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COMMONWEALTH BUREAU OF CENSUS AND STATISTICS,  
CANBERRA.

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OFFICIAL

# YEAR BOOK

OF THE

# COMMONWEALTH OF AUSTRALIA

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No. 42.—1956.

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Prepared under Instructions from  
The Right Honorable the Treasurer,

BY

S. R. CARVER,  
ACTING COMMONWEALTH STATISTICIAN.



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## PREFACE.

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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 forty-second Official Year Book issued under the authority of the Commonwealth Government.

The Synopsis on pp. xi to xxxi 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, owing to limitations of 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.

Every endeavour has been made to meet the demand occasioned by the current economic and financial conditions for new information, or information expressed in new terms, concerning many branches of statistics, while a Diary of Principal Economic Events of the years 1951 to 1954 is inserted after the last chapter.

It is not proposed to refer here to the whole of the new matter or to the new treatment of existing matter incorporated in the present volume, but attention may be drawn to the following :—

- Chapter I. Discovery, etc., of Australia.—Reprinting of Commonwealth Constitution (p. 6).
- Chapter V. The Territories of Australia.—Information relating to Cocos Is. (pp. 151-2)
- Chapter VI. Labour, Wages and Prices.—Expanded section showing comparison of trends of "Interim" and "C" Series Indexes of retail prices (p. 157); Wage Margins (p. 193).
- Chapter VIII. Trade.—New Table showing Direction of Trade according to Currency Areas (p. 293); Interstate Trade (p. 315).
- Chapter XV. Welfare Services.—The Aged Persons Homes Act (p. 562); The Order of St. John (p. 566).
- Chapter XVI. Population. Details of 1954 Census results (pp. 586-605); details of General Assisted Passage scheme of migration (p. 616).
- Chapter XXV. Fisheries.—Whaling (p. 979).
- Chapter XXVI. Mineral Industry.—Revised and expanded sections on Mineral Oils (pp. 1016-7) and Non-metallic minerals (pp. 1017-20).
- Chapter XXIX. Miscellaneous.—Special article on Snowy Mountains Scheme (pp. 1103-30).
- Appendix.—Commonwealth and State Election Results, 1955 (pp. 1179-80); New Ministries (pp. 1181-3); Details of Commonwealth Conciliation and Arbitration Act 1904-1956; Government Schools, Summary of Statistics for 1954.

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.

In a publication of this size, a considerable time must necessarily elapse between the handling, by both author and printer, of the earlier and later parts of the work. In order to offset, to some extent, the consequent delay in presentation, the contents of this issue have already been published in separate Parts as the successive chapters or groups

of chapters were printed. Particulars of these Parts, numbering eleven in all, are shown in the Price List of Printed Publications at the end of this volume. In a statistical publication, the time element, however, does result in an unevenness in the periods to which the statistics relate. To overcome this difficulty, at least partially, much more use is now made of the Appendix to the Year Book. So far as space permits, later particulars, where available, of many statistical series appearing in preceding chapters have been inserted in the Appendix. The insertions have been restricted to figures mainly, as the inclusion of current textual matter is not generally practicable.

The Appendix to this issue contains information for various periods up to 1955-56, that is, one, and in some instances two, years in advance of that contained in the body of the book.

It should be pointed out that for the most recent statistics the reader should refer to other publications issued by this Bureau, notably the *Monthly Review of Business Statistics* and the *Quarterly Summary of Australian Statistics*. There are also numerous mimeographed statements issued from time to time on a wide range of subjects. Particulars of these are shown in Chapter XXX.—Statistical Organization and Sources of Information.

Commencing with issue No. 38 a change in the title of the Year Book was made, the year now shown being the year of issue.

My thanks are tendered to the State Statisticians, who have collected and compiled the data on which a great part of the information given in the Official 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. A. E. Callander, Editor of Publications, Mr. E. H. Harry, B.A., B.Com., and Mr. G. I. Neville, B.Com., 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.

S. R. CARVER,

Acting Commonwealth Statistician.

COMMONWEALTH BUREAU OF CENSUS AND STATISTICS,  
*Canberra, A.C.T., November, 1956.*

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# OFFICIAL YEAR BOOK

## OF THE

# COMMONWEALTH OF AUSTRALIA.

### CHAPTER I.

## DISCOVERY, COLONIZATION AND FEDERATION OF AUSTRALIA.

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

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

2. **Terra Australis.**—It would appear that there was 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 which might warrant the supposition of knowledge of such a land appeared in maps and manuscripts of the Middle Ages and the fourteenth and fifteenth centuries, but there is no evidence definitely 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 supposed 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.

3. **Discovery of Australia.**—(i) *The Spaniards.* Disregarding the statement that the Arabs had come to Australia long before the Portuguese, Spaniards or the Dutch, for which there is no evidence, and apart from the possibility that the Portuguese may have discovered part of the Australian coast before 1542, the coastal exploration of Australia began 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 to explore the islands 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).

4. 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 *Cygnnet*, 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 a question 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 James Cook's first voyage, though primarily undertaken for the purpose of observing the transit of Venus from Tahiti, had also for its objective to ascertain 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, Dr. Solander the naturalist, Green the astronomer, draughtsmen and servants, Cook, after observing the transit of Venus at Tahiti, turned towards 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 Flinders and Bass in 1798.

## § 2. The Annexation of Australia.

1. Annexation of 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° to this place, latitude 104° 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. 1., 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 in November, 1769 Captain Cook had taken possession of the North Island of New Zealand, and in January, 1770 also of the South Island, it is a matter of doubt 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 facts 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 unequivocally become British territory until 1840. In that year, on 29th January, Captain Hobson arrived at the Bay of Islands. On the following day he read the 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 advised 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 III. 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's 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 mainly due 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 Exploration of Australia.

A fairly complete, though brief, account of the exploration of Australia was given in *Official Year Book No. 2* (pp. 20-39), and a summary of the more important facts relating to the subject was embodied in this Chapter in succeeding issues up to and including No. 22.

### § 4. 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 till 1798 that the contrary was known. In that year, by sailing through Bass Strait, Flinders and Bass proved that it was an island. 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 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 is included in King, one of the electorates of Sydney, is situated in latitude  $31^{\circ} 30'$  south, longitude  $159^{\circ} 5'$  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 formations 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 278 at the Census of 30th June, 1954.

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.

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 Australian National Antarctic Expedition landed on the island and remained there until 1915. On 3rd March, 1948, another party was landed to man a new base and this has since been maintained as a scientific base. The island is about 21 miles long and 2 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, though until 1831 the settlement on King George's Sound remained under the latter jurisdiction.

4. **South Australia.**—On 15th August, 1834 the Act 4 and 5 William IV., cap. 95, was passed, creating South Australia a "province," and towards the end of the year 1836 settlement took place. 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 the authority of the Imperial Act 24 and 25 Vic., cap. 44, the western boundary of South Australia was extended to coincide with the eastern boundary of Western Australia, namely, the 129th



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, by letters patent, brought under the jurisdiction of South Australia, which thereupon controlled an area of 903,690 square miles.

5. *New Zealand*.—New Zealand, nominally annexed by Captain Cook and formally declared by proclamation in 1840 as a dependency of New South Wales, was, by letters patent of 16th November of that year, constituted a separate colony under the powers of the Act 3 and 4 Vic., 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 87,384 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 consummated 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.

## § 5. 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 into 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 surrender to and acceptance by the Commonwealth of the Northern Territory, 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.

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.**—The total area of the Commonwealth of Australia is 2,974,581 square miles. The dates of creation and the areas of its component States and Territories, as determined on the final adjustment of their boundaries, 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	670,500			
South Australia ..	1834	380,070			
Western Australia	1829	975,920	Commonwealth of Australia ..	..	2,974,581
Tasmania ..	1825	26,215			

**§ 6. The Constitutions of the States and of the Commonwealth.**

1. **General.**—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 No. 22.

2. **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 July, 1955.

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

*An Act to constitute the Commonwealth of Australia. [9th July, 1900.]*

**W**HEREAS 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 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).

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 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.

\* 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.

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.

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.

\* The Parliament has otherwise provided, by means of the Commonwealth Electoral Act 1918-1949, Section 39 (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 1918-1949, Section 69. For present qualifications see Chapter III.—General Government.

## 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 was increased to £600 per annum in 1907 (except in the cases of Ministers, the Presiding Officers of the two Houses, and the Chairmen of Committees, whose allowances remained at £400 in addition to the emoluments of office), and to £1,000 per annum in 1920 (Ministers, etc., £800). Under financial emergency legislation Parliamentary salaries and allowances were reduced generally, the lowest level reached in respect of the Parliamentary allowance being £750 per annum in 1932. Subsequently there was a gradual restoration to former levels, the allowance reaching £1,000 per annum again in 1938, when, also, the proviso for the reduced allowance to Ministers, etc. was removed. In 1947 the Parliamentary allowance was increased to £1,500 per annum, and in 1952 to £1,750. In 1920 additional allowances of £200 and £400 per annum, respectively, were granted to the Leaders of the Opposition in the Senate and the House of Representatives, and in 1947 they were increased to £300 and £600 respectively. In 1947, also, an additional allowance of £400 per annum was granted 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 referenda are referred to in Chapter III., General Government.

- (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.

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

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.

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 laws 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.

\* The Ministers of State were increased to eight in 1915, to nine in 1917, to ten in 1935, to eleven in 1938, and to nineteen in 1941, a special war-time provision during the continuance in operation of the National Security Act which was extended in 1946 on the expiry of that Act. In 1951 the number was increased to twenty. The annual appropriation for Ministers' salaries received in addition to their allowances as Members (*see* page 13), was increased to £13,650 in 1915 and to £15,300 in 1917. Under financial emergency legislation, in addition to the reductions in Members' allowances the appropriation for Ministers was also reduced, in 1932 reaching the level of £10,710. The reductions were removed gradually, and finally in 1938 when the appropriation was £16,950. At the same time, an additional allowance of £1,500 per annum was granted to the Prime Minister, and the proviso for the reduced Parliamentary allowance to Ministers was removed. In 1941 the annual appropriation for Ministers was increased, as a war-time provision, to £21,250. This was extended in 1946. In 1947 the appropriation was increased to £27,650, in 1951 to £29,000, and in 1952 to £41,000.

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.

### 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 prescribed.\*

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.

\* The Judiciary Act 1903 provided for a Chief Justice and two other Justices. Subsequent amendments to the Act increased the number of other Justices to four and later six, and then reduced it to five. In 1936 the number was again increased to six. The Judiciary Act 1903 also provided for the payment of a salary of £3,500 per annum to the Chief Justice and of £3,000 per annum to each other Justice. In 1947 these salaries were increased respectively to £4,500 and £4,000 per annum, in 1950 to £5,000 and £4,500 per annum, and in 1955 to £8,000 and £6,500 per annum.

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.

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 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 State 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.† (i) *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.*

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

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

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

(v) *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.*

(vi) *The powers conferred by this section shall not be construed as being limited in any way by 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.

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.

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

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

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.*)

3. The Royal Proclamation.—The preceding Act received the Royal assent on the 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 the 17th September, 1900, constituted the Commonwealth as from the 1st January, 1901; it reads 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.

## § 7. 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  $29^{\circ} 3' 30''$  S. longitude  $167^{\circ} 57' 5''$  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* (Commonwealth) of 16th November, 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  $8^{\circ}$  S., and in longitude between  $141^{\circ}$  E. and  $159^{\circ} 25'$  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 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  $0^{\circ} 32'$  south of the Equator and longitude  $166^{\circ} 55'$  east of Greenwich, 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. The administration under the mandate operated from 17th December, 1920 until 1st November, 1947 and so far the administrators have been appointed by the Commonwealth Government. As with the Territory of New Guinea, Nauru is now administered under a Trusteeship Agreement with the United Nations.

5. **Territory of Ashmore and Cartier Islands.**—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.

6. **Australian Antarctic Territory.**—An Imperial Order in Council of 7th February, 1933 placed under Australian authority "all the islands and territories other than Adélie 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 Commonwealth Parliament had passed the Australian Antarctic Territory Acceptance Act on 13th June, 1933. The boundaries of Adélie Land were definitely fixed by a decree of 1st April, 1938 as latitude  $60^{\circ}$  S., longitude  $136^{\circ}$  E. and longitude  $142^{\circ}$  E.

7. **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. The laws of the Australian Capital Territory were declared to be in force in the Territory of Heard and McDonald Islands by the Heard and McDonald Islands Act 1953.

8. **Territory of Cocos 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.

## 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 in all an area of about 2,974,581 square miles, the mainland alone containing about 2,948,366 square miles. Bounded on the west and east by the Indian and Pacific Oceans respectively, it lies between longitudes  $113^{\circ} 9' E.$  and  $153^{\circ} 39' E.$ , while its northern and southern limits are the parallels of latitude  $10^{\circ} 41' S.$  and  $43^{\circ} 39' S.$ , or, excluding Tasmania,  $39^{\circ} 8' S.$  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, South-East Cape on the south, or, if Tasmania be excluded, Wilson's Promontory.

(ii) *Tropical and Temperate Regions.* Of the total area of Australia nearly 40 per cent. lies within the tropics. Assuming, as is usual, that the latitude of the Tropic of Capricorn is  $23^{\circ} 30' S.$ , 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	..	..	359,000	..	364,000	..	426,320	1,149,320
„ Temperate Zone	310,372	87,884	311,500	380,070	611,920	26,215	97,300	1,825,261
Total Area	310,372	87,884	670,500	380,070	975,920	26,215	523,620	2,974,581

(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; of Western Australia, 37 per cent. is tropical and 63 per cent. temperate; of the Northern Territory 81 per cent. 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, and about 53 per cent. of the three territories which have areas within the tropical zone.

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, four-fifths of that of Canada, nearly three-quarters of the whole area of Europe, and about 25 times as large as Great Britain and Ireland. The areas of Australia and of certain other countries are shown in the table on the next page.

AREA OF AUSTRALIA AND OF OTHER COUNTRIES, *circa* 1954.

('000 square miles.)

Country.	Area.	Country.	Area.
<b>Continental Divisions—</b>		<b>Africa—continued.</b>	
Europe ( <i>a</i> ) .. ..	1,904	Angola .. ..	481
Asia ( <i>a</i> ) .. ..	10,426	Union of South Africa .. ..	473
U.S.S.R. (Europe and Asia)	8,599	Ethiopia .. ..	409
Africa .. ..	11,703	Egypt .. ..	386
North and Central America		Tanganyika Territory .. ..	363
and West Indies .. ..	9,360	Nigeria and Protectorate .. ..	339
South America .. ..	6,894	South-West Africa .. ..	318
Oceania .. ..	3,304	Mozambique .. ..	298
Total, excluding Arctic		Northern Rhodesia .. ..	290
and Antarctic Confs.	52,190	Bechuanaland Protectorate .. ..	275
		Madagascar .. ..	228
<b>Europe (<i>a</i>)—</b>		Kenya Colony and Protec-	
France .. ..	213	torate .. ..	225
Spain (incl. possessions) .. ..	194	Other .. ..	1,421
Sweden .. ..	173	Total .. ..	11,703
Germany .. ..	136		
Finland .. ..	130	<b>North and Central America—</b>	
Norway .. ..	125	Canada .. ..	3,846
Poland .. ..	120	United States of America .. ..	3,022
Italy .. ..	116	Greenland .. ..	840
Yugoslavia .. ..	99	Mexico .. ..	760
United Kingdom .. ..	94	Alaska .. ..	586
Romania .. ..	92	Nicaragua .. ..	57
Other .. ..	412	Cuba .. ..	44
Total .. ..	1,904	Honduras .. ..	43
		Other .. ..	162
<b>Asia (<i>a</i>)—</b>		Total .. ..	9,360
China and Dependencies .. ..	3,759		
India .. ..	1,270	<b>South America—</b>	
Iran .. ..	629	Brazil .. ..	3,288
Mongolian People's Republic .. ..	591	Argentina .. ..	1,084
Saudi Arabia .. ..	618	Peru .. ..	506
Indonesia .. ..	576	Colombia (excl. of Panama) .. ..	440
Pakistan .. ..	364	Bolivia .. ..	424
Turkey .. ..	296	Venezuela .. ..	352
Burma .. ..	262	Chile .. ..	286
Afghanistan .. ..	251	Paraguay .. ..	157
Thailand .. ..	198	Ecuador .. ..	105
Iraq .. ..	168	Other .. ..	252
Other .. ..	1,444	Total .. ..	6,894
Total .. ..	10,426		
<b>U.S.S.R. .. ..</b>	<b>8,599</b>	<b>Oceania—</b>	
<b>Africa—</b>		Commonwealth of Australia .. ..	2,975
French West Africa .. ..	1,831	New Zealand .. ..	103
French Equatorial Africa .. ..	969	New Guinea .. ..	93
Anglo-Egyptian Sudan .. ..	967	Papua .. ..	91
Belgian Congo .. ..	905	Other .. ..	42
Algeria .. ..	846	Total .. ..	3,304
Libya .. ..	679		

(a) Excludes U.S.S.R., shown below.



The areas shown in the table are obtained from the *Demographic Yearbook*, 1954, 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 Configurations and Standard Times.**—As already stated, Australia consists of six States and the Northern and Australian Capital Territories. 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.	Proportion 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	10.40	(a) 700	(a) 443	150° E.	10
Victoria ..	87,884	2.96	680	129	150° E.	10
Queensland ..	670,500	22.54	3,000	223	150° E.	10
South Australia ..	380,070	12.78	1,540	247	142°30' E.	9½
Western Australia ..	975,920	32.81	4,350	224	120° E.	8
Northern Territory ..	523,620	17.60	1,040	503	142°30' E.	9½
Australian Capital Territory ..	939	0.03	..	..	150° E.	10
Continent ..	2,948,366	99.12	11,310	261	..	..
Tasmania ..	26,215	0.88	900	29	150° E.	10
Australia ..	2,974,581	100.00	12,210	244	..	..

(a) Includes Australian Capital Territory.

There are no 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 is given of the features of the coastline of Australia (*see pp. 60-68*).

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. 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 summarization of the main physical characteristics of the Australian continent. For greater detail of particular geographical elements earlier issues of the 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 over 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. Of variable width, seldom more than sixty or seventy miles, and occasionally only a few miles, its average may, nevertheless, be taken as about forty to fifty miles. From this, the Great Dividing Range, extending from the north of Queensland to the south of New South Wales, and thence sweeping westward through Victoria, rises often abruptly, and frequently presents bold escarpments on its eastern face. 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 is even below it. Then there is another almost imperceptible rise until the mountain ranges of Western Australia are reached, and beyond these another coastal plain.

The great central plain or plateau is the most distinctive feature of the Australian continent and its climatic peculiarities 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—finds its termination 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.

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. In New South Wales Mount Kosciuszko is only about 7,300 feet, and Mount Bogong in Victoria about 6,500 feet high. This fact, that there are no high mountains in Australia, is also an important element in considering the climate of Australia.

There is no connexion between the mountains of the eastern and other States of Australia. In South Australia and Western Australia heights of three and four thousand feet are attained. In Tasmania the greatest height is only a little more than 5,000 feet.

It may be of interest to observe that at one time Tasmania was probably 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 similarly 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 as 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 great 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 empties itself 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 Darling-Murray 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., 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 the configuration of the territory would indicate.

(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 Lake 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 large areas available which otherwise would be difficult to occupy even for pastoral purposes.

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

5. *Fauna, Flora, Geology and Seismology of Australia.*—Special articles dealing with these features have appeared in previous issues of the Official Year Book, but limits of space naturally preclude their repetition in each volume. The nature and location of these articles can be readily ascertained from the special index preceding the general index at the end of this issue.

## § 2. Climate and Meteorology of Australia.

NOTE.—This Section has been prepared by the Director, Commonwealth Meteorological Bureau, 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, pp. 79 to 83, and No. 4, pp. 84 and 87, contained outlines of the history of Australian meteorology and the creation and organization of the Commonwealth Bureau of Meteorology. Official Year Book No. 38, pp. 30-32, contained paragraphs devoted to (i) Organization of the Meteorological Service; (ii) Meteorological Publications; (iii) Equipment; and (iv) Meteorological Divisions.

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 its climate embraces 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.

On the coast, 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 large areas also 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. Climatologically, therefore, Australia may be said to present a great variety of features.

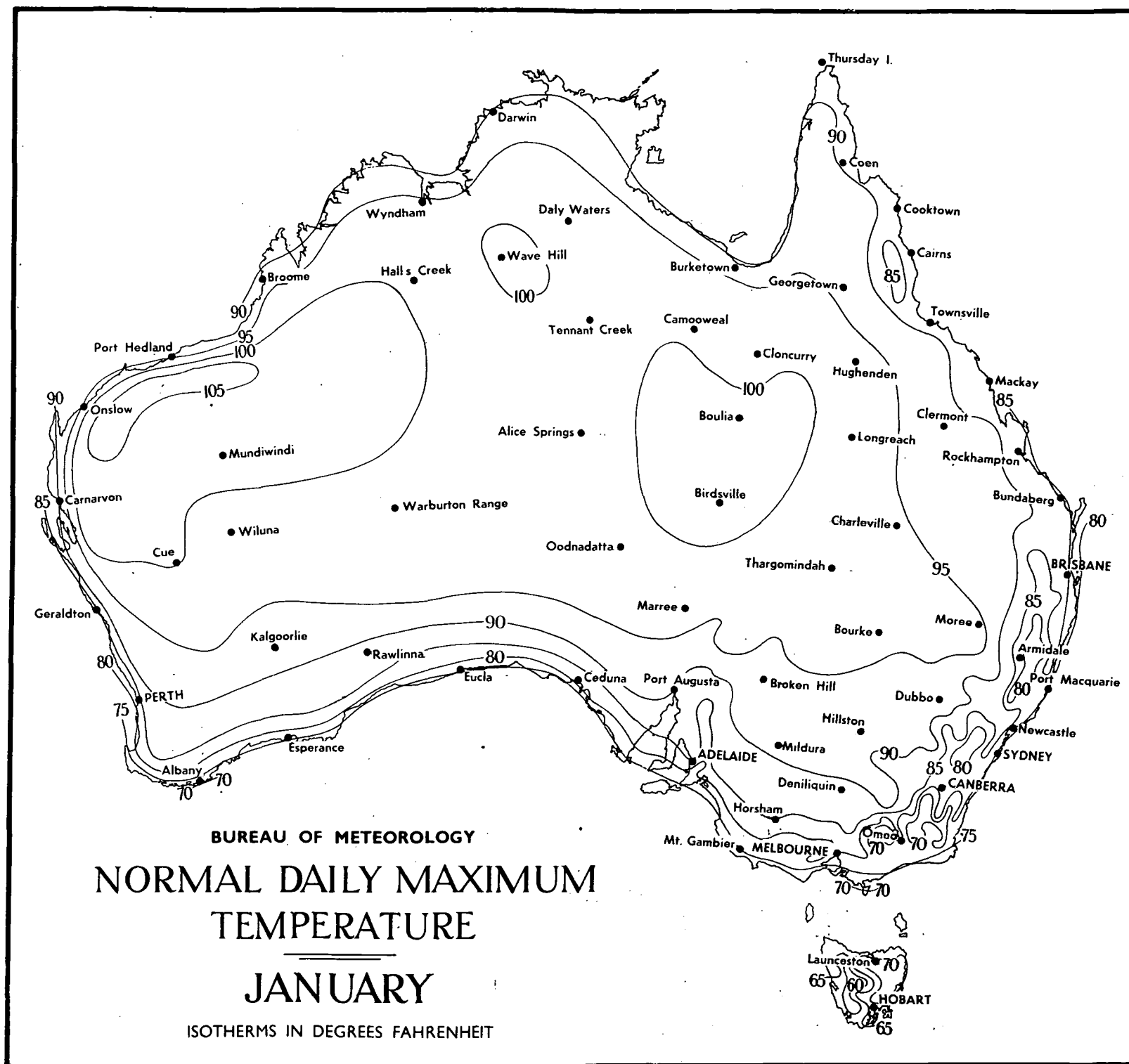
2. *Temperature*.—(i) *Effective Temperature*. When a meteorologist speaks of temperature he means the temperature of the air indicated by a thermometer sheltered from precipitation, from direct rays of the sun and from radiation of heat from the ground and neighbouring objects, yet freely exposed to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

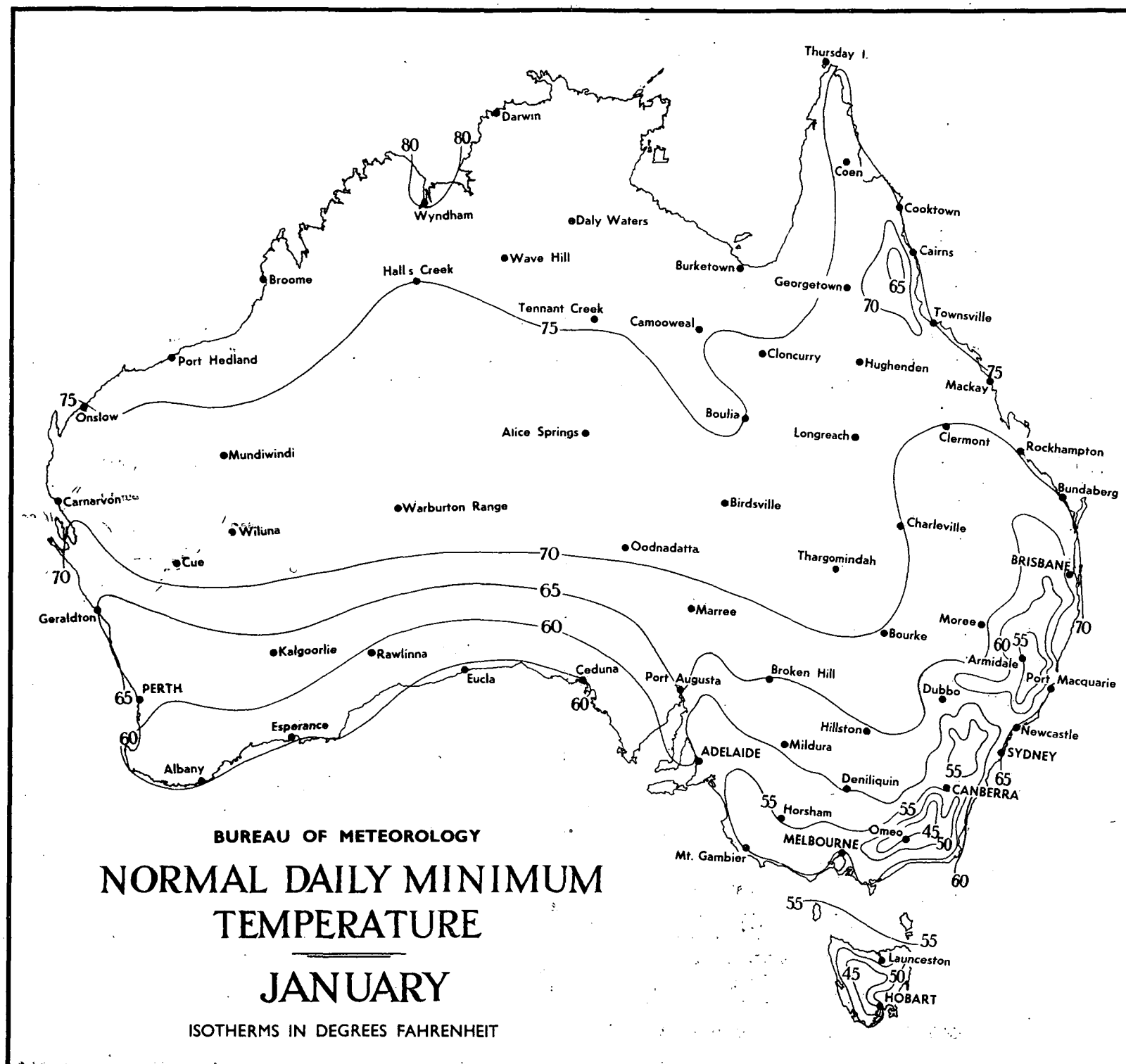
This shade temperature as measured by a "dry bulb" thermometer shows only the actual temperature experienced by dry inorganic substances, not the *sensible* temperatures felt by organic bodies. In the case of human beings, sensible temperature is affected by the rate of conduction of heat to or from 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.

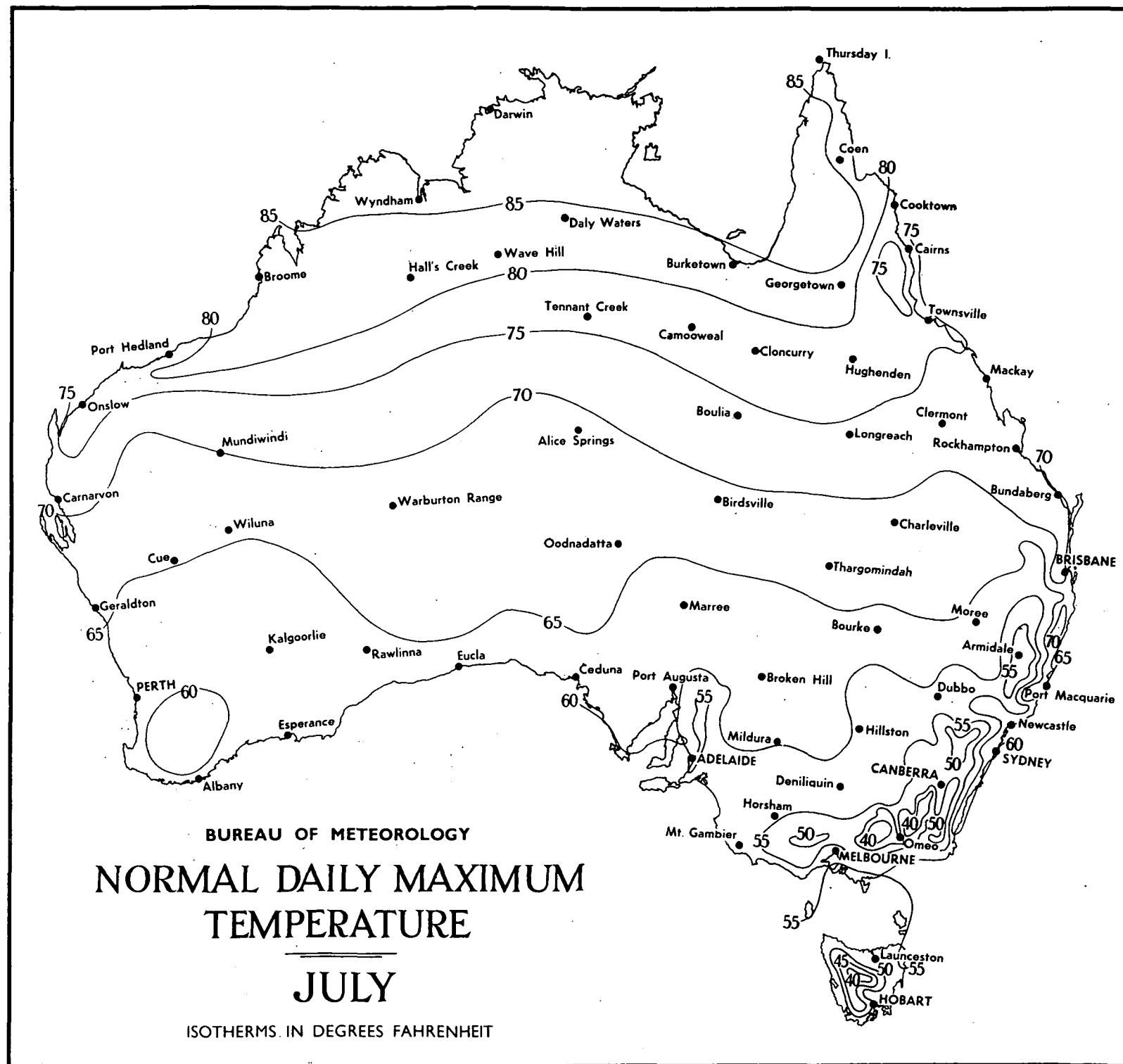
The humidity (relative humidity) is determined from the readings of the dry and wet bulb thermometers. Of late years, however, with increasing interest in human comfort in tropical climates, another term, *effective* temperature, has come into use. It may be defined as "the temperature of a still, saturated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

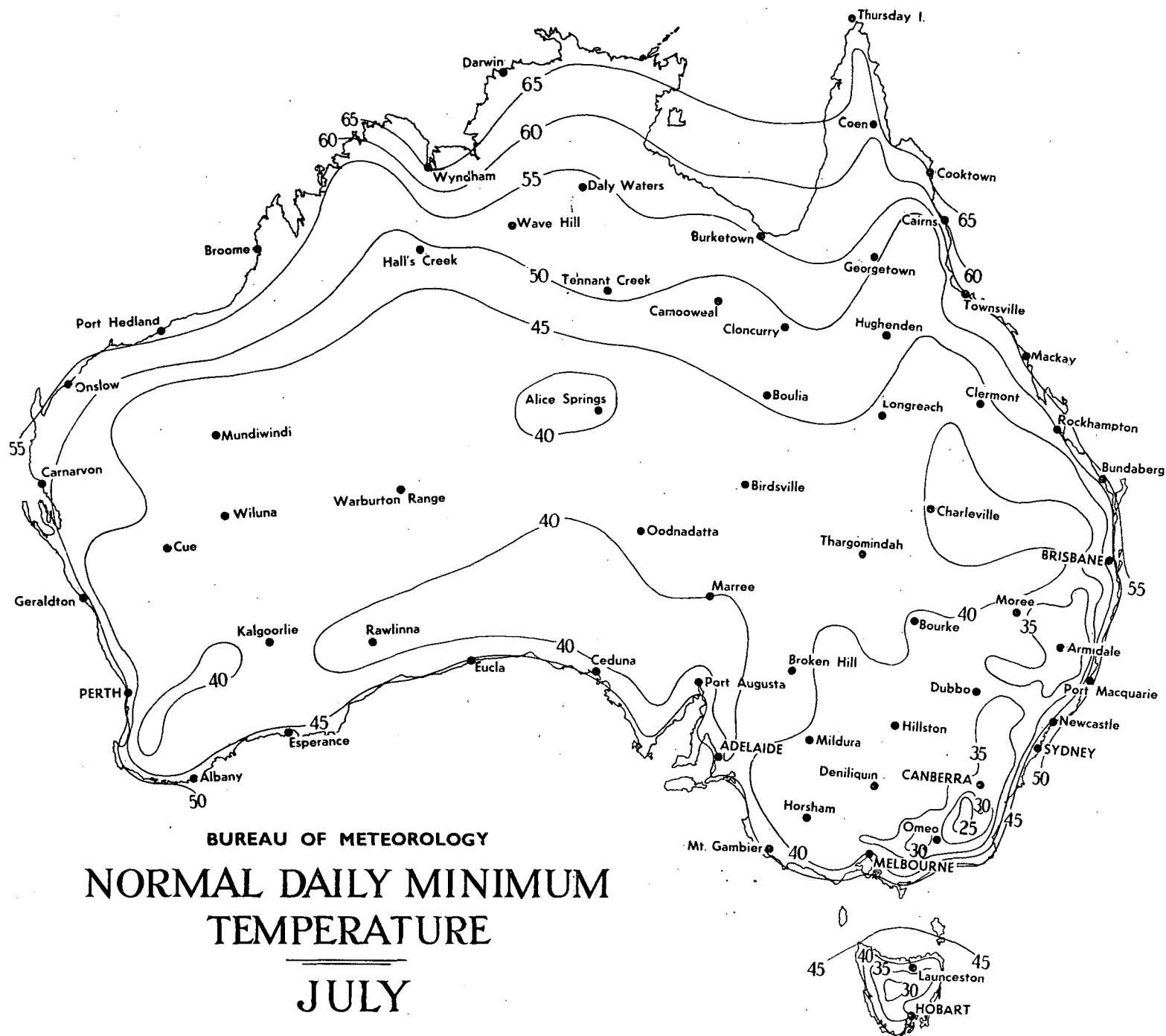
The 80° F. isotherm is confined to a very narrow tract of country on the north-west coast of Western Australia. The 75° F. isotherm extends broadly from Onslow on the north-west coast of Western Australia to Daly Waters to Camooweal to Moreton in Cape York Peninsula following in a general way the coastline of Northern Australia but from 100 to 300 miles inland.

\* Houghton, F. C., Teague, W. W. and Miller, W. E. (1926) Amer. Soc. Heat. Vent. Engns.



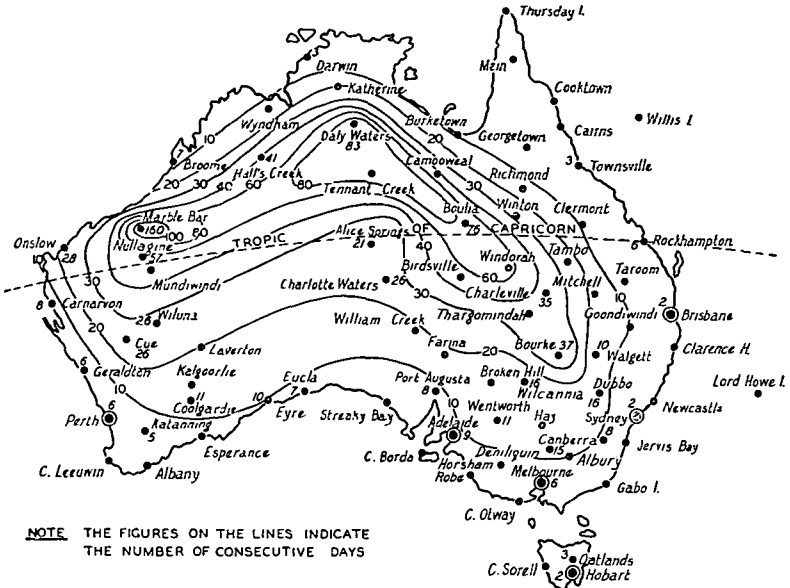




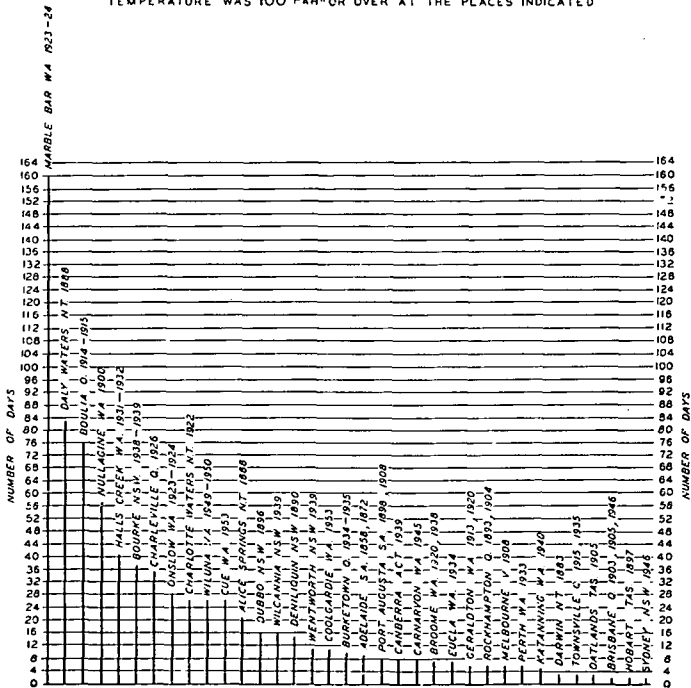




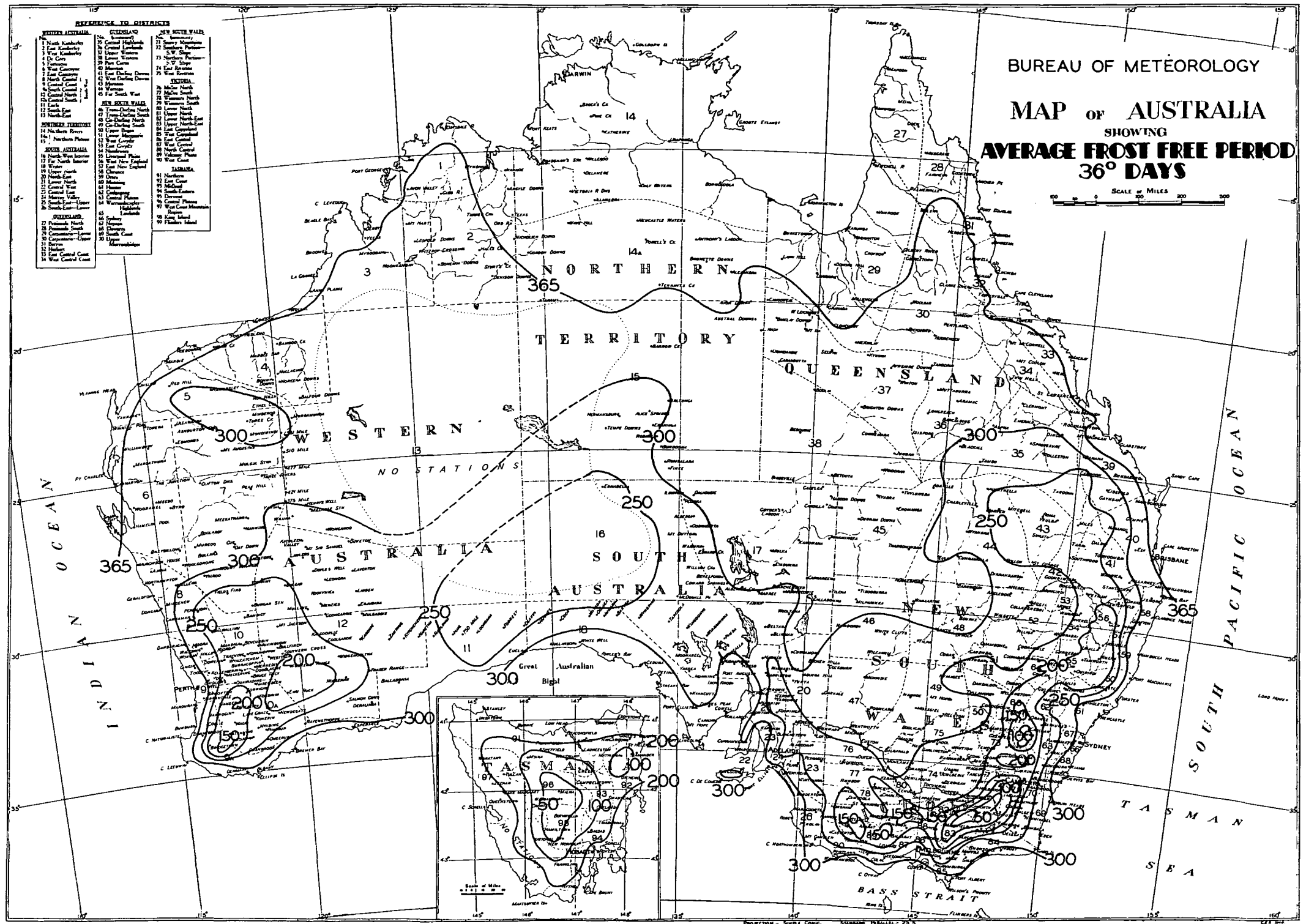
AREA AFFECTED AND PERIOD OF DURATION OF THE LONGEST HEAT WAVES WHEN THE MAXIMUM TEMPERATURE FOR CONSECUTIVE 24 HOURS REACHED OR EXCEEDED 100°F.



