is also adopted for country areas, except at Whyalla and nearby areas, where a loading of 5s. for adult males is generally payable.

The Commonwealth basic wage is still the same as that operative from 19th June, 1964 (p. 481).

## CHAPTER XIV. OVERSEA TRADE

## § 9. Direction of Oversea Trade

According to Countries, p. 528.—The following table shows particulars of the values of total imports and total exports of Australia, including bullion and specie, according to countries of origin or consignment, for the year 1963–64.



**VALUES OF AUSTRALIAN IMPORTS AND EXPORTS: COUNTRIES OF  
ORIGIN OR CONSIGNMENT, 1963-64 p**  
(£A. '000 f.o.b.)

Country	Imports	Exports	Country	Imports	Exports
United Kingdom .. .. .	329,548	255,574	Czechoslovakia .. .. .	3,197	8,105
Australian Territories—			France .. .. .	19,907	68,781
Papua-New Guinea .. .. .	9,068	24,266	Germany, Federal Republic of	65,380	46,237
Other .. .. .	4,644	3,784	Indonesia .. .. .	28,040	4,838
Brunei .. .. .	4,851	86	Iraq .. .. .	18,823	2,514
Canada .. .. .	48,031	25,455	.. .. .	6,383	4,990
Ceylon .. .. .	8,505	7,153	Italy .. .. .	20,278	54,112
Hong Kong .. .. .	9,404	25,099	Japan .. .. .	81,220	244,391
India .. .. .	17,297	17,725	Mexico .. .. .	2,290	7,200
Malaysia .. .. .	18,237	34,525	Netherlands .. .. .	15,655	7,575
New Zealand .. .. .	22,445	82,907	Norway .. .. .	3,985	3,847
Pakistan .. .. .	6,980	4,014	Poland .. .. .	751	7,733
Other Commonwealth countries	23,414	33,732	South Africa .. .. .	9,157	9,744
<b>Total, Commonwealth Countries</b>	<b>502,424</b>	<b>514,320</b>	Sweden .. .. .	22,810	2,683
Arabian States .. .. .	44,426	6,268	Switzerland .. .. .	15,004	1,029
Austria .. .. .	3,732	1,782	United States of America	271,830	140,027
Belgium-Luxembourg .. .. .	8,377	29,895	Other foreign countries(a)	36,012	142,868
China (Mainland) .. .. .	8,333	84,096	<b>Total, Foreign Countries</b>	<b>685,590</b>	<b>878,715</b>
			<b>Total, All Countries</b>	<b>1,188,014</b>	<b>1,393,035</b>

(a) Includes shipments made "for orders" and imports of unknown origin.

According to Major Groups of Countries, p. 530-1.—The following table shows the trade of Australia during 1963-64 according to major groups of countries.

**OVERSEA TRADE OF AUSTRALIA WITH MAJOR GROUPS OF COUNTRIES(a),  
1963-64 p**

Major groups of countries	£A. '000 f.o.b.	Major groups of countries	£A. '000 f.o.b.
<b>STERLING</b>		<b>OTHER NON-STERLING</b>	
<b>Imports—</b>		<b>Imports—</b>	
From—United Kingdom .. .. .	329,548	From—Countries of the E.E.C. ..	131,537
Other Sterling Area Coun- tries .. .. .	157,541	Countries of the E.F.T.A. ..	57,451
		Other Countries .. .. .	192,058
<b>Total .. .. .</b>	<b>487,089</b>	<b>Total .. .. .</b>	<b>381,046</b>
<b>Exports—</b>		<b>Exports—</b>	
To—United Kingdom .. .. .	255,574	To—Countries of the E.E.C. ..	213,814
Other Sterling Area Countries	248,634	Countries of the E.F.T.A. ..	13,720
<b>Total .. .. .</b>	<b>504,208</b>	Other Countries .. .. .	493,288
		<b>Total .. .. .</b>	<b>720,822</b>
<b>Excess of Exports (+) or Imports (-)</b>	<b>+17,119</b>	<b>Excess of Exports (+) or Imports (-)</b>	<b>+339,776</b>
<b>NON-STERLING—NORTH AMERICA</b>		<b>ALL GROUPS</b>	
<b>Imports—</b>		<b>Total Imports .. .. .</b>	<b>1,188,014</b>
From—United States of America(b)	271,848	<b>Total Exports .. .. .</b>	<b>1,393,035</b>
Canada .. .. .	48,031	<b>Excess of Exports (+) or Imports (-)</b>	<b>+205,021</b>
<b>Total .. .. .</b>	<b>319,879</b>		
<b>Exports—</b>			
To—United States of America(b) ..	142,550		
Canada .. .. .	25,455		
<b>Total .. .. .</b>	<b>168,005</b>		
<b>Excess of Exports (+) or Imports (-)</b>	<b>-151,874</b>		

(a) For a list of the countries in each group, see page 530.

(b) Includes Alaska and Hawaiian Islands.

## § 13. Classified Summary of Australian Oversea Trade

Statistical Classes, p. 538.—The following table shows the values of total imports and total exports in statistical classes for the year 1963-64.

**VALUE OF OVERSEA TRADE OF AUSTRALIA: CLASSES, 1963-64 p**  
(£A. '000 f.o.b.)

Class	Imports	Exports	Class	Imports	Exports
I. Animal foodstuffs, etc. . .	14,845	181,623	XIII. Rubber and leather, etc. . .	25,579	5,389
II. Vegetable foodstuffs; non-alcoholic beverages, etc. . .	30,809	363,377	XIV. Wood and wicker, etc. . .	20,569	3,096
III. Alcoholic liquors, etc. . .	4,574	2,769	XV. Earthenware, etc. . .	20,354	1,696
IV. Tobacco, etc. . .	13,440	890	XVI. Paper and stationery . .	71,128	6,497
V. Live animals . . .	964	2,395	XVII. Jewellery, etc. . .	14,991	5,322
VI. Animal substances, etc. . .	7,032	528,227	XVIII. Optical, surgical and scientific instruments . .	21,640	3,686
VII. Vegetable substances, etc. . .	28,830	1,930	XIX. Chemicals, medicinal products, fertilizers, etc. . .	81,683	12,954
VIII. Apparel, textiles, etc. . .	117,680	7,330	XX. Miscellaneous . . .	93,906	38,016
IX. Oils, fats and waxes . .	126,496	28,933	<i>Total, Merchandise</i> . . .	<i>1,185,622</i>	<i>1,382,962</i>
X. Pigments, paints and varnishes . . .	5,806	1,331	XXI. Gold and silver; bronze specie . . .	2,392	10,073
XI. Rocks, minerals, etc. . .	11,789	47,115	<b>Grand Total</b> . . .	<b>1,188,014</b>	<b>1,393,035</b>
XII. Metals, metal manufactures and machinery . .	473,507	140,386			

Imports of Principal Articles, p. 539.—The following table shows the values of the principal articles imported into Australia during 1963-64.