GREATEST NUMBER OF CONSECUTIVE DAYS ON WHICH THE SHADE TEMPERATURE WAS 100°F OR OVER AT THE PLACES INDICATED





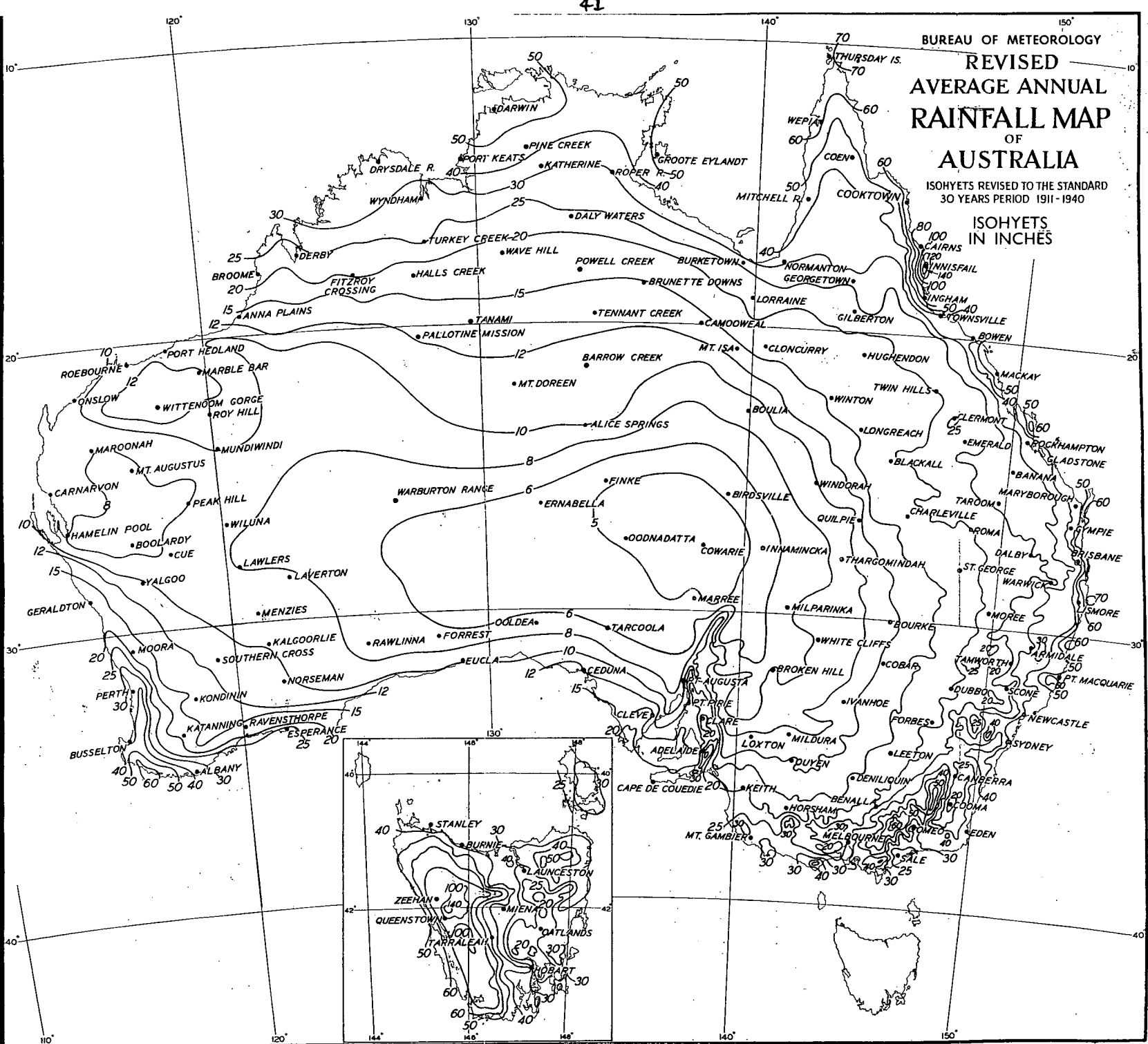




BUREAU OF METEOROLOGY  
 REVISED  
 AVERAGE ANNUAL  
 RAINFALL MAP  
 OF  
 AUSTRALIA

ISOHYETS REVISED TO THE STANDARD  
 30 YEARS PERIOD 1911-1940

ISOHYETS  
 IN INCHES

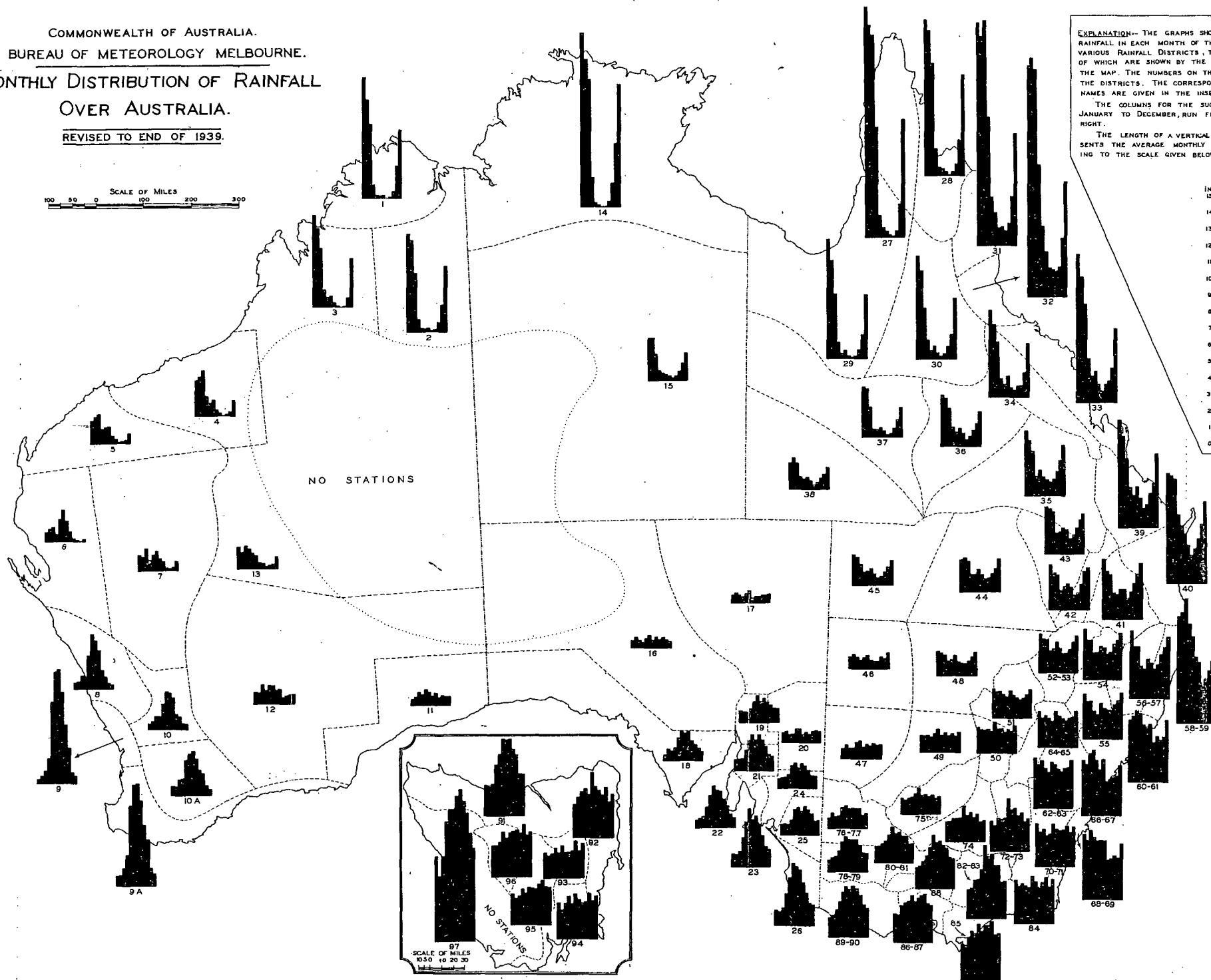
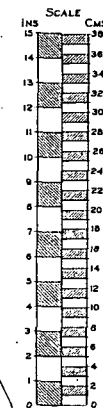


COMMONWEALTH OF AUSTRALIA.  
BUREAU OF METEOROLOGY MELBOURNE.  
**MONTHLY DISTRIBUTION OF RAINFALL  
OVER AUSTRALIA.**  
REVISED TO END OF 1939.

SCALE OF MILES  
100 50 0 100 200 300

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 39.  
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.

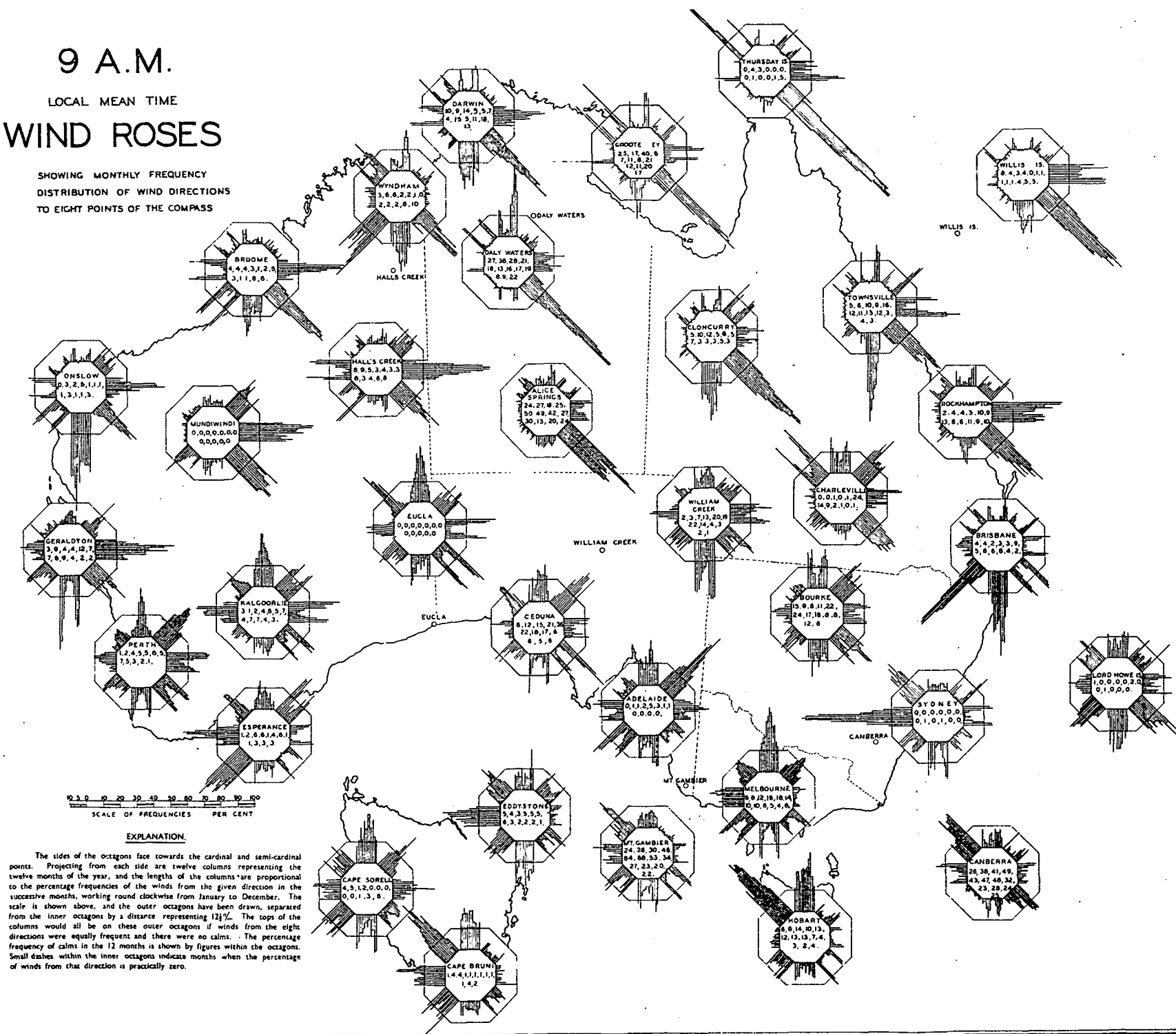


9 A.M.

LOCAL MEAN TIME

## WIND ROSES

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

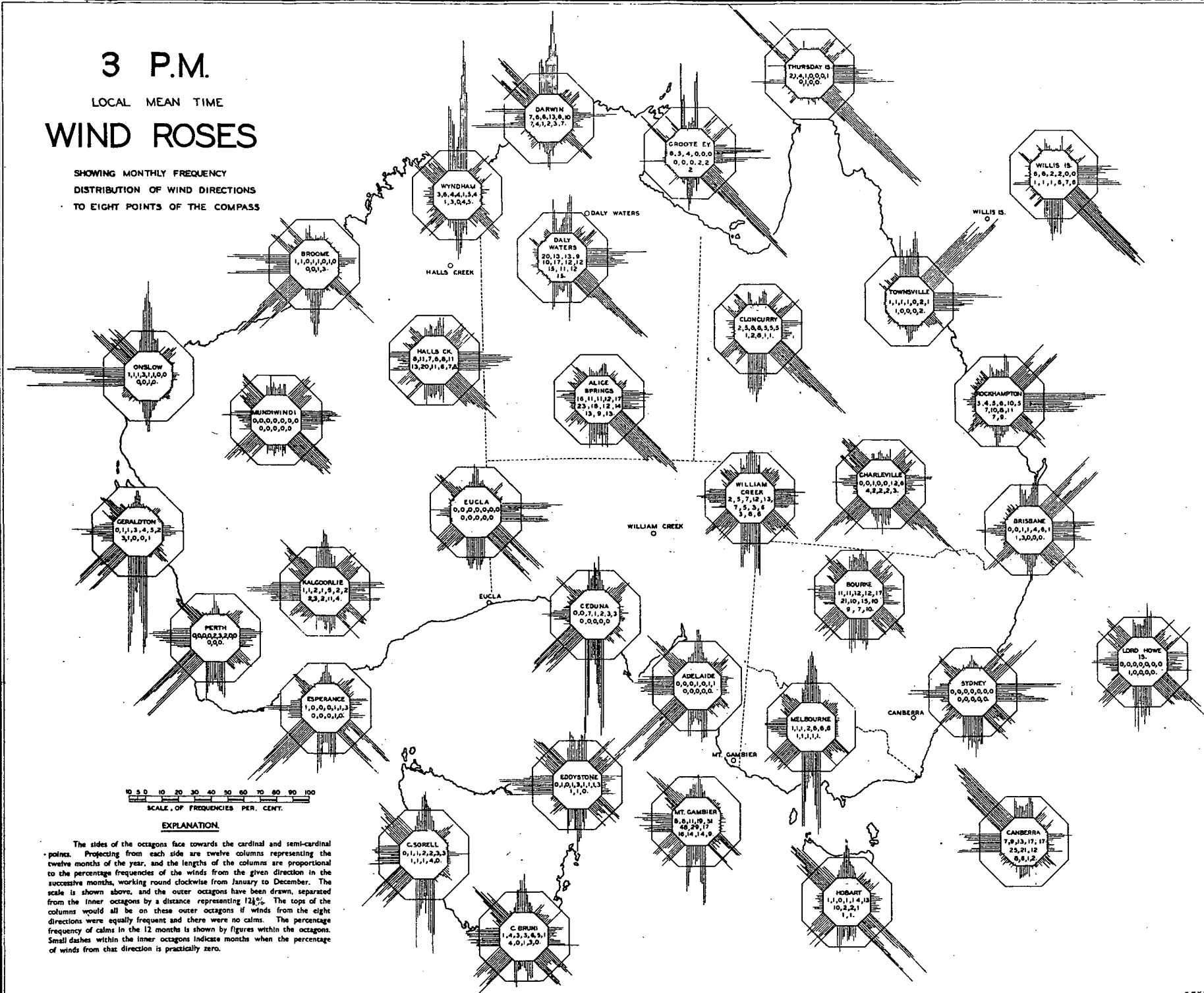


3 P.M.

LOCAL MEAN TIME

## WIND ROSES

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





Later investigations have established "comfort zones"\* bounded by limits of effective temperature within which people will 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.

Queensland investigators‡ in recent years have divided some towns of Queensland into three classes on the basis of deviation from comfort :—

Class 1 (Sub-tropics).—Quite suitable for Caucasian habitation—Rockhampton, Bundaberg, Brisbane, Longreach, Charleville.

Class 2 (Marginal tropics).—Suitable for Caucasian habitation, but requires adaptation in summer—Mackay, Townsville.

Class 3 (Tropics).—(a) Permissible for Caucasian habitation but requires selection and marked adaptation—Cardwell, Cairns, Cloncurry. (b) Not suitable for continuous Caucasian habitation—Cape York, Burketown.

These results of recent years bear out investigations made previously in Australia§ in which the atmospheric vapour pressure was used as a measure of comfort, its value for this purpose being that it has equal effect in both indoor and outdoor climates. The limits of comfort range from .2 to .5 inch of vapour pressure. After drawing isopleths for effective temperature (not corrected for altitude), mean vapour pressure reduced to a logarithmic scale, and mean wet bulb temperature, it is found that there is close agreement in defining zones of relative discomfort.

(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.

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.

\* Yaglou, C. P. (1926) J. Industr. Hyg. † Yaglou, C. P. (1927) Ibid. ‡ Lee, D. H. K. Trans. Roy. Soc. Trop. Med. and Hyg. (1940) Vol. XXXII. § Barkley, H. Zones of Relative Physical Comfort in Australia, Met. Bull. 20, 1934. || Maze, W. H. Austr. Geog. June, 1945. Settlement in E. Kimberleys.

In Central as in 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°. (*See maps pp. 33, 34.*)

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°. Over the southern half of the continent, July temperatures range from 55° to 45° at elevations below 1,500 feet and fall as low as 35° on the Australian Alps. (*See maps pp. 35, 36.*) Here the temperature seldom, if ever, reaches 100° even in the hottest of seasons. Hotham Heights (6,100 feet above Mean Sea Level) recorded the highest maximum of 82.0° on 20th January, 1935. In winter, readings slightly below zero 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° in the eastern part of the State.

(iii) *Comparisons with other Countries.* In respect of Australian temperatures generally, it may be pointed out that the mean annual isotherm for 70° F. extends in South America and South Africa as far south as latitude 33°, while in Australia it reaches only as far south as latitude 30°, thus showing 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° isotherm extends in several of the western States as far north as latitude 41°. 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 higher mean annual temperature than 70°.

The extreme range of temperature is less than 100° over practically the whole of Australia, that figure being only slightly exceeded at a very few places; it is mostly 70° to 90° over inland areas, and somewhat less on the coast. In parts of Asia and North America, the extreme range exceeds 130° and 150° 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 8.4°, and the extreme readings for the year, or the highest maximum on record and the lowest minimum, show a difference of under 50°.

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 June, 1945, and again on 22nd July, 1947, as contrasted with the world's lowest recorded temperature of -90° F. at Verkhoyansk (Siberia) on 5th and 7th February, 1892.

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

(iv) *Hottest and Coldest Parts.* A comparison of the temperatures recorded at coast and inland stations shows that, in Australia, as in other continents, the range increases, within certain limits, with increasing distance from the coast.

In the interior of Australia, and during exceptionally dry summers, the temperature occasionally reaches or exceeds 120° 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° 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 appeared in Official Year Book No. 40, pp. 16-23, and similar data for other selected stations in the Commonwealth in Official Year Book No. 39, pp. 41-48. Pages 57-64 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° F.) and a 'ground frost' is regarded as having occurred when the thermometer on the grass has fallen to 30.4° 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° F. is taken as indicating light frosts at ground level. For heavy frosts a screen temperature of 32° 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 takes place, of the water which they contain, 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 per month with readings of 32° 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° 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 mainly 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 area 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° F.) appears on page 39.

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, particularly 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".

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

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 (pages 57-64). The mean monthly vapour pressure has also been added to these tables.

The annual curve of vapour pressure derived from the normal monthly values for this element is comparable with the maximum and minimum temperature curves, but the relative humidities consisting as they do of the extremes for each month do not show the normal annual fluctuation which would be approximately midway between the extremes.

The order of stations in descending values of 9 a.m. vapour pressure is Darwin, Brisbane, Sydney, Perth, Melbourne, Adelaide, Canberra, Hobart and Alice Springs, while the relative humidity at 9 a.m. diminishes in the order, Melbourne, Sydney, Darwin, Brisbane, Canberra, Hobart, Perth, Adelaide and Alice Springs.

Further reference to humidity will be found in the section on effective temperature (page 32).

40  
4. *Evaporation.*—(i) *General.* The rate and quantity of evaporation in any territory is influenced by the prevailing temperature, and by atmospheric humidity, pressure and wind movement. In Australia the question is, perhaps, of more than ordinary 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 page 36) which shows that the yearly amount varies from about 20 inches over Western Tasmania to more than 100 inches over the central and north-western parts of Australia. Over an area of 70 per cent. of the continent, comprising most inland districts and extending to the coast in the North-West and Eucla divisions of Western Australia, during no month of the year does the rainfall exceed the evaporation. The central and north-western portions of the continent, comprising 46 per cent. of the total land mass, experience evaporation more than twice as great as their rainfall; it is noteworthy that the vegetation over most of this region is characterized by acacia, semi-desert, shrub steppe and porcupine grass. Since the loss by evaporation depends largely on the exposed area, tanks and dams so designed that the surface shall be a minimum are advantageous. Further, the more they are protected from the direct rays of the sun and from winds by means of suitable tree planting, the less will be the loss by evaporation. These matters are naturally of more than ordinary concern in the drier districts of Australia.

(ii) *Comments on Map of Average Annual Evaporation.* The map of average annual evaporation in Australia (see page 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.\* Some modification of the latter values was found to be necessary in comparison with recordings of evaporimeters.

The standard evaporation tank used in Australia is cylindrical in form and is 36 inches in diameter and 36 inches deep. It is surrounded by a 6-inch water jacket and the whole is sunk into the ground so that the water surface is approximately at ground level.

Saturation deficit is obtained from readings of dry and wet bulb thermometers exposed in a standard Stevenson thermometer shelter. Saturation deficit is the difference between the vapour pressure indicated by the dry and wet bulb readings, and the saturation vapour pressure corresponding to the dry bulb temperature.

The Waite formula,  $e = 263$  s.d., is not an exact relationship, but it takes account of one of the major factors in evaporation, i.e., the difference between saturation vapour pressures at the mean dew point and at the mean air temperature. Errors in the formula are found to be fairly consistent in considerable areas of Australia and corrections have

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

been applied accordingly. No evaporation records are available north of latitude  $20^{\circ}$ , and corrections have been extrapolated for these areas. The evaporation stations on which estimates for the tropics have been based are Alice Springs (Northern Territory) and Winton (Queensland), and to a lesser degree Blackall (Queensland) and Marble Bar (Western Australia).

The map thus presents an estimate of evaporation for which allowance should be made for a certain margin of error (perhaps 10 per cent. or so) on the conservative side. In the absence of definite information, such a map should serve a useful purpose as a basis for many climatic studies.

For graphs and tables of mean monthly evaporation and rainfall at certain selected stations *see* Official Year Book No. 37, pp. 34-35.

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  $30^{\circ}$  south latitude, and, with very few exceptions, the heaviest rains of the Australian continent 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 (page 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 (New South Wales) to the northern part of Cape York Peninsula, also around Darwin (Northern Territory), on the West Kimberley coast, near Cape Leeuwin (Western Australia), about the Australian Alps in eastern Victoria and New South Wales, and on the north-eastern highlands in Tasmania. A great part of the 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.

(iii) *Factors Determining Occurrence, Intensity and Seasonal Distribution of Rainfall.* Reference has already been made to the frequent rains occurring in the north-eastern coastal districts of Queensland with the prevailing south-east trade winds and to similar rains in the west of Tasmania with the prevailing westerly winds. Other rains in Australia are associated mainly with tropical and southern depressions.

The former chiefly affect the northern, eastern, and to some extent the central parts of the continent and operate in an irregular manner during the warmer half of the year, but principally from December to March. They vary considerably in activity and scope from year to year, occasionally developing into severe storms off the east and north-west coasts. Tropical rainstorms sometimes cover an extensive area, half of the continent on occasions receiving moderate to very heavy falls during a period of a few days. Rain is also experienced, with some regularity, with thunderstorms in tropical areas, especially near the coast. All these tropical rains, however, favour mostly the northern and eastern

parts of the area referred to; the other parts further inland receive lighter, less frequent and less reliable rainfall. With the exception of districts near the east coast, where some rain falls in all seasons, the tropical parts of the continent receive useful rains only on rare occasions from May to September.

The southern depressions are most active in the winter—June to August—and early spring months. The rains associated with them are fairly reliable and frequent over southern Australia and Tasmania, and provide during that period the principal factor in the successful growing of wheat. These depressions also operate with varying activity during the remainder of the year, but the accompanying rains are usually lighter. The southern rains favour chiefly the south-west of Western Australia, the agricultural districts of South Australia, Victoria, Tasmania, and the southern parts of New South Wales. They sometimes extend into the drier regions of the interior, but only infrequently and irregularly.

The map showing mean monthly distribution of rainfall over Australia (page 42) gives in graphic form information on the amount and occurrence of rain.

(iv) *Wettest and Driest Regions.* The wettest known part of Australia is on the north-east coast of Queensland, between Port Douglas and Cardwell, where Deeral on the north coast-line has an average annual rainfall of 172.26 inches and Tully on the Tully River 179.26 inches. In addition, three stations situated on, or adjacent to, the Johnstone and Russell Rivers have an average annual rainfall of between 144 and 169 inches. The maximum and minimum annual amounts there are:—Deeral, 287.18 in 1945 and 94.65 inches in 1951, or a range of 192.53 inches; Tully, 310.92 in 1950 and 104.98 inches in 1943, or a range of 205.94 inches; Goondi, 241.53 in 1894 and 67.88 inches in 1915, or a range of 173.65 inches; Innisfail, 232.06 in 1950 and 69.87 inches in 1902, or a range of 162.19 inches; Harvey Creek, 254.77 in 1921 and 80.47 inches in 1902, or a range of 174.30 inches.

On five occasions more than 200 inches have been recorded at Goondi, the last of these being in 1950, when 204.97 inches were registered. The records at this station cover a period of 67 years.

In twenty-seven years of record Tully has exceeded 200 inches on ten occasions, whilst in a record of 28 complete years Harvey Creek has four times exceeded this figure.

In Tasmania the wettest part is in the West Coast region, the average annual rainfall at Lake Margaret being 146.51 inches, with a maximum of 177.30 inches in 1948.

The driest known part of the continent is in an area of approximately 180,000 square miles surrounding Lake Eyre in South Australia, where the annual average is between 4 and 6 inches and where the fall rarely exceeds 10 inches for twelve months.

Records at stations have at times been interrupted, but of the 23 stations in this region which have an annual average of less than 5 inches, six have complete records extending from 30 to 55 years. Of these Mulka has the lowest average of 4.05 inches (34 years), followed by Troudaninna with an average of 4.15 inches in 42 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 even been 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 2.91 inches. From 1918 to 1929 the average was only 2.65 inches, and in this period from December, 1924 to November, 1929 the average was only 1.70 inches.

Mulka since 1918 has only once exceeded 10 inches for the annual total (11.72 inches in 1920), and in 34 years on 16 occasions 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). However, at Kanowana, 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. An even smaller total than 43 points was recorded at Mungeranie in 1889 when only 39 points were recorded on five days.

The average number of days of rain per month in this region is only 1 to 2 and the annual number ranges between 10 and 20. Oodnadatta (standard 30 years' average rainfall equal to 4.44 inches) has an average of 20 days of rain per year, while Cordillo

Downs in the extreme north-east corner of the State of South Australia receives 5.16 inches on twelve days per year, averaging about one day of rain each month in the thirty years' period 1911-1940.

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.

(v) *Quantities and Distribution of Rainfall.* The general distribution is best seen from the rainfall map (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 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	37.6
10 and under 15 ins.	22.4	32.4	9.4	14.4	23.5	22.4	Nil	19.9
15 and under 20 ..	6.8	9.7	4.5	19.7	17.5	15.2	0.7	10.9
20 and under 25 ..	3.7	6.6	2.2	18.8	14.2	17.9	11.0	9.1
25 and under 30 ..	3.7	9.3	0.8	11.6	9.1	18.0	11.4	7.3
30 and under 40 ..	3.3	4.7	0.3	11.1	9.9	16.1	20.4	6.6
40 inches and over	2.1	12.6	Nil	11.4	6.1	10.4	56.5	8.6
Total ..	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0

(a) Includes Australian Capital Territory.

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

Referring first to the capital cities, the records of which are given in the next table, it will be seen that Sydney, with an average rainfall of 44.80 inches, occupies the chief place; Brisbane, Perth, Melbourne, Hobart, Canberra and Adelaide follow in that order, Adelaide with 21.09 inches being the driest. The extreme range from the wettest to the driest year is greatest at Brisbane (72.09 inches) and least at Adelaide (19.46 inches).

In order to show how the rainfall is distributed throughout the year in various parts of the continent, average figures for the various climatological districts have been selected (*see* map on page 42). The figures for Northern Rivers (District 14), show that nearly the whole of the rainfall occurs there in the summer months, while little or none falls in the middle of the year. The figures for the Central Coast, south-west of Western Australia (District 9), are the reverse, for while the summer months are dry, the winter months are very wet. In the districts containing Melbourne and Hobart the rain is fairly well distributed throughout the twelve months, with a maximum in October for both districts. In Queensland, the heaviest rains fall in the summer months, but good averages are also maintained during the other seasons in eastern parts.

On the coast of New South Wales, the first half of the year is the wettest, with heaviest falls in the autumn; the averages during the last six months are fair, and moderately uniform. Generally it may be said that approximately one-third of the area of the continent, principally in the eastern and northern parts, enjoys an annual average rainfall of from 20 to 50 inches or more, the remaining two-thirds averaging from 5 to 20 inches.

(vi) *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 which follows in the next paragraph of the more remarkable falls 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.
	in.		in.		in.		in.		in.		in.		in.	
1920 ..	40.35	124	26.70	119	39.72	122	43.42	159	..	..	28.27	162	18.00	182
1921 ..	41.09	135	22.64	100	54.31	167	43.34	140	..	..	29.76	154	18.04	159
1922 ..	31.86	135	23.20	117	35.82	109	39.35	136	..	..	25.02	151	28.27	189
1923 ..	44.47	134	29.79	139	32.27	93	37.01	123	..	..	22.64	158	32.93	198
1924 ..	33.79	119	23.44	143	41.08	114	37.01	136	..	..	36.48	171	28.76	197
1925 ..	31.41	126	21.91	118	53.10	139	50.35	145	..	..	17.57	144	22.67	170
1926 ..	49.22	167	22.20	116	30.82	111	37.07	127	..	..	20.51	149	25.79	187
1927 ..	36.59	133	16.92	101	62.08	130	48.56	138	..	..	17.98	135	20.13	185
1928 ..	44.88	140	19.43	107	52.64	145	40.07	130	18.59	90	24.09	151	30.23	205
1929 ..	36.77	132	17.51	119	39.78	118	57.90	129	23.12	70	28.81	168	26.55	194
1930 ..	39.80	129	18.65	116	41.22	144	44.47	141	17.33	82	25.41	145	19.38	152
1931 ..	39.18	118	22.26	145	66.72	136	49.22	153	24.02	103	28.63	164	27.17	179
1932 ..	39.40	121	25.04	141	24.79	97	37.47	146	20.18	118	31.08	179	30.20	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	141	20.63	160
1938 ..	29.64	111	19.26	110	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	193
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	20.08	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	105
1953 ..	37.14	119	20.00	121	43.30	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
Average No. of Years Standard 30 years' Normal	34.90	121	21.00	121	44.86	124	46.93	151	24.08	101	25.85	143	24.73	167
	79	79	116	116	103	95	96	96	27	27	99	99	72	72
	35.99	128	21.09	122	40.09	117	44.80	143	..	..	25.89	156	25.03	180

(a) Commonwealth Forestry Bureau ; records in issues prior to No. 36 were for the station at Acton which closed down in 1939.  
 (b) Records taken from present site commenced 1883.

6. Remarkable Falls of Rain.—The following are the most notable falls of rain which have occurred within a period of twenty-four hours in the various States and Territories. For other very heavy falls at various localities reference may be made to Official Year Books No. 14, pp. 60-64, No. 22, pp. 46-48 and No. 29, pp. 43, 44 and 51.

## HEAVY RAINFALLS : WESTERN AUSTRALIA, UP TO 1954, INCLUSIVE.

Name of Town or Locality.	Date.	Amt.	Name of Town or Locality.	Date.	Amt.
		in.			in.
Whim Creek ..	3 Apr., 1898	29.41	Winderrrie ..	17 Jan., 1923	14.23
Fortesque ..	3 May, 1890	23.36	Pilbara ..	2 Apr., 1898	14.04
Roebuck Plains..	6 Jan., 1917	22.36	Broome ..	6 Jan., 1917	14.00
	5 Jan., 1917	14.01	Carlton Hill ..	7 Feb., 1942	12.75
Widjip..	1 Apr., 1934	19.54	Towrana ..	1 Mar., 1943	12.16
Derby ..	7 Jan., 1917	16.47	Marble Bar ..	2 Mar., 1941	12.00
Boodarie ..	21 Mar., 1899	14.53	Jimba Jimba ..	1 Mar., 1943	11.54
Balla Balla ..	21 Mar., 1899	14.40			



## HEAVY RAINFALLS : NORTHERN TERRITORY, UP TO 1954, INCLUSIVE.

Name of Town or Locality.	Date.	Amt.	Name of Town or Locality.	Date.	Amt.
		in.			in.
Brock's Creek ..	24 Dec., 1915	14.33	Cape Don ..	13 Jan., 1935	13.58
Groote Eylandt ..	9 Apr., 1931	14.29	Bathurst Island		
Borroloola ..	14 Mar., 1899	14.00	Mission ..	7 Apr., 1925	11.85
Timber Creek ..	5 Feb., 1942	13.65	Darwin ..	7 Jan., 1897	11.67

## HEAVY RAINFALLS : SOUTH AUSTRALIA, UP TO 1954, INCLUSIVE.

Name of Town or Locality.	Date.	Amt.	Name of Town or Locality.	Date.	Amt.
		in.			in.
Ardrossan ..	18 Feb., 1946	8.10	Wilmington ..	1 Mar., 1921	7.12
Carpa ..	18 Feb., 1946	7.83	Port Victoria ..	18 Feb., 1946	7.08
Wynbring ..	28 Feb., 1921	7.70	Mannum ..	25 Jan., 1941	6.84
Edithburg ..	18 Feb., 1946	7.46	Cape Willoughby	18 Feb., 1946	6.80
Hesso ..	18 Feb., 1946	7.36	Wirrabarra ..	7 Mar., 1910	6.80
Maitland ..	18 Feb., 1946	7.21	Torrens Vale ..	25 Jan., 1941	6.77

## HEAVY RAINFALLS : QUEENSLAND, UP TO 1954, INCLUSIVE.

Name of Town or Locality.	Date.	Amt.	Name of Town or Locality.	Date.	Amt.
		in.			in.
Crohamhurst ..	2 Feb., 1893	35.71	Flat Top Island ..	21 Jan., 1918	25.18
Port Douglas ..	1 Apr., 1911	31.53	Landsborough ..	2 Feb., 1893	25.15
Yarrabah ..	2 Apr., 1911	30.65	Babinda (Cairns)	2 Mar., 1935	24.14
Kuranda ..	2 Apr., 1911	28.80	Goondi ..	30 Jan., 1913	24.10
Sarina ..	26 Feb., 1913	27.75	Banyan (Cardwell)	12 Feb., 1927	24.00
Harvey Creek ..	3 Jan., 1911	27.75	Carruchan ..	24 Jan., 1934	24.00
Plane Ck. (Mackay)	26 Feb., 1913	27.73	Tully Mill ..	12 Feb., 1927	23.86
Decral ..	2 Mar., 1935	27.60	Maenade Mill ..	6 Feb., 1901	23.33
Springbrook ..	24 Jan., 1947	27.07	Woodlands (Yepp'n)	3 Jan., 1893	23.07
Buderim Mountain	11 Jan., 1898	26.20			

## HEAVY RAINFALLS : NEW SOUTH WALES, UP TO 1954, INCLUSIVE.

Name of Town or Locality.	Date.	Amt.	Name of Town or Locality.	Date.	Amt.
		in.			in.
Dorrigo ..	24 June, 1950	25.04	Viaduct Creek ..	15 Mar., 1936	20.00
Cordeaux River ..	14 Feb., 1898	22.58	Buladelah ..	16 Apr., 1927	19.80
Morpeth ..	9 Mar., 1893	21.52	Madden's Creek ..	13 Jan., 1911	18.68
Broger's Creek ..	13 Jan., 1911	20.83	Condong ..	27 Mar., 1887	18.66
South Head (Sydney Harbour) ..	16 Oct., 1844	20.41	Candelo ..	27 Feb., 1919	18.58
" ..	29 Apr., 1841	20.12	Mt. Kembla ..	13 Jan., 1911	18.25
" ..			Bega ..	27 Feb., 1919	17.88
Mount Pleasant ..	5 May, 1925	20.10	Kembla Heights ..	13 Jan., 1911	17.46
Broger's Creek ..	14 Feb., 1898	20.05	Foxground ..	11 Sep., 1950	17.04
Towamba ..	5 Mar., 1893	20.00	Nimbin ..	6 Feb., 1939	16.26

## HEAVY RAINFALLS : AUSTRALIAN CAPITAL TERRITORY, UP TO 1954, 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 1954, 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 1954, 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  $31^{\circ}$  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 zero Fahrenheit during the night. In the ravines around Mt. Kosciuszko and similar localities the snow never entirely disappears 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. **Barometric Pressures.**—The mean annual barometric pressure (corrected to sea level and standard gravity) in Australia varies from 29.80 inches on the north coast to 29.92 inches over the central and 30.03 inches in the southern parts of the continent. In January, the mean pressure ranges from 29.70 inches in the northern and central areas to 29.95 inches in the southern. The July mean pressure ranges from 29.90 inches at Darwin to 30.12 inches at Alice Springs. Barometer readings corrected to mean sea level and standard gravity have, under anticyclonic conditions, ranged as high as 30.935 inches (at Hobart on 13th July, 1846) and have fallen as low as 27.55 inches. This lowest record was registered at Mackay during a tropical hurricane on 21st January, 1918. An almost equally abnormal reading of 27.88 inches was recorded at Innisfail during a similar storm on 10th March, 1918. For graphs of Mean Barometric Pressure at Capital Cities see Official Year Book No. 37, p. 35.