**IMPORTS OF PRINCIPAL ARTICLES: AUSTRALIA, 1963-64 p**

Article	Value
	£A. '000 f.o.b.
Aircraft and parts . . . . .	19,572
Apparel . . . . .	11,010
Arms, explosives, military stores, etc. . . . .	9,152
Bags and sacks . . . . .	8,665
Chemicals, medicinal and pharmaceutical products, essential oils and fertilizers . . . . .	81,683
Cotton, raw, excluding linters and waste . . . . .	8,309
Electrical machinery, appliances and equipment . . . . .	58,992
Fibres, excluding cotton . . . . .	11,488
Glass and glassware . . . . .	9,510
Iron and steel—	
Bar and rod . . . . .	8,385
Plate and sheet . . . . .	12,583
Machines and machinery—	
Motive power . . . . .	64,389
Other . . . . .	131,695
Motor vehicles complete; components and parts . . . . .	117,936
Paper, printing . . . . .	22,771
Petroleum and shale oils . . . . .	117,166
Piece-goods—	
Cotton and linen . . . . .	36,593
Other . . . . .	24,146
Plastics materials . . . . .	20,486
Rubber and rubber manufactures . . . . .	23,224
Stationery and paper manufactures . . . . .	24,523
Tea . . . . .	11,832
Timber, undressed, including logs . . . . .	17,257
Tobacco . . . . .	11,298
All other articles . . . . .	325,349
<b>Total Imports</b> . . . . .	<b>1,188,014</b>

Exports of Principal Articles of Australian Produce, p. 540.—The following table shows the quantities and values of the principal articles of Australian produce exported during 1963–64.

EXPORTS OF PRINCIPAL ARTICLES OF AUSTRALIAN PRODUCE, 1963-64 p

Article	Quantity	Value
		£A. '000 f.o.b.
Butter .. .. . tons	87,753	27,357
Cheese .. .. . "	27,860	6,767
Chemicals, drugs, fertilizers .. .. . "	..	12,954
Coal .. .. . tons	3,878,287	16,522
Fruit—		
Dried .. .. . "	66,810	10,792
Fresh, including frozen .. .. . '000 bus.	10,942	16,958
Preserved in airtight containers .. .. . tons	126,850	16,777
Gold .. .. . "	..	7,145
Grains and cereals—		
Barley .. .. . tons	422,525	9,149
Flour (wheaten), plain white .. .. . tons(a)	684,493	21,119
Wheat .. .. . tons	6,800,731	181,228
Hides and skins .. .. . "	..	45,919
Lead, unwrought, n.e.i. .. .. . tons	171,784	15,526
Machines and machinery (except dynamo electrical) .. .. . "	..	20,745
Meats preserved by cold process—		
Beef and veal .. .. . tons	281,340	88,426
Lamb .. .. . "	18,636	3,873
Mutton .. .. . "	66,958	12,383
Pork .. .. . "	165	66
Meats, tinned .. .. . "	25,365	6,309
Milk and cream .. .. . '000 lb.	135,077	8,693
Ores and concentrates .. .. . tons	1,414,663	28,996
Sugar (cane) .. .. . "	1,116,188	78,256
Wool(b) .. .. . '000 lb.	1,616,871	480,767
All other articles .. .. . "	..	248,506
<b>Total Exports (Australian Produce) .. .. . "</b>	<b>..</b>	<b>1,365,233</b>

(a) 2,000 lb.

(b) Quantity in terms of greasy wool.

## § 20. The Australian Balance of Payments, p. 547-52

The table following shows, in summary form, revised balance of payments estimates for the years 1961-62 and 1962-63, and preliminary estimates for 1963-64. Further details will be found in the mimeographed publication *Balance of Payments, 1959-60 to 1963-64*.

## BALANCE OF PAYMENTS: SUMMARY, AUSTRALIA

(£A. million)

Particulars	1961-62	1962-63	1963-64 p
<b>CURRENT ACCOUNT(a)—</b>			
Exports f.o.b.(b) .. .. .	1,067	1,065	1,374
Imports f.o.b.(b) .. .. .	857	1,032	1,124
Balance of Trade .. .. .	210	33	250
Invisible credits—			
Transportation .. .. .	81	89	100
Travel .. .. .	16	14	18
Property income .. .. .	40	38	44
Government .. .. .	22	24	33
Other .. .. .	66	73	92
Invisible debits—			
Transportation(d) .. .. .	139	155	168
Travel .. .. .	41	45	51
Property income .. .. .	148	180	202
Government .. .. .	27	28	31
Other .. .. .	79	89	104
<i>Balance on Current Account</i> .. .. .	<i>1</i>	<i>-226</i>	<i>-19</i>
<b>CAPITAL ITEMS(a)—</b>			
Inflow of investment—			
Government securities—			
Domiciled overseas .. .. .	6	47	11
Domiciled in Australia .. .. .	-1	-5	(c)
Total, Government Securities .. .. .	5	42	(c)
Companies—			
Undistributed income .. .. .	31	52	(c)
Other direct .. .. .	79	128	(c)
Portfolio .. .. .	38	42	(c)
Total, Companies .. .. .	148	222	(c)
Total Inflow of Investment .. .. .	153	264	(c)
Outflow of investment .. .. .	-7	-3	(c)
Net inflow of investment .. .. .	146	261	(c)
Other official capital movements .. .. .	..	-10	-40
Marketing authorities .. .. .	-33	5	15
Net identified capital inflow .. .. .	113	256	} (c) 249
Balancing item .. .. .	-25	44	
Net Apparent Capital Inflow .. .. .	88	300	249
Monetary movements—			
Change in net I.M.F. position .. .. .	79	12	..
Change in international reserves .. .. .	10	65	228
Other .. .. .	..	-3	2
Net Monetary Movements .. .. .	89	74	230

(a) For current account balances minus sign (-) denotes deficit; for capital items other than monetary movements minus sign (-) denotes outflow; for monetary movements minus sign (-) denotes decrease in international reserves or net I.M.F. position or an increase in foreign holdings of Australian currency.

(b) The amounts shown represent the recorded trade figures adjusted for balance of payments purposes. Adjustments affect both coverage and valuation.

(c) Particulars of the Survey of Oversea Investment are not yet available for 1963-64. Relevant items for this period are therefore combined with the balancing item.

(d) Total freight and insurance on imports, whether payable overseas or in Australia, is estimated at £113,000,000 in 1961-62, £129,000,000 in 1962-63 and £140,000,000 in 1963-64.

**CHAPTER XV. TRANSPORT AND COMMUNICATION**  
**SHIPPING**

**§ 3. Oversea Shipping**

**Total Oversea Shipping, States, p. 556.**—The following table shows particulars of the entrances and clearances of vessels direct from, and to, overseas countries during 1963–64.

**OVERSEA SHIPPING: ENTRANCES AND CLEARANCES  
OF VESSELS DIRECT, 1963-64 p**

Particulars		N.S.W.	Vic.	Qld	S.A.	W.A.	Tas.	N.T.	Aust.
Entrances	No.	1,184	582	732	274	818	81	45	3,714
	'000 net tons	6,918	3,604	2,746	2,031	4,999	275	151	20,724
Clearances	No.	1,001	583	944	294	866	44	29	3,761
	'000 net tons	6,310	4,041	3,676	1,535	4,974	189	113	20,838

**§ 6. Shipping Cargo**

**Oversea and Interstate Cargo, p. 564.**—The following table shows the quantity of shipping cargo discharged and shipped, according to States, during 1963–64.

**CARGO DISCHARGED AND SHIPPED: STATES, 1963-64 p**  
(‘000 Tons)

State, etc.	Discharged				Shipped			
	Oversea		Interstate		Oversea		Interstate	
	Wt.	Meas.	Wt.	Meas.	Wt.	Meas.	Wt.	Meas.
New South Wales ..	6,975	1,600	7,832	121	6,744	513	3,799	89
Victoria ..	6,694	1,376	2,615	524	3,547	646	1,479	607
Queensland ..	620	372	1,523	197	3,489	112	632	63
South Australia ..	1,800	402	1,572	70	2,616	207	6,324	23
Western Australia ..	4,297	150	646	91	3,185	128	2,764	40
Tasmania ..	326	43	1,033	449	154	253	630	384
Northern Territory ..	59	..	70	1	4	2	5	..
<b>Australia ..</b>	<b>20,771</b>	<b>3,943</b>	<b>15,291</b>	<b>1,453</b>	<b>19,739</b>	<b>1,861</b>	<b>15,633</b>	<b>1,206</b>

**GOVERNMENT RAILWAYS**

**Summary of Operations, pp. 573-582.**—The following table shows a summary of the operations of government railways for the year 1963–64.

## GOVERNMENT RAILWAYS: SUMMARY OF OPERATIONS, 1963-64

Particulars	Cwth	N.S.W.	Vic.	Old (a)	S.A. (b)	W.A. (b)	Tas.	Aust.
Route miles open ..	2,252	6,055	4,242		2,514	3,677	500	
Train-miles .. '000	2,668	39,411	20,113		6,666	7,506	1,322	
Earnings(c)—								
Coaching (passengers, parcels, mails, etc.) £'000	1,197	28,743	14,129		2,150	1,687	182	
Goods, including livestock and minerals ..	5,916	72,323	29,365		11,649	14,894	2,569	
Miscellaneous ..	566	178	2,895		1,038	1,014	83	
<b>Total Earnings(c)</b> ..	<b>7,679</b>	<b>101,244</b>	<b>46,389</b>		<b>14,837</b>	<b>17,595</b>	<b>2,834</b>	
Working expenses £'000	7,158	88,708	45,756		15,533	16,125	3,192	
Net earnings ..	+521	+12,536	+633		-696	+1,470	-358	
Ratio of working expenses to earnings .. %	93.22	87.62	98.64		104.69	91.65	112.64	
Earnings per train-mile ..	57s. 7d.	51s. 4d.	46s. 2d.		44s. 6d.	46s. 11d.	42s. 10d.	
Working expenses per train-mile ..	53s. 8d.	45s. 0d.	45s. 6d.		46s. 7d.	43s. 0d.	48s. 3d.	
Passenger-journeys '000	338	253,796	153,396		15,227	10,814	1,425	
Freight carried—								
Livestock '000 tons	83	553	312		152	115	27	
Coal and coke ..	1,630	9,828	2,289		59	704	199	
Other minerals ..	57	2,355	93		1,372	665	33	
Other goods ..	708	13,144	9,438		3,630	3,703	896	
<b>Total Freight</b> ..	<b>2,478</b>	<b>25,880</b>	<b>12,132</b>		<b>5,213</b>	<b>5,187</b>	<b>1,155</b>	

(a) Excludes South Brisbane-Border section of the uniform gauge line (69 route miles). (b) Financial details include road motors. (c) Excludes government grants.

Minus sign (-) denotes loss.

NOTE.—The foregoing table is prepared from quarterly statements supplied by each government railway, and figures therein are not completely comparable with those shown in Chapter XV. Transport and Communication, which are derived, in the main, from the annual reports of the government railways.

## MOTOR VEHICLES

New Vehicles Registered, p. 590.—New motor vehicles registered during 1963-64 were as follows.

## NEW MOTOR VEHICLES REGISTERED, 1963-64(a)

State or Territory	Motor cars(b)	Other vehicles (c)	Motor cycles	Total
New South Wales .. ..	119,711	24,496	1,919	146,126
Victoria .. ..	90,437	16,455	715	107,607
Queensland .. ..	45,899	12,409	1,160	59,468
South Australia .. ..	33,518	6,714	942	41,174
Western Australia .. ..	24,949	6,999	633	32,581
Tasmania .. ..	10,268	2,343	53	12,664
Northern Territory .. ..	978	714	20	1,712
Australian Capital Territory ..	3,578	646	39	4,263
<b>Total .. ..</b>	<b>329,338</b>	<b>70,776</b>	<b>5,481</b>	<b>405,595</b>

(a) Excludes defence service vehicles, trailers, road tractors, etc., and dealers' plates. (b) Includes taxis, hire cars and station wagons. (c) Includes utilities, panel vans, lorries and omnibuses.

## CIVIL AVIATION

Statistical Summaries, p. 604.—The following table shows particulars of the operations of regular internal services and oversea services for the nine months ended 31st March, 1964.

**CIVIL AVIATION: OPERATIONS OF REGULAR INTERNAL SERVICES  
AND OVERSEA SERVICES, 1963-64**

Particulars	Regular internal services(a)	Oversea services(b)
Route miles (unduplicated)(c) .. .. .		
Hours flown .. .. .	185,385	39,426
Miles flown .. .. .	36,402	16,382
Paying passengers .. .. .	2,419,799	260,641
Paying passenger-miles .. .. .	1,047,454	871,794
Freight—		
Tons(d) .. .. .	46,845	5,874
Ton-miles(d) .. .. .	22,642	28,019
Mail—		
Tons(d) .. .. .	5,392	2,017
Ton-miles(d) .. .. .	2,843	12,228

(a) Includes only services operating within the Australian mainland and Tasmania. (b) Airlines wholly or partly owned by Australian interests. (c) At 30th June, 1964. (d) In terms of short tons (2,000 lb.).

## BROADCASTING AND TELEVISION

## § 4. Licences, etc.

Broadcast Listeners' and Television Viewers' Licences, p. 623.—Broadcast listeners' licences in force at 30th June, 1964, were as follows:—New South Wales, 822,499; Victoria, 622,663; Queensland, 342,321; South Australia, 266,027; Western Australia, 174,121; Tasmania, 74,159; Australia, 2,301,790. Figures for the Northern Territory and the Australian Capital Territory have been included with those for South Australia and New South Wales respectively.

Television viewers' licences in force at 30th June, 1964, were as follows:—New South Wales, 721,043; Victoria, 581,286; Queensland, 214,763; South Australia, 194,430; Western Australia, 115,272; Tasmania, 55,305; Australia, 1,882,099.

## CHAPTER XVI. WELFARE SERVICES

## COMMONWEALTH EXPENDITURE ON SOCIAL AND HEALTH SERVICES

## National Welfare Fund, p. 626

The following table sets out expenditure from the fund on social and health services in each State during 1963-64.

**COMMONWEALTH EXPENDITURE FROM NATIONAL WELFARE FUND  
ON SOCIAL AND HEALTH SERVICES, 1963-64**

(£'000)