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 only operate to the north of the tropics for the greater part of the winter. 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, and occasionally penetrate 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 nor 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, albeit weakened, are still dominant winds. With the migration of the sun northward in the autumn, the north-west monsoon is itself 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, pp. 58-61.

(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, including 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, appear in previous issues of the Official Year Book (see No. 6, pp. 84-86), and a special article dealing with "Australian Hurricanes and Related Storms" appears in Official Year Book No. 16, pp. 80-84.

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 "A" 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 per day.

11. *Influences affecting Australian Climate.*—(i) *General.* Australian history does not cover a sufficient period, nor is the country sufficiently occupied, to ascertain whether or not the advance of settlement has materially affected the climate as a whole. Local changes have, however, taken place, a fact which suggests that settlement and the treatment of the land have a distinct effect on local conditions. For example, low-lying lands on the north coast of New South Wales, which originally were seldom subject to frosts, have, with the deforestation of the surrounding hills experienced annual visitations, the probable explanation being that through the absence of trees the cold air of the highlands now flows unchecked and untempered down the sides of the hills to the valleys and lower lands.

(ii) *Influence of Forests on Climate.* As already indicated, forests doubtless exercise a great influence on local climate, and hence, to the extent that forestal undertakings will allow, the weather can be controlled by human agency. The direct action of forests is an equalizing one; thus, especially in equatorial regions, and during the warmest portion of the year, they considerably reduce the mean temperature of the air. They also reduce the diurnal extremes of shade temperatures by altering the extent of radiating surface by evaporation, and by checking the movement of air, and while decreasing evaporation from the ground, they increase the relative humidity. Vegetation greatly diminishes the rate of flow-off of rain and the washing away of surface soil, and when a region is protected by trees a steadier water supply is ensured, and the rainfall is better conserved. In regions of snowfall, the supply of water to rivers is similarly regulated, and without this and the sheltering influence of ravines and "gullies," watercourses supplied mainly by melting snow would be subject to alternate periods of flooding and dryness. This is borne out in the case of the inland rivers, the River Murray, for example, which has never been known to become dry, deriving its steadiness of flow mainly through the causes indicated.

(iii) *Direct Influence of Forests on Rainfall.* Whether forests have a direct influence on rainfall is a debatable question, some authorities alleging that precipitation is undoubtedly induced by forests, while others take the opposite view.

Sufficient evidence exists, however, to prove that, even if the rainfall has not increased, the beneficial climatic effect of forest lands more than warrants their protection and extension. Rapid rate of evaporation, induced by both hot and cold winds, injures crops and makes life uncomfortable on the plains, and, while it may be doubted that the forest aids in increasing precipitation, it must be admitted that it does check winds and the rapid evaporation due to them. Trees as wind-breaks have been successfully planted in central parts of the United States of America, and there is no reason why similar experiments should not be successful in many parts of the treeless interior of Australia. The belts should be planted at right angles to the direction of the prevailing parching winds, and if not more than half a mile apart will afford shelter to the enclosed areas.

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

13. *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 1954, are given on the following seven pages.

NOTE.—The following points apply throughout :—

- (i) Where records are available, mean or average values have been calculated on a standard period of 30 years from 1911 to 1940.
- (ii) 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.	No. of years of observations.	Bar. corrected to 32° F. Mm. 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 (inch. s).	No. of Days of Lightning.	Mean Amount of Clouds, 9 a.m., 3 p.m., 9 p.m.(%)	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.
		30(b)	30(b)	56	42	30(b)	30(b)	30(b)	30(b)	30(b)	30(b)	
January	29	29.897	13.8	33.2	27/98	49	E	SSW	10.37	2	2.9	14
February	29	29.922	13.5	27.1	6/08	54	ENE	SSW	8.63	2	3.1	13
March	29	29.976	12.8	27.1	6/13	66	E	SSW	7.52	2	3.5	12
April	30	30.071	10.7	39.8	25/06	61	ENE	SSW	7.62	2	4.2	9
May	30	30.062	10.6	34.4	29/32	73	NE	WSW	2.80	3	5.4	6
June	30	30.068	10.6	38.1	17/27	80	N	NW	1.82	2	5.9	5
July	30	30.082	11.2	42.3	20/26	73	NNE	W	1.76	2	5.6	5
August	30	30.084	11.8	40.3	15/03	77	N	WNW	2.37	2	5.6	6
September	30	30.073	11.8	36.0	11/05	75	ENE	SSW	3.44	1	4.9	8
October	30	30.033	12.6	33.7	6/16	65	SE	SW	3.38	1	4.8	8
November	29	29.989	13.4	32.4	18/97	63	E	SW	7.65	2	3.9	9
December	29	29.923	13.9	32.3	6/22	64	E	SSW	9.69	2	3.2	13
Year {	Totals								66.05	23		108
	Averages	30.015	12.2				E	SSW			4.4	
	Extremes			42.3	20/7/26	80						

(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.					
No. of years over which observation extends.	30(a)	30(a)	30(a)	58	58	58	56	56	30(a)				
January	84.6	63.3	73.9	110.2	12/34	48.6	20/23	61.6	177.3	22/14	39.5	20/25	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	5.7
June	64.4	49.8	57.1	81.7	2/14	35.0	30/20	46.7	135.5	9/14	26.3	11/37	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	5.4
August	63.8	48.4	56.1	82.0	21/40	35.3	31/08	46.7	145.1	29/21	26.7	24/35	6.0
September	66.8	50.4	58.6	90.9	30/18	38.5	15/47	52.4	153.6	20/16	29.2	21/17	7.2
October	69.7	52.6	61.1	95.3	30/22	40.0	16/31	55.3	157.5	31/36	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	35.5	(b)	9.6
December	81.2	60.9	71.0	107.9	20/04	48.0	2/10	59.9	168.8	11/27	39.0	12/20	10.4
Year { Averages	73.5	55.5	64.5										7.8
Year { Extremes	—	—	—	112.2	8/2/33	34.2	7/7/16	78.0	177.3	22/1/14	25.1	30/7/20	

(a) Standard 30 years' normal (1911-1940).

(b) 6/10 and 14/12.

## Humidity, Rainfall and Fog.

Month.	Vapour Pres- sure (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.	Mean No. of Days of Fog.	
No. of years over which observation extends.	30(a)	30(a)	58	58	30(a)	30(a)	79	79	79	30(a)	
January	0.438	51	61	41	0.33	3	2.17 1879	Nil	(b)	1.74 27/79	0
February	0.434	51	65	43	0.50	3	2.98 1915	Nil	(b)	1.63 26/14	0
March	0.432	57	66	46	0.90	5	5.71 1934	Nil	(b)	3.03 9/31	0
April	0.397	61	73	51	1.75	8	5.85 1926	Nil	1920	2.62 30/01	1
May	0.365	70	81	61	5.14	15	12.13 1879	0.98 1903	3.00 17/42	2	2
June	0.337	75	83	68	7.55	17	18.75 1945	2.16 1877	3.90 10/20	2	2
July	0.322	76	84	69	7.08	19	12.28 1926	2.42 1876	3.00 4/91	2	2
August	0.316	71	81	62	5.78	19	12.53 1945	0.46 1902	2.91 14/45	1	1
September	0.341	66	75	58	3.37	15	7.84 1923	0.34 1916	1.82 4/31	0	0
October	0.345	60	75	52	2.30	12	7.87 1890	0.15 1946	1.73 3/33	0	0
November	0.374	52	63	41	0.75	7	2.78 1916	Nil 1891	1.40 15/48	0	0
December	0.409	51	63	44	0.54	5	3.05 1888	Nil	(c)	1.72 1/88	0
Year { Totals	—	—	—	—	35.99	128	—	—	—	—	8
Year { Averages	0.370	62	—	—	—	—	—	—	—	—	—
Year { Extremes	—	—	84	41	—	—	18.75 6/1945	Nil Various months	3.90 10/6/20	—	—

(a) 2-1951. Standard 30 years' normal (1911-1940).

(b) Various years.

(c) 1886 and 1924.

## 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. M.S. Sea Level and Standard Gravity from 9 a.m. and 3 p.m. readings.	Average Miles per Hour.	Highest Mean Speed in One Day (miles per hour).	Highest Gust Speed (miles per hour).	Prevailing Direction.		Mean Amount of Evaporation (inches).	Number of days of Lightning.	Mean Amount of Clouds, 9 a.m. 3 p.m., 9 p.m. (a).	No. of Clear Days.
					9 a.m.	3 p.m.				
No. of years of observations.	30	14	—	—	—	—	—	30	30	30
January ..	29.706	6.1	—	—	NW & S	W & NW	—	16	7.1	1
February ..	29.728	6.7	—	—	W & S	W & NW	—	16	7.0	1
March ..	29.751	5.3	—	—	SE	W & NW	—	14	6.2	3
April ..	29.809	6.1	—	—	SE	E	—	6	3.5	11
May ..	29.859	6.5	—	—	SE	E	—	1	2.1	19
June ..	29.892	6.5	—	—	SE	E & SE	—	0	1.6	22
July ..	29.911	6.2	—	—	SE	E & SE	—	0	1.4	23
August ..	29.914	5.9	—	—	SE	NW & N	—	0	1.3	23
September ..	29.886	6.2	—	—	SE & S	NW & N	—	1	2.0	18
October ..	29.850	6.2	—	—	S	NW & N	—	8	3.2	10
November ..	29.797	5.5	—	—	W & S	NW & N	—	17	4.8	4
December ..	29.738	6.2	—	—	NW & S	NW & N	—	17	6.0	—
Year { Totals ..	—	—	—	—	—	—	—	96	—	137
Year { Averages	29.820	6.1	—	—	SE	NW	—	—	3.9	—
Year { Extremes	—	—	—	—	—	—	—	—	—	—

(a) Scale 0-10.

## 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	30	30	37(a)	37(a)	—	25	—	—
January ..	89.9	77.3	83.6	99.1 8/28	69.2 21/44	—	168.0 26/42	—	—
February ..	89.8	77.1	83.4	97.0 13/37	63.0 25/49	—	163.6 23/38	—	—
March ..	90.2	77.1	83.6	100.0 8/31	66.6 31/45	—	165.6 23/38	—	—
April ..	91.9	75.9	83.9	98.0 19/24	60.8 11/43	—	163.0 1/38	—	—
May ..	90.9	72.6	81.4	96.8 (b)	59.2 8/49	—	160.0 5/20	—	—
June ..	87.5	69.4	78.5	98.6 17/37	55.3 18/49	—	155.2 2/16	—	—
July ..	86.6	67.8	77.2	98.0 16/21	50.7 29/42	—	150.0 28/12	—	—
August ..	88.5	69.7	79.1	96.0 30/36	58.0 (c)	—	156.2 28/16	—	—
September ..	91.0	73.9	82.5	99.0 25/28	63.8 1/46	—	157.0 (d)	—	—
October ..	92.6	77.2	84.9	99.0 14/33	68.5 26/45	—	160.5 30/38	—	—
November ..	93.2	78.2	85.7	101.0 27/24	67.4 12/45	—	170.4 14/37	—	—
December ..	92.0	78.1	85.0	100.4 13/31	68.5 24/41	—	169.0 26/23	—	—
Year { Averages	90.3	74.5	82.4	—	—	—	170.4	—	—
Year { Extremes	—	—	—	101.0 27/11/24	50.7 29/7/42	—	170.4 14/11/37	—	—

(a) Years 1918-41 at Post Office, 1942-53 at aerodrome; sites not strictly comparable.

(b) 2/37 and 2/42

(c) 9/42 and 12/42.

(d) 28/16 and 3/21.

## 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.	
No. of years over which observation extends.	58	58	58	58	30	21	86	86	30
January ..	0.925	78	89	69	16.18	27	27.86 1906	2.25 1930	11.67 7/97
February ..	0.920	79	88	71	12.37	18	24.46 1949	0.44 1931	5.25 15/49
March ..	0.912	78	84	69	11.18	17	21.88 1898	0.81 1911	7.18 6/19
April ..	0.800	69	80	60	3.08	6	23.74 1891	Nil (a)	5.51 1/29
May ..	0.652	63	76	49	0.33	1	14.00 1953	Nil (a)	2.19 6/22
June ..	0.545	61	75	52	0.09	1	1.53 1902	Nil (a)	1.32 10/02
July ..	0.522	59	71	47	0.01	0	2.56 1900	Nil (a)	1.71 2/00
August ..	0.613	63	73	53	0.02	0	3.00 1870	Nil (a)	1.06 14/09
September ..	0.732	65	73	54	0.60	2	2.72 1950	Nil (a)	2.00 26/50
October ..	0.832	65	72	60	1.93	5	13.34 1954	Nil (a)	3.60 15/16
November ..	0.868	68	75	62	4.32	10	15.72 1938	0.40 1870	4.73 9/51
December ..	0.890	73	83	65	8.57	15	22.38 1910	0.98 1934	7.87 28/10
Year { Totals	—	—	—	—	58.68	95	—	—	2.4
Year { Averages	0.764	68	—	—	—	—	27.86 1/06	Nil (b)	11.67 7/1/97
Year { Extremes	—	—	—	89	71	—	—	—	—

(a) Various years.

(b) Various months in various years.

**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.	No. of years of observations.	Bar. corrected to 32° F. Mm. Sea Level and Standard Gravity from 9 a.m. and 3 p.m. readings.	Wind. (Height of Anemometer 75 feet.)				Mean Amount of Evaporation (inches).	No. of Days of Lightning.	Mean Amount of Clouds, 9 a.m. to 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.				
		30(b)	30(b)	77	38	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	64	NE	SW	7.56	2.0	3.7	11.2
March	30.037	8.3	26.2	9/12	63	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	67	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	57	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	28/93	73	NNE	SW	5.03	2.8	5.3	5.7
November	29.990	9.9	32.2	7/48	79	SW	SW	6.89	3.3	4.9	7.2
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
	Averages	30.037	9.0	—	—	NE	SW	—	—	5.0	—
	Extremes	—	—	32.2 (c)	81	—	—	—	—	—	—
(a) Scale 0-10. (b) Standard 30 years' normal (1911-1940). (c) 10/4/1896, 31/8/1897 and 7/11/1943.											

(a) Scale 0-10.

(b) Standard 30 years' normal (1911-1940).

(c) 10/4/1896, 31/8/1897 and 7/11/1943.

## 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)	98	98	98	54(b)	94	30(a)				
January	84.8	61.0	72.9	117.7	12/30	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	15/59	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	26/95	52.6	148.2	12/79	25.6	19/28	4.8
June	61.0	46.6	53.8	76.0	23/65	32.5	(c)	43.5	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	30/20	1.3
August	62.3	46.2	54.3	85.0	31/11	32.3	17/59	52.7	140.0	31/92	22.8	11/20	5.4
September	66.8	48.3	57.5	91.3	29/44	32.7	4/58	58.6	160.5	23/82	25.0	25/27	6.3
October	72.5	51.7	62.1	102.0	21/22	36.0	—/57	66.9	162.0	30/21	27.8	(d)	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	3.6
December	82.6	58.9	70.7	114.6	29/31	43.0	(e)	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	18/1/82	21.0	24/6/44	—

(a) Standard 30 years' normal (1911-1940).

(b) Records incomplete, 1931-34.

Discontinued, 1934.

(c) 27/1376 and 24/1944.

(d) 4/1931 and 2/1918.

(e) 16/1861 and 4/1906.

## 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)	87	87	30(a)	30(a)	116	116	116	30(a)			
January	0.327	39	59	29	0.76	5	4.00	1850	Nil	(b)	2.30	2/39	0.0
February	0.352	41	56	30	1.10	5	6.09	1925	Nil	(b)	5.57	7/28	0.0
March	0.332	44	58	29	0.87	5	4.60	1878	Nil	(b)	3.50	5/78	0.0
April	0.329	55	72	37	1.45	10	6.78	1853	Nil	1945	3.15	5/66	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	67	2.93	15	9.58	1916	0.42	1886	2.11	1/20	1.1
July	0.282	75	87	66	2.49	16	5.38	1865	0.37	1899	1.75	10/65	1.4
August	0.282	68	78	54	2.58	16	6.24	1852	0.33	1914	2.23	3/51	0.4
September	0.280	59	72	44	2.39	13	5.83	1923	0.27	1951	1.59	20/33	7.2
October	0.287	48	67	29	1.54	10	4.38	1948	0.17	1914	2.24	16/08	0.0
November	0.292	41	57	31	1.22	8	4.10	1934	0.04	1885	2.08	7/34	0.0
December	0.322	40	50	31	1.27	6	3.98	1861	Nil	1904	2.42	23/13	0.0
Year { Totals	—	—	—	—	21.09	122	—	—	—	—	—	—	3.7
Year { Averages	0.304	52	—	—	—	—	—	—	—	—	—	—	—
Year { Extremes	—	—	87	20	—	—	8.58	6/1016	Nil	(c)	5.57	7/2/25	—

(a) Standard 30 years' normal (1911-1940).

(b) Various years.

(c) December to April, various years.

**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. Sea Level and Standard Gravity from 9 a.m. and 3 p.m. readings.	Wind. (Height of Anemometer 105 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.					
							30(b)				
No. of years of observations.	30(b)	30(b)	40	40	30(b)	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	20.2 21/54	67	SE	NE	5.49	6.5	5.6	2.4	
March ..	29.975	6.5	20.3 1/29	50	S	E	5.05	5.9	5.1	5.4	
April ..	30.035	5.9	16.7 3/25	57	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	52	SW	W & SW	2.69	2.8	3.8	12.4	
August ..	30.105	5.8	14.8 4/35	56	SW	NE	3.51	3.8	3.1	13.1	
September ..	30.067	5.9	16.1 1/48	57	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	62	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	
Averages	30.007	6.3	—	—	SW	NE	—	—	4.5	—	
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)	68	68		68	50(b)	
No. of years over which observation extends.	30(a)	30(a)	30(a)	68	68	68	50(b)	68	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	101.4 18/93	43.3 3/99	58.1	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	56.4 13/12	49.5	165.9 28/42	49.1 1/04	8.2
Year { Averages	78.0	59.9	69.0	—	—	—	—	—	7.5
Extremes	—	—	—	109.8 26/1/40	36.1 (d)	73.7	169.0 2/1/37	23.9 11/7/90	—

(a) Standard 30 years' normal (1911-1940).

(b) From 1887 to March, 1947, excluding 1927 to 1936.

(c) 9/1896 and 5/1903.

(d) 12/7/1894 and 2/7/1896.

**Humidity, Rainfall and Fog.**

Month.	Vapour Pres- sure (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.	Mean No. of Days of Fog.
No. of years over which observation extends.	30(a)	30(a)	68	68	30(a)	30(a)	103	103(b)	103	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	72	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	—	—	—	33.3		
{ Averages	0.485	67	—	—	—	—	40.39 2/1893	Nil (e)	18.31 21/1/87	—		
{ Extremes	—	—	85	45	—	—	—	—	—	—		

(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, 1880.

(e) Various months in various years.



**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.	No. of years of observations.	Bar. corrected to 32° F. Mm. 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. (e)	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.							
								26(c)	26(c)					
30(b)	26(c)	40(d)	35(e)	26(c)	26(c)	26(c)	30(f)	30(b)	30(b)					
January	29.875	8.9	24.9 2/22	74	S	ENE	5.71	4.8	5.7	4.8				
February	29.942	8.1	20.1 14/18	61	NE	ENE	4.68	3.3	5.5	5.4				
March	30.009	7.5	20.7 10/44	53	W	ENE	4.05	2.8	5.3	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	19.6 2/26	63	W	S	2.17	1.6	4.9	7.4				
June	30.078	7.1	24.5 17/14	70	W	W	1.61	1.5	4.8	8.3				
July	30.070	7.2	26.6 6/31	68	W	W	1.69	1.1	4.5	10.1				
August	30.060	7.4	24.6 9/51	68	W	NE	2.30	2.1	3.9	11.1				
September	30.018	8.0	22.3 19/17	70	W	NE	3.00	3.0	4.2	10.0				
October	29.976	8.2	21.1 18/44	95	W	ENE	4.17	3.9	4.9	7.4				
November	29.935	8.5	22.6 14/30	71	W & E	ENE	4.97	4.5	5.5	5.7				
December	29.881	8.9	24.9 10/20	75	S	ENE	5.64	5.4	5.8	4.8				
Year { Totals	30.000	7.8	—	—	—	—	42.90	36.4	—	87.8				
Year { Averages	—	—	26.6 6/7/31	95	—	NE	—	—	5.0	—				
Year { Extremes	—	—	—	—	—	—	—	—	—	—				

(a) Scale 0-10. (b) Standard 30 years' normal (1911-1940). (c) 1915-1940. (d) 1914-1953.  
 (e) 1917-1954. (f) 1921-1950.

**Temperature and Sunshine.**

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)	96	96	96	84	95	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	24/00	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	82.8	12/46	36.8	3/72	46.0	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	61.3	158.5	28/09	36.0	6/06	7.5
December	76.9	63.2	70.1	107.5	(c)	48.4	3/24	59.1	164.5	27/89	41.4	3/24	7.5
Year { Averages	71.1	56.3	63.7	—	—	—	—	—	—	—	—	—	6.8
Year { Extremes	—	—	—	113.6	14/1/39	35.7	22/6/32	77.9	168.3	14/2/39	24.0	4/7/93	—

(a) Standard 30 years' normal (1911-1940). (b) 1921-1950 (different exposure prior to 1921). (c) 31/04 and 21/53.

**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.		
No. of years over which observation extends.	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.	Mean No. of Days of Fog.	
	30(a)	30(a)	79	79	30(a)	30(a)	96	96	96	30(b)	
January	0.537	65	78	58	3.86	13	15.26 1911	0.25 1932	7.08 13/11	0.4	
February	0.560	68	81	60	3.75	12	18.56 1873	0.12 1939	8.90 25/72	0.6	
March	0.527	71	85	62	4.44	13	20.52 1942	0.42 1876	11.05 28/42	1.8	
April	0.441	73	87	63	5.65	14	24.49 1861	0.06 1868	7.52 29/60	2.8	
May	0.362	75	90	63	4.98	12	23.03 1919	0.18 1860	8.36 28/89	3.7	
June	0.303	76	89	63	3.68	11	25.30 1950	0.19 1904	5.17 16/84	3.3	
July	0.282	74	88	63	4.89	12	13.23 1950	0.10 1946	7.80 7/31	2.9	
August	0.288	68	84	54	2.41	10	14.89 1899	0.04 1885	5.33 2/60	2.3	
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 1916	0.21 1867	6.27 13/02	0.6	
November	0.433	60	79	42	2.54	11	9.88 1865	0.07 1915	4.23 19/00	0.6	
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	—	—	—	20.1	
Year { Averages	0.393	68	—	—	—	—	25.30 6/1950	0.04 8/1885	11.05	—	
Year { Extremes	—	—	90	42	—	—	—	—	28/3/42	—	

(a) Standard 30 years' normal (1911-1940). (b) 1921-1950.

## 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. M. Sea level and Stan- dard 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).	High- est Gust Speed (miles per hour).	9 a.m.	3 p.m.				
No. of years of observations.	24	25	26	(b)	27	27	26	18	24	25
January	29.848	4.9	14.9 23/33	—	NW	NW	8.51	1.2	4.7	7.5
February	29.901	4.4	15.3 24/33	—	E	NW	6.68	2.4	4.9	6.6
March	30.012	3.9	18.2 28/42	—	E	NW	5.37	0.2	5.0	6.8
April	30.062	3.7	18.6 8/45	—	NW	NW	3.35	0.4	5.4	5.0
May	30.139	3.1	12.6 3/30	—	NW	NW	2.00	0.1	5.5	5.8
June	30.124	3.7	16.1 2/30	—	NW	NW	1.32	0.1	6.1	4.1
July	30.132	3.6	23.4 7/31	—	NW	NW	1.31	0.0	5.7	5.4
August	30.048	4.1	15.7 25/36	—	NW	NW	1.84	0.1	5.5	5.6
September	30.049	4.5	17.4 28/34	—	NW	NW	2.95	0.5	5.1	6.2
October	29.959	4.4	12.4 27/40	—	NW	NW	4.54	0.9	5.3	5.3
November	29.887	4.8	17.2 28/42	—	NW	NW	5.98	1.2	5.5	4.5
December	29.837	4.8	16.1 11/38	—	NW	NW	7.78	0.8	5.1	5.9
Year { Totals ..	—	—	—	—	—	—	51.60	7.9	—	68.7
Year { Averages ..	30.002	4.2	—	—	NW	NW	—	—	5.3	—
Year { Extremes ..	—	—	23.4 7/7/31	—	—	—	—	—	—	—

(a) Scale 0-10.

(b) No record.

## Temperature and Sunshine.

Month.	Mean Temperature (°Fahr.).			Extreme Shade Temperature (°Fahr.).		Extreme Range.	Extreme Temperature (°Fahr.).		Mean Daily Hours of Sunshine.
	Mean.	Mean.	Mean.	Highest.	Lowest.		Highest in Sun.	Lowest on Grass.	
No. of years over which observation extends.	27	27	27	27	27	27	(a)	27	25
January	82.5	56.0	69.2	107.4 11/39	39.4 18/49	68.0	—	30.1 10/50	8.3
February	81.0	55.9	65.5	99.8 13/33	35.0 (b)	64.8	—	26.5 23/43	7.7
March	76.3	52.5	64.4	99.1 6/38	34.8 31/49	64.3	—	26.4 26/35	7.2
April	66.5	45.2	55.9	89.7 6/38	29.0 29/34	60.7	—	19.0 18/44	6.7
May	59.1	38.9	49.2	72.6 1/36	22.5 9/29	50.1	—	15.6 (c)	5.2
June	52.6	35.7	44.1	64.9 1/51	18.1 20/35	43.9	—	8.9 25/44	4.2
July	51.8	33.8	42.8	63.5 16/34	20.0 (d)	43.5	—	10.8 9/37	4.8
August	55.1	35.4	45.2	71.0 24/54	21.0 3/29	49.5	—	10.1 6/44	5.8
September	61.3	39.0	50.2	81.5 16/34	25.2 6/46	56.3	—	13.0 6/45	7.2
October	67.2	44.2	55.7	90.0 13/46	29.0 24/38	61.0	—	18.2 2/45	7.8
November	73.1	49.0	61.1	101.4 19/44	32.2 11/36	69.2	—	25.9 6/40	8.1
December	79.7	53.4	66.5	103.5 27/38	36.0 24/28	67.5	—	30.2 (e)	8.3
Year { Averages ..	67.2	44.9	55.1	—	—	—	—	—	6.8
Year { Extremes ..	—	—	—	107.4 11/1/39	18.1 20/6/35	89.3	—	8.9 25/6/44	—

(a) No record.

(b) 22/31 and 23/31.

(c) 13/37 and 15/46.

(d) 19/29, 9/37 and 27/43.

(e) 2/39 and 20/48.

## Humidity, Rainfall and Fog.

Month.	Vapour Pressure (inches).	Rel. Hum. (%) at 9 a.m.			Rainfall (inches).				Fog.
		Mean. 9 a.m.	Highest Monthly.	Lowest Monthly.	Mean Monthly.	Mean No. of Days of Rain.	Greatest Monthly.	Least Monthly.	
No. of years over which observation extends.	26	26	26	26	27	27	27	27	23
January	0.370	53	69	39	2.09	7	6.69 1941	0.02 1932	2.47 19/50
February	0.388	58	71	40	2.09	7	6.03 1948	0.01 1933	3.24 17/28
March	0.378	65	79	48	2.36	7	12.69 1950	0.01 1940	2.53 20/52
April	0.315	71	81	54	2.18	7	5.19 1952	0.07 1942	2.52 9/45
May	0.254	79	87	67	1.95	7	6.13 1948	0.06 1935	3.88 3/48
June	0.212	81	90	72	1.75	9	6.09 1931	0.18 1944	1.65 24/31
July	0.106	81	87	73	1.61	10	4.09 1933	0.27 1940	2.02 13/33
August	0.213	75	83	60	1.93	11	4.71 1939	0.36 (a)	2.07 12/29
September	0.239	64	74	51	1.67	9	3.03 1937	0.13 1946	1.75 3/47
October	0.273	60	72	46	2.62	11	6.59 1934	0.34 1949	2.51 25/34
November	0.301	54	67	38	2.12	8	4.45 1950	0.28 1936	2.45 9/50
December	0.338	51	70	37	1.91	8	8.80 1947	0.16 1938	2.29 28/29
Year { Totals ..	—	—	—	—	24.08	101	—	—	22.0
Year { Averages ..	0.286	66	—	—	—	—	—	—	—
Year { Extremes ..	—	—	90	37	—	—	12.69 3/50	0.01 2/33/3/40	3.88 3/5/48

(a) 1944 and 1949.

**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. M. Sea Level and Standard Gravity from 9 a.m. and 3 p.m. readings.	Wind. (Height of Anemometer 93 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)	15(c)	42	45	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	17.2	19/50	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	20.0	4/44	72	N	N	1.57	0.5	6.1	3.4
June	30.097	7.2	22.8	16/47	60	N	N	1.18	0.4	6.5	2.7
July	30.079	8.7	20.9	9/44	68	N	N	1.16	0.3	6.3	2.9
August	30.048	8.2	21.3	20/42	64	N	N	1.54	0.9	6.0	3.1
September	30.001	8.5	19.4	6/53	69	N & W	N & S	2.41	1.3	5.9	3.3
October	29.968	8.4	18.6	12/52	69	N	N	3.54	1.8	6.1	3.8
November	29.951	8.6	19.4	4/50	65	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 .. Averages .. Extremes	30.010	8.1	—	—	—	N	S	40.31	16.5	5.8	50.6
	—	—	22.8	16/6/47	74	—	—	—	—	—	—
	—	—	—	—	—	—	—	—	—	—	—

(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.					
No. of years over which observation extends.	30(a)	30(a)	30(a)	99	99	99	86(b)	95	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	4.1
June	56.8	43.8	50.3	72.2	1/07	28.0	11/66	44.2	129.0	11/61	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	57.7	43.7	51.2	77.0	20/85	28.3	11/63	48.7	137.4	29/69	21.3	14/02	4.6
September	63.3	46.0	54.7	88.6	28/28	31.0	3/40	57.6	142.1	20/67	22.8	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	27/04	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	—	—	—	—	—	—	—	—	—	—
Year { Extremes	—	—	—	114.1	27.0	87.1	178.5	19.9	—	—	—	—	—
				13/1/39	21/7/69		14/1/62	30/6/29					

(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 Pres- sure (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.	Mean No. of Days of Fog.	
No. of years over which observation extends.	30(a)	30(a)	47	47	30(a)	30(a)	99		99		99		30(a)
January	0.382	58	65	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	76	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	6.71	1901	Nil	1923	2.28	22/01	2.3
May	0.311	79	86	70	1.94	14	5.60	1942	0.14	1934	1.85	7/91	6.8
June	0.276	83	92	75	2.06	16	4.51	1859	0.73	1877	1.74	21/04	6.5
July	0.264	82	86	75	1.93	17	7.02	1891	0.57	1902	2.71	12/91	6.5
August	0.271	76	82	65	2.02	17	4.35	1939	0.48	1903	1.94	26/24	3.7
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	67	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	0.323	69	—	—	—	—	8.11	11/1954	Nil	4/1923	3.92	4/12/54	—
Year { Extremes	—	—	92	48	—	—	—	—	—	—	—	—	—

(a) Standard 30 years' normal (1911-1940).

## 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.

Wind.											
(Height of Anemometer 40 feet.)											
Month.	Bar. corrected to 32° F. M.S. Sea Level and Standard Gravity from 9 a.m. and 3 p.m. readings.	Average Miles per Hour.	Highest Mean Speed in One Day (miles per hour).	Highest Gust Speed (miles per hour).	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.	
					9 a.m.	3 p.m.					
No. of years of observations.	30(b)	30(b)	61	64	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	65	NNW	SSE	3.71	1.0	6.2	2.3
March ..	29.961	6.8	21.4	13/38	75	NW	SSE	3.10	1.2	6.1	2.4
April ..	29.997	6.7	21.1	9/52	74	NW	W	1.98	0.7	6.5	1.7
May ..	30.009	6.3	20.2	20/36	79	NNW	NW	1.37	0.4	6.1	2.4
June ..	29.986	6.2	23.7	27/20	71	NW	NW	0.91	0.4	6.2	2.4
July ..	29.958	6.5	22.9	22/53	78	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	73	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	29.907	7.2	—	—	—	NNW	W	31.29	7.8	—	22.1
Year { Averages	—	—	—	—	—	—	—	—	—	—	—
Year { Extremes	—	—	25.5	19/8/26	87	—	—	—	—	6.3	—

(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.			
No. of years over which observation extends.	30(a)	30(a)	30(a)	71(b)	71(b)	71(b)	57(c)	71(b)	30		
January	69.8	52.4	61.0	105.0	1/00	40.1 (d)	64.9	160.0 (e)	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	1/47	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 (f)	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	51.3	92.0	24/14	32.0 12/89	60.0	156.0 9/93	23.8 (g)	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 1/98	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	30/12/97	27.7	11/7/95	77.5	165.0 24/2/98	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) 9/37 and 11/37.

(e) 5/86 and 13/05.

(f) —/89 and

—/93.

(g) 1/86 and —/99.

## 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.			Mean No. of Days of Fog.
No. of years over which observation extends.	30(a)	34	68	68	30(a)	30(a)	71(b)		71(b)		71(b)		30(c)		
January ..	0.309	57	72	46	1.82	13	5.91	1893	0.17	1915	2.96	30/16	0.0		
February ..	0.342	61	77	48	1.68	10	4.96	1935	0.11	1914	2.20	1/54	0.0		
March ..	0.323	65	77	52	2.13	13	10.05	1946	0.29	1943	3.47	17/40	0.3		
April ..	0.290	69	84	58	2.31	14	8.50	1935	0.07	1904	5.02	20/09	0.2		
May ..	0.263	78	89	65	1.71	14	6.37	1905	0.14	1913	1.75	2/93	0.9		
June ..	0.233	78	91	68	2.25	16	8.15	1889	0.28	1886	5.80	7/34	0.8		
July ..	0.227	78	94	72	2.14	17	6.02	1922	0.17	1950	2.51	18/22	1.0		
August ..	0.232	72	92	60	1.82	18	6.32	1946	0.30	1892	2.28	14/90	0.4		
September ..	0.240	64	85	58	1.90	17	5.02	1953	0.38	1951	2.34	21/53	0.1		
October ..	0.258	60	73	51	2.52	18	7.60	1947	0.39	1914	2.58	4/06	0.0		
November ..	0.274	57	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	—	—	—	—	—	—	3.5		
Year { Averages	0.271	66	—	—	—	—	—	—	—	—	—	—	—		
Year { Extremes	—	—	94	45	—	—	10.05	3/1946	0.07	4/1904	5.80	7/6/54	—		

(a) Standard 30 years' normal (1911-1940).

(b) Records prior to 1883 not comparable.

(c) 1922-1951.

## CHAPTER III.

### GENERAL GOVERNMENT.

#### § 1. Scheme of Parliamentary Government.

1. **General.**—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 him in detail of the manner in which his duties are to be fulfilled. The Legislature in each State was bi-cameral till 1922, in which year the Queensland Parliament became uni-cameral. In the bi-cameral States it consists of (a) a Legislative Council and (b) a Legislative Assembly, or House of Assembly. In Queensland the Legislative Assembly constitutes the legislature. In the Commonwealth Parliament the Upper House is known as the Senate, and in the State Parliaments as the Legislative Council. The Lower House in the bi-cameral Parliaments is known as follows:—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. The legislative powers of these Parliaments are delimited by the Commonwealth and the State Constitutions. The Assembly (Queensland as pointed out is uni-cameral) which is the larger House, is always 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 that State, 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 passed in October, 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.

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.* At a conference of Prime Ministers and other representatives of the British Commonwealth in London in December, 1952 it was agreed that the Royal Style and Titles then in use were not in accord with current relationships within the British Commonwealth and that there was need of a new form which would, in particular, “reflect the special position of the Sovereign as Head of the Commonwealth”.

It was therefore decided that each member of the British Commonwealth should use a form of the Royal Style and Titles suited for its own circumstances, while retaining as a common element the description “Queen of Her other Realms and

Territories and Head of the Commonwealth"; and that consultation between all countries of the Commonwealth should take place on any future proposal to change the form of the Royal Style and Titles used in any country.

To give effect to these decisions in Australia the Royal Style and Titles Act was passed on 3rd April, 1953 giving 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." The Act also approves the adoption by the Queen of a Royal Style and Titles for use in relation to other countries of the British Commonwealth in accordance with the principles formulated at the London conference.

### 3. Powers and Functions of the Governor-General and of the State Governors.—

(i) *Governor-General of the Commonwealth.* Section 2 of the Commonwealth Constitution provides as follows:—

"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."

As the Queen's representative in Australia, the Governor-General exercises certain prerogative powers and functions assigned to him by the Queen—either by Letters Patent (see Letters Patent dated 29th October, 1900 and 15th December, 1920), by Instructions under the Royal Sign Manual and Signet, by Commission issued to him under the Royal Sign Manual and Signet, or by any instrument of delegation under section 2 of the Constitution. Powers which have been so assigned include, amongst others, the power to appoint a Deputy or Deputies of the Governor-General, to administer or authorize any other person to administer the Oath of Allegiance, to grant pardons and to remit fines for offences against the laws of the Commonwealth and to appoint certain officers in the Diplomatic or Consular Service of the Commonwealth.

Other powers and functions are conferred on the Governor-General by the Constitution. For example, under section 5 of the Constitution he may appoint times for holding the sessions of the Parliament, prorogue Parliament and dissolve the House of Representatives. Under section 32 the Governor-General in Council may cause writs to be issued for general elections of members of the House of Representatives. Under section 58 he assents in the Queen's name to a proposed law passed by both Houses of the Parliament or withholds assent, or reserves the law for the Queen's pleasure; or he may return the proposed law to the House in which it originated and may transmit therewith any amendments which he may recommend. Under section 61 he exercises the executive power of the Commonwealth, under section 62 he chooses and summons Executive Councillors, who hold office during his pleasure, and under section 64 he may appoint Ministers of State for the Commonwealth. By section 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. Under the conventions of responsible government obtaining in Commonwealth countries, the Governor-General's executive functions generally are exercised on the advice of Ministers of State. In this regard the Governor-General's position has become assimilated to that of the Queen in relation to her Ministers of State for the United Kingdom.

In addition, many powers and functions are exercised by the Governor-General under Acts of the Commonwealth Parliament. Most Acts, for example, provide that the Governor-General may make regulations, not inconsistent with the Act, either generally to give effect to the Act or to cover certain matters specified in the power. The Governor-General may 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. The Governor-General has been given power by statute to legislate for certain Territories of the Commonwealth. Other statutory powers include the power to appoint and dismiss statutory officers or bodies. A reference to the Governor-General, in Acts of the Commonwealth Parliament, means, unless the contrary intention appears, the Governor-General acting with the advice of the Executive Council (Acts Interpretation Act 1901-1950, section 17 (f)).

(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 of the present State Governors, see § 3. following.

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 by means, chiefly, of constitutional conventions, customs or understandings, and of 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 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 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, all Ministers are members of the Cabinet. 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 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 are *ex officio* 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. Australian practice follows, broadly, that of the United Kingdom. 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.

The customary procedure in connexion with the resignation or acceptance of office by a Ministry is described fully in previous issues of the Official Year Book (*see* No. 6, p. 942). It may be added, however, that legislation now exists in all States, the effect of which is to obviate the necessity of responsible Ministers vacating their seats in Parliament on appointment to office.

(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, 1955 :—

AUSTRALIAN PARLIAMENTS : MINISTERS IN UPPER OR LOWER HOUSES, DECEMBER, 1955.

Ministers with Seats in—	C'wealth.	N.S.W.	Vic.	Q'land.	S. Aust.	W. Aust.	Tas.	Total.
The Upper House ..	5	2	4	(a)	3	2	..	16
The Lower House ..	15	14	10	11	5	8	9	72
Total ..	20	16	14	11	8	10	9	88

(a) Abolished in 1922.

For the names of the occupants of ministerial office in each of the Parliaments of Australia in December, 1955, *see* § 3. of this chapter. Subsequent changes of importance in Ministries 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, number and salaries were increased to 8—£13,650 (1915) and to 9—£15,300 (1917). During the period of financial emergency in the early thirties the ministerial salary appropriation was reduced to as low as £10,710 a year, and was not restored to its former level until 1938. During the period of restoration of salary the number of Ministers was increased to 10 (1935). Later increases were as follows:—to 11—£18,600 (1938); 19—£21,250 (1941)—these increases were war-time provisions, extended into peacetime in 1946; £27,650 (1947—number unaltered); 20—£29,000 (1951); £41,000 (1952—number unaltered). In 1938 an additional ministerial allowance of £1,500 a year was granted to the Prime Minister; this was increased to £3,500 a year (exempt from income tax) in 1952 and at the same time an additional ministerial allowance of £1,000 a year (exempt from income tax) was granted to each other Minister.

All amounts payable in the foregoing paragraphs are in addition to amounts payable as Parliamentary allowances (*see paras. 5 and 6 below*).

5. **Number and Salary of Members of the Legislatures, Australian Parliaments, December, 1955.**—The following table shows the number and annual salary of members in each of the legislative chambers in December, 1955:—

**AUSTRALIAN PARLIAMENTS: MEMBERS AND ANNUAL SALARIES,  
DECEMBER, 1955.**

Members in—	C'wealth.	N.S.W.	Vic.	Q'land.	S. Aust.	W. Aust.	Tasmania.	Total.
NUMBER OF MEMBERS.								
Upper House ..	60	60	34	(a)	20	30	19	223
Lower House ..	124	94	<del>65</del> 66	75	39	50	30	<del>477</del> 478
Total ..	184	154	<del>99</del> 100	75	59	80	49	<del>700</del> 701
ANNUAL SALARY. (£.)								
Upper House ..	(b) 1,750	500	(c) 1,600	(a)	(d) 1,425— 1,500	(e) 1,340	(f) 800— 1,050	..
Lower House ..	(b) 1,750	1,875	(c) 1,600	(g) 2,008	(d) 1,425— 1,500	(e) 1,340	(f) 850— 1,050	..

(a) Abolished in 1922. (b) Plus expense allowances exempt from income tax—Senators, £550; Members of House of Representatives, £400—£900, varying with electoral divisions. *See also para. 6 following.* (c) Increased from £1,050 as from 6th October, 1954. Plus allowance of £400 for metropolitan, £600 for urban, £700 for inner country and £800 for outer country electorates. (d) According to distance of electorate from Adelaide. (e) Subject to adjustment in accordance with variations of the State basic wage. Plus £50 where any part of electorate is more than 50 miles from Perth. (f) According to area of electorate and distance from the capital. Plus a cost of living adjustment. (g) Increased from £1,575 as from 1st July, 1954. Subject to adjustment in accordance with any variation of the equivalent Public Service Award classification. Plus marginal allowances of £100 for metropolitan electorates and ranging from £165 to £270 for non-metropolitan electorates.

6. **Commonwealth Parliamentary Allowances.**—(i) *General Allowance.* Section 48 of the Commonwealth Constitution granted to each Senator and member of the House of Representatives an allowance of £400 a year until Parliament should decide to alter it. The first alteration was made in 1907, when the allowance was increased to £600 for all except the holders of Parliamentary office (i.e., Ministers, and the Presiding Officer and Chairman of Committees of each House), whose allowances in addition to the emoluments of office remained at £400 a year. In 1920 the general allowance was increased to £1,000 a year and the allowance to holders of office to £800 a year. Under financial emergency

legislation Parliamentary salaries and allowances were reduced generally, the lowest level reached for the general allowance being £750 in 1932. Subsequently there was a gradual restoration to former levels, the allowance reaching £1,000 a year again in 1938, when the provision for the reduced allowance for holders of Parliamentary office was removed. In 1947 the general allowance was increased to £1,500 and in 1952 to £1,750 a year.

(ii) *Additional Allowances.* (a) *Holders of Parliamentary Office.* Amounts received by the holders of Parliamentary office in respect of the duties they perform are additional to the allowances to each Senator and Member of the House of Representatives as described above. Appropriations for ministerial salaries are referred to in par. 4 (vi) above, but the amounts received because of their duties of office by the President of the Senate, the Speaker of the House of Representatives and the Chairman of Committees in each House are not included in these appropriations.

In 1901-2 the Presiding Officer of each House received £1,100 a year and the Chairmen of Committees each £500 a year. Before the depression years these amounts had been increased to £1,300 and £700 respectively, but, in common with other Parliamentary salaries and allowances, they were reduced during this period, and in 1933-34 were as low as £900 and £500 a year. Following the gradual restoration to previous levels, they remained unchanged until 1947-48, when they were increased to £1,600 and £900 respectively. In 1952 the allowance to the President of the Senate and to the Speaker of the House of Representatives was increased to £1,750 a year each.

(b) *Other Additional Allowances.* In 1920 the Leaders of the Opposition in the Senate and in the House of Representatives were granted additional allowances of £200 a year and £400 a year respectively. These were increased to £300 and £600 in 1947 and to £750 and £1,750 in 1952. In 1947, also, the Leader in the House of Representatives (other than the Leader—and in 1952 the Deputy Leader—of the Opposition) of a recognized political party with not less than ten members in that House and of which none is a Minister received an additional allowance of £400 a year. This was increased to £500 in 1952.

Further additional annual allowances, all of which were granted in 1952, are as follows:—

Deputy Leader of the Opposition in the House of Representatives, £750; Government Whip in the House of Representatives, £325; Other Whips, £275.

Additional allowances (exempt from income tax) for expenses of discharging duties.—Payable to each Senator—£550; payable to each Member of the House of Representatives—£400-£900, varying with electoral divisions.

Additional allowances (exempt from income tax) for expenses of discharging duties of Office.—President of the Senate, Speaker of the House of Representatives, Leader of the Opposition in the Senate, and Deputy Leader of the Opposition in the House of Representatives—£250; Leader of the Opposition in the House of Representatives—£1,000.

7. *Enactments of the Parliament.*—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. The Governor-General or the State Governor acts on behalf of, and in the name of, the Sovereign, in assenting to Bills passed by the Legislatures, but he may reserve them for the special consideration of the Sovereign. 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) *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 racial or other ground, who has lived in Australia for six months continuously. Residence in a sub-division for a period of one month prior to enrolment is necessary to enable a qualified person to enrol. Enrolment and voting are compulsory. A member of the Defence Force 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.

Disqualification of persons otherwise eligible as members of either Commonwealth House is mainly on the grounds of 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. Excluded from the franchise are persons of unsound mind, attainted of treason, convicted and under sentence for any offence punishable by imprisonment for one year or longer, or of certain non-European races. In the main, these or similar grounds for disqualification apply also to State Parliament membership and franchise.

(ii) *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 enacted legislation in 1948 enlarging both Houses of Parliament and providing a representation ratio nearer to the proportion which existed at Federation. Thus the Representation Act 1948 provides that there shall be ten Senators from each State instead of six, increasing the total to 60 Senators. To effect this transition in the Senate, seven Senators were elected from each State at the elections of 1949, four taking office immediately the Senate sat after the election, the remaining three commencing their term on the usual date—1st July, 1950. Members of this Chamber are normally elected for the term of six years, but half the members retire at the end of every third year, although they are eligible for re-election. Accordingly, at each future periodical election of Senators, five Senators will normally be elected in each State, making 30 to be elected at each such election.

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. Correspondingly, in terms of the Constitution and the Representation Act 1905–38, 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—20 to 33; Queensland—10 to 18; South Australia—6 to 10; Western Australia—5 to 8; Tasmania—5, no increase; total—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 the 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 sub-divisions, 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 12th December, 1955, 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 external Territories) being increased from 121 to 122. A redistribution of electoral boundaries was effected by Distribution Commissioners appointed in each State.

Since the general elections 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 a motion for the disallowance of any ordinance of the Territory or on any amendment to such motion. 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.

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. In elections for Senators, the whole State constitutes the electorate. For the purposes 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-one complete Parliaments since the inauguration of Federation. Until 1927 the Parliament met at Melbourne; it now meets at 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 fifth Parliament, which was opened on 9th July, 1913, was dissolved on 30th July, 1914 in somewhat unusual circumstances, when, for the first time in the history of the Commonwealth, a deadlock occurred between the Senate and the House of Representatives, and, in accordance with Section 57 of the Constitution which provides for such an eventuality, both Houses were dissolved by the Governor-General. The nineteenth Parliament was similarly dissolved. It opened on 22nd February, 1950, but on 19th March, 1951, in its first session, a double dissolution was proclaimed for the second time since the inception of the Commonwealth.

The system of voting for the House of Representatives is preferential and for the Senate, until 1948, voting was also preferential. The Commonwealth Electoral Act 1948, however, introduced with the Representation Act 1948 to enlarge the Commonwealth Parliament (*see page 71*), changed the system of scrutiny and counting of votes in Senate elections from preferential to that of proportional representation. For a description of the system, *see Official Year Book No. 38, pp. 82-3*.

For particulars of electors enrolled and of electors who voted at the various Commonwealth elections, *see earlier Year Books*. Elections for the Senate have usually been held at the same time as those for the House of Representatives. The double dissolution of the nineteenth Parliament, however, referred to above, led to the holding of separate elections for the Senate. An election was held on 9th May, 1953, and particulars of electors and voting in the several States are as follows:—

#### SENATE ELECTION, 9th MAY, 1953.

State.	Electors Enrolled.			Electors who Voted.			Percentage of Electors who Voted.		
	Males.	Females.	Total.	Males.	Females.	Total.	Males.	Females.	Total.
New South Wales	966,830	1,012,764	1,979,594	921,432	952,089	1,873,521	95.30	94.01	94.64
Victoria	683,483	728,028	1,411,511	653,787	686,324	1,340,111	95.66	94.27	94.94
Queensland	367,872	357,592	725,464	346,932	340,297	687,229	94.31	95.16	94.73
South Australia	220,518	232,978	453,496	213,446	224,137	437,583	96.79	96.21	96.49
West. Australia	164,652	164,540	329,192	155,872	154,587	310,459	94.67	93.95	94.31
Tasmania	83,634	84,862	168,496	80,729	81,332	162,061	96.53	95.84	96.18
Total	2,486,989	2,580,764	5,067,753	2,372,198	2,438,766	4,810,964	95.38	94.50	94.93

Following the Senate Election of 9th May, 1953, an election for the House of Representatives was held on 29th May, 1954. Particulars of electors and voting in the several States are as follows :—

**ELECTION FOR HOUSE OF REPRESENTATIVES, 29th MAY, 1954. (a)**

State.	Electors Enrolled.			Electors who Voted.			Percentage of Electors who Voted.		
	Males.	Females.	Total.	Males.	Females.	Total.	Males.	Females.	Total.
New South Wales	910,532	951,467	1,861,999	879,289	909,808	1,789,097	96.57	95.62	96.08
Victoria	646,517	689,508	1,336,025	621,909	659,223	1,281,132	96.19	95.61	95.89
Queensland	368,795	364,259	733,054	353,200	350,421	703,621	95.77	96.20	95.98
South Australia	179,188	190,608	369,796	173,392	184,462	357,854	96.77	96.78	96.77
West. Australia	166,946	167,407	334,353	160,603	161,085	321,688	96.20	96.22	96.21
Tasmania	85,715	86,815	172,530	82,826	83,353	166,179	96.63	96.01	96.32
Nor. Territory	4,280	2,589	6,869	3,163	2,136	5,299	73.90	82.50	77.14
Aust. Cap. Terr.	7,626	7,294	14,920	7,223	6,851	14,074	94.72	93.93	94.33
Australia	2,369,599	2,459,947	4,829,546	2,281,605	2,357,339	4,638,944	96.29	95.83	96.05

(a) Contested Electorates only.

The twenty-first Parliament opened on 4th August, 1954 and was dissolved on 28th October, 1955.

(iii) *Commonwealth Referenda.* According to Section 128 of the Constitution, any proposed law for the alteration of the Constitution must, in addition to being passed by an absolute majority of each House of Parliament, be submitted to a referendum of the electors in each State, and must further be approved 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 referenda 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 referenda and the voting thereon were given in previous issues of the Official Year Book (*see* No. 18, p. 87, No. 31, p. 67, No. 35, p. 60, No. 36, p. 61, No. 37, pp. 64–5, No. 38, p. 84 and No. 40, p. 56), and a brief résumé of the various referenda held in Australia was given in Official Year Book No. 41 (*see* page 67.)

2. *State Elections.*—(i) *Latest in each State. (a) 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 and Western Australia. 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 (a)	1952	676,195	719,455	1,395,650	485,417	508,773	994,190	92.91	91.42	92.14	
South Australia	1953	(b)	(b)	168,758	(b)	(b)	79,373	(b)	(b)	81.02	
Western Australia	1952	56,854	22,650	79,504	11,677	4,005	15,682	36.16	31.38	34.80	

(a) First election on the basis of adult suffrage.

(b) Not available.

Particulars of voting in 1954 at the latest contested election for the Legislative Council in Tasmania are as follows :—Number of electors on the roll, 19,355; number of votes recorded, 16,405; percentage of enrolled voters who voted, 84.75.

(b) *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.	Females.	Total.	Males.	Females.	Total.	Males.	Females.	Total.
N.S. Wales	1953	954,966	997,987	1,952,953	779,186	809,107	1,588,293	94.05	93.42	93.73
Victoria	1955	691,034	731,554	1,422,588	639,535	679,402	1,318,937	93.93	94.11	94.01
Q'land	1953	372,121	365,458	737,579	310,425	306,186	616,611	93.88	93.72	93.80
S. Australia	1953	(a)	(a)	449,630	(a)	(a)	336,592	(a)	(a)	95.01
W. Aust...	1953	160,151	159,790	319,941	93,307	98,918	192,225	93.68	93.27	93.47
Tasmania	1955	85,491	87,674	173,165	81,179	81,458	162,637	94.96	92.91	93.92

(a) Not available.

(ii) *Elections in Earlier Years.* Official Year Book No. 38 and earlier issues contain particulars of the voting at elections for both Upper and Lower State Houses in years prior to those shown above, and some general information is given in the following paragraphs.

3. *The Parliament of New South Wales.*—The Parliament of New South Wales consists of two Chambers, the Legislative Assembly and the Legislative Council. By legislation assented to in July, 1949, the Assembly was enlarged from 90 to 94 members, elected in single-seat electoral districts, who hold their seats during the existence of the Parliament to which they are elected. The duration of Parliament is limited to three years and by legislation enacted in 1950 cannot be extended beyond that period except with the approval of electors by referendum. Until 1934 the Council was a nominee Chamber, consisting of a variable number of members appointed for life without remuneration, but as from 23rd April, 1934 it was reconstituted and became a House of 60 members to serve without remuneration for a term of twelve years, with one-quarter of the members retiring every third year. As from 1st September, 1948, however, members of the Council have been paid an allowance, now £500 a year. Vacancies are filled by members of both Chambers, who vote as a single electoral body at simultaneous sittings of both Chambers.

Any person who is an elector entitled to vote at a Legislative Assembly election, or a person entitled to become such elector, and who has been for at least three years resident in Australia, and who is a natural-born or naturalized subject of the Queen, is capable of being elected to the Legislative Council. For the Council franchise an elector must be, for the time being, a Member of the Legislative Council or a Member of the Legislative Assembly. Every person qualified to vote at a Legislative Assembly election for any electoral district in New South Wales is qualified to be elected as a Member for that or any other district. Every person not under twenty-one years of age, who is a natural-born or naturalized subject of the Queen, and who has lived in Australia for at least six months continuously, and in New South Wales for at least three months, and in any subdivision for at least one month immediately preceding the date of claim for enrolment, is entitled to enrolment as an elector for the Legislative Assembly. Persons are disqualified either as members or voters for reasons generally the same as those outlined on page 71.

Since the introduction of responsible government in New South Wales there have been 36 complete Parliaments, the first of which opened on 22nd May, 1856, and was dissolved on 19th December, 1857, while the thirty-sixth was dissolved on 14th January, 1953. The thirty-seventh Parliament opened on 11th March, 1953.

The 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 the 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 (Women's Franchise Act) in 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, in the qualifications necessary for members and electors. The number of members in the Upper House is 34, and in the Lower House, 65. 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 seventeen provinces retiring every third year. Members of the Legislative Assembly are elected for the duration of Parliament, which is limited to three years.

Prior to the passing of the Act just referred to, which operated from November, 1951, there were property qualifications required for membership of, and franchise for, the Legislative Council. As alternatives to the property qualifications for the Council franchise, certain professional and academic qualifications were also allowed. As amended, however, the qualifications for membership of the Council are possessed by any adult natural-born subject of the Queen, or by any adult alien 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* page 71).

Since the introduction of responsible government in Victoria there have been 39 complete Parliaments, the first of which opened on 21st November, 1856, and closed on 9th August, 1859, while the thirty-ninth was dissolved on 22nd April, 1955. The fortieth Parliament was opened on 15th June, 1955.

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 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.**—As stated previously, the Legislative Council in Queensland was abolished in 1922, the date of Royal Assent to the Act being 23rd March, 1922. The Legislative Assembly is composed of 75 members, each elected for a period of three years and each representing an electoral district.

Any person qualified to be enrolled for any electoral district is qualified for election to the Legislative Assembly. Any person of the age of twenty-one years, who is a natural-born or naturalized British subject with continuous residence within Australia for six months, in Queensland for three months, and in an electoral district for one month prior to making a claim for enrolment, is qualified to enrol as an elector. The classes of persons not qualified to be elected are similar to those for other Australian Parliaments (*see* page 71).

Under the Electoral Districts Act of 1949 the number of members and the number of electorates were increased from 62 to 75, and the increase became effective from the beginning of the thirty-second Parliament, elected in 1950. The Act divided the State into four zones, and a commission of three appointed by the Governor-in-Council completely distributed the prescribed zones into the number of electoral districts, taking into account community or diversity of interest, means of communication, physical features, boundaries of Petty Sessions Districts and of areas of Local Authorities.

Since the establishment of responsible government in Queensland there have been 32 complete Parliaments, the last of which was dissolved on 6th February, 1953. Opinions differ regarding the opening date of the first Queensland Parliament. According to the

Votes and Proceedings of the Legislative Assembly, the House met for the first time on 22nd May, 1860, when the members were sworn and the Speaker elected. The Governor, however, was unable to be present on that date, but he duly attended on 29th May, 1860, and delivered the Opening Address. The thirty-third Parliament was opened on 4th August, 1953.

At the elections held in May, 1915, the principle of compulsory voting was introduced for the first time in Australia. 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. In 1942 the system of preferential voting was abolished and that of election of the candidate obtaining the highest number of votes in the electorate now operates.

6. **The Parliament of South Australia.**—In this State there is a Legislative Council composed of twenty 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, two of whom retire alternately, the term of office being six years. Thirty-nine districts return one member each to the House of Assembly; prior to 1938 there were 46 members representing nineteen districts. The duration of the House of Assembly is three years.

Any person who is at least thirty 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 in the Legislative Council. Qualifications for the Council franchise are that a person is at least twenty-one 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 twenty-one 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 page 71*).

Since the inauguration of responsible government in South Australia there have been 33 complete Parliaments, the first of which was opened on 22nd April, 1857. The thirty-third Parliament was opened on 28th June, 1950 and expired on 28th February, 1953. The thirty-fourth Parliament was opened on 25th June, 1953. The duration of the twenty-eighth Parliament was extended from three to five years by the provisions of the Constitution (Quinquennial Parliament) Act 1933, but this Act was repealed by the Constitution Act Amendment Act (No. 2) 1939, and the three-year term was reverted to.

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 observed 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 of whom retires biennially. 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 three years.

Since the establishment of responsible government in Western Australia there have been twenty complete Parliaments, the first of which was opened on 30th December, 1890. The twentieth Parliament was opened on 27th July, 1950 and expired on 15th January, 1953. The twenty-first Parliament was opened on 6th August, 1953. The preferential system of voting in use in Western Australia is described in Official Year Book No. 6, p. 1184.



Qualifications required for membership of the Legislative Council are the age of 30 years, residence in Western Australia for two years, being a natural-born British subject or naturalized for five years prior to election and resident in the State for that period, and freedom from legal incapacity. Qualifications required for Council franchise are the age of twenty-one years, residence in Western Australia for six months, being a natural-born British subject or naturalized for twelve months, freedom from legal incapacity, and certain property qualifications relating to freehold, leasehold, or householder occupancy. Qualifications required for membership of the Legislative Assembly are the age of twenty-one years, residence in Western Australia for twelve months, being a natural-born British subject or naturalized for five years and resident in the State for two years prior to election, and freedom from legal incapacity. Qualifications required for the franchise are the age of twenty-one years, residence in Western Australia for six months and in an electoral district continuously for three months, and being a natural-born or naturalized British subject. Persons may be disqualified as members or voters for reasons similar to those for other Australian Parliaments (*see* page 71).

Women's suffrage was granted by the Electoral Act of 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. Prior to the 1946 Act there were eighteen members elected from fifteen divisions, of which Hobart returned three members and Launceston two. There are five House of Assembly divisions, corresponding to the Commonwealth electoral divisions, each returning six members elected under a system of proportional representation which first came into force at the 1909 elections (*see* Official Year Book No. 6, p. 1185). By the Constitution Act 1936 the life of the Assembly was extended from three to five years except where, after a general election, all the Members elected are members of either of two opposing parties, and of these fifteen are members of one of those parties and fifteen are members of the other of those parties, when the Governor shall by Proclamation, invoke the Constitution Act (No. 2) 1954 which limits the life of the Assembly to three years.

Persons qualified for election to the Legislative Council must be 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 twenty-one 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 twenty-one 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 twenty-one 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* page 71).

The first Tasmanian Parliament opened on 2nd December, 1856, and closed on 8th May, 1861. There have been 30 complete Parliaments since the inauguration of responsible government. The thirty-first Parliament was opened on 13th April, 1955.

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 proportional representation by single transferable vote.

9. **Superannuation Funds of the Parliaments of the Commonwealth and of the Australian States.**—(i) *General.* In Official Year Book No. 38 there is a conspectus of Superannuation Funds of the Parliaments of the Commonwealth and of the five States (New South Wales, Victoria, Queensland, South Australia and Western Australia) in which such schemes operate (*see* pp. 91–9). This conspectus summarized the main features of each fund as at 30th June, 1949. Although the schemes are still essentially as described in the conspectus, there have subsequently been several amending Acts providing for extensions or increases in benefits, increased contributions, etc., in some of the schemes. The Commonwealth Retiring Allowances Act 1952 provided *inter alia* for additional benefit of £1,200 a year, subject to certain conditions, to a retired Prime Minister, and in case of his death, additional benefit of £750 a year to his widow.

(ii) *Finances.* For particulars of the financial operations of these schemes *see* Chapter XIX.—Private Finance of this volume.

### § 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 .. .. .	28th October, 1955

(a) A dissolution of both the Senate and the House of Representatives was granted by the Governor-General, acting on the advice of the Ministry, 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), K.T., G.C.M.G., G.C.V.O. From 1st January, 1901 to 9th January, 1903.  
 Rt. Hon. HALLAM, BARON TENNYSON, G.C.M.G. From 17th July, 1902 to 9th January, 1903 (Acting).  
 Rt. Hon. HALLAM, BARON TENNYSON, G.C.M.G. From 9th January, 1903 to 21st January, 1904.  
 Rt. Hon. HENRY STAFFORD, BARON NORTHCOTE, 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, G.C.B., G.C.M.G., G.C.V.O. From 9th September, 1908 to 31st July, 1911.  
 Rt. Hon. THOMAS, BARON DENMAN, 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 LEPE, G.C.M.G. From 6th October, 1920 to 8th October, 1925.
- Rt. Hon. JOHN LAWRENCE, BARON STONEHAVEN, G.C.M.G., D.S.O. From 8th October, 1925 to 22nd January, 1931.
- Rt. Hon. SIR ISAAC ALFRED ISAACS, G.C.B., G.C.M.G. From 22nd January, 1931 to 23rd January, 1936.
- General the Rt. Hon. ALEXANDER GORE ARKWRIGHT, BARON GOWRIE, V.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. From 11th March, 1947 to 8th May, 1953.
- Field-Marshal SIR WILLIAM JOSEPH SLIM, 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.

(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
Major-General Sir Winston Joseph Dugan, G.C.M.G., C.B., D.S.O.	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

(iii) *Commonwealth Ministries.* (a) *Names and Tenure of Office, 1901 to 1951.* 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.

\* Lieutenant-General Sir John Northcott was granted honorary rank of General whilst administering the Government of the Commonwealth.

† K.C.V.O., 1954.

COMMONWEALTH MINISTRIES—*continued.*

- (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.  
 (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.

(b) *Names of Successive Holders of Office, 9th February, 1923 to 31st December, 1955.* In Official Year Book No. 17, 1924, there appeared the names 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 have held office in each Ministry during that period.

This issue shows only particulars of the latest Menzies Ministry as constituted on 11th January, 1956. For any subsequent changes *see* Appendix to this volume.

## MENZIES MINISTRY—from 11th January, 1956.

(The State from which each Minister was elected to Parliament is added in parentheses.)

<i>Departments.</i>	<i>Ministers.</i>
Prime Minister .. ..	The Rt. Hon. ROBERT GORDON MENZIES, C.H., Q.C. (Vic.).
Treasurer .. ..	The Rt. Hon. SIR ARTHUR WILLIAM FADEN, K.C.M.G. (Qld.).
Vice-President of the Executive Council; Minister for Defence Production; and Minister for the Army .. ..	The Rt. Hon. SIR ERIC JOHN HARRISON, K.C.V.O. (N.S.W.).
Minister for Labour and National Service; and Minister for Immigration .. ..	The Rt. Hon. HAROLD EDWARD HOLT (Vic.).
Minister for Trade .. ..	The Rt. Hon. JOHN MCEWEN (Vic.).
Minister for External Affairs .. ..	The Rt. Hon. RICHARD GARDINER CASEY, C.H., D.S.O., M.C. (Vic.).
Minister for Defence .. ..	The Hon. SIR PHILIP ALBERT MARTIN MCBRIDE, K.C.M.G. (S.A.).
Minister for the Navy .. ..	Senator the Hon. NEIL O'SULLIVAN (Qld.).
Attorney-General .. ..	Senator the Hon. JOHN ARMSTRONG SPICER, Q.C. (Vic.).
Minister for National Development .. ..	Senator the Hon. WILLIAM HENRY SPOONER, M.M. (N.S.W.).
Minister for Air; and Minister for Civil Aviation .. ..	The Hon. ATHOL GORDON TOWNLEY (Tas.).
Minister for Territories .. ..	The Hon. PAUL MEERNAA CAEDWALLA HASLUCK (W.A.).
Minister for Repatriation .. ..	Senator the Hon. WALTER JACKSON COOPER, M.B.E. (Qld.).
Minister for Supply .. ..	The Hon. HOWARD BEALE, Q.C. (N.S.W.).
Minister for Primary Industry; and Minister for Social Services .. ..	The Hon. WILLIAM MCMAHON (N.S.W.).
Minister for Shipping and Transport .. ..	Senator the Hon. SHANE DUNNE PALTRIDGE (W.A.).
Minister for Health .. ..	The Hon. DONALD ALASTAIR CAMERON, O.B.E. (Qld.).
Postmaster-General .. ..	The Hon. CHARLES WILLIAM DAVIDSON, O.B.E. (Qld.).
Minister for Customs and Excise .. ..	The Hon. FREDERICK MEARES OSBORNE, D.S.C. (N.S.W.).
Minister for the Interior; and Minister for Works .. ..	The Hon. ALLEN FAIRHALL (N.S.W.).

(iv) *Commonwealth Ministers of State.* In Official Year Book No. 38 a statement was 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. 74-79). This was in continuation of a similar statement covering the period from the inauguration of Commonwealth Government to 1925 which appeared 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 December, 1955, are shown in the following statement. (Changes since December, 1955 are shown in the Appendix to this volume.)

## NEW SOUTH WALES.

*Governor*—LIEUT.-GENERAL SIR JOHN NORTHCOTT, K.C.M.G., K.C.V.O., C.B.

*Ministry (from 23rd February, 1953).*

*Premier and Colonial Treasurer—*  
THE HON. J. J. CARILL.

*Deputy Premier and Minister for Education—*  
THE HON. R. J. HEFFRON.

*Minister of Justice and Vice-President of the Executive Council—*  
THE HON. R. R. DOWNING, M.L.C.

*Chief Secretary, Minister for Immigration and Minister for Co-operative Societies—*  
THE HON. C. A. KELLY.

*Minister for Health—*  
THE HON. M. O'SULLIVAN.

*Minister for Agriculture and Minister for Food Production—*  
THE HON. E. H. GRAHAM.

*Attorney-General—*  
THE HON. W. F. SHEAHAN, Q.C.

*Secretary for Lands—*

THE HON. F. H. HAWKINS.

*Secretary for Public Works and Minister for Local Government—*  
THE HON. J. B. RENSHAW.

*Minister for Conservation—*  
THE HON. A. G. ENTICKNAP.

*Minister for Labour and Industry and Minister for Social Welfare—*  
THE HON. A. LANDA.

*Minister for Housing—*  
THE HON. J. F. McGRATH.

*Minister for Transport—*  
THE HON. E. WETHERELL.

*Secretary for Mines—*  
THE HON. W. M. GOLLAN.

*Minister without Portfolio—*  
THE HON. R. B. NOTT.

*Minister without Portfolio—*  
THE HON. J. J. MALONEY, M.L.C.

## VICTORIA.

*Governor*—GENERAL SIR REGINALD ALEXANDER DALLAS BROOKS, K.C.B., K.C.M.G., K.C.V.O., D.S.O., K.St.J.

*Ministry (from 7th June, 1955).*

*Premier, Treasurer and Minister for Conservation—*  
THE HON. H. E. BOLTE.

*Chief Secretary and Attorney-General—*  
THE HON. A. G. RYLAH.

*Minister of Transport and a Vice-President of the Board of Land and Works—*  
THE HON. A. G. WARNER, M.L.C.

*Minister of Agriculture and a Vice-President of the Board of Land and Works—*  
THE HON. G. L. CHANDLER, M.L.C.

*Minister of Education and Minister of Immigration—*  
COL. THE HON. W. W. LEGGATT.

*Commissioner of Public Works and a Vice-President of the Board of Land and Works—*  
THE HON. SIR THOMAS MALTBY.

*Minister of Health—*  
THE HON. E. P. CAMERON, M.L.C.

*Minister of Water Supply and Minister of Mines—*  
THE HON. W. J. MIBUS.

*Minister of Forests and Minister of State Development and Decentralization—*  
THE HON. R. K. WHATELY.

*Minister of Labour and Industry and Minister of Electrical Undertakings—*  
THE HON. J. S. BLOOMFIELD.

*Minister of Housing—*  
THE HON. H. R. PETTY.

*Commissioner of Crown Lands and Survey, Minister of Soldier Settlement and President of the Board of Land and Works—*  
THE HON. K. H. TURNBULL.

*Ministers without Portfolio—*  
THE HON. G. O. REID.  
THE HON. G. S. McARTHUR, M.L.C.

GOVERNORS AND STATE MINISTERS—*continued.*

## QUEENSLAND.

*Governor*—LIEUT.-GENERAL SIR JOHN DUDLEY LAVARACK, K.C.M.G., K.C.V.O., K.B.E., C.B., D.S.O.

*Ministry (from 16th March, 1953).*

<i>Premier and Chief Secretary and Vice-President of the Executive Council—</i> THE HON. V. C. GAIR.	<i>Secretary for Labour and Industry—</i> THE HON. A. JONES.
<i>Minister for Transport—</i> THE HON. J. E. DUGGAN.	<i>Secretary for Health and Home Affairs—</i> THE HON. W. M. MOORE.
<i>Secretary for Public Lands and Irrigation—</i> THE HON. T. A. FOLEY.	<i>Attorney-General—</i> THE HON. W. POWER.
<i>Treasurer—</i> THE HON. E. J. WALSH.	<i>Secretary for Public Works and Housing—</i> THE HON. P. J. R. HILTON.
<i>Secretary for Agriculture and Stock—</i> THE HON. H. H. COLLINS.	<i>Secretary for Public Instruction—</i> THE HON. C. H. DEVRIES.
	<i>Secretary for Mines and Immigration—</i> THE HON. C. G. MCCATHIE.

## SOUTH AUSTRALIA.

*Governor*—Air Vice-Marshal SIR ROBERT ALLINGHAM GEORGE, K.C.V.O., K.B.E., C.B., M.C.

*Ministry (from 15th May, 1944).*

<i>Premier, Treasurer and Minister of Immigration—</i> THE HON. T. PLAYFORD.	<i>Minister for Works and Minister of Marine—</i> THE HON. SIR MALCOLM MCINTOSH, K.B.E.
<i>Chief Secretary, Minister of Health and Minister of Mines—</i> THE HON. SIR LYELL McEWIN, K.B.E., M.L.C.	<i>Minister of Agriculture and Minister of Forests—</i> THE HON. A. W. CHRISTIAN.
<i>Attorney-General and Minister of Industry and Employment—</i> HON. C. D. ROWE, M.L.C.	<i>Minister of Education—</i> THE HON. B. PATTINSON.
<i>Minister of Lands, Minister of Repatriation and Minister of Irrigation—</i> THE HON. C. S. HINCKS.	<i>Minister of Local Government, Minister of Roads and Minister of Railways—</i> THE HON. N. L. JUDE, M.L.C.

## WESTERN AUSTRALIA.

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

*Ministry (from 23rd February, 1953.)*

<i>Premier, Treasurer and Minister for Child Welfare—</i> THE HON. A. R. G. HAWKE.	<i>Minister for Railways, Transport and Police—</i> THE HON. H. H. STYANTS.
<i>Minister for Works and Water Supplies and Deputy Premier—</i> THE HON. J. T. TONKIN.	<i>Minister for Health and Justice—</i> THE HON. E. NULSEN.
<i>Minister for Education, Native Welfare and Labour—</i> THE HON. W. HEGNEY.	<i>Minister for Housing and Forests—</i> THE HON. H. E. GRAHAM.
<i>Chief Secretary and Minister for Local Government and Town Planning—</i> THE HON. G. FRASER, M.L.C.	<i>Minister for Mines, Industrial Development and Fisheries—</i> THE HON. L. F. KELLY.
<i>Minister for Lands and Agriculture—</i> THE HON. E. K. HOAR.	<i>Minister for the North-West and Supply and Shipping—</i> THE HON. H. C. STRICKLAND, M.L.C.

GOVERNORS AND STATE MINISTERS—*continued.*

## TASMANIA.

*Governor*—THE RT. HON. SIR RONALD HIBBERT CROSS, BART., K.C.M.G., K.C.V.O.

*Ministry (from 25th February, 1948).*

*Premier, Minister for Education and Chief Secretary—*

*Minister administering Hydro-Electric Commission Act—* THE HON. A. J. WHITE.

*THE HON. R. COSGROVE.*

*Honorary Ministers—*

*Attorney-General—*

THE HON. R. F. FAGAN.

THE HON. C. H. HAND

(Minister for Forests and Minister controlling the Tourist and Immigration Department).

*Treasurer and Minister for Transport—*

THE HON. J. L. MADDEN.

*Minister for Agriculture—*

THE HON. J. J. DWYER, V.C.

THE HON. C. A. BRAMICH

(Minister for Housing).

*Minister for Lands and Works and Minister for Mines—*

THE HON. E. E. REECE.

THE HON. R. J. D. TURNBULL

(Minister for Health).

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 December, 1955.

Leader of the Opposition, Commonwealth and State Parliaments—

*Commonwealth*—The Rt. Hon. H. V. Evatt, Q.C.

*New South Wales*—P. H. Morton.

*Victoria*—The Hon. J. Cain.

*Queensland*—G. F. R. Nicklin.

*South Australia*—M. R. O'Halloran.

*Western Australia*—The Hon. Sir Ross McLarty, K.B.E., M.M.

*Tasmania*—R. C. Townley.

5. The Course of Legislation.—The actual legislation by the Commonwealth Parliament up to the end of 1953 is indicated in alphabetical order in Vol. L. "The Acts of the Parliament of the Commonwealth of Australia passed during the year 1953, in portion of the First Session and portion of the Second Session of the Twentieth Parliament of the Commonwealth, with Tables, Appendix and Index."

A "Chronological Table of Acts passed from 1901 to 1953, 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 1953 in relation to the several provisions of the Constitution", is furnished. Reference should be made to these for complete information.

6. Legislation during 1954.—The following paragraphs present a selection from the legislative enactments of the Commonwealth Parliament during the year 1954. The acts included have been selected as the more important new measures and amending measures enacted during the year. The selection is somewhat arbitrary, however, because of the task of determining, in view of the limitations on space that might reasonably be allotted, the relative importance of the acts passed. Certain principles regulating the choice of acts have nevertheless been generally observed. Ordinary appropriation and loan acts are excluded, as are also acts relating to less important changes in existing forms of taxation, in superannuation and pension schemes, and in workers' compensation. Acts providing for minor amendments to existing statutes and continuance acts are similarly excluded.

The total enactments of the Commonwealth Parliament for a number of years at fairly even intervals since 1901 show a general increase. About 17 acts were passed in 1901, 36 in 1914, 38 in 1927, 87 in 1939 and 83 in 1954.

In Official Year Book No. 40 (*see pp. 66–70*) and previous Year Books similar information was published for the principal legislative enactments of State Parliaments.

**Legislation Passed in 1954.**—*Aged Persons Homes Act 1954 (No. 81 of 1954)*. An Act to encourage and assist the provision of suitable homes for aged persons, and in particular homes at which aged persons may reside in conditions approaching as nearly as possible normal domestic life, and, in the case of married people, with proper regard to the companionship of husband and wife.