Service	N.S.W.	Vic.	Qld	S.A.	W.A.	Tas.	N.T.(a)	A.C.T. (a)	Abroad	Aust.
<b>Social Services—</b>										
Age and invalid pensions ..	79,058	50,118	31,775	18,060	13,686	6,171	474	401	197	199,940
Child endowment ..	29,590	23,433	12,763	7,958	6,497	3,057	419	637	25	84,379
Commonwealth Rehabilitation Service ..	221	206	109	106	81	22	..	..	..	745
Funeral benefits ..	163	105	61	36	28	12	..	1	..	406
Maternity allowances ..	1,325	1,032	564	338	273	136	27	30	4	3,729
Unemployment benefits ..	2,542	1,375	1,347	376	701	375	2	11	..	6,729
Sickness benefits ..	1,397	883	530	254	261	108	6	11	..	3,450
Special benefits <sup>b</sup> ..	186	265	93	34	27	26	1	1	..	633
Widows' pensions ..	7,836	5,158	3,425	1,942	1,557	734	55	54	23	20,784
<b>National Health Services—</b>										
Hospital benefits ..	11,479	6,547	4,315	2,499	2,353	851	..	64	..	28,108
Medical benefits ..	5,109	3,189	1,293	1,410	1,080	343	..	..	..	12,424
Medical benefits for pensioners ..	1,983	1,225	647	448	324	127	..	12	..	4,766
Milk for children ..	1,329	1,092	558	353	308	196	25	27	..	3,888
Pharmaceutical benefits ..	11,012	8,840	4,200	2,450	1,927	617	..	(c) 72	..	29,118
Pharmaceutical benefits for pensioners ..	4,415	2,410	1,565	954	693	264	..	..	..	10,301
Tuberculosis Campaign—										
Allowances ..	277	189	183	64	44	40	..	..	..	797
Maintenance and surveys <sup>d</sup> ..	1,875	1,386	1,059	355	375	181	..	5	..	5,236
Miscellaneous <sup>(e)</sup> ..	53	69	134	7	14	32	31	(f) 552	..	892
Rental rebates ..	..	..	23	..	..	..	..	..	..	23
<b>Total ..</b>	<b>159,850</b>	<b>107,522</b>	<b>64,644</b>	<b>37,644</b>	<b>30,229</b>	<b>13,292</b>	<b>1,040</b>	<b>1,878</b>	<b>249</b>	<b>416,348</b>

(a) Payments for some Health Services to residents of the Northern Territory and the Australian Capital Territory are included in the amounts shown for States. (b) Includes special benefits to migrants in reception and training centres. (c) Includes payments to Flying Doctor Service and Bush Nursing Centres. (d) Paid to the State Governments as a contribution towards the cost of surveys and the maintenance of institutions for the treatment of tuberculosis. (e) This item covers the cost of the Commonwealth Health Laboratory services, subsidies to home nursing services, the cost of radio-active isotopes provided under the National Health Act and running expenses of the Blood Fractionation Plant. (f) Includes running expenses of the Blood Fractionation Plant at the Commonwealth Serum Laboratory, £300,000, subsidies to Home Nursing Services, £186,000, and running cost of Health Laboratories, £62,000.

**COMMONWEALTH SOCIAL SERVICES**

**§ 2. Commonwealth Social Services, pp. 630-9.**

The following table gives a summary of age, invalid and widows' pensions, maternity allowances, child endowment, and unemployment, sickness and special benefits for the year 1963-64.



## SOCIAL SERVICES: SUMMARY, 1963-64

Particulars	N.S.W.	Vic.	Qld	S.A.	W.A.	Tas.	N.T.	A.C.T.	Aust.
Age pensioners at end of year	236,990	159,658	98,408	57,280	41,819	18,803	1,255	973	615,186
Invalid pensioners at end of year	47,264	24,962	16,893	8,293	8,306	3,363	397	247	109,725
Child endowment at end of year—									
Family claims in force	572,377	428,260	219,068	149,449	115,645	53,042	5,991	11,546	1,555,630
Endowed children (a)	1,244,152	956,632	523,093	337,576	275,910	126,896	19,134	26,202	3,510,115 (b)
Maternity allowances—									
Claims paid during year	83,580	64,438	34,966	21,096	16,988	8,437	1,663	2,013	623,451
Unemployment, sickness and special benefits—									
Persons admitted to benefit—									
Unemployment benefit	49,132	22,633	36,490	9,007	14,971	6,720	132	415	139,500
Sickness benefit	26,630	16,560	12,133	5,553	6,127	2,167	140	193	69,503
Special benefit—									
Ordinary	945	2,205	684	182	101	135	13	2	4,267
Migrants	351	2,768	12	159	45	..	..	..	3,335
Persons on benefit at end of year—									
Unemployment benefit	6,851	3,380	2,803	1,267	2,367	1,399	6	56	18,129
Sickness benefit	4,365	2,807	1,644	761	859	289	14	37	10,776
Special benefit—									
Ordinary	708	1,100	377	143	112	129	6	2	2,577
Migrants	7	86	..	12	..	..	..	..	105
Benefits paid—									
Unemployment	£ 2,542,013	1,374,817	1,347,109	375,536	701,475	375,123	1,926	11,037	6,729,036
Sickness	£ 1,397,131	883,122	530,218	254,141	261,005	107,545	6,197	11,320	3,450,679
Special(c)	£ 185,540	265,343	93,065	34,725	26,763	26,001	991	345	632,773
Total Benefits Paid(c)	£ 4,124,684	2,523,282	1,970,392	664,402	989,243	508,969	9,114	22,702	10,812,488
Widows' pensions at end of year—									
Total pensions in force	23,481	15,581	10,000	5,842	4,734	2,109	165	212	62,124
Class "A" pensions in force(d)	9,862	6,722	4,759	2,632	2,120	1,090	80	106	27,371

(a) Includes children in approved institutions. (b) Includes claims paid abroad.  
(c) Includes payments to migrants. (d) Pensions paid to widows who maintain at least one child under 16 years of age.

## CHAPTER XVIII. PUBLIC HEALTH

## INSTITUTIONS

## § 1. Public Hospitals (other than Mental Hospitals), § 2. Mental Hospitals, pp. 700-5

The following tables provide summarized information on public and mental hospitals for the year 1962-63.

## PUBLIC HOSPITALS, 1962-63

Particulars	N.S.W.	Vic.	Q'land	S.A.	W.A.	Tas.	N.T.	A.C.T.	Aust.
Hospitals	269	146	139	66	93	28	4	1	746
Medical staff(a)	6,145	2,617	903	850	565	263	20	85	11,448
Nursing staff(b)	15,139	10,509	6,060	3,194	3,318	1,484	230	306	40,240
Beds and cots	23,415	13,395	12,545	4,513	5,049	2,773	480	343	62,513
Average daily number of patients resident	16,811	9,221	8,378	2,901	3,103	1,869	370	259	42,912

(a) Honorary and salaried. (b) Qualified and student nurses, assistant nurses, assistant nurse trainees, nursing aides and nursing aide trainees.

## MENTAL HOSPITALS, 1962-63

Particulars	N.S.W.	Vic.	Q <sup>l</sup> land (a)	S.A.	W.A.	Tas.	Aust.
Hospitals .. .. .	15	9	5	2	6	1	38
Medical staff(b) .. .. .	127	134	18	19	16	5	319
Nursing staff and attendants .. .. .	2,764	2,760	1,172	566	440	212	7,914
Beds .. .. .	13,315	9,420	4,308	2,676	1,926	850	32,495
Average daily number of patients resident .. .. .	11,890		3,776	2,396	1,821	759	

(a) Includes the Epileptic Home. specialists who are paid for their services.

(b) In addition, there are in New South Wales 54 visiting

## CHAPTER XXI. PRIVATE FINANCE

## CURRENCY

## § 2. Coinage

**Issues of Australian Coins, p. 827.**—The net issues of Australian coins to 30th June, 1964, were:—silver, £49,261,000; bronze, £4,089,000; total, £53,350,000.

## § 3. Notes

**The Australian Note Issue, p. 829.**—The average value of notes in circulation for the year 1963-64 was £442,363,000. This amount was distributed in denominations as follows:—10s., £13,608,000; £1, £70,911,000; £5, £198,240,000; £10, £156,547,000; £20, £2,000; £50, £28,000; £100, £31,000; and £1,000, £2,996,000. The amount held by the banks was £65,549,000 and by the public £376,814,000.