*Australian Antarctic Territory Act 1954 (No. 42 of 1954)*. Repeals the existing laws of the Australian Antarctic Territory, provides for the government of the Territory and specifies the laws which are to be in force in the Territory.

*Bankruptcy Act 1954 (No. 83 of 1954)*. Amends the Bankruptcy Act 1924–1950 by omitting the provisions which conferred on Registrars in Bankruptcy the power to perform duties and functions of a judicial nature.

*Broadcasting Act 1954 (No. 82 of 1954)*. Amends the Broadcasting Act 1942–1953 to make provision for the appointment of two part-time members to the Australian Broadcasting Control Board.

*Cocos (Keeling) Islands (Request and Consent) Act 1954 (No. 76 of 1954)*. Requests and consents to the enactment by the Parliament of the United Kingdom of an Act enabling the Queen to place the Cocos or Keeling Islands under the authority of the Commonwealth and making provision for matters incidental to the placing of those Islands under the authority of the Commonwealth.

*Commonwealth Aid Roads Act 1954 (No. 57 of 1954)*. Replaces the Commonwealth Aid Roads Act 1950 and grants and applies out of the Consolidated Revenue Fund sums for the purpose of financial assistance to the States to be applied in the construction, reconstruction, maintenance and repair of roads and for works connected with transport.

*Commonwealth Employees' Compensation Act 1954 (No. 15 of 1954)*. Amends the Commonwealth Employees' Compensation Act 1930–1951 by increasing rates and amounts of payments of compensation payable to Commonwealth employees and their dependants for injuries received by the employees in the course of or arising out of their employment.

*Dairy Produce Export Control Act 1954 (No. 17 of 1954)*. Amends the Dairy Produce Export Control Act 1924–1953 and establishes a new system of marketing of Australian dairy produce enabling the Australian Dairy Produce Board to control the export, and the sale and distribution after export, of dairy produce produced in Australia.

*Defence Forces Retirement Benefits Act 1954 (No. 20 of 1954)*. Amends the Defence Forces Retirement Benefits Act 1948–1953 by providing for increases in the number of units for which a member of the forces may contribute, the value of existing pension units and the value of pensions payable to ex-members of the forces and their dependants.

*Egg Export Control Act 1954 (No. 18 of 1954)*. Amends the Egg Export Control Act 1947–1953, reconstitutes the Australian Egg Board and provides for the control by the Australian Egg Board of the export, and the sale and distribution after export, of eggs produced in Australia.

*Flags Act 1953 (No. 1 of 1954)*. Declares and describes the Australian National Flag and the Australian Red Ensign.

*Flax Fibre Bounty Act 1954 (No. 68 of 1954)*. Repeals existing flax bounty legislation and provides for the payment of bounty to producers of flax fibre intended for sale and use in Australia and produced at a factory from flax plants grown in Australia.

*Gold-Mining Industry Assistance Act 1954 (No. 79 of 1954)*. Provides for the payment of a subsidy to producers of gold bullion which is produced in Australia or in the Territory of Papua and New Guinea and from which refined gold is or has been obtained.

*Hide and Leather Industries Act Suspension Act 1954 (No. 62 of 1954)*. Suspends the operation of the principal provisions of the Hide and Leather Industries Act 1948–1953.



*Leigh Creek North Coalfield to Maree (Conversion to Standard Gauge) Railway Act 1954 (No. 74 of 1954).* Approves an agreement made between the Commonwealth and the State of South Australia relating to the conversion to standard gauge (4' 8½") of the 3' 6" gauge railway between Leigh Creek North Coalfield and Maree and to provide for the conversion to be effected by the Commonwealth Railways Commissioner.

*Loan (International Bank for Reconstruction and Development) Act 1954 (No. 19 of 1954).* Approves the borrowing by the Treasurer on behalf of the Commonwealth from the International Bank for Reconstruction and Development in accordance with a Loan Agreement dated 2nd March, 1954, between the Commonwealth and the Bank, of moneys not exceeding fifty-four million dollars.

*Loan (Swiss France) Act 1954 (No. 7 of 1954).* Approves the raising of a loan in Swiss currency of a sum not exceeding sixty million francs in accordance with a Loan Agreement made between the Commonwealth and a group of Swiss Banks.

*Pay-roll Tax Assessment Act 1954 (No. 37 of 1954).* Amends the Pay-roll Tax Assessment Act 1941-1953. Increases the exemption from pay-roll tax from £80 to £120 per week and authorizes the exemption of wages paid by non-profit making private hospitals.

*Rayon Yarn Bounty Act 1954 (No. 67 of 1954).* Provides for the payment out of the Consolidated Revenue Fund of a bounty at the rate of sixpence per pound on the production in Australian factories of continuous filament acetate rayon yarn for sale and delivery in Australia.

*Repatriation Act 1954 (No. 31 of 1954).* Increases the rates of pension payable to former members of the Defence Forces, increases the limit of the value of property a pensioner may own and excludes income derived from property for the purposes of assessing the income of a service pensioner.

*River Murray Waters Act 1954 (No. 80 of 1954).* Ratifies the agreement made on 2nd November, 1954, between the Commonwealth and the States of New South Wales, Victoria and South Australia to increase the capacity of the Hume Dam to 2,500,000 acre feet and to approve the construction of certain regulators and effluents on the River Murray between Tocumwal and Echuca.

*Royal Commission Act 1954 (No. 2 of 1954).* Provides for the appointment of a Royal Commission to enquire into and report on the commission of acts of espionage in Australia, the commission in Australia of other acts prejudicial to the security or defence of Australia and related matters.

*Royal Commission on Espionage Act 1954 (No. 28 of 1954).* Confirms the Letters Patent issued to the three members of the Royal Commission on Espionage under the Royal Commission Act 1954 and the authority and powers of the Royal Commission and provides for the protection of its proceedings.

*Seamen's Compensation Act 1954 (No. 16 of 1954).* Amends the Seamen's Compensation Act 1911-1953 by increasing the rates and amounts of compensation payable to seamen who receive injuries in the course of or arising out of their employment.

*Seamen's War Pensions and Allowances Act 1954 (No. 32 of 1954).* Amends the Seamen's War Pensions and Allowances Act 1940-1953 by increasing the rates of pension payable to Australian mariners who are incapacitated by war injuries.

*Social Services Act 1954 (No. 30 of 1954).* Amends the Social Services Consolidation Act 1947-1953 to exclude income from property for the purposes of the means test, to increase the limits of property which a pensioner may own and increase the amount of income a pensioner may receive and be eligible for a pension.

*South-East Asia Collective Defence Treaty Act 1954 (No. 77 of 1954).* Approves the ratification by Australia of the South-East Asia Collective Defence Treaty.

*Stevedoring Industry Act 1954 (No. 75 of 1954).* Amends the Stevedoring Industry Act 1949 by varying the existing procedure by which men are recruited into the stevedoring industry and by authorizing the appointment of a committee of inquiry to examine certain specified matters relating to stevedoring operations.

*Stevedoring Industry Charge Act 1954 (No. 12 of 1954).* Amends the Stevedoring Industry Charge Act 1947-1952 and reduces the rate of the charge made under that Act from elevenpence to sixpence for every man-hour of employment.

*Sugar Agreement Act 1954 (No. 65 of 1954).* Approves an agreement dated 26th November, 1953, between the Commonwealth and the State of Queensland amending the agreement approved by the Sugar Agreement Act 1951. The amending agreement approves the increase in the retail price of sugar of 1d. per lb. on and from 13th October, 1952, and also approves the increase of 1½d. per lb. which operated from 24th March, 1952.

*Sulphuric Acid Bounty Act 1954 (No. 78 of 1954).* Repeals existing sulphur bounty legislation and provides for the payment out of the Consolidated Revenue Fund to the producers of sulphuric acid of a bounty in respect of sulphuric acid produced at a registered factory from materials of Australian origin and sold by the producer for delivery in Australia or used by the producer in the production in Australia of fertilizers.

*Superannuation Act 1954 (No. 11 of 1954).* Amends the Superannuation Act 1922-1952 by increasing pension rates and the amount of pension units, and by increasing the maximum number of units for which an officer may contribute.

*War Service Homes Act 1954 (No. 69 of 1954).* Amends the War Service Homes Act 1918-1951 by increasing to £2,750 the maximum loan for financing the purchase by ex-servicemen of existing homes and by extending the operation of the Act to the Territories of Papua and New Guinea and Norfolk Island.

*Wheat Industry Stabilization Act 1954 (No. 70 of 1954).* Repeals the Wheat Marketing Act 1948-1953. Provides for the continued orderly marketing of wheat and incorporates with it a scheme for the stabilization of the wheat industry.

*Wheat Export Charge Act 1954 (No. 71 of 1954).* Imposes a charge on wheat exported from the Commonwealth under the wheat industry stabilization scheme.

*Wheat Industry Stabilization (Refund of Charge) Act 1954 (No. 21 of 1954).* Provides for the payment, through the Australian Wheat Board, of certain moneys out of the Wheat Industry Stabilization Fund maintained under the Wheat Marketing Act to growers of wheat harvested in the year commencing 1st October, 1951.

*Wine Grapes Charges Act 1954 (No. 40 of 1954).* Amends the Wine Grapes Charges Act 1929-1941 by increasing the maximum rates of levy that may be collected on grapes delivered to wineries and distilleries.

#### § 4. Commonwealth Government Departments.

Official Year Book No. 37 contains, on pp. 76-86, a list of the Commonwealth Government Departments as at 31st March, 1947, showing details of the matters dealt with by each Department, and the Acts administered by the Minister of each Department, and Year Book No. 39 contains, on pp. 100-1, a description of major changes in Departmental structure from 1947 to 1951.

#### § 5. Cost of Parliamentary Government.

The tables in this section are intended to represent 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.

Comparison between individual items should be made with caution because of differences in accounting and presentation.

The following statement shows this expenditure for the Commonwealth and for each State, as well as the cost per head of population, for the year ended 30th June, 1954. In order to avoid incorrect conclusions as to the cost of the Governor-General's or Governor's establishment, it may be pointed out that a very large part of the expenditure (with the exception of the item "Governor's salary") under the head of Governor-General or Governor represents official services entirely outside the Governor's personal interest, and carried out at the request of the Government.

## COST OF PARLIAMENTARY GOVERNMENT, 1953-54.

(£.)

Particulars.	C'with.	N.S.W.	Vic.	Q'land.	S.A.	W.A.	Tas.	Total.
1. <i>Governor-General or Governor(a)</i> —								
Governor's salary .. ..	10,000	5,000	6,000	3,850	13,000	4,815	3,000	45,665
Other salaries .. ..	18,975	22,826	6,820	9,070	5,079	4,084	17,637	81,491
Other expenses, including maintenance of house and grounds .. ..	80,727	53,746	48,788	30,483	11,490	25,106	11,803	262,145
Total .. ..	109,702	81,572	1,608	43,403	29,569	34,007	32,440	392,301
2. <i>Ministry</i> —								
Salaries of Ministers .. ..	61,496	51,181	35,144	32,601	16,839	12,750	18,861	230,874
Travelling expenses .. ..	12,908	(b)	(b)	(b)	(b)	1,270	3,199	17,377
Other .. ..	278	2,646	(b)	(b)	(b)	6,212	18,478	27,614
Total .. ..	76,682	53,827	35,144	32,601	16,839	20,232	40,540	273,865
3. <i>Parliament</i> —								
<i>A. Upper House :</i>								
President and Chairman of Committees .. ..	2,900	3,600	3,875	..	2,100	3,161	(c) 1,000	10,636
Allowance to members .. ..	139,383	28,157	42,015	..	21,031	41,236	25,144	299,966
Railway passes(d) .. ..	10,080	15,424	(e)	..	1,480	(f) 7,944	1,260	36,197
Other travelling expenses .. ..	9	0,715	..	..	..	..	..	9,715
Postage for members .. ..	3,992	(e)	1,121	..	229	918	..	6,260
<i>B. Lower House :</i>								
Speaker and Chairman of Committees .. ..	2,900	5,175	(h) 3,875	4,208	3,775	3,308	650	23,981
Allowance to members .. ..	280,750	147,363	83,355	103,665	47,997	71,295	28,292	762,717
Railway passes(d) .. ..	21,695	29,090	(i) 9,000	12,189	2,903	12,319	2,136	89,332
Other travelling expenses .. ..	917,822	4,169	..	13,147	..	..	..	35,138
Postage for members .. ..	7,950	4,948	3,776	8,087	762	1,476	..	26,999
<i>C. Both Houses :</i>								
Government contribution to Members' Superannuation Fund .. ..	19,689	4,950	6,738	107,354	6,566	..	..	145,297
Printing—								
<i>Hansard</i> .. ..	36,380	12,889	12,936	11,763	8,115	14,275	..	96,358
Other .. ..	45,337	26,702	18,367	7,799	16,235	5,369	8,480	128,289
Reporting Staff—								
Salaries .. ..	34,775	18,395	16,107	8,757	17,891	15,526	..	111,451
Contingencies .. ..	906	340	422	..	..	299	..	3,030
Library—								
Salaries .. ..	29,282	10,647	6,428	4,270	3,047	100	..	53,774
Contingencies .. ..	13,215	3,236	2,000	2,217	1,105	375	..	22,146
Salaries of other officers .. ..	251,351	98,390	51,149	17,853	24,847	28,988	17,130	489,703
Other .. ..	117,797	3,526	8,000	24,773	12,765	623	1,121	168,695
<i>D. Miscellaneous :</i>								
Fuel, light, heat, power, and water .. ..	3,068	3,061	5,251	2,630	5,243	133	..	20,286
Posts, telegraphs, telephones .. ..	16,630	8,866	833	1,517	2,351	888	..	32,925
Furniture, stores and stationery .. ..	20,824	14,461	4,540	2,916	29,169	1,062	..	72,972
Other .. ..	112,790	25,375	7,469	8,396	5,698	(l) 8,339	7,664	175,731
Total .. ..	119,923	49,661	28,737	34,163	21,737	21,763	9,417	2,827,600
4. <i>Electoral</i> —								
Salaries .. ..	323,114	6,325	3,856	12,558	15,691	18,385	(m)	379,929
Cost of elections, contingencies, etc. .. ..	350,448	26,945	27,907	22,334	10,607	6,717	6,201	451,159
Total .. ..	673,562	33,270	31,763	34,892	26,298	25,102	6,201	831,088
5. <i>Royal Commissions, Select Committees, etc.</i> .. ..	13,580	7,172	3,309	..	28	1,451	1,627	27,257
GRAND TOTAL .. ..	207,275	65,505	419,261	452,527	200,110	208,126	175,525	4,354,111
Cost per head of population .. ..	4s. 8d.	3s. 10d.	3s. 6d.	7s. 0d.	7s. 4d.	9s. 6d.	11s. 4d.	9s. 0d.

(a) Includes Executive Council except in Tasmania, where duties are performed by Chief Secretary's Department. (b) Not available separately. (c) Includes Government Leader. (d) Actual amounts paid to the respective Railway Departments, except in New South Wales and Western Australia, where the amounts shown represent the value of railway passes as supplied by the Railway Departments.

(e) Included with Lower House. (f) Includes other fares. (g) While in Canberra. See also (j). (h) Includes Leader of the Opposition and Leader of the Third Party. (i) Both Houses.

(j) Conveyance of Members of Parliament and others not elsewhere included. (k) Includes maintenance of Ministers' and Members' rooms, £61,452 and additions, new works, buildings, etc., £23,055.

(l) Includes Ex-Ministers' and Ex-Members' Life Passes (Rail). (m) Duties performed by Chief Secretary's Department.

Figures for total cost and cost per head during each of the years 1947-48 to 1953-54 in comparison with 1938-39 are shown in the next table.

### COST OF PARLIAMENTARY GOVERNMENT.

Year.	C'wealth.	N.S.W.	Vic.	Q'land.	S.A.	W.A.	Tas.	Total.
TOTAL. (£.)								
1938-39	516,455	232,709	114,497	106,942	97,383	113,793	49,270	1,231,049
1947-48	905,476	335,006	193,003	158,258	123,412	173,073	71,956	1,959,244
1948-49	903,853	307,383	266,539	201,873	145,998	181,227	113,643	2,180,230
1949-50	1,418,532	447,955	361,387	248,174	174,240	213,611	112,615	2,956,514
1950-51	1,624,998	430,814	303,417	246,941	181,758	212,933	117,208	3,118,069
1951-52	1,853,709	508,024	407,278	298,401	215,673	294,441	156,982	3,734,508
1952-53	2,089,968	679,946	474,731	349,262	254,147	292,289	161,383	4,301,726
1953-54	2,072,757	645,505	419,201	452,527	290,110	298,426	175,525	4,354,111

### PER HEAD OF POPULATION.

(s. d.)

1938-39	1 6	1 8	1 3	2 1	3 3	4 10	4 2	3 7
1947-48	2 4	2 3	1 10	2 10	3 9	6 10	5 6	5 2
1948-49	2 4	2 5	2 6	3 6	4 +	6 11	8 6	5 7
1949-50	3 6	2 9	3 4	4 3	5 0	7 10	8 2	7 4
1950-51	3 11	2 8	2 8	4 2	5 0	7 6	8 3	7 6
1951-52	4 4	3 1	3 6	4 10	5 10	10 0	10 8	8 9
1952-53	4 9	4 0	4 0	5 7	6 8	9 7	10 8	9 10
1953-54	4 8	3 9	3 6	7 0	7 5	9 6	11 4	9 9

### § 6. Government Employees.

Information concerning the number of employees of Australian Government Authorities may be found in Chapter VI.—Labour, Wages and Prices.

## CHAPTER IV.

### LAND TENURE AND SETTLEMENT.

#### § 1. Introduction.

For descriptions of the land tenure systems of the several States and the internal Territories *see* Official Year Book No. 4 (pp. 235-333) and subsequent issues, in particular No. 22 (pp. 133-195). Conspectuses of land legislation in force and of the systems of land tenure in the several States have appeared in issues up to and including No. 38, but only a brief summary is given below.

The land legislation in force in the several States may be classified broadly under five major types of land enactments, i.e., 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 Department of 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. For details of the various particular forms of land tenure within these seven groups in each State *see* Official Year Book No. 38, pp. 114-116 and earlier issues. Descriptions of the systems operating in the two internal Territories may be found on pp. 329-30 and 338 of Official Year Book No. 39.

The following sections contain figures showing the extent of the different tenures in the several States and Territories, together with some general descriptive matter.

#### § 2. Free Grants and Reservations.

1. New South Wales.—(i) *Free Grants.* Crown lands may, by notification in the *Gazette*, be dedicated for public purposes and be granted therefor in fee simple. Such lands may be placed under the care and management of trustees, not less than three nor more than seven in number, appointed by the Minister.

(ii) *Reservations.* Temporary reservations of Crown lands from sale or lease may be made by the Minister.

(iii) *Areas Granted and Reserved.* During 1953-54, 15,585 acres were permanently reserved or dedicated for miscellaneous recreation reserves and similar purposes. The areas reserved at 30th June, 1954 were as follows:—For travelling stock, 5,319,275 acres; pending classification and survey, 4,341,818 acres; forest reserves, 2,251,473 acres; water and camping reserves, 876,906 acres; mining reserves, 1,117,695 acres; for recreation and parks, 452,358 acres; other reserves, 5,984,800 acres; total, 20,344,325 acres.

2. *Victoria.*—(i) *Free Grants.* The Governor may grant, convey or otherwise dispose of Crown lands for public purposes.

(ii) *Reservations.* The Governor may temporarily or permanently reserve from sale, lease or licence any Crown lands required for public purposes.

(iii) *Areas Granted and Reserved.* During 1954, 529 acres were granted without purchase. The areas both temporarily and permanently reserved at the end of 1954 were as follows:—For roads, 1,794,218 acres; water reserves, 318,239 acres; agricultural colleges, etc., 8,434 acres; forest and timber reserves, 5,368,492 acres; reserves in the mallee, 410,000 acres; other reserves, 551,591 acres; total, 8,450,974 acres.

(iv) *Revoking of Agricultural Reservations.* Under the Agricultural Colleges Act 1944, the land on which the agricultural colleges and experimental farms at Longerenong (2,386 acres) and Dookie (6,048 acres) are established is permanently reserved as sites for the purposes of State Agricultural Colleges and the remainder of the lands previously reserved has become unalienated for treatment as such under the Land Acts.

3. *Queensland.*—(i) *Free Grants.* The Governor may grant in trust any Crown land which is or may be required for public purposes. Under the Irrigation Acts, land to be used for the purpose of any undertaking under the Acts may be vested in fee simple in the Commissioner of Irrigation and Water Supply.

(ii) *Reservations.* The Governor may reserve from sale or lease, either temporarily or permanently, any Crown land which is or may be required for public purposes. Reserved lands may be placed under the control of trustees who are empowered to lease them for not more than 21 years with the approval of the Minister.

Under the State Forests and National Parks Acts, the Governor may permanently reserve any Crown lands and declare them to be a State Forest or a National Park.

(iii) *Areas Granted and Reserved.* During 1954 no areas were granted in fee simple without payment, 144,796 acres were set apart as reserves and reserves cancelled totalled 91,769 acres. The areas reserved, including roads, at the end of 1954 were as follows:—Timber reserves, 3,206,956 acres; for State forests and national parks, 5,475,687 acres; aboriginal reserves, 7,847,531 acres; for streets, surveyed roads and stock routes, 3,663,310 acres; general reserves, 5,679,171 acres; total, 25,872,655 acres.

4. *South Australia.*—(i) *Free Grants.* The Governor may dedicate Crown lands for any public purpose and grant the fee simple of such lands, with the exception of foreshores and land for quays, wharves or landing-places, which are inalienable in fee-simple from the Crown.

(ii) *Reservations.* The Governor may reserve Crown lands for the use and benefit of aboriginals, military defence, forest reserves, railway stations, park lands or any other purpose that he may think fit.

(iii) *Areas Granted and Reserved.* During 1953-54 free grants were issued for an area of 598 acres and reserves comprising 70,652 acres were proclaimed. At 30th June, 1954 the total area of surveyed roads, railways and other reserves was 21,335,543 acres, including 18,274,000 acres set apart as aboriginal reserves.

5. *Western Australia.*—(i) *Free Grants.* The Governor may dispose of, in such manner as for the public interest may seem best, any lands vested in the Crown for public purposes, and may grant the fee simple of any reserve to secure the use thereof for the purpose for which such reserve was made.

(ii) *Reservations.* The Governor may reserve any lands vested in the Crown for public purposes. Areas not immediately required may be leased by the Governor for periods up to 10 years. Reserves may be placed under the control of a local authority or trustees, with power to lease them for a period not exceeding 21 years, or may be leased for 99 years. Temporary reserves may also be proclaimed.

(iii) *Areas Granted or Reserved.* During the year ended 30th June, 1954, approximately 81,726 acres were reserved for various purposes. At 30th June, 1954 the total area reserved was 52,319,734 acres, comprising State forests, 3,462,239 acres, timber reserves, 1,831,503 acres and other reserves 47,025,992 acres.

6. *Tasmania.*—(i) *Free Grants.* No mention is made in the Crown Lands Act respecting free grants of land, and it is expressly stated that no lands may be disposed of as sites for religious purposes except by way of sale under the Act. Under the Returned Soldiers' Settlement Act 1916, returned soldiers who applied prior to 31st March, 1922 were eligible to receive free grants of Crown land not exceeding £100 each in value, but these grants were conditional on the land being adequately improved.

(ii) *Reservations.* The Governor in Council may except from sale or lease, and reserve to Her Majesty any Crown land for public purposes, and vest for such term as he thinks fit any land so reserved in any person or corporate body. Any breach or non-fulfilment of the conditions upon which such land is reserved renders it liable to forfeiture. A school allotment, not exceeding 5 acres in area, may also be reserved.

(iii) *Areas Granted or Reserved.* The total area reserved at 30th June, 1954 was 4,069,811 acres, excluding 21,444 acres of land occupied by Commonwealth and State Departments.

7. *Northern Territory.*—(i) *Reservations.* The Governor-General may resume for public purposes any Crown lands not subject to any right of, or contract for, purchase, and may reserve, for the purpose for which they are resumed, the whole or any portion of the lands so resumed.

(ii) *Areas Reserved.* The total area of reserves at 30th June, 1954 was 47,031,605 acres.

8. *Summary.*—The following table shows the total areas reserved in each State, and the grand totals, for the years 1950 to 1954 :—

## AREAS RESERVED.

('000 Acres.)

Year.	N.S.W. (a)	Victoria. (b)	Q'ld. (b)	S. Aust. (a)	W. Aust. (a)	Tas. (a)	Nor. Terr. (a)	Total.
1950 ..	18,585	8,224	25,045	21,240	51,809	4,016	45,455	174,374
1951 ..	19,654	8,429	25,243	21,249	51,998	4,043	45,648	176,264
1952 ..	20,158	8,429	25,538	21,252	52,014	4,068	46,159	177,618
1953 ..	20,319	8,429	25,797	21,265	52,238	4,069	47,001	179,118
1954 ..	20,344	8,451	25,873	21,336	52,613	4,070	47,032	179,719

(a) At 30th June.

(b) At 31st December.

### § 3. Unconditional Purchases of Freehold.

1. *New South Wales.*—(i) *Auction Purchases.* Crown lands, not exceeding in the aggregate 200,000 acres in any one year, may be sold by public auction in areas not exceeding half-an-acre for town lands, 20 acres for suburban lands, and 640 acres for country lands, at the minimum upset price of £8, £2 10s., and 15s. per acre respectively. At least 10 per cent. of the purchase-money must be paid at the time of sale, and the balance within three months, or the Minister may allow the payment of such balance to be deferred for a period not exceeding ten years, 4 per cent. interest being charged. Town blocks in irrigation areas may also be sold by auction.

(ii) *After-Auction Purchases.* In certain cases, land offered at auction and not sold may be purchased at the upset price. A deposit in accordance with the terms and conditions under which the land was previously offered must be lodged, and, if the application be approved by the Minister, the balance of purchase money is payable as required by the specified terms and conditions.

(iii) *Special Purchases.* Under certain circumstances, land may be sold in fee simple, the purchaser paying the cost of survey and of reports thereon, in addition to the purchase-money as determined by the local Land Board.

(iv) *Improvement Purchases.* The owner of improvements in land in authorized occupation by residence under any Mining or the Western Lands Act of land within a gold-field or mineral field may purchase such land without competition at a price determined by the local Land Board, but at not less than £8 per acre for town lands or £2 10s. per acre for other lands. The area must not exceed  $\frac{1}{4}$  acre within a town or village, or 2 acres elsewhere, and no person may purchase more than one such area within 3 miles of a similar prior purchase by him.

(v) *Road Purchases.* Land from roads that are closed may, with certain exceptions, be sold to the owners of adjoining lands at a value determined by the local Land Board.

(vi) *Areas Sold.* During the year ended 30th June, 1954 the total area sold was 869 acres of which 117 were sold by auction and 35 acres as after auction purchases, while 78 acres were sold as improvement purchases, 596 acres as road purchases and 43 acres as special purchases. The amount realized for the sale of the whole area was £39,799.

2. *Victoria.*—(i) *General.* Lands, not exceeding 100,000 acres in any one year, specially classed for sale by auction, may be sold by auction in fee simple at an upset price of not less than £1 per acre. The purchaser must pay the survey fee at the time of the sale, together with a deposit of  $12\frac{1}{2}$  per cent. of the whole price; the residue is payable in equal half-yearly instalments with interest. Any unsold land in a city, town or borough area, areas specially classed for sale, isolated pieces of land not exceeding 150 acres in area, and sites for churches or charitable purposes, if not more than 3 acres in extent, may be sold by auction on the same terms. Swamp or reclaimed lands may also be sold by auction, subject to the condition that the owner keeps open all drains, etc., thereon.

(ii) *Areas Sold at Auction and by Special Sales.* During 1954 a total of 1,289 acres was disposed of under this tenure, 1,059 acres being country lands and 230 acres town and suburban lands.

3. *Queensland.*—(i) *General.* From 1917 to 1929 the law precluded land being made available for any class of selection which gave the selector the right to acquire the freehold title. Amending legislation giving power to make land available under freehold tenures was passed in 1929, but this provision was repealed by the Act of 1932.

(ii) *Areas Sold, etc.* No unconditional selections were made freehold during 1954.



4. *South Australia.*—(i) *Sales by Auction.* The following lands may be sold by auction for cash :—(a) special blocks ; (b) Crown lands which have been offered for lease and not taken up within two years ; (c) town lands ; and (d) suburban lands which the Governor excepts from the operations of the Land Board. A purchaser must pay 20 per cent. of the purchase money in cash, and the balance within one month or within such extended time as the Commissioner of Crown Lands may allow. Town lands may be sold subject to the condition that they cannot be transferred or mortgaged within six years without the consent of the Commissioner. If the Commissioner of Crown Lands so determines, town lands may also be offered at auction on terms that the buyer may at his option purchase the lands for cash or on agreement for sale and purchase.

(ii) *Areas Sold, etc.* During the year ended 30th June, 1954 the area of town lands and special blocks sold by auction was 65 acres. In addition, 73,952 acres were sold at fixed prices, and purchases on credit of 55,591 acres were completed, making a total of 129,608 acres.

5. *Western Australia.*—(i) *Sales by Auction.* Town, suburban and village lands may be sold by auction after being surveyed into lots and notified in the *Gazette*. Ten per cent. of the purchase-money must be paid in cash together with the value of any improvements, and the balance in four equal quarterly instalments. Suburban land must be fenced within two years, and no Crown grant may be issued until the land is fenced.

(ii) *Areas Sold.* During the year ended 30th June, 1954, the area of town and suburban allotments sold by auction was 678 acres in 609 allotments.

6. *Tasmania.*—(i) *Sales by Auction.* Town lands may be sold by auction.

(ii) *After-auction Sales.* Town lands, not within 5 miles of any city, which, after having been offered at auction, have not been sold, may be sold at the upset price by private contract.

(iii) *Sales of Land in Mining Towns.* Any person being the holder of a residence licence or business licence who shall be in lawful occupation of any residence area or business area, and who shall be the owner of buildings and permanent improvements upon such land of a value equal to or greater than the upset price of such area, shall be entitled to purchase such area at the upset price at any time prior to the day on which such area is to be offered for sale as advertised. The upset price for such area shall not be less than £10, excluding the value of improvements, cost of survey, and of grant deed. The area which may be so purchased may, with the consent of the Commissioner, exceed one-quarter of an acre, but shall not in any case exceed one-half of an acre.

## § 4. Conditional Purchases of Freehold.

1. *General.*—The various methods of obtaining Crown lands by conditional purchase in the several States are given in some detail in preceding issues of the Official Year Book (*see* No. 22, pp. 141–9).

2. *New South Wales.*—At 30th June, 1954 the total number of incomplete conditional purchases in existence was 37,437 covering an area of 12,109,613 acres. During 1953–54 applications received for conditional purchases numbered 18, of which 16, with an area of 1,827 acres, were confirmed ; during the year deeds were issued for 322,241 acres, bringing the total acreage for which deeds had been issued to 34,218,179 at the end of the year. These figures exclude conversions from other tenures—657 comprising 184,723 acres.

3. *Victoria.*—Excluding selections in the Mallee country, the total area purchased conditionally in 1954 was 8,195 acres, all with residence. The number of selectors was 47. There were no selections in the Mallee in 1954.

4. Queensland.—The following selections were made freehold during 1954 :—Agricultural farms, 69,221 acres, prickly pear selections, 104,148 acres, and prickly pear development selections, 14,103 acres.

5. South Australia.—During 1953–54, 3,855 acres were allotted under agreements to purchase, comprising Eyre Peninsula railway lands, 55 acres, closer settlement lands, 2,611 acres, surplus lands, 675 acres, and other Crown lands, 514 acres.

6. Western Australia.—During the year ended 30th June, 1954 the number of holdings conditionally alienated was 840, the total area involved being 1,635,017 acres, comprising conditional purchases by deferred payments with residence, 1,634,317 acres and free homestead farms, 700 acres. Under the heading “deferred payments with residence” are included conditional purchases of grazing lands.

In addition, Crown grants were issued during 1953–54 for the following selections, the prescribed conditions having been complied with :—Free homestead farms, 14,845 acres and conditional purchases, 718,662 acres.

7. Tasmania.—During 1953–54 Crown grants were issued for 23,362 acres. The total area sold conditionally was 3,158 acres, comprising selections for purchase, 2,738 acres, and town and suburban allotments, 420 acres. The numbers of applications confirmed were 63 for country selections and 123 for town and suburban allotments.

### § 5. Leases and Licences under Land Acts.

1. General.—Information regarding the methods of obtaining leases and licences of Crown lands in the several States and Territories is given in earlier issues of the Official Year Book (*see* No. 22, pp. 149–63).

2. New South Wales.—The following table shows the areas held under various descriptions of leases and licences under the control of the Department of Lands, the Water Conservation and Irrigation Commission and the Western Lands Commission at 30th June, 1954.

#### AREAS OCCUPIED UNDER LEASE OR LICENCE AT 30th JUNE, 1954, NEW SOUTH WALES.(a)

(Acres.)

Particulars.	Area.	Particulars.	Area.
<i>Crown Lands or Closer Settlement Acts</i>		<i>Crown Lands or Closer Settlement Acts—continued.</i>	
Occupation licences .. .. .	602,620	Suburban holdings .. .. .	50,925
Conditional leases .. .. .	11,090,317	Group purchase leases .. .. .	222,567
Conditional purchase leases .. .. .	138,535	Irrigation areas .. .. .	193,537
Settlement leases .. .. .	2,610,656	Other leases .. .. .	19,208
Improvement leases .. .. .	37,772		
Annual leases .. .. .	402,792	<i>Western Lands Act.</i>	
Scrub and Snow leases .. .. .	659,745	Conditional leases .. .. .	93,823
Special leases .. .. .	1,344,085	Perpetual leases .. .. .	63,827,289
Permissive occupancies .. .. .	2,309,699	Other long-term leases .. .. .	10,736,590
Prickly pear leases .. .. .	144,932	Permissive occupancies .. .. .	367,676
Crown leases .. .. .	7,088,574	Leases being issued—occupation	
Homestead farms .. .. .	4,963,678	licences .. .. .	115,276
Homestead selections and grants .. .. .	1,683,690	Preferential occupation licences .. .. .	2,381,943
Closer settlement leases .. .. .	2,301,571		
Settlement purchase leases .. .. .	1,046,171	Total .. .. .	114,451,671

(a) Excludes mining leases and permits; forest leases and occupation permits; and leases outside irrigation areas, controlled by the Water Conservation and Irrigation Commission—164,689 acres.

3. **Victoria.**—The area of Crown lands occupied under leases and licences in the year 1954 was as follows :—Grazing licences—other than Mallee, 4,287,856 acres, Mallee, 1,965,122 acres ; auriferous lands licences, 15,806 acres ; perpetual leases—other than Mallee, 17,819 acres ; Mallee, 43,092 acres ; swamp lands leases, 4,020 acres ; agricultural college lands, 33,138 acres ; total, 6,366,853 acres.

4. **Queensland.**—The area occupied under lease or licence, excluding mining leases, at the end of 1954 was as follows :—Pastoral leases, 250,983,880 acres ; occupation licences, 10,519,328 acres ; grazing selections and settlement farm leases, 89,438,105 acres ; special purpose leases—Crown land, 485,202 acres ; reserves, 1,589,100 acres ; perpetual lease (including prickly pear) selections, 6,644,998 acres ; auction perpetual leases, 376,558 acres ; forest grazing leases (reserves), 1,620,320 acres ; total, 361,657,491 acres.

5. **South Australia.**—The total area, including repurchased lands held under lease or licence except mining lease and licence, at 30th June, 1954 was 137,866,596 acres of which pastoral leases, 115,387,376 acres, constituted the major proportion.

6. **Western Australia.**—At 30th June, 1954 the total area held under lease or licence issued by the Lands Department amounted to 202,753,778 acres, of which 198,870,488 acres were under pastoral lease.

7. **Tasmania.**—Crown lands leased at 30th June, 1954 for other than mining purposes amounted to 2,576,441 acres of which 2,071,075 acres were leased for pastoral purposes.

8. **Northern Territory.**—At 30th June, 1954 the total area under lease, etc., was 180,019,666 acres of which pastoral leases accounted for 139,962,335 acres and other leases, licences and mission stations, 40,057,331 acres.

9. **Australian Capital Territory.**—Under the terms of the City Area Leases Ordinance 1936–1951 each block is leased for a period of 99 years at a rental of five per cent. per annum of the unimproved capital value as assessed by the Commonwealth. The number of leases granted under this Ordinance to 30th June, 1954 (excluding leases surrendered and determined) was 2,166 representing an unimproved value of £725,420. Auction sales of city leaseholds are described in Official Year Book No. 22, p. 599. During the year ended 30th June, 1954, 365 leases were granted for residential purposes and 38 for business purposes.

Twelve leases under the Church Lands Leases Ordinance 1924–1932, which require the lessees to submit a definite building programme within a specified period, and one lease under the Church of England Lands Ordinance, 1926, have been granted for church purposes. A further 27 leases have been granted for either church or scholastic purposes under various other Ordinances.

The total area held under lease and licence for grazing, agricultural, dairying and other purposes (including the Jervis Bay area) amounted to 322,737 acres in 1953–54.

10. **Summary.**—The following table shows particulars of the land held in each State under lease or licence for purposes other than mining and forestry, the total leased or licensed land in the Territories, and the grand totals, for the years 1950 to 1954.

### AREAS OCCUPIED UNDER LEASE OR LICENCE OTHER THAN MINING AND FORESTRY.

('000 Acres.)

Year.	N.S.W. (a)	Vic. (b)	Q'land. (b)	S. Aust. (a)	W. Aust. (a)	Tas. (a)	N.T. (a) (c)	A.C.T. (b) (c) (d)	Total.
1950	114,125	8,708	358,940	137,419	222,489	2,799	162,561	331	1,007,372
1951	113,918	8,709	359,144	137,514	199,303	2,639	171,841	331	993,399
1952	114,051	7,218	360,684	138,177	200,839	2,704	178,135	321	1,002,129
1953	114,913	7,501	361,594	139,509	202,761	2,712	180,015	323	1,009,328
1954	114,452	6,367	361,657	137,867	202,754	2,576	180,020	323	1,006,016

(a) At 30th June. (b) At 31st December. (c) Leases and licences for all purposes.  
(d) Includes Jervis Bay area.

### § 6. Leases and Licences under Mining Acts.

1. **General.**—Information regarding the various forms of leases and licences under Mining Acts in the several States and the Northern Territory is given in preceding issues of the Official Year Book (*see* No. 22, pp. 170–7). The following paragraphs contain particulars of operations during the year 1953–54 or 1954 and of areas occupied at the end of the year, under the various forms of lease, licence, etc., issued for mining purposes.

2. **New South Wales.**—During the year ended 30th June, 1954, 48,224,445 acres were taken up under Mining Acts of which authorities to prospect comprised 48,206,907 acres and mining for minerals other than gold, 16,816 acres. At the end of the year total areas occupied were as follows:—Gold-mining, 3,879 acres; mining for other minerals, 288,190 acres; authorities to prospect, 13,772,698 acres; other purposes, 13,497 acres; total, 14,078,264 acres.

3. **Victoria.**—During 1954 there were 142 leases and licences granted under Mining Acts, including 42 for gold-mining. Areas occupied at the end of 1954 were as follows: Gold-mining, 16,425 acres; petroleum prospecting, 2,881,280 acres; coal, 13,101 acres; uranium and radio active minerals, 61,772 acres; other purposes, 5,743 acres; total, 2,978,321 acres.

4. **Queensland.**—During 1954 there were 3,937 miners' rights and two business licences issued. Areas taken up during 1954 totalled 725,655 acres, of which petroleum prospecting comprised 703,040 acres and mining for minerals other than gold, 18,969 acres. Total areas occupied at the end of 1954 were as follows:—Gold-mining, 2,929 acres; mining for other minerals, 112,257 acres; miners' homesteads, 426,197 acres; petroleum prospecting, 1,211,840 acres; coal prospecting, 4,086 acres; total, 1,757,309 acres. The area of land held under lease only was 541,383 acres.

5. **South Australia.**—Areas taken up under Mining Acts during 1953–54 totalled 156,650,315 acres, including claims, 2,952 acres, gold leases, 87 acres, mineral and miscellaneous leases, 679,276 acres and oil licences, 155,968,000 acres. Total areas occupied at 30th June, 1954 were as follows:—Gold-mining, 590 acres; other mineral and miscellaneous leases, 763,335 acres; claims, 11,696 acres; oil licences, 155,968,000 acres; other purposes, 29 acres; total, 156,743,650 acres.

6. **Western Australia.**—Areas taken up during 1954 under Mining Acts totalled 33,910 acres, including gold-mining, 13,279 acres, and mining for other minerals, 19,328 acres. Total areas occupied at the end of 1954 were as follows:—Gold-mining, 33,089 acres; mining for other minerals, 92,098 acres; other purposes, 41,191 acres; total, 166,378 acres.

7. **Tasmania.**—During 1954 the number of leases issued covered 2,920 acres, including coal-mining, 255 acres and tin-mining, 486 acres. Total areas occupied at the end of 1954 were as follows :—Gold-mining, 654 acres; coal-mining, 6,514 acres; mining for other minerals, 18,358 acres; other purposes, 4,533 acres; total, 30,059 acres.

8. **Northern Territory.**—At 30th June, 1954 the number and acreage of holdings under mining leases and tenements were as follows :—Gold-mining leases, 269 (4,571 acres); other mineral leases, 283 (6,711 acres); gold and other mineral claims, 5 (851 acres); gold and other mineral prospecting areas, 33 (606 acres); business and residence areas, 186 (50 acres); other purposes, 92 (1,947 acres); total, 868 (14,736 acres). In addition 32 authorities to prospect aggregating 2,352 square miles were held at 30th June, 1954.

9. **Summary.**—The following table shows the total areas occupied under Mining Acts in each State at the end of the years 1950 to 1954 :—

### AREAS OCCUPIED UNDER MINING ACTS.

(Acres.)

Year.	N.S.W. (a)	Victoria.	Q'land. (b)	S. Aust. (a) (b)	W. Aust. (c)	Tasmania. (b)	Total. (d)
1950 ..	455,778	1,095,637	1,267,012	36,672,566	145,847	30,462	39,667,302
1951 ..	364,901	1,096,495	1,285,740	36,669,380	137,523	32,744	39,586,873
1952 ..	477,873	840,989	840,344	740,094	151,376	32,150	3,082,826
1953 ..	2,372,244	957,797	1,040,816	44,742	148,932	31,398	4,595,929
1954 ..	14,078,264	2,978,321	1,757,309	156,743,650	166,378	30,059	175,753,981

(a) Year ended 30th June.

(b) Excludes lands held under miners' rights and dredging claims.

(c) Excludes holdings under miners' rights and mineral oil licences.

(d) Excludes Northern Territory.

## § 7. Closer Settlement.

1. **General.**—Particulars regarding the methods of acquisition and disposal of land for closer settlement 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. In more recent years, however, the amalgamation, in some States, of closer settlement records with those of other authorities has made it impossible to obtain up-to-date figures for those States and for Australia as a whole, although aggregations of State totals as at the latest dates available have been published as rough approximations intended to convey some idea of the extent of the schemes throughout Australia. Particulars in this issue are restricted to a summary only of the position in each State at the latest date available.

2. **New South Wales.**—From the inception of closer settlement in 1905 to 30th June, 1954, 2,385 estates totalling 6,511,156 acres had been purchased by the Crown at a cost of £28,123,107 for purposes of closer settlement of civilians and returned service personnel.

Closer settlement is now being effected entirely under perpetual leasehold tenure (closer settlement leases).

3. **Victoria.**—The Closer Settlement Commission was abolished as from 31st December, 1938, and land settlement was placed under the control of the Department of Lands and Survey. On 31st March, 1939 all Closer Settlement and Discharged Soldiers' accounts were amalgamated, the settlers' accounts adjusted and the new debt

made payable over an extended period. Particulars of the operations under the provisions of the Closer Settlement Acts to 30th June, 1938, the latest date for which separate details are available, show that 1,402,568 acres were acquired at a cost, including the value of Crown lands taken over, of £10,244,023, and that 8,722 allotments were made, farm allotments comprising 1,162,676 acres, workmen's homes allotments, 790 acres, agricultural labourers' allotments, 3,484 acres and town allotments, 86,599 acres. The figures for area and cost of land acquired for closer settlement purposes include, in addition to 133,128 acres purchased for £1,246,722 and transferred subsequently to discharged soldiers, a total area of 512,757 acres costing £4,125,822 which was purchased originally for the settlement of discharged soldiers.

4. **Queensland.**—Separate records relating to the closer settlement of re-purchased land are no longer kept by the Land Administration Board, and the operations under this heading are now included with "Leases and Licences under Land Acts." The total area acquired to 31st December, 1934 was 970,778 acres, costing £2,292,881. At the same date the area allotted amounted to 915,690 acres distributed over 3,048 selections, consisting of 2,155 agricultural farms, 257 unconditional selections, 544 perpetual lease selections, 9 prickly pear selections, 6 perpetual lease prickly pear selections and 77 settlement farm leases. An area of 13,038 acres was sold by auction.

5. **South Australia.**—The total area re-purchased for closer settlement at 30th June, 1954 was 948,885 acres, at a cost of £2,865,200. Included in these figures are 51,872 acres purchased for £185,285, and afterwards set apart for returned service personnel, 3,214 acres reserved for forest and waterworks purposes the purchase-money being £16,185, and also 26,563 acres of swamp and other lands, which were purchased for £111,850, in connexion with reclamation of swamp-lands on the River Murray. Of the total area, 822,704 acres have been allotted to 2,791 persons.

6. **Western Australia.**—The total area acquired for closer settlement up to 30th June, 1954 was 2,480,671 acres, costing £4,246,516. Particulars of operations under the Act for the year ended 30th June, 1954 are as follows:—Area selected during the year, 30,582 acres; number of farms, etc., allotted to date, 2,373; total area occupied to date, 1,928,007 acres; area set aside for roads, reserves, etc., 20,972 acres; balance available for selection, 531,692 acres.

7. **Tasmania.**—Up to 30th June, 1954, 38 areas had been opened up for closer settlement, the total purchase-money paid by the Government being £371,486 and the total area acquired amounting to 104,294 acres, including 12,149 acres of Crown lands. The number of farms occupied at 30th June, 1954 was 107.

## § 8. Settlement of Returned Service Personnel : 1939-45 War.

1. **War Service Land Settlement Scheme.**—(i) *General.* The War Service Land Settlement Agreements Act 1945 authorized the execution by or on behalf of the Commonwealth of agreements between the Commonwealth and the States for proposals to settle discharged members of the Forces and other eligible persons on land in the States. The proposals were subsequently ratified by the States, and the agreements were signed in November, 1945.

For more detailed information about the agreements and the methods of operation and administration of the scheme *see* Official Year Book No. 37, pp. 113-8. Issue No. 39 contains a brief general description of the scheme.

(ii) *Summary of Operations to 30th June, 1954.* The tables hereunder show the operations of the War Service Land Settlement Scheme in each State up to 30th June, 1954.

**WAR SERVICE LAND SETTLEMENT (1939-45 WAR): SUMMARY TO  
30th JUNE, 1954.**

State.	Land Submitted by States.		Land Approved by Commonwealth.				Land under Con- sidera- tion.	Land Rejected or With- drawn.
			As Suitable for Soldier Settlement.		Acquired by States.			
		Sub- missions.	Area.	Pro- perties.	Area.	Pro- perties.	Area.	Area.
	No.	Acres.	No.	Acres.	No.	Acres.	Acres.	Acres.
New South Wales— Subdivision ..	129	1,619,272	111	1,363,709	67	865,295	2,300	252,763
Irrigation Lands ..	(a) 31	266,329	(a) 30	233,604	(a) 15	169,344	..	32,725
Western Division ..	160	6,114,006	131	5,399,020	147	4,566,754	..	715,586
Promotion Scheme ..	577	7,393,570	446	1,186,460	443	1,177,043	256	176,854
Irrigation Lands ..	78	118,335	73	107,142	62	102,122	..	11,193
Total, New South Wales ..	975	9,482,112	811	8,289,935	734	6,881,158	3,056	1,189,121
Victoria— Irrigation Lands ..	19	177,044	19	133,500	17	94,951	..	43,544
Other ..	216	871,471	214	853,963	(a) 190	778,901	..	17,508
Total, Victoria ..	235	1,048,515	233	987,463	207	873,852	..	61,052
Queensland ..	182	531,259	145	455,476	(d) 134	398,524	..	75,783
South Australia ..	(b) 198	717,487	(c) 166	583,968	(b) 160	569,840	..	133,519
Western Australia ..	755	2,791,071	543	2,065,507	520	2,063,502	95,000	630,564
Tasmania ..	124	568,576	96	444,078	89	415,407	..	124,498
Total, Australia ..	2,469	15,139,020	1,996	12,826,427	1,844	11,202,283	98,056	2,214,537

State.	Land Approved by Commonwealth for Subdivision.			Single Properties Approved by Commonwealth.		Land Allotted to Settlers.	
	Pro- perties.	Area.	Hold- ings.	Pro- perties.	Area.	Area.	Hold- ings.
	No.	Acres.	No.	No.	Acres.	Acres.	No.
New South Wales—							
Subdivision ..	104	1,161,788	959	..	..	914,591	771
Irrigation Lands ..	(a) 26	204,786	336	1	770	161,131	288
Western Division ..	..	..	..	195	5,399,020	4,132,941	143
Promotion Scheme ..	187	912,720	646	254	260,111	1,021,049	792
Irrigation Lands ..	33	90,307	162	38	15,755	83,384	150
<b>Total, New South Wales ..</b>	<b>350</b>	<b>2,369,601</b>	<b>2,103</b>	<b>488</b>	<b>5,675,656</b>	<b>6,313,096</b>	<b>2,144</b>
Victoria—							
Irrigation Lands ..	14	104,002	1,112	5	2,336	77,522	743
Other ..	195	786,866	1,393	11	7,522	768,019	1,395
<b>Total, Victoria ..</b>	<b>209</b>	<b>890,868</b>	<b>2,505</b>	<b>16</b>	<b>9,858</b>	<b>845,541</b>	<b>2,138</b>
Queensland ..	88	399,241	604	43	15,143	218,696	471
South Australia ..	(d) 79	271,183	657	49	32,952	277,097	603
Western Australia ..	146	1,208,813	513	369	478,173	1,082,903	695
Tasmania ..	24	111,040	216	49	26,858	112,213	184
<b>Total, Australia ..</b>	<b>896</b>	<b>5,250,746</b>	<b>6,598</b>	<b>1,014</b>	<b>6,238,640</b>	<b>8,849,546</b>	<b>6,235</b>

(a) Excludes portions of four properties. (b) Excludes portions of three properties. (c) Excludes portions of two properties. (d) Excludes portion of one property.

(iii) *Expenditure.* The following table shows a dissection of the Commonwealth expenditure on War Service Land Settlement to 30th June, 1954 :—

**WAR SERVICE LAND SETTLEMENT (1939-45 WAR) : COMMONWEALTH  
EXPENDITURE TO 30th JUNE, 1954.  
(£.)**

Advances to States.	N.S.W.	Vic.	Qld.	S. Aust.	W. Aust.	Tas.	Total.
For acquisition of land ..	..	..	..	2,042,789	3,304,532	1,075,107	6,422,428
For development and improvement of land ..	..	..	..	7,806,390	8,237,072	3,976,856	20,020,318
Commonwealth contributions to excess cost over valuation ..	..	1,014,144	91,799	..	146,758	84,000	1,337,001
To provide credit facilities to settlers ..	..	..	..	1,703,431	5,875,769	920,906	8,500,106
For remission of settlers' rent and interest ..	228,804	74,492	26,754	68,555	182,590	47,457	628,652
For payment of living allowances to settlers ..	630,973	571,000	161,000	131,866	263,002	52,589	1,810,430
For operation and maintenance of irrigation projects ..	..	..	..	211,653	10,197	1,359	223,209
Loss on advances ..	..	14	1,132	1,727	11,093	..	13,986
Cost of administration of credit facilities ..	..	..	..	37,925	202,097	11,333	251,357
<b>Total ..</b>	<b>859,777</b>	<b>1,659,950</b>	<b>280,685</b>	<b>12,004,336</b>	<b>18,233,110</b>	<b>6,169,609</b>	<b>39,207,467</b>

Repayments of expenditure to 30th June, 1954 on the acquisition, development and improvement of land amounted to £2,945,064, and on the provision of credit facilities to settlers to £3,264,590, so that the total expenditure was reduced by £6,209,554 to £32,997,813. In addition, miscellaneous receipts in South Australia, Western Australia and Tasmania to 30th June, 1954 amounted to £1,091,526.

2. Loans and Allowances (Agricultural Occupations) Scheme.—(i) *General.* Full details of the measures taken to provide for the re-establishment of ex-servicemen in rural occupations are contained in Official Year Book No. 37, pp. 117-8.

(ii) *Loans (Agricultural Occupations).* The following table shows particulars for each State and certain Territories to 30th June, 1954 :—

**LOANS (AGRICULTURAL OCCUPATIONS) : SUMMARY TO 30th JUNE, 1954.**

State.	Applications.			Loans Approved.		Advanced by Commonwealth Treasury Lending Authorities.	Advanced by Lending Authorities to Applicants. (b)
	Re-ceived.	Ap-proved.	Refused, With-drawn or Not Yet Approved.	Gross Amount.	Net Approvals.(a)		
					Applica-tions.	Amount.	
				£		£	£
New South Wales	7,757	6,294	1,463	4,951,002	5,479	4,252,324	2,660,000
Victoria ..	4,817	3,350	1,467	2,175,881	3,090	2,016,830	1,940,000
Queensland ..	2,368	1,968	400	1,003,766	1,605	889,134	610,000
South Australia ..	2,110	1,173	846	990,349	1,210	948,735	465,000
Western Australia	3,190	2,284	906	2,149,297	2,148	2,017,954	1,110,000
Tasmania ..	1,124	758	366	473,265	728	454,404	300,400
Northern Territory ..	34	15	19	11,945	12	10,148	10,748
New Guinea ..	16	7	9	7,272	6	6,772	5,496
Norfolk Island ..	3	1	2	1,000	..	..	..
Total ..	21,428	15,950	5,478	11,853,771	14,278	10,596,301	6,201,644

(a) After deduction of loans declined after approval—£1,257,470.

(b) Includes advances from principal repaid by borrowers.

These 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.



(iii) *Allowances (Agricultural Occupations)*. The following table shows details for each State and New Guinea to 30th June, 1954:—

**ALLOWANCES (AGRICULTURAL OCCUPATIONS) : SUMMARY TO 30th JUNE, 1954.**

State.	Applications.			Advanced by Commonwealth Treasury to Bank.	Allowances Paid.
	Received.	Approved.	Rejected, Withdrawn or Not Yet Approved.		
				£	£
New South Wales ..	4,071	3,620	451	580,000	578,739
Victoria ..	3,066	2,311	755	296,500	296,013
Queensland ..	3,041	2,512	529	476,744	476,744
South Australia(a) ..	2,258	1,749	509	323,500	322,232
Western Australia ..	3,014	2,607	407	479,500	479,125
Tasmania ..	633	522	111	115,000	114,476
New Guinea ..	4	3	1	846	846
Total ..	16,087	13,324	2,763	2,272,090	2,268,175

(a) Includes allowances paid to four ex-servicemen in the Northern Territory.

These 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.

3. **War Service Land Settlement Division—Total Expenditure.**—The following table shows details, by States and Territories, of the total expenditure of the War Service Land Settlement Division for the years 1945-46 to 1953-54, and the aggregate to 30th June, 1954. The aggregate, £50,055,299, includes—War Service land settlement, £39,207,467; agricultural loans, £6,201,644; agricultural allowances, £2,272,090; administrative expenses, £960,026; rural training, £1,414,072.

**COMMONWEALTH WAR SERVICE LAND SETTLEMENT DIVISION : EXPENDITURE.**

(£.)

Period.	N.S.W.	Vic.	Qld.	S. Aust.	W. Aust.	Tas.	N. Ter.	N. G'nea.	Total.
1945-46	120,500	153,804	60,000	263,299	610,042	331,769	..	..	1,539,414
1946-47	1,289,426	536,230	261,780	1,285,495	1,337,384	140,506	2,000	..	4,852,821
1947-48	1,191,480	618,637	324,000	887,712	1,769,701	294,936	..	..	5,086,466
1948-49	870,890	388,323	269,158	1,169,650	2,156,805	366,240	..	..	5,221,066
1949-50	629,094	302,966	301,453	1,691,974	2,617,441	641,083	4,453	4,158	6,192,622
1950-51	287,491	145,773	109,691	1,743,583	2,844,116	830,343	4,295	389	5,965,681
1951-52	197,084	177,450	81,396	2,075,184	2,880,716	1,510,783	..	..	6,922,613
1952-53	172,001	403,500	63,708	2,257,968	3,746,099	1,412,346	..	1,500	8,057,122
1953-54	114,528	858,382	63,464	1,662,482	2,327,206	1,191,137	..	295	6,217,494
Total to 30th June, 1954 ..	4,872,494	3,585,065	1,534,650	13,037,347	20,289,510	6,719,143	10,748	6,342	50,055,299

After deducting repayments of expenditure to 30th June, 1954 which amounted to £6,209,654 and miscellaneous receipts (£4,892,420), the net expenditure to 30th June, 1954 was £38,953,225.

## § 9. 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 appears in preceding issues of the Official Year Book (*see* No. 22, pp. 179-186).

The summaries of loans and advances in the following paragraphs are compiled from returns supplied by the various State government lending agencies in the several States. They include the transactions in lands acquired under closer and soldier settlement schemes, but exclude the balances owing on former Crown lands sold on the conditional purchase, etc., system.

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 reappraisements 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* § 8 above).

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 § 8 above.

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, 1954 :—

#### ADVANCES TO SETTLERS, ETC. : NEW SOUTH WALES.

Advances, etc.	Advances, etc., made during 1953-54.	Total Advances, etc., at 30th June, 1954.	Balance outstanding at 30th June, 1954.	
			Number of Accounts.	Amount.
	£	£		£
Department of Lands—				
Closer Land Settlement .. .. .	..	15,124,116	5,295 (a)	2,365,677
Soldier Settlers, 1914-18 War .. .. .	..	(b) 3,196,005	368	119,307
1939-45 War .. .. .	612,834	8,466,076	4,895	3,161,457
Soldier Land Settlement—Acquisition, development and improvement of land, War Service Land Settlement Agreement Act .. .. .	2,873,508	19,213,626	1,937 (c)	15,846,512
Wire Netting .. .. .	..	1,494,653	170	17,757
Prickly Pear .. .. .	25,632	245,831	191	8,616
Rural Bank—				
General Bank Department—				
Commonwealth Re-establishment and Employment Act 1945 .. .. .	15,300	4,219,888	2,320	1,353,972
Other .. .. .	3,109,445	66,605,762	9,098	17,375,012
Government Agency Department—				
Rural Industries .. .. .	261,032	8,264,200	711	394,324
Unemployment Relief and Dairy Promotion .. .. .	505,301	2,339,782	1,307	745,785
Rural Reconstruction (d) .. .. .	381,190	12,594,769	812	1,678,038
Shallow Boring .. .. .	75,217	1,231,660	170	142,404
Farm Water Supplies .. .. .	86,783	246,994	265	190,376
Soil Conservation .. .. .	888	3,504	6	2,081
Rivers and Foreshores Improvement .. .. .	1,615	3,932	30	924
Irrigation Areas .. .. .	337,288	(e)	358	2,505,375
Government Guarantee Agency .. .. .	56	225,475	5	2,625
Closer Settlement Agency .. .. .	..	167,014	46	55,649
<b>Total .. .. .</b>	<b>8,286,089</b>	<b>143,644,187</b>	<b>28,002</b>	<b>45,865,791</b>

(a) Excludes an amount of £4,674,295 capitalized to 30th June, 1954, on conversion into leasehold under the Closer Settlement Amendment (Conversion) Act 1943. (b) In addition, the sum of £1,926,952 has been expended to 30th June, 1954 on developmental works on soldiers' settlements.

(c) Includes capital value of Closer Settlement Leases, £11,842,608, and unpaid balance and interest on structural improvements, £4,003,904. (d) Includes Debt Adjustment, Drought Relief, and Marginal Wheat Areas Scheme Advances (Commonwealth and State Moneys), amount outstanding £1,149,132.

(e) Not available. (f) Incomplete.

3. Victoria.—The following table shows particulars respecting advances, etc., under State Authorities to 30th June, 1954 :—

ADVANCES TO SETTLERS, ETC. : VICTORIA.

Advances, etc.	Advances, etc., made during 1953-54.	Total Advances, etc., at 30th June, 1954.	Balance outstanding at 30th June, 1954.	
			Number of Persons.	Amount.
State Savings Bank, Cr��dit Foncier—	£	£		£
Civilians .. .. .	19,016	11,698,241	800	638,202
Discharged Soldiers .. .. .	267	848,567	42	24,121
Treasurer—				
Cool Stores, Canneries, etc. .. .. .	89,636	1,480,449	(a) 3	484,282
Department of Lands and Survey—				
Closer Settlement Settlers and Soldier Settlers .. .. .	..	b 16,904,855	2,629	2,822,573
Cultivators of Land .. .. .	..	2,463,558	185	33,070
Wire Netting .. .. .	2,199	728,398	138	39,550
Soldier Settlement Commission—				
Purchase of land .. .. .	1,367,235	12,029,606	..	(c) 16,317,732
Development and Improvement of Holdings .. .. .	2,566,939	14,693,538	..	
Advances for sales of land not required for Soldier Settlement(d) .. .. .	65,361	819,437	4	36,965
Advances for Settlers' Lease Liability, Soldier Settlement Act 1946 .. .. .	865,348	6,839,562	965	6,257,545
Advances to assist in acquiring and developing single unit farms .. .. .	512,888	9,086,890	1,857	6,701,506
Advances for improvements, stock, implements, etc. .. .. .	524,521	1,788,709	1,060	878,178
Advances for shares in Co-operative Companies, Soldier Settlement Act 1946 .. .. .	8,000	84,914	199	72,190
Commonwealth Re-establishment and Employment Act 1945 Advances .. .. .	1,067	1,796,239	978	485,135
Total .. .. .	6,022,477	111,262,966	8,860	34,793,049

(a) Companies and Co-operative Societies. (b) Represents consolidated debts of settlers (Section 30, Act 4091). (c) After allowing an amount of £2,147,131 representing excess acquisition, development and improvement cost which has been written off. (d) Sale price of land not required for settlement; balance outstanding represents instalments not yet due where terms were given to purchasers.

4. Queensland.—The following table shows particulars of advances to 30th June, 1954. The figures exclude transactions in land :—

ADVANCES TO SETTLERS : QUEENSLAND.

Advances, etc.	Advances, etc., made during 1953-54.	Total Advances, etc., at 30th June, 1954.	Balance outstanding at 30th June, 1954.	
			Number of Accounts.	Amount.
Co-ordination of Rural Advances and Agricultural Bank Acts .. .. .	£	£		£
Discharged Soldiers' Settlement (a) .. .. .	1,291,259	18,720,695	3,083	5,254,178
Water Facilities .. .. .	..	2,467,913	262	49,206
Wire Netting, etc. .. .. .	..	58,079	4	264
Seed Wheat and Barley .. .. .	..	1,019,403	391	35,022
Drought Relief .. .. .	98	(b) 143,229	(c)	12,205
War Service Land Settlement .. .. .	..	961,047	153	120,271
Income (Unemployment Relief and State Development) Tax Acts (d) .. .. .	613,624	2,844,480	451	2,340,712
Irrigation .. .. .	..	1,183,861	373	58,526
Farmers' Assistance (Debt Adjustment Acts) .. .. .	..	54,914	6	1,407
Commonwealth Re-establishment and Employment Act 1945 .. .. .	300	1,033,573	82	158,239
.. .. .	..	867,314	504	197,840
Total .. .. .	1,905,281	29,354,508	(e) 5,309	8,227,960

(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 under State Authorities to 30th June, 1954 :—

**ADVANCES TO SETTLERS : SOUTH AUSTRALIA.**

Advances, etc.,	Advances, etc., made during 1953-54.	Total Advances, etc., at 30th June, 1954.	Balance outstanding at 30th June, 1954.	
			Number of Persons.	Amount.
	£	£		£
Department of Lands—				
Advances to Soldier Settlers .. .. .	20,457	5,031,373	311	1,294,271
Advances to Blockholders .. .. .	..	41,451	..	..
Advances for Sheds and Tanks .. .. .	..	75,693	..	4,976
Advances Under Closer Settlement Acts .. .. .	4,430	2,719,863	..	878,138
Advances under Agricultural Graduates Settlement Act .. .. .	..	62,258	..	25,236
Settlement of Returned Service Personnel, 1939-45 War .. .. .	418,544	1,719,958	747	1,470,710
Primary Producers Assistance Department—				
Advances in Drought-affected Areas .. .. .	..	2,146,768	15	7,522
Advances under Farmers Relief Acts .. .. .	..	4,435,509	24	4,953
Irrigation Branch—				
Advances to Civilians .. .. .	49	291,443	134	19,642
Advances to Soldier Settlers .. .. .	735	1,048,174	265	379,188
State Bank of South Australia (Crédit Foncier Department)—				
Advances to Primary Producers .. .. .	249,144	9,229,299	1,180	2,216,819
Advances to Settlers for Improvements .. .. .	24,910	973,717	111	46,635
Advances under Vermin and Fencing Acts .. .. .	1,171	1,383,760	122	49,379
Advances under Loans to Producers Act .. .. .	307,264	1,071,241	74	734,175
Commonwealth Re-establishment and Employment Act 1945 .. .. .	10,281	801,255	457	319,267
<b>Total .. .. .</b>	<b>1,036,985</b>	<b>31,031,762</b>	<b>3,440</b>	<b>7,450,911</b>

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 similarly 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 § 8 above.

7. **Tasmania.**—The following table shows particulars of advances under State Authorities to 30th June, 1954. Although not regarded as outstanding advances by the Department of Agriculture the figures in connexion with closer and soldier land settlement have been included in the table for comparative purposes; the areas so purchased have been leased on 99-year terms having an option of purchase which the leaseholder may exercise at any time.

## ADVANCES TO SETTLERS, ETC. : TASMANIA.

Advances, etc.	Advances, etc. made during 1953-54.	Total Advances, etc. at 30th June, 1954.	Balance outstanding at 30th June, 1954.	
			Number of Persons.	Amount.
	£	£		£
<b>Agricultural Bank—</b>				
State Advances Act and Rural Credits ..	167,330	2,957,816	448 (a)	562,752
Orchardists' Relief, 1926 ..	..	46,832	1	53
Unemployed (Assistance to Primary Producers) Relief Act 1930-1931 ..	..	114,302	..	..
Bush Fire Relief 1934 ..	..	14,555	3	56
Crop Losses, 1934-35 ..	..	10,086	2	213
Assistance to Fruitgrowers Act 1941 ..	..	34,556	3	333
Flood Sufferers' Relief Act 1942 ..	..	3,764	..	..
Flood Sufferers' Relief Act 1944 ..	..	1,902	5	441
Commonwealth Re-establishment and Employ- ment Act 1945 ..	8,168	403,995	325	217,953
Primary Producers' Relief Act 1947 ..	..	297,846	302	64,589
<b>Minister for Agriculture—</b>				
<b>Soldier Settlers—</b>				
Advances ..	10,465	970,038	27 (b)	29,917
Purchase of Estates, etc.(c) ..	3,244	2,555,654 (d)	513	406,436
<b>Closer Settlers—</b>				
Advances ..	1,122	98,533	5	6,459
Purchase of Estates, etc.(c) ..	4,338	525,268 (d)	119	100,944
<b>Total ..</b>	<b>194,667</b>	<b>8,035,147</b>	<b>1,753</b>	<b>1,390,146</b>

(a) Excludes £5,600 forfeited properties. (b) Excludes £204,813 advances capitalized, £79,166 advances written off to bad debts, and £40,789 written off to revaluation. (c) Not regarded as outstanding advances by the Department. (d) Number of leaseholders, including those to whom advances have been made.

8. Northern Territory.—During the financial year 1953-54 two advances totalling £1,234 were made. The total amount advanced to 30th June, 1954 was approximately £34,220. At 30th June, 1954 the balance outstanding from 13 settlers, including interest, was £4,806.

9. Summary of Advances.—The following table is a summary for each State (except Western Australia) and the Northern Territory to the 30th June, 1954. The particulars, so far as they are available, represent the total sums advanced to settlers, including amounts spent by the various Governments in the purchase and improvement of estates disposed of by closer and soldier land settlement, while the amounts outstanding reveal the present indebtedness of settlers to the Governments, including arrears of principal and interest but excluding amounts written off debts and adjustments for land revaluations. Particulars of Loans (Agricultural Occupations) under the Commonwealth Re-establishment and Employment Act 1945 and of certain advances for wire-netting and other purposes provided from Commonwealth funds are included.

## ADVANCES TO SETTLERS, ETC. : SUMMARY.

State.	Advances, etc., made during 1953-54.	Total Advances, etc., at 30th June, 1954.	Balance outstanding at 30th June, 1954.	
			Number of Persons.	Amount.
	£	£		£
New South Wales(a) ..	8,286,089	6143,644,187	28,002	45,865,791
Victoria(a) ..	6,022,477	111,262,966	8,860	34,793,049
Queensland ..	1,905,281	29,354,508 (b)(c)	5,309	8,227,960
South Australia ..	1,036,985	31,031,762	3,440	7,450,911
Tasmania ..	194,667	8,035,147	1,753	1,390,146
Northern Territory ..	1,234	34,220	13	4,806

(a) Includes expenditure on acquisition, development and improvement of land for war service land settlement (see p. 102). (b) Incomplete. (c) Number of accounts.

## § 11. Alienation and Occupation of Crown Lands.

1. **General.**—The figures shown in the previous parts of this chapter show separately the areas alienated, in process of alienation, or occupied under various tenures. The following tables set out the position in regard to the tenure of land in each State, in the Northern Territory, and in the Australian Capital Territory during the latest year for which information is available—1954 in all cases. A summary for each State and Territory and for Australia as a whole is also supplied. Particulars for each year from 1943 to 1953 appear in *Primary Industries Bulletin* No. 47, Part I.—Rural Industries, page 10. The area occupied includes roads, permanent reserves, forests, etc. In some cases, lands which are permanently reserved from alienation are occupied under leases and 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 26.2 per cent. had been alienated at 30th June, 1954; 7.1 per cent. was in process of alienation; 58.9 per cent. was held under leases and licences; and the remaining 7.8 per cent. was unoccupied, or held by the Crown.

The following table shows particulars as at 30th June, 1954 :—

### ALIENATION AND OCCUPATION OF CROWN LANDS : NEW SOUTH WALES. 30th JUNE, 1954.

(Acres.)

Particulars.	Area.	Particulars.	Area.
<b>1. Alienated.</b>		<b>3. Held under Leases and Licences.</b>	
Granted and sold prior to 1862 ..	7,146,579	Homestead selections and grants ..	1,683,690
Sold by auction and other sales, 1862 to date ..	15,560,557	Alienable leases, long-term and perpetual ..	26,082,601
Conditionally sold, 1862 to date ..	34,218,179	Long-term leases with limited right of alienation ..	1,652,004
Granted under Volunteer Land Regulations, 1867 to date ..	172,198	Other long-term leases ..	78,134,188
Granted for public and religious purposes ..	265,929	Short-term leases and temporary tenures ..	7,042,250
	57,363,442	Forest leases ..	1,916,477
		Mining and auriferous leases ..	189,765
Less lands resumed or reverted to Crown ..	5,524,455	<b>Total</b> ..	<b>116,700,975</b>
<b>Total</b> ..	<b>51,838,987</b>		
<b>2. In Process of Alienation.</b>		<b>4. Unoccupied—Particulars of Lord Howe Island not being available, the area, 3,220 acres, is included under unoccupied (Approximate) ..</b>	
Conditional purchases ..	12,109,613		15,512,113
Closer settlement purchases ..	1,494,169		
Soldiers' group purchases ..	158,168		
Other forms of sale ..	223,095		
<b>Total</b> ..	<b>13,985,045</b>	<b>5. Total Area of State</b> ..	<b>198,037,120</b>

3. **Victoria.**—The total area of Victoria is 56,245,760 acres, of which 54.7 per cent. had been alienated up to the end of 1954; 4.0 per cent. was in process of alienation under deferred payments and closer settlement schemes; 16.6 per cent. was occupied under leases and licences; and 24.7 per cent. was unoccupied or held by the Crown.

The following table shows the distribution :—

**ALIENATION AND OCCUPATION OF CROWN LANDS : VICTORIA,  
31st DECEMBER, 1954.**

(Acres.)

Particulars.	Area.	Particulars.	Area.
1. <i>Alienated</i> .. .. .	30,715,199	3. <i>Leases and Licences held—</i>	
		Under Lands Department—	
		Perpetual Leases .. .. .	60,911
		Agricultural College Leases ..	33,138
		Other Leases and Licences ..	19,906
		Temporary (Yearly) Grazing	
		Licences .. .. .	6,252,078
2. <i>In Process of Alienation—</i>		Under Mines Department(a) ..	2,970,322
Exclusive of Mallee and Closer		Total .. .. .	9,337,255
Settlement Lands .. .. .	330,249		
Mallee Lands (exclusive of Closer			
Settlement Lands) .. .. .	1,423,125		
Closer Settlement Lands .. ..	522,224		
Village Settlement .. .. .	33	4. <i>Occupied by the Crown or Un-</i>	
Total .. .. .	2,275,631	occupied .. .. .	13,917,675
		5. <i>Total Area of State</i> .. .. .	56,245,760

(a) Includes State Coal Mine area, 7,275 acres and State Electricity Commission area, 2,800 acres.

4. *Queensland.*—The total area of this State is 429,120,000 acres, of which, on 31st December, 1954, 5.8 per cent. was alienated ; 0.7 per cent. was in process of alienation ; and 84.4 per cent. was occupied under leases and licences. The remainder, 9.1 per cent., was either unoccupied or held as reserves or for roads.

The distribution is shown in the following table :—

**ALIENATION AND OCCUPATION OF CROWN LANDS : QUEENSLAND,  
31st DECEMBER, 1954.**

(Acres.)

Particulars.	Area.	Particulars.	Area.
1. <i>Alienated—</i>		3. <i>Occupied under Leases and</i>	
By Purchase .. .. .	24,515,360	Licences—	
Without Payment .. .. .	92,126	Pastoral Leases .. .. .	250,983,880
		Occupation Licences .. .. .	10,519,328
		Grazing Selections and Settle-	
		ment Farm Leases .. .. .	82,438,105
		Leases—Special Purposes .. ..	2,074,302
		Mining Leases .. .. .	553,802
		Perpetual Leases Selections	
		and Perpetual Lease Prickly	
		Pear Selections .. .. .	6,644,998
		Auction Perpetual Leases, etc.	
		Forest Grazing Leases (of	
		Reserves) .. .. .	1,620,320
		Total .. .. .	362,211,293
Total .. .. .	24,607,486	4. <i>Reserves (net, not leased), Surveyed</i>	
		Roads and Surveyed Stock	
		Routes .. .. .	22,663,237
		5. <i>Unoccupied</i> .. .. .	16,496,315
2. <i>In Process of Alienation</i> ..	3,141,669	6. <i>Total Area of State</i> .. .. .	429,120,000

(a) Special leases of Crown Land, 485,202 acres ; special leases of reserves, 1,589,100 acres.

5. **South Australia.**—The area of South Australia is 243,244,800 acres and at 30th June, 1954, 5.9 per cent. was alienated ; 0.1 per cent. in process of alienation ; 56.4 per cent. occupied under leases and licences ; and 37.6 per cent. occupied by the Crown or unoccupied.

The following table shows the distribution :—

**ALIENATION AND OCCUPATION OF CROWN LANDS : SOUTH AUSTRALIA,  
30th JUNE, 1954.  
(Acres.)**

Particulars.	Area.	Particulars.	Area.
1. <i>Alienated</i> —		3. <i>Held under Lease and Licences (a)</i> —	
Sold .. .. .	14,236,166	Perpetual Leases, including Irrigation Leases .. ..	18,686,678
Granted for Public Purposes .. ..	139,306	Pastoral Leases .. ..	115,387,376
		Other Leases and Licences .. ..	3,018,212
			137,092,266
Total .. ..	14,375,472	4. <i>Area Unoccupied (b)</i> .. ..	91,431,672
2. <i>In Process of Alienation</i> .. ..	345,390	5. <i>Total Area of State</i> .. ..	243,244,800

(a) Mining leases and licences have also been issued over an area comprising 156,743,650 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 31st December, 1954, 3.9 per cent. was alienated ; 2.1 per cent. was in process of alienation ; and 33.4 per cent. was occupied under leases and licences issued either by the Lands, Mines or Forests Departments. The balance of 60.6 per cent. was unoccupied.

The following table shows the distribution :—

**ALIENATION AND OCCUPATION OF CROWN LANDS : WESTERN AUSTRALIA,  
31st DECEMBER, 1954.  
(Acres.)**

Particulars.	Area.	Particulars.	Area.
1. <i>Alienated</i> .. .. .	24,484,828	3. <i>Leases and Licences in Force</i> —	
		(i) Issued by Lands Department—	
		Pastoral Leases .. ..	200,803,157
		Special Leases .. ..	2,319,600
		Leases of Reserves .. ..	596,193
		Residential Lots .. ..	4,718
		Perpetual Leases .. ..	1,045,890
2. <i>In Process of Alienation</i> —		(ii) Issued by Mines Department—	
Midland Railway Concessions .. ..	54,800	Gold-mining Leases .. ..	24,677
Free Homestead Farms .. ..	386,138	Mineral Leases .. ..	44,239
Conditional Purchase .. ..	10,102,400	Miners' Homestead Leases .. ..	33,264
Selections under the Agricultural Lands Purchase Act .. ..	328,355	(iii) Issued by Forests Department—	
Grazing Land .. ..	2,153,665	Timber Permits .. ..	3,761,194
Town and Suburban Lots .. ..	3,218		
Crown Grants of Reserves .. ..	77,831	Total .. ..	208,632,932
		4. <i>Area Unoccupied</i> .. ..	378,364,633
Total .. ..	13,106,407	5. <i>Total Area of State</i> .. ..	624,588,800



7. *Tasmania*.—The total area of Tasmania is 16,778,000 acres, of which, at 30th June, 1954, 37.3 per cent. had been alienated; 2.0 per cent. was in process of alienation; 15.6 per cent. was occupied under leases and licences for either pastoral, agricultural, timber, or mining purposes, or for closer or soldier settlement; while the remainder (45.1 per cent.) was unoccupied or reserved by the Crown.

The following table shows the distribution :—

**ALIENATION AND OCCUPATION OF CROWN LANDS : TASMANIA.**  
30th JUNE, 1954.

(Acres.)

Particulars.	Area.	Particulars.	Area.
1. <i>Alienated</i> .. .. .	6,262,004	3. <i>Leases and Licences</i> —continued.	
		(i) Issued by Lands Department—continued.	
		Soldier Settlement ..	80,562
2. <i>In Process of Alienation</i> ..	338,289	Short-term Leases ..	8,462
		(ii) Issued by Mines Department ..	(a) 30,059
		Total .. .. .	2,606,500
3. <i>Leases and Licences</i> —		4. <i>Area Occupied by the Crown or Un-</i>	
(i) Issued by Lands Department—		occupied(b) .. .. .	7,571,207
Islands .. .. .	161,061		
Ordinary Leased Land ..	1,910,014	5. <i>Total Area of State</i> .. .. .	16,778,000
Land Leased for Timber ..	393,019		
Closer Settlement .. ..	23,323		

(a) At 30th December, 1954. (b) Includes reservations for roads and various other public purposes 4,069,811 acres, lands occupied by Commonwealth or State Departments, 21,444 acres and land acquired for Soldier and Closer Settlement but not leased, 2,256 acres.