## BANKING

## § 1. Cheque-Paying Banks

**The Reserve Bank of Australia, pp. 835-6.**—The average liabilities of the Central Banking Business (including Note Issue Department) of the Reserve Bank for the year ended June, 1964 amounted to £1,125,122,000. Capital and reserve funds amounted to £30,302,000; notes on issue to £438,361,000; statutory reserve deposit accounts of trading banks to £265,677,000; other deposits of trading banks to £7,012,000; term loan fund accounts of trading banks to £34,416,000; deposits of savings banks to £210,153,000; other liabilities to £139,201,000.

Particulars of the average assets were as follows:—gold and balances held abroad, £699,861,000; Australian notes and coin, £9,670,000; cheques and bills of other banks, £1,847,000; government and other securities (including treasury bills), £332,044,000; bills receivable and remittances in transit, £9,128,000; and other assets, £72,572,000.

**The Commonwealth Trading Bank of Australia, p. 839.**—The average liabilities in Australia of the Commonwealth Trading Bank for the year ended June, 1964, were £349,748,000. Of this amount, deposits not bearing interest amounted to £208,926,000; deposits bearing interest to £135,740,000; balances due to other banks to £968,000; other liabilities to £4,114,000.

The average assets in Australia, £356,848,000, included cash and cash balances £11,960,000; treasury bills and seasonal securities, £5,403,000; other Commonwealth and State government securities, £82,185,000; loans to authorized dealers in the short-term money market, £4,552,000; statutory reserve deposits with Reserve Bank, £43,441,000; cheques, bills and balances with other banks, £13,390,000; loans (other than loans to authorized dealers in the short-term money market), advances and bills discounted, £179,341,000; other assets, £16,576,000.

**Private Trading Banks, p. 840.**—Average liabilities in Australia of the Private Trading Banks for the year ended June, 1964, were £1,794,789,000. Deposits not bearing interest amounted to £1,085,729,000 and deposits bearing interest to £662,301,000; balances due to other banks to £10,016,000; other liabilities to £36,743,000.

The average assets in Australia, £1,787,279,000, included cash and cash balances, £56,607,000; treasury bills and seasonal securities, £49,387,000; other Commonwealth and State government securities, £350,916,000; loans to authorized dealers in the short-term money market, £27,655,000; statutory reserve deposits with Reserve Bank, £,221,726,000; cheques, bills and balances with other banks, £54,174,000; loans (other than loans to authorized dealers in the short-term money market), advances and bills discounted, £927,000,000; other assets, £99,814,000.

**Clearing House Returns—Average Weekly Clearings, p. 853.**—The average weekly bank clearings in each capital city for the year ended June, 1964, were as follows:—Sydney, £265,784,000; Melbourne, £255,787,000; Brisbane, £57,558,000; Adelaide, £55,460,000; Perth, £31,995,000; Hobart, £8,660,000; total, £675,244,000.

**Debits to Customers' Accounts—Cheque-paying Banks, p. 853.**—The average weekly debits to customers' accounts in each State for the year 1963–64 for all cheque-paying banks (excluding debits to accounts of Australian Governments in capital cities) were as follows:—New South Wales, £412,389,000; Victoria, £366,595,000; Queensland, £106,600,000; South Australia, £77,539,000; Western Australia, £48,192,000; Tasmania, £18,531,000; Northern Territory, £1,388,000; Australian Capital Territory, £5,731,000; total, £1,036,965,000.

## § 2. Savings Banks

**Number of Operative Accounts and Business Transacted, p. 861.**—The numbers of operative accounts in the several States at end of June, 1964, were:—New South Wales, 3,817,000; Victoria, 3,418,000; Queensland, 1,448,000; South Australia, 1,181,000; Western Australia, 736,000; Tasmania, 363,000; Northern Territory, 25,000; and Australian Capital Territory, 63,000; total, 11,051,000. The amounts on deposit in the several States at 30th June, 1964, were:—New South Wales, £791,606,000; Victoria, £739,484,000; Queensland, £271,176,000; South Australia, £237,902,000; Western Australia, £119,883,000; Tasmania, £62,385,000; Northern Territory, £4,044,000; and Australian Capital Territory, £11,644,000; total, £2,238,124,000. Total excess of deposits over withdrawals during 1963–64 was £210,875,000; and interest added was £57,403,000.

## INSURANCE

## § 2. Life Insurance

**New Policies Issued, Policies Discontinued, etc., Premiums and Claims, Australia, pp. 869-77.**—The following is a summary of the life insurance business transacted in Australia during 1963 (figures for 1962 in parentheses) compiled from monthly returns collected from the 42 (40) companies registered under the *Life Insurance Act 1945-1961*, and excluding the Government Insurance Office of New South Wales and the Queensland State Government Insurance Office which operate only within their respective States. Particulars shown are therefore not entirely comparable with those in Chapter XXI., which are derived from annual returns and include business of the State Government Offices.

Ordinary, Industrial, and Superannuation Businesses, respectively:—*New policies issued in Australia*—numbers, 327,103 (315,574), 128,886 (155,593), 78,354 (75,283); sums insured, £674,677,000 (£631,541,000), £36,304,000 (£52,171,000), £286,433,000 (£242,711,000); *policies discontinued or reduced in Australia*—numbers, 230,779 (215,729), 250,180 (276,413) 69,074 (96,308); sums insured, £262,855,000 (£247,126,000), £36,231,000 (£33,991,000) £20,232,000 (£85,548,000). Particulars of annuities are excluded.

*Premium receipts in Australia* of Ordinary, Industrial, and Superannuation Businesses, respectively, amounted to £109,340,000 (£98,596,000); £16,381,000 (£15,906,000); £42,297,000 (£37,025,000); *claims, etc., paid* amounted to—£47,175,000 (£41,470,000); £12,263,000 (£12,827,000); £16,414,000 (£15,086,000). Particulars of annuities are included.

## NEW CAPITAL RAISINGS BY COMPANIES IN AUSTRALIA

**Companies Listed on Stock Exchanges, p. 882.**—The following table shows particulars of new capital raised during the year 1963-64. Corresponding information is not yet available for unlisted companies.

## LISTED AUSTRALIAN COMPANIES(a): NEW CAPITAL RAISED THROUGH ISSUES OF SHARES, DEBENTURES, OR REGISTERED NOTES, ETC.(b), OR ACCEPTING DEPOSITS(c)

(£ million)

Year	Share capital						Debentures, registered notes and deposits		
	Value of issues commenced	Non-cash issues commenced (d)	Cash issues commenced	Cash raised during period (e)	Amounts not involving new money	New money	Total amount raised (f)	Amounts not involving new money (f)	New money
1963-64(g)	118.5	50.9	67.6	83.8	20.8	63.0	454.9	376.0	78.9

(a) Includes companies incorporated in the Australian Territories.

(b) Includes convertible notes.

(c) Deposits accepted by banks, life insurance companies, pastoral companies, building societies and loans to authorized dealers in the short-term money market are not included.

(d) Includes bonus issues, conversion issues, issues in exchange for existing shares, etc.

(e) Amounts paid up on issues commenced during the year plus calls on issues commenced in earlier years.

(f) Includes conversions, renewals, etc.

(g) Subject to revision.

## OVERSEA INVESTMENT BY PRIVATE INVESTORS

Net Annual Flow of Investment, p. 889.—The net annual flow of investment to Australia for the year ended 30th June, 1963, was £A. 261.2 m. Total annual *inflow* was £A. 264.3m. Of this amount, £A. 222.5m. was invested in companies in Australia, £A.—4.9m. in public authority securities domiciled in Australia, and £A. 46.7m. in Australian public authority debt domiciled overseas. Total annual *outflow* was £A. 3.1m.; £A. 3.0m. was invested in companies overseas, and net remittances from Australia by life insurance companies were £A. 0.1m.