8. *Northern Territory*.—The area of the Northern Territory is 335,116,800 acres, of which, at 30th June, 1954, only 0.1 per cent. was alienated; 53.7 per cent. was held under leases and licences; 14.1 per cent. was reserved for aboriginal, defence and public requirements; and the remaining 32.1 per cent. was unoccupied and unreserved.

The following shows the mode of occupancy of areas at 30th June, 1954 :—Alienated, 455,322 acres; leased—pastoral leases, 139,962,335 acres, other leases, licences and mission stations, 40,057,331 acres, total leased, 180,019,666 acres; reserved for aboriginal, defence and public requirements, 47,031,605 acres; unoccupied and unreserved, 107,610,207 acres; total, 335,116,800 acres.

9. *Australian Capital Territory*.—Alienated land of the Territory (excluding the Jervis Bay area) at the end of 1954 comprised 11.0 per cent. of the total area; land in process of alienation 6.9 per cent.; land held under lease and licence 53.7 per cent.; land otherwise occupied, including city tenures, 6.9 per cent.; and unoccupied 21.5 per cent.

The following are the particulars of land areas in the Australian Capital Territory at the end of 1954 :—Alienated, 65,857 acres; in process of alienation, 41,224 acres; leased—grazing, agricultural, etc., leases, 302,775 acres, grazing licences, 7,174 acres, total leased, 309,949 acres; otherwise occupied, 36,324 acres; unoccupied, 129,446 acres; total, 582,800 acres. Including the Jervis Bay area of 18,000 acres—12,788 acres leased and 5,212 acres otherwise occupied—the grand total for the whole Territory is 600,800 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 1954 :—

### ALIENATION AND OCCUPATION OF CROWN LANDS, 1954.

State or Territory.	Private Lands.				Crown Lands.				Total Area.
	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.	'000 Acres.
N.S.W.(a) ..	51,839	26.2	13,985	7.1	116,791	58.9	15,512	7.8	198,037
Victoria(b) ..	30,715	54.7	2,276	4.0	9,337	15.6	13,918	24.7	56,246
Queensland(b) ..	24,607	5.8	3,142	0.7	362,211	84.4	39,160	9.1	429,120
S. Aust.(a) ..	14,376	5.9	345	0.1	137,092	56.4	91,432	37.6	243,245
W. Aust.(b) ..	24,485	3.9	13,106	2.1	208,633	33.4	378,364	60.6	624,588
Tasmania(a) ..	6,262	37.3	338	2.0	2,607	15.6	7,571	45.1	16,778
Nor. Terr.(a) ..	455	0.1	..	..	180,020	52.7	154,642	46.2	335,117
A.C.T.(b)(c) ..	66	11.0	41	6.9	323	53.7	171	28.4	601
Australia ..	152,805	8.0	33,233	1.8	1,016,924	53.4	700,770	36.8	1,903,732

(a) At 30th June.

(b) At 31st December.

(c) Includes Jervis Bay area.

A diagram showing in graphical form the areas alienated from the State, those in process of alienation under the various systems of deferred payments, the areas held under leases or licences and the areas left unoccupied was included in earlier issues of the Year Book (see No. 41, page 73), but is not reprinted in this issue.

## 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 Ashmore and Cartier Islands ; and the Territory of Cocos (Keeling) Islands. 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 pp. 5, 25 and 26 of this issue.

#### THE NORTHERN TERRITORY.

##### § 1. Area and Population.

1. Area.—Upon the extension of New South Wales westward to the 129th meridian in 1825, the Northern Territory was incorporated in that colony, but in 1863 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, 1954 the population of the Northern Territory, excluding full-blood aborigines, was 10,281 males, 6,171 females, 16,452 persons. Corresponding figures at the Census of 30th June, 1947 were 7,378, 3,490 and 10,868 respectively.

The white population of the Northern Territory increased slowly from 670 at the Census of 1881 to 3,767 in 1918. By 1921 it had decreased to 2,459, and in 1933 was only 3,306. At the Census of 1947 it had risen to 9,116 an increase of 176 per cent. on the 1933 figures, while at the Census of 1954 it had risen a further ~~82~~ <sup>54</sup> per cent. to 16,452. 14028

Although at one time there were more than 4,000 Chinese in the Territory, at 30th June, 1954 there were only 325, these comprising the major proportion of the 486 full-blood non-European population, excluding Australian aborigines, at that date.

The half-caste population recorded at the Census of 1954 numbered 1,955, of whom 1,659 were half-caste Australian aborigines. Corresponding figures at the 1947 Census were, respectively, 1,364 and 1,247.

(ii) *The Aborigines.* The total number of full-blood aborigines at 30th June, 1954 was estimated at 13,744, of whom approximately 3,224 were in regular employment. By virtue of Aborigines Ordinance No. 2 of 1953, part aborigines are not now deemed to be aborigines within the meaning of the Aborigines Ordinance 1918–1953, except children who were committed to institutions prior to the commencement of the ordinance and those who have requested the Director of Native Affairs to declare them aborigines within the meaning of the ordinance. Aboriginal reserves comprise an area of approximately 66,000 square miles. (See also Chapter XVI.—Population.)

## § 2. Legislation and Administration.

On 1st January, 1911 the Territory was transferred by South Australia to the Commonwealth. The terms are outlined in Official Year Book No. 15, p. 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 1947 enabled the Northern Territory to set up a Legislative Council. The Council consists of the Administrator and seven official and six elected members who make 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 land or pecuniary transactions or to 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 was granted the right to take part in debates but not to vote, except on a motion for the disallowance of any ordinance of the Northern Territory or on any amendment of any such motion. However, the power of the Federal Parliament to disallow ordinances was repealed by the Northern Territory (Administration) Act 1947 referred to above.

## § 3. Physiography.

1. **Tropical Nature of the Country.**—The Territory is within the torrid zone, with the exception of a strip  $2\frac{1}{2}$  degrees wide which lies south of the Tropic of Capricorn.

2. **Contour and Physical Characteristics.**—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 ironstone 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 principal features of the coast-line are enumerated in Official Year Book No. 1, p. 66; the rivers in No. 2, p. 76; the mountains in No. 3, p. 67; the lakes in No. 4, pp. 77, 78; the islands in No. 5, pp. 71, 72; and the mineral springs in No. 6, p. 65.

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 of 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, p. 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 white ant is a pest which is capable of serious destruction to wooden buildings unless special preventative measures are taken. Another species of the ant builds anthills which sometimes attain great dimensions. Mosquitoes and sandflies are very troublesome, particularly in the wet season. Native fauna are in some cases protected. Buffalo formerly existed in large herds, but their number has been greatly reduced by indiscriminate shooting. Buffalo shooting is 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. The timber trees are not of great commercial value, but in the coastal regions tropical vegetation grows luxuriantly to the water's edge. In the north, cypress pine, bloodwood and paperbark timbers are now cut and milled for local building purposes. These three timbers are 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*.

More detailed particulars regarding fauna and flora are given in Official Year Book No. 6, pp. 1116-7.

## § 5. Production.

1. Agriculture.—Up to the present, agriculture has made little progress in the Territory, although rice, peanuts, tobacco, cotton, grain sorghum, bananas, pineapples, citrus, mangoes, papaws, vegetables and fodder plants can be grown in certain areas. At the present time commercial agricultural production is practically confined to peanuts, which have been an export crop for some time (160 tons were exported in 1952), and vegetables and small-scale fruit production (mainly pineapple and citrus) for local consumption.

In 1946, the Commonwealth Scientific and Industrial Research Organization commenced scientific surveys to define more accurately the potentialities of the Territory. Surveys have been completed of the Katherine-Darwin, Barkly Tableland and Victoria River Regions. The survey of the Katherine-Darwin Region indicated that further investigations into agricultural possibilities were warranted. As a result, the Commonwealth Scientific and Industrial Research Organization 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 regard to the production of peanuts, grain sorghum, cotton 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. The trials are in progress but it is too early to make any pronouncements.

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. In order to carry out these tests economically and quickly the Administration organized in 1952 a mobile unit for the purpose of conducting trials on five soil types with pineapples, peanuts, sorghum, tobacco and other crops.

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 near the Stuart Highway. A quarantine station was also established at an area known as the Chinese Rice Gardens (near Darwin) to enable oversea varieties of rice to be introduced under controlled conditions. At the rice research stations it has been demonstrated that rice can be grown but that the main problems of rice growing in the Territory are adequate water control and drainage, determination of

cultivation techniques in the soil conditions which obtain in the Territory and the production of a suitable rice variety for the rainfall, temperature and soil conditions of the area.

2. **Pastoral Industry.**—The pastoral possibilities of certain parts of the Northern Territory were recognized at an early date, and in 1866 stock was brought into the Macdonnell Range country from South Australia. Six years later cattle were moved from Queensland to the northern parts of the Territory, and in 1879 Giles reached the Katherine River with 2,000 head of cattle and 12,000 sheep from South Australia. For various reasons sheep-raising did not succeed. The cattle industry, however, progressed steadily and development of stock routes and other plans for the expansion of the industry are continuing.

Cattle exported during 1954-55 (1953-54 figures in parentheses) numbered 77,452 (126,125)—21,513 (72,058) to Queensland, 43,786 (46,951) to South Australia, 10,370 (7,116) to Western Australia and 1,783 (nil) to the Philippines. Other livestock exports were:—horses, 479 (8); bulls, 5 (nil); pigs, 104 (nil) and camels, 11 (nil). Importations of live stock were:—bulls, 572 (826); other cattle, 9,340 (6,128); stallions, 1 (4); other horses, 611 (451); rams, 11 (41); other sheep, 2,575 (3,496) and pigs, 4 (nil).

The estimated number of livestock in the Territory at the end of the years 1939 and 1950 to 1954 is given in the table hereunder:—

#### NORTHERN TERRITORY: LIVESTOCK.

31st December—	Horses.	Cattle.	Sheep.	Pigs.	Goats.	Camels.	Donkeys.	Mules.
1939 .. ..	32,721	922,581	38,587	483	20,335	331	1,443	366
1950 .. ..	29,366	1,019,149	28,888	1,122	12,329	94	918	603
1951 .. ..	32,519	1,057,906	30,935	794	10,520	98	1,180	603
1952 .. ..	34,645	935,602	33,773	799	11,861	100	873	546
1953 .. ..	36,985	966,033	31,232	1,132	12,502	53	1,475	626
1954 .. ..	33,035	968,755	28,644	911	11,152	50	661	364

3. **Hides and Skins.**—The number of hides and skins exported from the Northern Territory during 1953-54 was as follows:—buffalo, 5,132; sheep, 748; crocodile, 1,572; and cattle, 6,113. In addition, a considerable number of kangaroo skins were exported, but details are not available.

4. **Mining.**—Alluvial gold digging in the Northern Territory commenced in 1869 and in 1881 the yearly return was valued at £111,945. The value of minerals produced in the Territory in 1953 and 1954 fell slightly from the all-time peak of £1,282,000 in 1952 mainly because of a fall in the value of wolfram. The main mineral was gold, most of which was won at Tennant Creek and the majority from one mine, "Noble's Nob". Five batteries are operated by companies on this field, which is noted for its rich patches of ore. The value of copper production increased, most of the ore being obtained from the "Peko" mine at Tennant Creek. The ore is treated by the Company's own plant at the mine. The Harts Range Mica Field continues to produce the bulk of Australian high grade mica. Tin concentrates were produced at Maranboy, where a Government-owned treatment plant is in operation. Uranium minerals were first discovered at Rum Jungle in September, 1948, and many other deposits were subsequently found. Great interest in uranium mining is now being shown and many Australian and over-sea mining companies are engaged in the search for radio-active minerals. The first full scale uranium treatment plant was opened at Rum Jungle by the Prime Minister on 17th September, 1954, and continuous production of uranium oxide is now being achieved.

The following table shows the value of mineral production for the years 1950 to 1954 compared with 1939:—

**NORTHERN TERRITORY : VALUE OF MINERAL PRODUCTION.**  
(£'000.)

Year.	Gold.	Tin Concen- trates.	Copper Ore.	Mica.	Wolfram.	Total All Minerals. (a)
1939..	163	4	2	16	58	244
1950..	543	15	57	62	26	708
1951..	603	22	44	59	257	987
1952..	681	10	53	92	413	1,282
1953..	820	15	18	102	267	1,221
1954..	839	14	114	123	55	1,145

(a) Excludes uranium.

5. **Pearl and Other 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. Production of shell since the war has varied considerably, year by year, but since 1950 has shown a decided increase:—1950—89,000 lb., value, £22,000; 1951—188,000 lb., value, £51,000; 1952—260,000 lb., value, £59,000; 1953—487,000 lb., value, £125,000; 1954—460,000 lb., value, £119,000.

The 1954 season was fished by eleven vessels compared with ten for 1953. The price of shell still remains high, £700 a ton for good grade shell being the average for 1953.

Darwin continues to provide a firm and ready market for fish, but supplies are somewhat irregular.

## § 6. Land Tenure.

1. **General.**—A description of the system of land tenure in force in the Territory in 1928 is given in Official Year Book No. 22, Chapter V.—Land Tenure and Settlement. It was revised in Official Year Book No. 39, pp. 329–30, and Chapter IV.—Land Tenure and Settlement of this issue contains statistical information on the subject.

Almost half the land in the Northern Territory is reserved, or unoccupied and unreserved, the remainder, apart from a very small proportion alienated, being held under various forms of lease and licence, which are described briefly below and in more detail in Official Year Book No. 39, pp. 329–30.

2. **Pastoral, Agricultural, etc., Leases.**—*Pastoral Leases*—granted for periods not exceeding 50 years.

*Pastoral Homestead Leases*—granted in perpetuity but available only to persons who intend to reside *bona fide* on the leased land. Firms or companies are incapable of holding this type of lease.

*Agricultural Leases*—granted in perpetuity, with area for any one lease limited according to type of farm (Cultivation Farms, Class 1, 1,280 acres, Class 2, 2,560 acres; Mixed Farming and Grazing, Class 1, 12,800 acres, Class 2, 38,400 acres).

*Leases of Town Lands*—except in Darwin, granted in perpetuity (in Darwin granted for periods up to 99 years).

*Miscellaneous Leases*—granted for any prescribed or approved purpose, for periods not exceeding 21 years.

*Grazing Licences*—granted to graze stock on Crown lands for periods not exceeding one year.

*Occupation Licences*—granted for manufacturing, industrial or any prescribed purposes, for periods not exceeding 5 years.

*Miscellaneous Licences*—granted for periods not exceeding 12 months.

*Leases to Aborigines*—granted for areas not exceeding 160 acres each for any period of years upon such terms and conditions as thought fit.

The foregoing leases and licences are granted at specified rentals or rentals fixed by the Administrator and subject to re-appraisal, and under various prescribed or specified conditions.

3. *Mining Leases, etc.—Holdings under Miners' Rights*—entitling holder, for a fee of 5s. for 12 months from date of issue, to occupy Crown lands for mining and to carry out works thereon.

*Gold-mining Leases*—granted for a period of 21 years, renewable for a further 21 years, for areas not exceeding 20 acres each, at an annual rent of 2s. per acre and with payment of a royalty of 3d. in the £1 on the value of gold won.

*Mineral Leases*—granted in blocks not exceeding 40 acres each, at an annual rent of 1s. per acre, with term and renewal and royalty as for gold-mining leases.

*Dredging Claims*—granted for gold or minerals claims, the area not exceeding 300 acres each, at an annual rent of 2s. per acre.

*Petroleum Prospecting Permits*—granted to search for oil over one, two or three areas not exceeding in aggregate 10,000 square miles for a term not exceeding 12 months and a fee of £100. The permittee must enter into a bond for at least £1,000 to comply with the conditions of the permit and the provisions of the Petroleum (Prospecting and Mining) Ordinances 1954 and the regulations thereunder.

*Petroleum Licences*—confer an exclusive right to carry out the detailed surveys and other operations necessary to test the land for petroleum. A licence is granted to a permittee for a fee of £20 over an area not exceeding 2,500 square miles upon the permittee entering into a bond of at least £5,000 to comply with the provisions of the licence and the Ordinance and Regulations.

*Petroleum Leases*—granted to a licensee for a period of 21 years, and renewable for a further period of 21 years, in respect of an area not exceeding 500 square miles. The lessee shall pay a royalty of 10 per cent. upon the gross value of all crude oil produced.

*Coal Licences*—granted to search for coal over an area not exceeding 1,000 square miles for a period of five years, at an annual fee of £10.

*Coal Leases*—granted for a period of 21 years, renewable for 21 years at an annual rental of 1s. per acre and a royalty fixed by regulation.

*Business and Residence Areas*—granted at the prescribed fee, authorizing the holder to occupy on a gold or mineral field an area not exceeding one acre for residence and carrying on business (one-quarter of an acre if for residence only).

*Garden Areas*—granted under prescribed conditions, on a gold or mineral field for growing fruit or other garden produce, the area of each garden not exceeding 5 acres.

There are various conditions regarding working, employment and value of machinery used, which apply to the foregoing leases and licences.

## § 7. Trade, Transport and Communication.

1. *Trade*.—No record is kept of the trade between the States and the Territory. Direct overseas imports amounted to £34,000 in 1938–39. In the post-war years 1945–46 to 1948–49 they averaged about £200,000 a year, but in the three years 1950–51 to 1952–53 the average was about £620,000 a year. In 1953–54 imports totalled £641,757. Direct overseas exports amounted to £13,000 in 1938–39 and are still relatively small—£30,169 in 1953–54.

2. *Shipping*.—Shipping services to Darwin are provided about once per month by a ship of the Australian Shipping Board from the eastern States and a twice monthly service from Western Australia by ships of the Western Australian State Shipping Service. An overseas tanker visits Darwin quarterly with supplies of aircraft fuel and other petroleum products. Other overseas vessels call at irregular intervals. During 1952–53, 39 calls were made by vessels at Darwin, landing approximately 35,000 tons of merchandise and 27,000 tons of petroleum products. In 1953–54 vessels made 43 calls and landed approximately 33,000 tons of merchandise and 42,000 tons of petroleum products. Total tonnages landed pre-war amounted to approximately 29,000 tons per annum.

3. *Air Services*.—Darwin, a first class international airport, is the first port of arrival in Australia for virtually all aircraft from Europe and Asia. Qantas Empire Airways Ltd. (under contract to the Commonwealth Government) operates, through Darwin, a



Sydney-Singapore-London passenger and freight service; a Sydney-Hong Kong-Japan service; and a Sydney-Manila-Japan service. Calls are also made at Darwin on the return flight of the service from Sydney to Johannesburg. The Air France service from Paris to Noumea via Saigon calls at Darwin. British Overseas Airways Corporation operates a London-Singapore-Sydney service, and Australian National Airways, in conjunction with Air-Ceylon, operates a service to London. Both these services also call at Darwin. Regular inland services calling at Darwin are Trans-Australia Airlines (Adelaide-Darwin and Brisbane-Darwin), MacRobertson-Miller Aviation, which runs regular services between Darwin and Perth, and Darwin and Wyndham, and Connellan Airways, which operates services between Alice Springs, Wyndham, Borroloola, Katherine and the Queensland border. Smaller services, mainly on a charter basis, operate from Darwin. From Darwin the Aerial Medical Service operates two aircraft and the North Australian Airways local charter flights. An aero club with head-quarters at the airport also operates.

4. Railways.—Under the agreement made between the Commonwealth and the State of South Australia for the transfer of the Northern Territory, which was ratified by the Northern Territory Acceptance Act 1910, the Commonwealth was to construct the Northern Territory portion of the transcontinental railway line (connecting Adelaide and Darwin via Port Augusta).

The northern line from Adelaide terminates at Alice Springs, about 192 miles north of the southern boundary of the Territory. The Commonwealth Government acquired, on 1st January, 1911, the property in the line from Port Augusta to Oodnadatta (478 miles), and on 1st January, 1926 the control thereof was transferred to the Commonwealth Railways Commissioner. The extension to Alice Springs (293 miles) was opened for traffic in 1929. The line from Darwin to Pine Creek, about 146 miles, was extended to Katherine River (200 miles from Darwin) in 1917, and as far as Birdum (316 miles from Darwin) in 1929. Extensions are still under consideration.

The Clapp plan for the standardization of Australian railways recommended, *inter alia*, the construction of a standard gauge (4 ft. 8½ in.) strategic and developmental railway between Dajarra (Queensland) and Birdum, and the conversion to standard gauge of the Birdum-Darwin line, but not the conversion of the Port Augusta-Alice Springs line nor the construction of a 4 ft. 8½ in. line between Alice Springs and Birdum. Provision for both of the last two projects, however, was included in an agreement with South Australia enacted in 1949.

It was agreed by the Governments of the Commonwealth and South Australia in 1950 that a standard gauge railway from Stirling North to Leigh Creek coalfields (157 miles) should be constructed. This is now under construction and is regarded as the first step in the ultimate provision of a standard gauge railway between Port Augusta and Alice Springs.

5. Roads.—During the war, roads were built connecting Alice Springs with Darwin, and Mount Isa (Queensland) with Tennant Creek. The first of these roads, known as the North-South Road or Stuart Highway, is 954 miles long, and runs via Larrimah and Tennant Creek. The Mount Isa-Tennant Creek Road (Barkly Highway) is 403 miles long. Both were used extensively during the war, the Stuart Highway, in particular, experiencing very heavy and continuous traffic. Since the war, the Stuart Highway has been used continually as a means of transporting foodstuffs and other supplies to Darwin and northern centres, and is now the main route for overland tourists and travellers from the southern States to Darwin. Both roads have good water bores and communications. There are now 12,274 miles of road in the Territory.

6. Posts, Telegraphs, Telephones and Wireless.—Postal communication is maintained by road and rail transport between Darwin and the capital cities of Australia. In addition, the vessels belonging to the Western Australian State Shipping Service give a regular service between Fremantle and Darwin. Mail is also carried between the capital cities of Australia and Darwin by the airway companies operating in each State. 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 transcontinental telegraph line, covering a length of 2,230 miles, runs in a northerly direction from Adelaide to Darwin, and provides telegraphic communication between Darwin and other parts of the world.

Long-distance telephone communication is established between Darwin and the other capital cities of Australia, and oversea telephone communication through Sydney is also available.

Regional national broadcasting stations are situated at Darwin and Alice Springs. The majority of homesteads on pastoral leases are equipped with pedal wireless sets 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) 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 Northern 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 the beginning of the 1954 school year there were 9 Government schools for European children in the Northern Territory, with 61 teachers and 1,650 pupils, providing instruction according to the South Australian curriculum. Facilities for secondary education exist at schools at Darwin and Alice Springs. The former conducts classes for the Leaving Certificate, but the latter at present normally only provides instruction to Intermediate Certificate level.

Children of primary and pre-Intermediate secondary standard who live more than 10 miles from an established school receive an allowance of £70 per annum plus fare concessions if they board away from home in order to attend school. Six exhibitions are available annually on the results of the Intermediate Certificate, the benefits being £50 per annum, a £5 book allowance per annum and annual return fares if the recipients board away from home in order to attend school.

Approximately 100 children receive correspondence education under the South Australian Correspondence School system. The "School of the Air" supplements normal correspondence instruction for certain children. Some of these live as much as 500 miles distant from Alice Springs, from which point the "School of the Air" is conducted. Five half-hourly sessions are given each week and the unique feature of the "School of the Air" is the "Question and Answer" section which forms a part of every session. Children with access to radio transceivers are able to ask questions of their teacher and all other pupils listen to the answers.

Five pre-school centres have been established in the Territory. Of these, three reach the required standards for subsidy by the Administration. Up to the present this subsidy has been the amount of the salary of a trained pre-school teacher. During the year, however, new policy was approved by which the Administration, in addition to subsidizing the teacher's salary, bears the cost of building pre-school centres in approved circumstances. The first centre to be built under these conditions is now under construction. Two scholarships are offered each year for Territory girls to qualify as pre-school teachers.

2. **Native.**—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. These schools are conducted by the Commonwealth Office of Education in its capacity as agent for the Administration. Nine 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 provided to the pupils. Close touch between the Administration and the Commonwealth Office of Education in connexion with these schools is maintained through the person of the Senior Education Officer (of the Office of Education staff) who is stationed at Darwin. In addition to the 9 Administration schools, 13 schools for aboriginal children are conducted by Missions with the aid of Government subsidies. One school, with similar aid, has been established on a pastoral property and the establishment of others along similar lines is planned.

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 School, these courses covering the work prescribed for the various trades in South Australia and New South Wales.

### § 9. Native Welfare.

The Welfare Ordinance, which the Legislative Council passed in June, 1953, established the principle that native people would be committed to the care of the State on the grounds of their need for special care and assistance and not on the grounds of race or colour and it laid on the Director of Welfare a positive responsibility for the advancement of wards in his care. The Employment Ordinance provides for the training of wards and assistance in establishing them in occupations, either on their own account or as employees. The Ordinance envisages apprenticeships for the better-educated wards and training-on-the-job for those wards not yet capable of entering into apprenticeships. It also envisages financial aid to natives or groups of natives who may, under the guidance of the Director, be able to engage on activities (for example in agriculture, cattle raising, hunting or fishing) on their own behalf. The Director of Welfare is responsible for supervising employment for the wards in his care, and protective legislation for those in employment is retained. The legislation does not, of course, apply to any persons who are not wards and it is envisaged that native people who have ceased to be wards will come within the normal industrial customs of the country.

### § 10. Finance.

Details of revenue and expenditure of the Territory for the years 1949-50 to 1953-54 are shown below :—

#### NORTHERN TERRITORY : REVENUE AND EXPENDITURE. (£.)

Item.	1949-50.	1950-51.	1951-52.	1952-53.	1953-54.
REVENUE.					
Taxation—					
Probate and Stamp Duties ..	7,185	9,307	6,201	5,565	6,292
Motor Registration ..	(a)	(a)	(a)	11,354	25,882
Total ..	(a)	(a)	(a)	16,919	32,174
Business Undertakings—					
Railways—					
North Australia ..	34,880	38,227	48,929	42,160	68,411
Central Australia ..	775,845	815,739	1,241,050	1,290,297	1,552,690
Postmaster-General's Department ..	118,292	135,218	166,533	182,788	205,747
Electricity Supply ..	103,177	119,054	139,572	260,521	259,687
Total ..	1,032,194	1,108,238	1,596,084	1,775,766	2,086,535
Other—					
Rent and Rates ..	77,068	88,307	101,263	115,758	127,852
Miscellaneous ..	86,523	101,939	167,530	177,839	227,110
Total ..	163,591	190,246	268,799	293,597	354,962
Grand Total ..	1,202,970	1,307,791	1,871,084	2,086,282	2,473,671

(a) Not available.

NORTHERN TERRITORY: REVENUE AND EXPENDITURE—*continued.*  
(£.)

Item.	1949-50.	1950-51.	1951-52.	1952-53.	1953-54.
<b>EXPENDITURE.</b>					
Public Debt Charges—					
Interest(b) .. ..	331,356	347,934	342,912	341,285	345,914
Debt Redemption(c) .. ..	112,188	117,794	123,679	129,848	136,332
Other .. ..	1,406	470	..	133	..
Total .. ..	444,950	466,198	466,591	471,266	482,246
Business Undertakings—					
Railways—					
North Australia .. ..	74,090	69,324	90,966	114,477	139,324
Central Australia .. ..	727,689	867,206	1,178,320	1,296,618	1,359,181
Postmaster-General's Department .. ..	123,239	164,138	181,093	165,095	178,898
Electricity Supply .. ..	152,235	202,560	280,064	266,614	268,307
Water Supply .. ..	36,023	48,771	56,151	71,104	73,495
Hostels Loss .. ..	35,061	45,259	29,185	42,653	25,159
Total .. ..	1,148,337	1,397,258	1,815,779	1,956,561	2,044,364
Social Expenditure—					
Aboriginal Affairs .. ..	101,064	175,094	286,041	278,492	354,266
Educational Services .. ..	31,963	53,718	75,838	95,476	94,578
Public Health, Recreation and Charitable .. ..	250,139	326,489	389,158	508,166	547,680
Law, Order and Public Safety .. ..	16,540	20,050	31,357	35,063	32,738
Total .. ..	399,706	575,351	782,394	917,197	1,029,262
Capital Works and Services—					
Railways—					
North Australia .. ..	21,415	20,105	20,209	162,020	229,861
Central Australia .. ..	76,654	5,115	133,699	676,298	560,146
Postmaster-General's Department .. ..	(a)	4,924	4,144	8,164	18,092
Water Supplies, Roads, Stock Routes, etc. .. ..	58,178	106,082	215,366	174,780	142,402
Darwin Lands Acquisition .. ..	79,790	112,439	..	56,209	..
Buildings, Works, Sites, etc. .. ..	477,198	975,675	974,058	858,459	1,161,384
Plant and Equipment .. ..	91,978	167,125	91,651	116,707	137,096
Total .. ..	805,213	1,391,465	1,439,127	2,052,637	2,248,981
All Other—					
Territory Administration .. ..	486,961	553,947	529,127	683,711	745,977
Developmental Services .. ..	56,822	93,304	88,170	117,419	140,541
Municipal, Sanitary and Garbage Services .. ..	57,207	67,568	73,565	88,336	81,796
Shipping Subsidy .. ..	4,767	4,700	3,800	3,800	3,800
Airmail Service Subsidy .. ..	10,400	5,200	5,200	11,000	11,708
Freight Concessions on North Australian and Central Australia Railways .. ..	196,339	296,538	512,678	530,450	587,939
Rent, Repairs and Maintenance, n.e.i. .. ..	114,191	149,588	125,233	153,608	152,768
Total .. ..	926,687	1,170,845	1,337,773	1,588,324	1,724,529
Grand Total .. ..	3,724,893	5,001,117	5,841,664	6,985,985	7,529,382

(a) Not available. (b) Includes Railways Interest and Exchange, 1949-50, £287,269; 1950-51, £305,085; 1951-52, £300,992; 1952-53, £299,844; 1953-54, £295,681. (c) Includes Railways Debt Redemption, 1949-50, £88,170; 1950-51, £92,575; 1951-52, £97,199; 1952-53, £102,044; 1953-54, £107,138.

## THE AUSTRALIAN CAPITAL TERRITORY.

1. *Introductory.*—Information regarding the selection and establishment of Canberra as the Australian capital city, the physiography of the Territory and its early history will be found in earlier issues of the Official Year Book—*See List of Special Articles. etc.*, at the end of this volume under Canberra and Federal Capital City.

On 12th March, 1913 the official ceremony to mark the start of operations in connexion with the establishment of the Seat of Government was carried out. At this ceremony the selection of "Canberra" as the name of the capital city was announced.

On 9th May, 1927 Parliament House at Canberra was officially opened by His Royal Highness Albert, Duke of York—afterwards His Majesty King George VI.—the occasion being the 26th anniversary of the opening of the first Parliament of the Commonwealth at Melbourne by His Royal Highness George, Duke of Cornwall and York—afterwards His Majesty King George V.—on 9th May, 1901. (For particulars of the opening ceremony *see* Official Year Book No. 21, p. 604.)

The development of the Territory administration prior to the taking over of control by the Federal Capital Commission on 1st January, 1925 is described in summarized form in Official Year Book No. 18, and in Official Year Book No. 22 a summary is given of the administrative activities of the Federal Capital Commission. The administration of the Territory by this authority was continued until 30th April, 1930, when the Seat of Government (Administration) Act 1924–1929 was repealed, and the powers and functions of the Commission reverted to the Government.

Since April, 1932 the general control of the Territory has been exercised by the Minister for the Interior, certain specific services, however, being undertaken by the Department of Health, the Department of Works and the Attorney-General's Department.

An amendment to the Seat of Government Acceptance Act in 1938 provides that the Territory shall be known as the Australian Capital Territory.

2. *Progress of Work.*—(i) *General.* Further progress in providing housing and allied community facilities has been shown in the works programme in the Australian Capital Territory for the financial year 1953–54 and engineering services were kept abreast of developmental requirements. Planning was begun for the increase in population which will result from transferring other Departments to Canberra as the various sections of the new Administrative Building are completed.

There has been extensive building construction with the establishment of the Australian National University at Canberra and facilities for the expansion of Defence Services at Duntroon, Fairbairn and Harman.

During 1953–54, the total expenditure on capital and maintenance works in the works programme amounted to £4,626,985.

The average combined labour force of the Department of Works and contractors working for the Department during 1953–54 totalled 2,271 men.

(ii) *Works Programme.* (a) *Housing.* During 1953–54, 489 dwelling units were completed (424 built by contract and 65 by day labour), including 93 brick, 42 brick veneer, 54 timber, 75 monocrete and 225 prefabricated (209 Riley Nevsum and 16 Econo Steel). Of the total units built, 101 and 84, respectively, were built in the suburbs of Narrabundah and O'Connor, 247 in the longer established but recently extended suburbs of Ainslie (86), Deakin (62) and Yarralumla (99), 24 in the suburb of Reid and 22 in Griffith. Four hundred and sixty were built for the Department of the Interior, 9 for War Services Homes, 16 for the Australian National University and 4 for the Department of the Army. At 30th June, 1954 there were 313 houses under construction.

(b) *Other Building.* Major projects completed during the year 1953–54 included an infants school at Turner; the erection of a 50-bed ward at the Canberra Community Hospital; and the erection of four plant laboratories for the Commonwealth Scientific and Industrial Research Organization at Black Mountain.

Projects for the Australian National University comprised the completion of University House, the Studies and Laboratories Block and a workshop for the John Curtin School of Medical Research.

Further progress was made on the permanent Administrative Building at Parkes and about one half had been completed at 30th June, 1954. Work has been concentrated on "A" block, which, when completed will be occupied, while the remainder of the building is being completed.

Work is well advanced on the Griffith infants' school but at Mt. Stromlo work on a dome for a 74-inch telescope has been temporarily suspended. The erection of a 20 chamber Hoffman brick kiln at Westridge, an Olympic Swimming Pool at Parkes and extensions to Staff quarters at the Canberra Community Hospital was commenced.

At the Royal Military College, Duntroon, erection of a new Cadets barracks and an engineering laboratory are both nearing completion.

Further progress was made on the central administrative block of the C.S.I.R.O. at Black Mountain and the erection of a new plant repair shop and depot at Molonglo was commenced.

Telephone exchanges at Barton and Braddon and alterations and additions to the ground floor at the Canberra Post Office, East Block, were almost completed.

(c) *Engineering Works and Services.* During 1953-54 12 miles of sub-divisional roads were constructed to serve newly built areas, bringing the length of city roads at 30th June, 1954 to 208 miles, comprising 3 miles of concrete, 104 miles of bitumen paved and 101 miles of gravel. At the same date the length of city footpaths was 116 miles. During 1953-54 about 9 miles of city roads were sealed and road maintenance works included the resealing of 5 miles of city roads and 3 miles of country main roads. Major projects were the construction of an access road from Harman Naval Station to the new transmitting station at "Bonshaw", sub-divisional roads in Ainslie, Narrabundah, O'Connor and the C.S.I.R.O. areas, and roads constructed at the Australian National University, Canberra. The Cotter road and other main roads were improved.

During 1953-54, 44,454 feet of water mains were laid to reticulate water services to new buildings. At 30th June, 1954, 6,538 houses were connected to the water supply system. The consumption for 1953-54 was 1,807 million gallons with an average daily consumption of about 168 gallons per head.

New works undertaken during the year were the 24" Cotter section main and a 24" main from Lower Red Hill to London Circuit. Progress of work is well advanced. Other major works included completion of a two million gallon water storage tank at Red Hill and the extension of the Cotter pump house which is now ready for the installation of new pumps.

During the same period 35,129 feet of sewer mains were laid to connect newly built houses to the sewerage system and 6,286 houses and buildings had been connected to the sewerage system by 30th June, 1954.

3. *Forestry.*—A considerable amount of reafforestation 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, 1954 was 16,500 acres, of which 14,500 acres were *Pinus radiata*, the balance consisting of other softwood species, chiefly *Pinus ponderosa* and *Pinus laricio*.

Forestry operations 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 from the logs resulting from thinning operations and clear felling of mature plantations. The yearly output of pine timber has increased from 30,000 super. feet in 1930-31 to approximately 10 million super. feet at the present time, the total amount cut to date being about 91 million super. feet. The present output consists of approximately 50 per cent. saw log timber, producing building material, and 50 per cent. case-making materials.

In 1926 a comprehensive review was undertaken of the Territory's potentialities for forest development. A system of forest management was instituted in the existing forest area, 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 produced during 1953-54 amounted to 2,240,000 super. feet log measure all of which was used in building operations in Canberra. The total amount of hardwood cut from A.C.T. forests to date is about 29,500,000 super. feet.

4. *Lands.*—(i) *General.* Reference has been made in previous issues of the Official Year Book to the general conditions of land tenure in the Australian Capital 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.

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 that Act. Leases of land in the city area are granted under the City Area Leases Ordinance 1936-1951, and leases of other lands under the Leases Ordinance 1918-1937. 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, and 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 required in connexion with the establishment of the city, large areas have been leased under special improvement conditions in regard to the extermination of noxious weeds and the destruction of rabbits and other pests. The lands are classified into three grades of agricultural and three grades of grazing land. Leases may be granted for grazing, fruitgrowing, horticulture, agriculture or other purposes for a period not exceeding 25 years. The annual rental is 4 per cent. of the assessed value of the land, including improvements which are the property of the Crown, plus the amount of rates payable. No person may hold under lease land of a greater value than £10,000, exclusive of the value of buildings and fences thereon.

Under the City Area Leases Ordinance 1936-1951 the Government may grant leases in the city area of any Crown land for business or residential purposes. Such leases may be issued for a period not exceeding 99 years at a rental equal to 5 per cent. of the unimproved value of the land, which value is subject to re-appraisal at the expiration of 20 years, and thereafter every 20 years. A suitable building must be commenced within 6 months and completed within 12 months unless an extension of time is allowed.

(ii) *Jervis Bay Territory.* 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 was established in this area on a site known as Captain's Point, but was removed in 1930 to Flinders Naval Base, Victoria. Leases have been granted over an area of about 13,000 acres in the Jervis Bay area.

5. *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. The railway terminus is situated in the suburb of Kingston. A daily passenger service operates 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 Australian Capital Territory, 2CY and 2CN of the national broadcasting system and 2CA, a commercial station.

6. *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. Since then the general trend has been upward.

The census return of population on 30th June, 1938, was 11,562 persons in the Australian Capital Territory including 272 in the Jervis Bay area. The population at the Census of 30th June, 1947, was 16,905 persons—15,156 in the city area, 1,389 in the rural districts and 360 in the Jervis Bay area. A census was taken of the city area on 14th–16th September, 1951, the population then being 23,617 persons. At that time the estimated population of the Australian Capital Territory was 25,400 persons. The population of the Territory at the Census of 30th June, 1954 was 30,315 persons, 28,277 being in the Canberra city area and 517 in the Jervis Bay area.

7. **Production.**—During 1952–53 the production of the more important items of the agricultural and pastoral industry was—Wheat, 7,764 bushels; wool, 2,245,000 lb.; whole milk, 688,000 gallons; butter, 5 tons; meat (bone-in weight, fresh), 2,826 tons. The numbers of livestock depastured at 31st March, 1954 were—Horses, 831; cattle, 9,394; sheep, 251,700; and pigs, 276.

8. **Education.**—The Commonwealth Department of the Interior is primarily responsible for the education of children in the Australian Capital Territory. The New South Wales Education Department, however, provides teachers and the curriculum for schools in the Territory and is reimbursed annually for expenses incurred.

There are two public secondary schools in Canberra providing courses to the Leaving Certificate standard, Canberra High School, Acton, and Telopea Park High School, Barton. Entrance to the Canberra High School is on a competitive basis.