## CHAPTER XXII. PUBLIC FINANCE

## COMMONWEALTH FINANCE

## § 3. Commonwealth Consolidated Revenue Fund pp. 908 and 919.

The table below shows details of revenue and expenditure for the year 1963–64.

## COMMONWEALTH CONSOLIDATED REVENUE FUND: REVENUE AND EXPENDITURE, 1963-64

(£'000)

Revenue		Expenditure	
Particulars	Amount	Particulars	Amount
Taxation—		Debt charges .. ..	68,940
Income tax—		Defence services(a) .. ..	221,747
Individuals .. ..	636,144	War and repatriation services ..	117,196
Companies .. ..	293,130	National Welfare Fund—	
Dividend (withholding) ..	7,968	Expenditure on social services	416,348
Customs .. ..	116,286	Loan consolidation and invest-	
Excise .. ..	291,232	ment reserve trust account ..	14,875
Sales tax .. ..	162,595	Business undertakings—	
Pay-roll tax .. ..	68,222	Postmaster-General .. ..	115,924
Estate duty .. ..	19,936	Broadcasting and television	
Other taxes .. ..	3,244	services .. ..	15,974
<i>Total</i> .. ..	1,598,757	Railways .. ..	5,895
Business undertakings—		<i>Total</i> .. ..	137,793
Postmaster-General .. ..	165,432	Territories .. ..	42,441
Broadcasting and television		Works and services—	
services .. ..	14,627	Business undertakings .. ..	76,653
Railways .. ..	7,830	Other .. ..	94,383
<i>Total</i> .. ..	187,889	<i>Total</i> .. ..	171,036
Territories .. ..	9,519	Payments to or for States .. ..	458,875
Other revenue .. ..	108,523	Other expenditure .. ..	(b) 255,437
<i>Grand Total</i> .. ..	1,904,688	<i>Grand Total</i> .. ..	1,904,688

(a) In addition, an amount of £38,715,000 was spent from Loan Fund. on the redemption of Treasury Bills.

(b) Includes expenditure

## COMMONWEALTH AND STATE FINANCE

Revenue and Expenditure, p. 950.—Preliminary information relating to Commonwealth and State revenue and expenditure during 1963–64 is given below.

COMMONWEALTH AND STATE REVENUE AND EXPENDITURE, 1963–64 p  
(£'000)

Government of—	Consolidated Revenue Fund		
	Revenue	Expenditure	Surplus (+) or deficit (—)
New South Wales .. .. .	(a) 343,591	(a) 343,321	+270
Victoria .. .. .	222,184	222,437	—253
Queensland .. .. .	130,448	130,227	+221
South Australia .. .. .	101,503	99,878	+1,625
Western Australia .. .. .	83,944	85,340	—1,396
Tasmania .. .. .	33,918	34,511	—593
<i>Six States</i> .. .. .	<i>915,588</i>	<i>915,714</i>	<i>—126</i>
Commonwealth .. .. .	1,904,688	1,904,688	..
<b>Grand Total—Unadjusted</b> .. .. .	<b>2,820,276</b>	<b>2,820,402</b>	<b>—126</b>
<b>Adjusted(b)</b> .. .. .	<b>2,440,398</b>	<b>2,440,524</b>	<b>—126</b>

(a) Represents the combined transactions of the Consolidated Revenue Fund and the Business Undertakings—Railways, Tramways and Omnibuses and Sydney Harbour Section of the Maritime Services Board—included in the annual Budget Papers. Adjustments have been made to exclude duplications.  
(b) To avoid duplication in aggregating particulars for the Commonwealth and States, the grand totals have been adjusted to exclude State payments to the Commonwealth in respect of pay-roll tax and Commonwealth payments to the States included in State Consolidated Revenue Funds in respect of interest on State debts, special grants, financial assistance grants, special financial assistance, grants to universities, tuberculosis, capital expenditure and National Welfare payments. There are other relatively minor payments for which adjustments have not been made and the adjusted figures are therefore still slightly overstated.

## GOVERNMENT SECURITIES ON ISSUE: COMMONWEALTH AND STATES

## § 3. Government Securities on Issue: Commonwealth and States

Securities on Issue and Annual Interest Payable, p. 954.—The following table shows details of the government securities on issue on account of the Commonwealth and States and the annual interest payable thereon at 30th June, 1964.

GOVERNMENT SECURITIES ON ISSUE AND ANNUAL INTEREST PAYABLE AT  
30th JUNE, 1964: COMMONWEALTH AND STATES

Particulars	Currency in which repayable							Australian currency equivalent(a)	
	Australian currency	Sterling	United States dollars	Canadian dollars	Swiss francs	Netherlands guilders	German Deutsche marks	Total amount on issue	Total interest liability
	£A.'000	£Stg.'000	U.S. \$'000	Can. \$'000	Sw. fr. '000	fl.'000	D.M.'000	£A.'000	£A.'000
Commonwealth .. .. .	1,284,357	79,393	351,347	50,376	194,288	7,150	37,901	1,586,198	59,140
States .. .. .	2,874,821	284,795	220,966	16,065	50,296	32,850	..	3,345,281	147,639
<b>Grand Total</b> .. .. .	<b>4,159,178</b>	<b>364,188</b>	<b>572,313</b>	<b>66,441</b>	<b>244,584</b>	<b>40,000</b>	<b>37,901</b>	<b>4,931,479</b>	<b>206,779</b>

(a) Converted at rates of exchange ruling at 30th June, 1964.

## TAXES ON INCOME

Commonwealth Income Tax and Social Service Contribution Assessments, pp. 983-4.—  
The following table shows particulars for resident individuals for the 1962-63 assessment year.

**COMMONWEALTH INCOME TAX AND SOCIAL SERVICES CONTRIBUTION  
1962-63 ASSESSMENT: NUMBER OF TAXPAYERS, ACTUAL INCOME(a),  
TAXABLE INCOME (b), AND NET INCOME TAX AND SOCIAL SERVICES  
CONTRIBUTION ASSESSED—RESIDENT INDIVIDUALS**

(Income derived in the year 1961-62)

Grade of actual income and State or Territory of assessment		Number of taxpayers	Actual income (a)	Taxable income(b)		Net Income Tax and Social Services Contribution assessed
				Salary and wages	Total	
£	£		£'000	£'000	£'000	£'000
105- 199 .. .. .		159,892	24,777	19,372	23,626	186
200- 299 .. .. .		181,445	45,128	33,205	41,517	707
300- 399 .. .. .		207,996	72,965	53,238	65,616	1,915
400- 499 .. .. .		240,502	108,267	79,000	96,117	3,872
500- 599 .. .. .		255,915	140,642	98,569	123,130	6,265
600- 699 .. .. .		287,667	187,066	134,143	162,153	9,810
700- 799 .. .. .		285,783	214,194	150,305	182,287	12,528
800- 899 .. .. .		295,816	251,680	169,435	204,888	15,351
900- 999 .. .. .		338,675	321,831	214,460	251,914	20,203
1,000- 1,099 .. .. .		362,021	380,028	250,204	289,220	24,854
1,100- 1,199 .. .. .		328,910	377,514	245,569	284,112	26,186
1,200- 1,299 .. .. .		275,566	343,768	219,488	257,175	25,220
1,300- 1,399 .. .. .		222,923	300,111	187,308	223,507	23,270
1,400- 1,499 .. .. .		172,220	249,261	152,710	186,805	20,698
1,500- 1,999 .. .. .		448,352	761,689	431,951	573,258	72,574
2,000- 2,999 .. .. .		226,306	535,365	241,670	417,142	69,538
3,000- 3,999 .. .. .		58,771	200,596	65,655	164,710	36,335
4,000- 4,999 .. .. .		24,652	109,244	29,418	92,356	24,494
5,000- 9,999 .. .. .		27,154	176,325	37,655	154,011	53,244
10,000-14,999 .. .. .		3,112	36,935	7,293	33,176	14,836
15,000-19,999 .. .. .		812	13,865	2,539	12,413	6,119
20,000-29,999 .. .. .		396	9,439	1,439	8,395	4,464
30,000-49,999 .. .. .		153	5,495	789	4,758	2,665
50,000 and over .. .. .		69	6,660	324	4,633	2,757
<b>Total, Residents .. .. .</b>		<b>4,405,108</b>	<b>4,872,845</b>	<b>2,825,739</b>	<b>3,856,919</b>	<b>478,091</b>
<b>Central Office .. .. .</b>		<b>14,828</b>	<b>44,696</b>	<b>9,018</b>	<b>37,074</b>	<b>11,313</b>
<b>New South Wales .. .. .</b>		<b>1,660,133</b>	<b>1,877,881</b>	<b>1,142,420</b>	<b>1,496,293</b>	<b>186,988</b>
<b>Victoria .. .. .</b>		<b>1,277,563</b>	<b>1,412,672</b>	<b>831,725</b>	<b>1,129,224</b>	<b>141,160</b>
<b>Queensland .. .. .</b>		<b>574,828</b>	<b>599,796</b>	<b>315,008</b>	<b>459,381</b>	<b>53,613</b>
<b>South Australia .. .. .</b>		<b>409,455</b>	<b>429,460</b>	<b>242,418</b>	<b>339,129</b>	<b>38,420</b>
<b>Western Australia .. .. .</b>		<b>293,777</b>	<b>317,092</b>	<b>169,464</b>	<b>248,421</b>	<b>29,354</b>
<b>Tasmania .. .. .</b>		<b>136,278</b>	<b>141,361</b>	<b>83,349</b>	<b>109,072</b>	<b>12,020</b>
<b>Northern Territory .. .. .</b>		<b>9,174</b>	<b>12,702</b>	<b>6,952</b>	<b>8,355</b>	<b>1,045</b>
<b>Australian Capital Territory .. .. .</b>		<b>29,072</b>	<b>37,185</b>	<b>25,385</b>	<b>29,970</b>	<b>4,178</b>
<b>Total, Residents .. .. .</b>		<b>4,405,108</b>	<b>4,872,845</b>	<b>2,825,739</b>	<b>3,856,919</b>	<b>478,091</b>

(a) Actual income is defined briefly as "Gross income including exempt income less expenses incurred in gaining that income". (b) Taxable income is the income remaining after deducting from assessable income all allowable deductions.

The following table shows particulars for resident and non-resident companies for the 1962-63 assessment year.

**COMMONWEALTH INCOME TAX AND SOCIAL SERVICES CONTRIBUTION  
1962-63 ASSESSMENT: NUMBER OF TAXPAYERS, TAXABLE INCOME(a),  
AND NET TAX ASSESSED—RESIDENT AND NON-RESIDENT COMPANIES.**

(Income derived in the year 1961-62)

Grade of taxable income	Taxable			Non-taxable		
	Number of taxpayers	Taxable income(a)	Net Tax assessed (b)	Number of taxpayers	Taxable income(a) (c)	Loss for year
£      £		£'000	£'000		£'000	£'000
<b>Private Companies—</b>						
Loss .. .. .	..	..	..	19,795	..	39,915
Nil .. .. .	..	..	..	7,550	..	..
1- 999 .. .. .	14,020	5,442	1,265	2,024	857	..
1,000- 4,999 .. .. .	18,476	49,122	10,956	2,607	6,428	..
5,000- 9,999 .. .. .	6,672	45,901	10,994	728	5,136	..
10,000- 19,999 .. .. .	3,018	41,751	10,983	362	4,960	..
20,000- 49,999 .. .. .	1,452	43,320	11,906	160	4,788	..
50,000- 99,999 .. .. .	322	21,438	5,959	26	1,786	..
100,000-199,999 .. .. .	111	15,455	4,396	2	237	..
200,000-499,999 .. .. .	28	6,978	1,927	..	..	..
500,000-999,999 .. .. .	2	1,062	189	..	..	..
1,000,000 and over .. .. .	2	2,109	790	..	..	..
<b>Total .. .. .</b>	<b>44,103</b>	<b>232,578</b>	<b>59,365</b>	<b>33,254</b>	<b>24,192</b>	<b>39,915</b>
<b>Non-private Companies—</b>						
Loss .. .. .	..	..	..	2,393	..	31,978
Nil .. .. .	..	..	..	1,255	..	..
1- 999 .. .. .	1,905	560	189	97	34	..
1,000- 4,999 .. .. .	2,002	5,724	1,901	157	452	..
5,000- 9,999 .. .. .	1,445	10,097	3,455	87	645	..
10,000- 19,999 .. .. .	1,050	15,012	5,117	109	1,577	..
20,000- 49,999 .. .. .	1,267	40,630	13,269	134	4,251	..
50,000- 99,999 .. .. .	747	52,563	16,518	70	4,656	..
100,000-199,999 .. .. .	487	68,901	21,152	42	5,585	..
200,000-499,999 .. .. .	318	98,950	29,368	25	7,994	..
500,000-999,999 .. .. .	89	60,221	18,556	11	8,148	..
1,000,000 and over .. .. .	101	290,193	94,347	1	1,385	..
<b>Total .. .. .</b>	<b>9,411</b>	<b>642,851</b>	<b>203,872</b>	<b>4,381</b>	<b>34,727</b>	<b>31,978</b>
<b>All Companies—</b>						
Private and non-private .. .. .	53,514	875,429	263,237	37,635	58,919	71,893
Special section .. .. .	1,380	8,775	3,311	3	2	1
Non-profit .. .. .	452	1,483	487	580	10	123
Co-operative .. .. .	1,796	3,484	1,133	337	23	364
<b>Grand Total .. .. .</b>	<b>57,142</b>	<b>889,171</b>	<b>268,168</b>	<b>38,555</b>	<b>58,954</b>	<b>72,381</b>

(a) Taxable income is the income remaining after deducting from assessable income all allowable deductions.

(b) Excludes additional tax levied on the undistributed income of private companies, £988,000.

(c) Net tax assessed is nil because of rebates, etc.



## CHAPTER XXIII. RURAL INDUSTRY

## AGRICULTURAL PRODUCTION

## § 2. Distribution, Production and Value of Crops

Distribution and Production, pp. 996-9.—The following table shows preliminary figures for the area and production of major crops in Australia during the season 1963-64.

## AREA AND PRODUCTION OF CROPS: AUSTRALIA, 1963-64 p

Crop	Area	Production	Crop	Area	Production
	'000 acres	'000		'000 acres	'000
<b>Cereals for grain—</b>			<b>Industrial crops—</b>		
Barley ..	2,013	43,395 bus.	Cotton ..	39	
Maize ..	215		Flax (for linseed) ..	118	30 tons
Oats ..	3,392	68,234 "	Peanuts ..	44	
Rice ..	59	7,454 "	Sugar cane (for crushing) ..	418	12,118 tons
Sorghum ..	366	7,887 "	Tobacco ..	28	
Wheat ..	16,474	327,912 "	Other ..	193	
Other ..	126				
<b>Total ..</b>	<b>22,645</b>	<b>..</b>	<b>Total ..</b>	<b>840</b>	<b>..</b>
			Potatoes ..	103	
Hay ..	2,602	4,269 tons	Vineyards, orchards, etc. ..	757	
Green fodder ..	4,877		<b>Grand Total ..</b>	<b>(a)32,043</b>	<b>..</b>
Grass seed ..	219				

(a) Includes an estimate for particulars not yet available.

Total area of crops in each State and Territory during 1963-64 was:—New South Wales, 8,994,000 acres; Victoria, 6,106,000 acres; Queensland, 3,663,000 acres; South Australia, 5,975,000 acres; Western Australia, 6,915,000 acres; Tasmania, 380,000 acres; Northern Territory, 2,000 acres; Australian Capital Territory, 8,000 acres.

## PASTORAL PRODUCTION

## § 1. Introduction

Livestock Numbers, p. 1051.—The following table shows, for each State and Territory, the numbers of livestock at 31st March, 1964.

## LIVESTOCK NUMBERS, 31st MARCH, 1964 p

('000)

Particulars	N.S.W.	Vic.	Q'land	S. Aust.	W. Aust.	Tas.	N.T.	A.C.T.	Aust.
Horses ..	163	56	206	n.a.	39	8	39	1	(a) 512
Cattle ..	4,789	3,301	7,402	694	1,299	450	1,055	14	19,004
Sheep ..	71,764	28,413	24,337	16,403	20,165	3,600	9	289	164,980
Pigs ..	391	322	388	153	128	83	3	(b)	1,468

(a) Incomplete. Excludes South Australia.

(b) Less than 500.

### § 5. Pastoral Products: Wool

Wool Production, p. 1061.—The estimated production of wool (greasy basis) in Australia during 1963–64 was 1,781,700,000 lb.

### § 6. Pastoral Products: Meat

Production of Meat, pp. 1069 and 1071.—The following table shows, for each State and Territory, the production of meat during 1963–64.

PRODUCTION OF MEAT, 1963-64 p  
(Tons Carcass Weight)

Particulars	N.S.W.	Vic.	Q'land	S. Aust.	W. Aust.	Tas.	N.T.	A.C.T.	Aust.
Beef and veal ..	281,879	219,140	328,126	38,798	64,471	25,672	9,414	2,230	969,730
Mutton and lamb	203,525	223,804	42,931	54,084	37,004	20,313	73	1,944	583,678
Total meat (incl. pigmeats) ..	514,222	468,104	400,332	104,044	111,420	51,919	9,579	4,482	1,664,102

## OTHER RURAL INDUSTRIES: DAIRYING, POULTRY AND BEE-FARMING

### § 1. The Dairying Industry

Principal Dairy Products, pp. 1079 and 1088.—Particulars of the total production of these commodities in each State and the Australian Capital Territory during 1963–64 are shown below.

PRINCIPAL DAIRY PRODUCTS, 1963-64 p

Particulars	N.S.W.	Vic.	Q'land	S. Aust.	W. Aust.	Tas.	A.C.T.	Aust.(a)
Total whole milk								
'000 gals.	328,411	688,937	239,368	96,016	56,797	83,152	1,153	1,493,910
Butter(b) .. tons	36,451	103,455	35,518	7,501	6,992	13,770	1	203,688
Cheese(b) .. tons	5,147	25,183	9,492	15,030	1,494	1,334	..	57,680
Pigmeats .. tons	28,818	25,160	29,275	11,162	9,945	5,934	308	110,694

(a) Includes Northern Territory.

(b) Factory and farm production.

## CHAPTER XXVI. MINERAL INDUSTRY

### § 2. The Mineral Industry

Quantity and Value of Production, pp. 1146 and 1184.—In the following table, particulars are given of the local value of production of metal and other mining for Australia in 1963, together with the quantities of the principal minerals produced during 1963.

MINERAL PRODUCTION: QUANTITIES AND VALUES, AUSTRALIA, 1963 p  
METALLIC MINERALS

Principal contents of metallic minerals produced								Local value of production—metal mining
Copper	Gold	Iron	Lead	Silver	Tin	Tungsten (a)	Zinc	
'000 tons	'000 fine oz.	'000 tons	'000 tons	'000 fine oz.	tons	tons	'000 tons	£'000
113	1,023	3,557	410	19,581	2,852	960	351	96,746

(a) In terms of WO<sub>3</sub> (tungstic oxide).

MINERAL PRODUCTION: QUANTITIES AND VALUES, AUSTRALIA, 1963 p  
—continued

## NON-METALLIC AND FUEL MINERALS

Quantities produced						Local value of production—non-metal and fuel mining £'000
Coal		Asbestos	Gypsum	Limestone(a)	Salt	
Black	Brown					
'000 tons	'000 tons	short tons	tons	'000 tons	tons	'000
24,857	18,457	13,374	687,319	6,761	582,787	80,937

(a) Excludes limestone used as a construction material.

§ 3. Gold, § 4. Lead, Silver and Zinc, § 5. Copper, § 6. Tin,  
pp. 1150, 1156, 1159 and 1161

Smelter and refinery production of the principal metals treated in Australia during the year 1963 is shown below.

SMELTER AND REFINERY PRODUCTION OF PRINCIPAL METALS: AUSTRALIA,  
1963

Refined gold	Refined silver (a)	Refined lead (a)	Lead content of lead bullion produced for export (a)	Refined zinc (a)	Refined copper (a)	Refined tin (a)
'000 fine oz.	'000 fine oz.	tons	tons	tons	tons	tons
1,119	8,871	224,605	80,661	179,777	86,115	2,626

(a) Source: Bureau of Mineral Resources.

## CHAPTER XXVIII. REPATRIATION

## § 2. War Pensions, § 3. Service Pensions, pp. 1205-10

The following table gives a summary of war and service pensions current at 30th June, 1964, and of the amounts paid in pensions during the year 1963-64.

## WAR AND SERVICE PENSIONS: SUMMARY, 1963-64

Particulars	N.S.W.	Vic.	Qld	S.A.	W.A.	Tas.	Abroad	Total
Number of Pensions in force at 30th June(a)—								
War pensions ..	225,971	189,583	98,327	65,601	57,010	27,904	4,457	668,853
Service pensions ..	20,360	15,874	11,118	6,822	7,754	2,660	..	64,588
Miscellaneous pensions ..	336	168	553	95	37	9	7	1,205
Amounts paid (£'000)—								
War pensions(b) ..	26,629	22,798	11,542	6,768	5,782	3,079	828	77,426
Service pensions(b) ..	3,990	2,827	1,912	1,345	1,588	437	..	12,099

(a) Includes dependants of eligible pensioners.

(b) Includes miscellaneous pensions.



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NOTE.—This index is preceded by a list of the special articles, etc., which have appeared in previous issues of the Official Year Book. A list of the illustrations contained in this issue will be found on page ix. Area, population, etc., of particular localities are indexed under the locality concerned. Subject matter extending continuously over more than one page is indexed according to the first page only. *Where more than one reference to a subject is given, the chief reference, wherever it has been possible to determine it, is indicated by italic type. Two references to a subject so indicated signify major, and approximately equal, importance.*

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