Ten schools provide courses for children in Infants and Primary classes, including two in the Jervis Bay area and three in rural districts. A school for mentally handicapped children was opened early in 1955.

There are six private schools in Canberra. Of these, St. Edmund's Christian Brothers College, St. Christopher's Convent, Canberra Grammar School (Boys) and Canberra Church of England Girls' Grammar School provide courses leading to the Leaving Certificate Examination.

The Australian Capital Territory Education Ordinance provides for the compulsory attendance at school of children between the ages of six and fifteen years.

Eleven pre-school centres, an occasional care centre and a mobile unit which visits outlying areas provide pre-school facilities for approximately 1,000 children between the ages of three and five years.

The Canberra Technical College, which follows the curricula 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 including workshop practice for Royal Military College cadets, motor maintenance for Australian Forestry School cadets and shorthand and typing courses for the Public Service Board. In addition the Technical College undertakes the trade testing of migrants seeking to enter skilled trades.

Education at university level is provided by the Canberra University College, details of which will be found in Chapter XII.—Education.

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. Further reference to this University appears in § 8 of Chapter XII.—Education.



9. Finance.—Details of revenue and expenditure for the years 1949-50 to 1953-54 are given in the following table :—

## AUSTRALIAN CAPITAL TERRITORY : REVENUE AND EXPENDITURE.

(£.)

Item.	1949-50.	1950-51.	1951-52.	1952-53.	1953-54.
<b>REVENUE.</b>					
<b>Taxation—</b>					
Motor Registration .. .. .	22,451	30,267	37,723	41,973	47,998
Liquor .. .. .	10,127	12,978	15,689	21,034	22,756
Rates .. .. .	12,948	15,717	18,271	22,312	30,306
Other .. .. .	932	1,042	765	1,196	935
<b>Total .. .. .</b>	<b>46,458</b>	<b>60,004</b>	<b>72,448</b>	<b>86,515</b>	<b>101,995</b>
<b>Business Undertakings—</b>					
Railways .. .. .	12,595	14,995	10,246	24,493	14,557
Electricity Supply .. .. .	146,136	192,739	230,363	328,108	471,410
Water Supply and Sewerage .. .. .	10,695	18,534	24,086	22,002	25,390
Abattoirs .. .. .	14,842	16,953	22,337	28,706	27,115
<b>Total .. .. .</b>	<b>184,268</b>	<b>243,221</b>	<b>287,032</b>	<b>403,309</b>	<b>538,472</b>
<b>Rent—</b>					
Housing .. .. .	243,706	290,664	334,020	409,915	502,096
Land .. .. .	49,714	53,215	77,832	91,038	110,080
Miscellaneous .. .. .	10,008	20,775	11,246	13,299	16,196
<b>Total .. .. .</b>	<b>303,428</b>	<b>364,654</b>	<b>423,098</b>	<b>514,252</b>	<b>628,372</b>
<b>Interest .. .. .</b>	<b>5,480</b>	<b>5,302</b>	<b>11,798</b>	<b>17,335</b>	<b>22,300</b>
<b>Fees for Services and Fines .. .. .</b>	<b>9,135</b>	<b>13,568</b>	<b>18,456</b>	<b>21,325</b>	<b>21,559</b>
<b>Mortgages—Principal .. .. .</b>	<b>4,118</b>	<b>114,434</b>	<b>267,399</b>	<b>128,037</b>	<b>155,596</b>
<b>Other .. .. .</b>	<b>111,819</b>	<b>44,532</b>	<b>73,644</b>	<b>61,619</b>	<b>94,628</b>
<b>Grand Total .. .. .</b>	<b>664,706</b>	<b>845,715</b>	<b>1,153,875</b>	<b>1,232,392</b>	<b>1,562,922</b>
<b>EXPENDITURE.</b>					
<b>Public Debt Charges—</b>					
Interest .. .. .	192,860	183,629	173,836	172,579	183,086
Debt Redemption .. .. .	74,052	77,720	81,530	85,605	89,884
Other .. .. .	433	3,045	..	42	..
<b>Total .. .. .</b>	<b>267,345</b>	<b>264,394</b>	<b>255,366</b>	<b>258,226</b>	<b>272,970</b>
<b>Business Undertakings(a)—</b>					
Railways .. .. .	18,689	26,260	37,058	45,802	42,721
Electricity Supply .. .. .	174,963	330,113	329,707	436,271	504,559
Water Supply and Sewerage .. .. .	41,881	54,307	59,040	69,279	83,047
Abattoirs .. .. .	11,225	14,065	17,736	20,310	20,379
Brickworks Loss .. .. .	(b)	(b)	(b)	25,000	30,000
Transport Services(c) .. .. .	26,285	46,000	63,000	60,000	60,000
Firewood Supplies Loss .. .. .	1,000	1,000	1,000	1,000	1,000
Hostels(d) .. .. .	70,273	92,483	64,688	26,513	33,542
<b>Total .. .. .</b>	<b>344,316</b>	<b>564,228</b>	<b>572,229</b>	<b>684,175</b>	<b>775,248</b>

NOTE.—For notes see end of table, page 127.

## AUSTRALIAN CAPITAL TERRITORY: REVENUE AND EXPENDITURE

—continued.

(£.)

Item.	1949-50.	1950-51.	1951-52.	1952-53.	1953-54.
EXPENDITURE—continued.					
Social Expenditure(a)—					
Education—					
Primary and Secondary ..	94,453	127,718	158,298	183,356	239,525
Technical College ..	20,266	26,479	28,005	39,191	38,490
University ..	23,500	40,800	48,100	60,300	64,882
Science, Art, Research, etc.	3,646	4,453	4,444	5,459	5,727
Nursery Schools and Pre-School Centres ..	6,044	8,886	12,690	18,724	18,749
Public Health and Recreation	23,557	45,068	62,218	75,369	88,820
Charitable—					
Hospital—General ..	70,222	96,421	135,487	144,733	135,328
Relief of Aged, Indigent, etc.	1,492	1,021	2,933	2,739	3,227
Other ..	8,062	6,914	8,459	11,250	14,801
Law, Order and Public Safety—					
Justice ..	9,884	11,953	14,297	17,399	22,467
Police ..	35,955	45,140	63,995	74,492	86,413
Public Safety ..	7,282	11,170	16,264	18,499	20,559
Total ..	304,363	426,023	555,190	651,511	738,988
Capital Works and Services(e)—					
Business Undertakings—					
Railways ..	645	200	7,620	3,166	2,562
Electricity Supply ..	134,796	230,507	223,297	272,038	138,162
Water Supply and Sewerage	175,854	298,228	362,735	364,006	408,365
Abattoirs ..	973	4,477	8,558	9,856	4,992
Transport Services ..	24,955	94,740	46,844	41,956	18,996
Hostels(f) ..	374,390	7,231	1,918	420	..
Brickworks ..	..	..	..	7,738	1,154
Total ..	711,613	635,383	650,972	699,180	574,231
Social Expenditure—					
Primary and Secondary Education ..	..	34	3,003	5,499	535
Technical College ..	3,655	..	..	..	..
University ..	7,750	..	..	..	..
Public Health and Recreation	9,367	12,476	3,631	17,884	23,741
Hospital—General ..	9,252	36,426	37,361	66,285	64,674
Police ..	..	839	146	3,238	2,485
Public Safety ..	13,155	173	2,214	5,528	3,664
Total ..	43,179	49,948	46,355	98,434	95,099
Other—					
Roads and Bridges ..	81,062	120,506	110,616	264,307	208,391
Parks and Gardens, etc. ..	35,358	30,776	24,695	26,540	23,927
Lands and Surveys ..	14,750	251	72	2,509	1,367
Forestry ..	30,396	35,121	80,370	33,050	45,871
Housing ..	1,200,272	1,934,352	2,287,179	1,578,790	1,168,499
Public Works, n.e.i. ..	309,524	907,038	658,897	546,790	527,008
Total Capital Works and Services ..	2,426,154	3,713,375	3,859,156	3,249,600	2,644,393

NOTE.—See next page for notes.

## AUSTRALIAN CAPITAL TERRITORY: REVENUE AND EXPENDITURE

—continued.

(£.)

Item.	1949-50.	1950-51.	1951-52.	1952-53.	1953-54.
<b>EXPENDITURE—continued.</b>					
All Other—					
Roads and Bridges ..	73,999	126,027	184,824	243,480	208,733
Parks and Gardens, etc. ..	140,969	161,971	189,546	204,905	220,008
Lands and Surveys ..	19,718	33,602	43,584	43,910	53,125
Agriculture and Pasture ..	24,589	23,570	26,162	19,291	18,386
Forestry ..	35,695	50,898	12,000	10,000	7,000
Housing ..	53,266	80,307	94,038	102,220	101,254
Legislative and General Administration ..	242,816	147,218	175,458	183,442	211,726
Public Works, n.e.i. ..	30,100	68,421	27,112	28,093	25,828
Miscellaneous ..	2,011	4,750 (g)	60,641 (g)	79,380 (g)	64,036
Total ..	623,163	696,764	813,365	914,721	910,096
Grand Total ..	3,965,341	5,664,784	6,055,306	5,758,233	5,341,695

(a) Other than Capital Works and Services. (b) Details not available. (c) Payment to Australian Capital Territory Transport Trust Account (loss on omnibus service). (d) Includes loss on operations 1949-50, £62,620; 1950-51, £75,559; 1951-52, £54,900; 1952-53, £12,700; and 1953-54, £24,000. (e) Excludes repairs and maintenance. (f) Expenditure on plant and equipment by Department of Interior only. (g) Includes restoration of bushfire damage, 1951-52, £54,441; 1952-53, £72,783; and 1953-54, £53,701.

The following table, which was prepared by the Department of the Interior, shows the total receipts and expenditure of the Australian Capital Territory from 1901-2 to 30th June, 1954 :—

**AUSTRALIAN CAPITAL TERRITORY: RECEIPTS AND EXPENDITURE TO  
30th JUNE, 1954.**

Receipts.	£	Expenditure.	£
Commonwealth Treasury—		Lands ..	929,802
Parliamentary Appropriations—		Engineering works ..	11,228,300
Revenue ..	36,260,107	Architectural works ..	19,679,993
Loan ..	5,703,199	Other capital expenditure, sundry debtors, etc. ..	2,249,954
		Seat of Government Establishment Account, being maintenance and administration less revenue; expenditure of a capital nature for which assets no longer exist; profit and loss accounts of trading activities, etc. ..	(a) 7,884,256
Total Receipts ..	41,963,305	Net Expenditure ..	41,963,305

(a) Excludes interest £5,799,001 net.

The foregoing figures exclude part cost of national buildings (Parliament House, the Secretariats, etc.), federal highways within the Territory, the Queanbeyan-Canberra Railway, the housing loan, etc., and loans for housing.

## NORFOLK ISLAND.

1. **Area, Location, etc.**—Norfolk Island, discovered by Captain Cook in 1774, is situated in latitude  $29^{\circ} 3' 30''$  South, longitude  $167^{\circ} 57' 5''$  East. Its total area is 8,528 acres, the island being about 5 miles long and 3 miles wide. From Sydney it is distant 930 miles, and from Auckland, 660 miles. 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  $49^{\circ}$  and  $85^{\circ}$  F. with a mean of  $68^{\circ}$  F. The average annual rainfall is 53 inches. It has been said that the healthy climate together with the beauty of its landscapes and seascapes, should make Norfolk Island "the Madeira of the Pacific". The island, both pre-war and post-war, has been popular as a tourist resort. Pre-war the only means of transport to the island was by ship. However, with the inauguration of direct air services from Australia and New Zealand the majority of tourists now take advantage of these services. The tourist traffic is rapidly increasing.

2. **Settlement and Population.**—The first colonization, in 1788, was by Lieutenant King, who in H.M.S. *Supply* established a small penal station as a branch settlement of that at Port Jackson. The settlement was abandoned in 1813, and for 13 years thereafter its chief use was as a whaling station and place of call for British warships.

From 1826 to 1855 it was again a penal station. In 1844 it was annexed to Van Diemen's Land (Tasmania).

The descendants of the *Bounty* mutineers, having become too numerous to subsist on Pitcairn Island, were removed to Norfolk Island in 1856. The new community numbering 94 males and 100 females were the descendants of British sailors and Tahitian women. The last of those transferred died at Norfolk Island on 1st March, 1943. The population of the island as disclosed by the Census of 30th June, 1954 was 942, consisting of 478 males and 464 females.

3. **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 Federal Parliament as a territory of Australia. From July, 1914 until 1st January, 1929, Norfolk Island was administered by the Department of Home and Territories, and then, until 25th June, 1941, by the Territories Branch of the Prime Minister's Department, but is now administered by the Minister for Territories through an Administrator. An amending measure, the Norfolk Island Act 1935, provided for the establishment of an Advisory Council of eight elected members which may advise the Administrator on matters affecting Norfolk Island.

4. **Economic Activity.**—The major economic activities of the island are primary production, the tourist trade and employment in 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 and trading difficulties with New Zealand have hampered production in the past. A recent relaxation of some restrictions enables out-of-season fruit and vegetables up to a limit of 3,000 lb. per week to be sent by air freight to Auckland.

Pre-war the principal primary product was passion fruit pulp. However, the introduction of disease together with the high cost of trellising and land reclamation has led to the curtailment of this industry. The production of bean seed has now become the main export industry. The island's isolation from many plant diseases found on the mainland, plus the fairly reliable dry period (which is conducive to the setting and maturing of seed), together with improved prices, induced a rapid expansion of production. In 1952-53, 3,374 bushels were exported and prices ranged from £5 to £5 10s. per bushel. These conditions also favour the production of other types of seed. Lord Howe Island Palm, Wild Lemon and Norfolk Island Pine seeds are the most important.

Island conditions are also conducive to good pasture growth but for a number of reasons meat production is insufficient to satisfy the demands of both the tourists and the local inhabitants. However, as a joint product to pastoral pursuits quantities of hides and wool are exported.

Fish and (in certain months) whales abound off the island. In the past a number of ventures have been formed to exploit these resources. They have been short-lived owing, for the most part, to the lack of a sheltered harbour.

(ii) *Tourists.* The unique history and unusual beauty of the island had always attracted a number of tourists in pre-war days. The building of the airstrip during the war has made the island far more accessible and a considerable tourist industry has developed, particularly with visitors from New Zealand. The industry is at present limited only by the accommodation available. Approximately 120 can now be catered for and accommodation is being continually expanded.

(iii) *Government Instrumentalities.* A large proportion of the population is employed by Commonwealth Government instrumentalities which are :—Department of Civil Aviation, Norfolk Island Administration, Department of Works, 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.

5. *Trade, Transport and Communication.*—Imports to Norfolk Island in 1938–39 amounted to £27,590, mainly from Australia. Since the 1939–45 War they have risen from £32,402 in 1945–46 to £216,353 in 1953–54, the major proportion (£177,933 or 82 per cent.) still coming from Australia, while New Zealand supplied 18 per cent. in the latter year. Exports were valued at £16,970 in 1938–39, and have risen from £9,024 in 1945–46 to £45,852 in 1953–54. Australia again is the principal country concerned (£35,133), with New Zealand's proportion of the trade showing a steady increase from negligible amounts pre-war and early post-war to one-quarter or one-third of the total exports in recent years.

No duties are chargeable on goods imported into Australia from Norfolk Island if the goods are (a) the produce or manufacture of Norfolk Island; (b) shipped direct to Australia; and (c) not goods which if manufactured or produced in Australia would be subject to excise duty.

A shipping service to the Territory is maintained at approximately seven-weekly intervals by Burns Philp & Co. Ltd., Sydney. The journey from Sydney to Norfolk Island occupies about four days.

The construction of the aerodrome on the island was completed during 1943. A fortnightly passenger and air freight service between Sydney and Norfolk Island is maintained by Qantas Empire Airways Ltd. There is also a weekly air service from New Zealand.

There are approximately 50 miles of usable road on Norfolk Island. As a substantial section of the population possesses private motor cars and taxi-cab services are available, transport is almost exclusively by motor vehicle.

The cable from Great Britain via Vancouver, Fanning Island, Fiji bifurcates at Norfolk Island, one line connecting with New Zealand, the other with Brisbane. Until 10th June, 1947 the post office at Norfolk Island was part of the Commonwealth postal system, but as from that date Norfolk Island was established as a separate postal administration with its own issue of stamps.

6. *Social Condition.*—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 headmaster and assistant teachers are lent by the New South Wales Education Department, but they are paid by the Norfolk Island Administration. The number of scholars enrolled at 30th June, 1954 was 144. Dental examination and free dental service are provided for school children.

The Court of Norfolk Island is a court of record with dual jurisdiction. Sitting in its Limited Jurisdiction the Court has power to hear and determine actions of claims not exceeding £30 and to punish summarily all crimes and offences involving a pecuniary penalty or a sentence of imprisonment not exceeding six months. In its Full Jurisdiction the Court can hear and determine all actions, punish all crimes and offences, grant probate and letters of administration, hear and determine appeals from any conviction of the Court sitting in its Limited Jurisdiction, and has authority in all other matters. An appeal lies to the High Court of Australia from any judgment, order, decree or sentence of the Court sitting in its Full Jurisdiction when constituted by a Judge or the Chief Magistrate.

7. *Finance*.—The revenue of the Territory, together with an annual grant from the Commonwealth Government in aid of 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 sources of revenue in 1953–54 were:—Sale of liquor, £24,709; Commonwealth subsidy, £58,000; customs duties, £6,994. The total revenue was £139,236. Major items of expenditure in 1953–54 were:—administrative, £20,995; miscellaneous services, £15,777; repairs and maintenance, £26,613; business undertakings, £22,842. Total expenditure amounted to £104,379. In 1938–39 revenue amounted to £11,784 and expenditure to £13,565.

## PAPUA AND NEW GUINEA.

### § 1. Administration.

Following the outbreak of the Pacific War, civil administration in Papua and New Guinea was suspended on 11th February, 1942 and military control commenced. The Territory of New Guinea came under Japanese occupation in 1942, but the greater part had already been recaptured by Australian and Allied Forces when the Japanese surrendered in August, 1945. Information relating to the transfer back from military to civil control under the Papua-New Guinea Provisional Administration Act 1945–1946 may be found in Official Year Book No. 39 and earlier issues.

The Papua-New Guinea Provisional Administration Act 1945–1946 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 provides for an Administrative Union, one Administrator, one Supreme Court and one Public Service.

Provision is made for an Executive Council of not less than nine officers of the Territory, who shall be appointed by the Governor-General, and a Legislative Council consisting of twenty-nine members, namely:—(a) the Administrator; (b) sixteen officers of the Territory (who shall be known as official members); (c) three non-official members possessing such qualifications as are provided by Ordinance and elected, as provided by Ordinance, by electors of the Territory; (d) three non-official members representing the interests of the Christian missions in the Territory; (e) three non-official native members; and (f) three other non-official members.

The Legislative Council was inaugurated on 26th November, 1951 by His Excellency Sir John Northcott, while Administrator of Australia.

Subject to the Act, provision may be made by Ordinance for the establishment of Advisory Councils for Native Matters and Native Village Councils.

The Act also makes provision for the continuance of the existing laws of the Territory of Papua and the Territory of New Guinea.

### § 2. Finance.

The following table shows particulars of the financial operations of the Papua and New Guinea Administration since its inception in July, 1949, together with those of the combined Territories in 1938–39. Further information on each Territory will be found on pages 140 and 147.

**TERRITORY OF PAPUA AND NEW GUINEA : REVENUE AND EXPENDITURE.**  
(£.)

Particulars.	1938-39.	1949-50.	1950-51.	1951-52.	1952-53.	1953-54.
<b>REVENUE.</b>						
<b>Taxation—</b>						
Customs Duties .. .. .	257,460	915,036	970,880	1,475,117	1,455,054	1,931,551
Stamp Duties .. .. .	7,061	8,211	13,267	10,742	7,217	36,266
Licences .. .. .	15,185	17,574	20,140	39,104	49,435	57,432
Other Taxes .. .. .	45,831	..	..	..	..	..
<b>Commonwealth Grants</b>	42,500	4,184,454	4,354,564	5,285,559	4,657,022	5,421,951
Post Office .. .. .	40,548	52,707	69,967	94,946	158,013	126,861
Lands .. .. .	24,429	25,738	29,034	48,172	63,218	71,268
Forestry .. .. .	(a)	34,849	33,436	105,676	94,362	144,879
Agriculture .. .. .	11,381	31,758	61,496	75,659	66,445	58,112
<b>Mining—</b>						
Royalty on Gold .. .. .	107,975	58,636	67,845	79,684	109,246	71,480
Other .. .. .	18,682	12,248	11,237	9,084	9,697	9,037
Harbour Dues, Wharfage, etc. ..	16,930	128,819	144,708	111,566	87,002	52,818
Fees, Fines and Forfeitures, n.e.l. ..	11,122	29,799	44,397	50,587	54,571	57,867
Electric Light and Power Supply ..	6,004	30,837	48,455	65,573	91,401	111,695
Other Revenue .. .. .	36,969	54,328	351,387	224,957	182,773	239,832
<b>Total</b> .. .. .	642,167	5,584,974	6,220,813	7,676,426	7,091,356	8,391,379
<b>EXPENDITURE.</b>						
Post Office .. .. .	8,875	151,733	183,769	246,520	255,186	275,457
<b>Social Expenditure—</b>						
Education .. .. .	12,904	395,903	393,032	438,322	409,388	469,758
Public Health Services, Hospitals, etc. ..	113,571	908,495	1,172,958	1,351,508	1,176,800	1,231,851
Law, Order and Public Safety ..	92,797	315,343	487,295	553,010	502,746	531,495
Grants to Missions for Education and Medical Services ..	14,238	46,021	153,532	117,516	153,200	130,043
District Services and Native Affairs ..	128,398	788,174	820,394	932,773	705,020	716,415
Wages due to Natives under Pre-war Contracts .. .. .	..	95	..	..	..	..
Compensation to Natives for War Injuries and War Damage .. ..	..	272,567	116,421	286,653	280,505	106,504
New Works, Buildings, etc. .. ..	(b) 69,146	919,933	1,413,234	1,755,970	1,592,600	2,258,150
Other Public Works and Services ..	57,422	745,199	315,520	605,820	593,773	800,702
Electric Light and Power .. .. .	2,837	116,802	153,460	243,811	282,102	310,137
Legislative, General Administration and Other Expenditure .. ..	179,514	887,955	1,176,797	1,164,344	1,170,770	1,414,403
<b>Total</b> .. .. .	679,702	5,548,420	6,386,412	7,606,257	7,122,180	8,335,095

(a) Included with Lands.

(b) Trust Territory of New Guinea only.

### § 3. Agriculture and Animal Industry.

1. Soils.—Although a large proportion of Papua and New Guinea is covered by skeletal soils unsuitable for agriculture, there are extensive areas in all parts 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 of 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 Ramu 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 thus 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, between the end of December and 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 in. at Gasmata in New Britain and 231 in. at Kikori in Papua, to about 88 in. at Wewak in New Guinea and 40 in. at Port Moresby.

Although the Territory has no summer and winter, it has a wide temperature range, due to altitude differences, 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. **Suitable Crops.**—The crops which can be grown in Papua and New Guinea include copra, rubber, tea, coffee, cocoa, jute, kenaf, manila hemp, sisal, rice, pepper, tobacco, peanuts, kapok, cassava, ginger, cinchona, nutmeg, vanilla, tropical fruits and vegetables, sago and tung oil.

The agricultural commodities which, because of their marketing prospects and suitability for production in the Territory, are considered to have the best possibility for development are copra, rubber, cocoa, coffee, tea, fibres and peanuts for export; and rice, fresh meat, dairy products, fresh vegetables and fresh fruit (e.g. bananas, papaws, citrus and pineapples) for local consumption.

4. **Plantation Agriculture.**—The principal plantation crops cultivated are coconuts, rubber, cocoa and coffee.

*Coconuts.* Territory coconut plantations suffered severely from damage and neglect during the 1939-45 War, but rehabilitation has been rapid and about 500 plantations together with native coconut stands produced 83,368 tons of copra for export in 1953-54, valued at £5,915,490. The area (excluding native stands) planted with coconut palms in March, 1954 was 234,935 acres. In addition, 188 tons of desiccated coconut, valued at £28,960, 10,215 tons of coconut oil valued at £1,397,999 and 4,840 tons of coconut meal valued at £102,048 were exported in 1953-54. A copra crushing mill was established at Rabaul in 1952.

A contract with the United Kingdom commenced on 1st March, 1949, for a period of nine years, for the sale of Territory copra in excess of Territory and Australian requirements. The price of copra sold for the first contract year, 1949, was £60 per ton f.o.b. Territory ports, and the contract provides that the price for each subsequent year is to be not more than 10 per cent. higher or lower than that for the preceding year and is to be negotiated before the end of the preceding year. Early in 1952 the termination date of the contract was varied to 31st December, 1957 and prices are now negotiated on the basis of calendar years. The price for the calendar year 1955 is £81 5s. per ton f.o.b. Territory ports for fair merchantable sun-dried copra with small price differentials for the other grades.



*Rubber.* Rubber exports have more than doubled since before the Japanese invasion, increasing from an average of 1,352 tons per year during the three years 1937-38 to 1939-40 to 3,145 tons in 1953-54, valued at £612,788. A total area of 27,071 acres had been planted with rubber trees up to March, 1954.

*Cocoa.* Exports of cocoa beans increased from 207 tons in 1949-50 to 727 tons in 1953-54, valued at £249,588. The area (excluding native stands) planted with cocoa trees in March, 1954 was 19,395 acres.

*Coffee.* Exports of coffee beans increased from 21 tons in 1949-50 to 37 tons in 1953-54, valued at £60,211. The area (excluding native stands) planted with coffee trees in March, 1954 was 806 acres.

5. *Native Agriculture.*—Most of the native inhabitants of Papua and New Guinea are agriculturists 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 usually 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 natives 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. In coconut areas large quantities of copra are produced. In 1953-54 native copra production was estimated at about 20,000 tons.

In many localities the natives follow a farming system known as "Bush Fallowing Rotation". The inhabitants of each village have, at any one time, a number of distinct and separate cleared garden areas in the land surrounding the village. The garden clearings may be located some miles from the village and are not usually contiguous. Each garden area may be made up of a number of distinct plots owned by individual natives or families. Communal ownership of gardens is rare. The number of garden clearings (and their area) attached to each village depends on the size of the village and the fertility of the land.

The method of cultivation followed is for the jungle trees to be felled and undergrowth cleared with axes and knives, the larger trees being usually left standing. The timber and foliage is allowed to dry out and then burnt. In some localities there is a little cultivation before the crops are planted, and root vegetables are placed in holes dug with a stick. In other places, however, there is careful preparation of the soil. Some weeding is done while the crops are growing. After harvesting, a second crop is rarely planted immediately in that garden area, but a new area of land is selected, cleared, burnt and planted. The natives return to the first area to harvest fruit from trees, such as papaw and banana, that may have been planted in the garden, but these are soon submerged in the new growth which quickly appears. The plot is allowed to lie fallow for a number of years, the period varying from 7 to 10 years or even longer, depending upon the local population pressure. During this time high secondary jungle has probably grown. Ultimately the natives return to the original plot, and clear, burn and plant again. The cycle continues year by year throughout the agricultural land belonging to the village. The foregoing is a broad generalization of the method followed. However, there are many variations.

The business of growing 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. However, other work 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 improved land use in village gardens for food production for local consumption, as well as for economic production of crops for sale, takes a high priority in Government policy.

6. *Animal Industry.*—At 31st March, 1954 the livestock in the Territory consisted of 7,522 cattle, 1,879 sheep, 3,483 goats, 4,841 pigs, besides horses, mules and poultry. These figures exclude native-owned livestock. The introduction of rabbits, foxes, hares and monkeys is prohibited.

A number of British breeds of cattle are represented in Territory herds. For dairying Jersey and Australian Illawarra Shorthorns are most popular, while Black Poll, Polled and Horned Shorthorns are represented for meat production. Under good management these breeds have done well in the Territory.

Most of the sheep now in the Territory are Romney Marsh breed located at Nondugl in the highlands of New Guinea. This breed has been tried in various parts of the Territory. It produces a good carcass, and in drier parts a useful sheep. There are also some Asiatic sheep, and crossed with Romney Marsh they produce good carcasses and are hardy. Current investigations on sheep raising include tests and observations to determine the most suitable breeds and areas for grazing for both mutton and wool.

## PAPUA.

### § 1. General Description.

1. *Early Administration.*—Particulars of the early administration of Papua are given in Official Year Book No. 19, p. 576.

2. *Administration by Commonwealth of Australia.*—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 now under the control of the Commonwealth, but not included within it, and is divided into six magisterial districts, namely, Southern Highlands, Western, Gulf, Central, Milne Bay and Northern.

3. *Area, etc.*—Papua lies wholly within the tropics. The northernmost point touches 5° S. latitude; its southernmost portion, comprising Sudest 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 considerably 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 about 90,540 square miles, of which 87,786 are on the mainland, and 2,754 on the islands. A reference to the physical characteristics of the Territory appears in previous issues of the Official Year Book (*see* No. 18, p. 633).

### § 2. Population.

1. *Non-indigenous Population.*—At the Census of 30th June, 1954 the non-indigenous population of Papua was 3,867 males, 2,446 females, 6,313 persons. Corresponding figures at the Census of 30th June, 1947 were, respectively, 2,057, 1,182 and 3,239.

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 1933 Census, it numbered only 1,148, but amounted to 5,295 at the 1954 Census (3,372 males and 1,923 females).

The non-European section of the non-indigenous population at 30th June, 1954 was 1,018, of whom 34 were full-bloods and 984 were half-castes with one of the parents a European. Comparable figures as at the 1947 and 1933 Censuses, respectively, were:—full-bloods—194 and 786; half-castes—503 and 227.

2. *Native Population.*—It is not possible to give exact data regarding the number of natives, 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, 1954 numbered 488,396 persons. This comprised 286,196 enumerated persons (151,464 males and 134,732 females) and 202,200 estimated. The total number was distributed through districts as follows:—Southern Highlands, 169,916; Western, 47,988; Gulf (including the former Delta district), 60,771; Central, 81,972; Milne Bay, 82,298; Northern, 45,451.

### § 3. Native Labour, Taxation, Health, etc.

1. **Native Labour.**—The laws relating to the employment of natives are uniform in Papua and New Guinea, and may be found in the Native Labour Ordinance 1950–53. These provide for the engagement of natives under a permit. Permits are issued by a District Officer, and authorize the holder to engage natives for employment on his own behalf, or on behalf of a registered employer who has authorized him to act on his behalf. Under this Ordinance a native may be issued with a Native Assistant's Permit, which authorizes him to solicit natives to work for his employer, or for other employers who have authorized him to act on their behalf.

Natives are employed under written agreements which have been sanctioned and attested by a District Officer. The period of the agreement must not exceed two years, but one further agreement, for a period not exceeding one year, may be drawn up, if both parties desire it. The period, in both cases, begins on the day on which the agreement is sanctioned and attested. Both parties may, by mutual consent, and with the approval of a District Officer, cancel an agreement. On the termination of an agreement, employers are required to repatriate workers to their own villages.

Natives under the age of sixteen years may not be employed. Employers must provide native employees with housing, medical attention, food and clothing free of charge. A minimum monthly wage of fifteen shillings and a working week of 44 hours are prescribed by Ordinance. Provision is also made for compensation in the case of injury or death.

2. **Native Taxes.**—No direct taxes have been levied on natives since the war. Native Village Councils (which are formed voluntarily by the natives) are, however, empowered to levy rates on villagers for the purpose of providing for local services carried out by the Councils.

3. **Health.**—The Department of Health has the general oversight of all medical and dental services. It maintains a large number of hospitals, which are staffed by fully-trained European medical personnel and trained native assistants, for both European and native patients. The Department has adequate facilities for research in tropical medicine.

At 30th June, 1954 there were in the Territory three European hospitals (one privately controlled); 31 native hospitals (one private and 14 mission); one mental hospital; 221 village aid posts (72 mission); 112 welfare clinics (45 mission); and three Hansende colonies. The Missions employ their own doctors and nurses in their medical establishments. A training school has been established for the purpose of training natives in first aid, elementary physics, chemistry, anatomy, physiology and pathology in preparation for their employment as Native Medical Assistants. Natives are also attending the Central Medical School at Suva, Fiji, to be trained as Native Medical Practitioners. The chief complaints treated in hospital are malaria, yaws, tropical ulcers, respiratory infections, hookworm, venereal and skin diseases.

### § 4. Land Tenure.

The basic principle of the land laws of Papua is that all land not specifically alienated by due process from the natives is native land. At 30th June, 1954, of the total estimated area of Papua, approximately 58,000,000 acres, only 1,838,827 acres had been alienated. The distribution of land in Papua at 30th June, 1954, according to tenure, was as follows:—alienated: held by private non-indigenous inhabitants—freehold, 24,284 acres, leasehold, 278,652 acres; held by administration, 1,499,268 acres; native reserves, 60,907 acres; total alienated, 1,863,111 acres.

Although, as the figures above show, a small amount of freehold land exists in Papua, no further estates in fee-simple or other estate in freehold can be granted under the provisions of the Land Ordinance 1911–1952 of Papua. Leases of various kinds may be granted by the Administration. The principal types of lease 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. For agricultural leases the rental rate per annum is 5 per cent. of the unimproved value and for pastoral leases the rate is  $2\frac{1}{2}$  per cent. Concessions regarding freedom from, or reduced, rents apply during the early developmental periods of agricultural and pastoral leases. All leases are subject to improvement conditions which may be varied or relaxed under certain circumstances. The following classes of leases were in force in Papua at 30th June, 1954 :—Agricultural, 630—246,673 acres; pastoral, 26—29,695 acres; residence, 149—198 acres; special, 164—848 acres; mission, 323—839 acres; business, 100—192 acres; town allotment, 495—207 acres; total, 1,887—278,652 acres.

Leases of Crown land may be obtained from the Administration. 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. If a lease of land which is native-owned is desired, application must be made to the Administration. If the native owners are willing to sell the land, and the Administrator is satisfied that the land over which the lease is applied for is not required or likely to be required by the native owners, and if otherwise satisfied that the lease should be granted, the Administration itself purchases the land and grants an appropriate form of lease to the applicant.

The registration of titles, interests and dealings in alienated land is provided for under the Real Property Ordinance 1913-1951 modelled on the Torrens system of land registration. A start has been made on the recording of native land ownership under the Native Land Registration Ordinance 1952.

## § 5. Production.

1. *General*.—The products of the Territory are obtained from its agricultural, forest, mining and fishing industries. A factory for the extraction of cutch from mangrove bark has been established at Kikori in the Gulf District. Native subsistence agriculture, fishing and hunting produce most of the food requirements of the native population. The main native agricultural products are taro, yams, sweet potatoes, bananas and papaw. Non-indigenous enterprise produces most of the commodities exported. Natives however, do produce copra for export and native enterprise in other fields of agricultural production for export purposes is being encouraged. The principal agricultural products of Papua for the export trade are copra and rubber. All of the timber milled during 1953-54 was absorbed by local building requirements. The main products of fisheries exported from Papua are trochus and green snail shell. Gold and manganese, zinc-lead and copper ores have been mined in commercial quantities.

Agricultural and pastoral conditions in Papua and New Guinea have been dealt with, for the sake of convenience, as a whole, and reference should be made to pp. 131-134 for information on the soils, climate, crops, methods of cultivation, etc., throughout both Territories. The following paragraphs relate to forestry, mining and water-power resources in Papua.

2. *Forestry*.—(i) *General*. 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 page 143.

(ii) *Timbers*. 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. Kwila, the most important hardwood found in millable quantities in Papua and New Guinea occurs in important stands east of Port Moresby. Mangroves occur in large areas fringing the Gulf of Papua and are cut for the preparation of cutch from the bark.

(iii) *Survey Work.* Forestry field work is being carried out in Papua with a view to assessing the forest resources available and to survey areas that will be thrown open for cutting.

(iv) *Permits.* At 30th June, 1954 thirteen permits were current. The total area of forest involved was 66,136 acres. Cutting on private land brought the total number of mills to 22, and the total cut of timber for the year to 2 million super. feet. No timber was exported.

3. *Mining.*—(i) *Variety of Minerals.* 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, but mostly not in deposits of economic importance.

Gold was discovered in 1888 and has been found in many parts of Papua. Before the 1939-45 War gold was an important item in the Territory's production and in 1938-39 (valued at more than £150,000) was the major export, but since the war gold production has dwindled to insignificance. The average annual estimated quantity of gold yielded for the five years ended 1952-53 was less than 300 fine oz. compared with almost 28,000 fine oz., the average for the last three pre-war years. During 1953-54 the production of gold realized £4,785, bringing the total value of gold won up to 30th June, 1954 to £3,299,836.

Of precious stones, only the topaz and beryl have been obtained. Large beds of apparently good coal also exist.

Manganese ore valued at £1,181 was exported from Papua during the year ended 30th June, 1954. 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.

(ii) *Oil Search.* Since oil search began in Papua in 1911 over £11 million has been spent. The existence of petroleum has been traced at scattered intervals over a large area. At 30th June, 1954 two companies held petroleum prospecting permits under the provisions of the Petroleum (Prospecting and Mining) Ordinance 1951-1954. Oil prospecting was mainly confined to the Gulf and Western Divisions.

4. *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.

## § 6. Trade, Transport and Communication.

1. *Customs Tariff.*—The present customs tariff has been in operation since 1st July, 1950. It provides high revenue rates on ale, spirits, wines, timepieces, cigarette papers, fancy goods, jewellery and certain apparel and piece-goods made of silk. Of 75 items now mentioned in the import schedule, 59 are on the free list and two are partially free. The tariff allows duty-free treatment of necessities, but increases rates on non-necessities. The purpose of the revision was to relieve both general industrial costs and the basic costs of living with a view to encouraging further development of the Territory. There is a by-law provision under the Customs Tariff to enable duty-free admission to be granted for plant and machinery to be used mainly for developmental purposes. Under this provision most agricultural machinery would be admitted duty free. The rate of duty on items not specified in the schedule is 10 per cent. *ad valorem*. No preferential rates are specified in the schedule. A surcharge equal to 10 per cent. of duty payable was imposed as from 17th January, 1952. Export duties are imposed on copra, cocoa, rubber, mother-of-pearl, trochus and burgos shell, and gold.

Provision is made in the Australian Customs Tariff (Papua and New Guinea Preference) 1936 for the free entry into Australia of certain goods produced and imported direct from Papua (*see* Chapter VIII.—Trade), and a proclamation of 25th September 1935 exempted from primage duty goods produced or manufactured in the Territory

2. Imports and Exports.—(i) *Total Values.* The table below summarizes and compares the values of imports and exports for the pre-war year 1938–39 and the post-war years 1951–52 to 1953–54.

## TERRITORY OF PAPUA : IMPORTS AND EXPORTS.

( £.)

Particulars.	1938–39.	1951–52.	1952–53.	1953–54.
Imports .. .. .	514,808	5,858,223	4,895,869	5,722,166
Exports—				
Domestic Exports .. .. .	410,666	2,376,165	1,985,535	1,616,786
Non-Domestic Exports .. .. .	79,492	412,992	337,370	304,376
Total Exports .. .. .	490,158	2,789,157	2,322,905	1,921,162

(ii) *Imports.* The following table summarizes the sources of imports. In the post-war years Australia has supplied a far greater proportion of the imports than was the case pre-war and this proportion has continued to increase in each successive post-war year. The increase in total imports in 1953–54 was due partly to increased purchasing power arising from the higher Commonwealth Government grant and partly to the progressive relaxation of import restrictions imposed to conserve foreign exchange.

## TERRITORY OF PAPUA : COUNTRY OF ORIGIN OF IMPORTS.

( £.)

Country of Origin.	1938–39.	1951–52.	1952–53.	1953–54.
Australia .. .. .	239,105	3,897,992	3,691,696	4,167,341
Canada .. .. .	(a)	11,097	22,102	4,305
China .. .. .	..	15,483	6,861	11,670
Hong Kong .. .. .	..	74,265	55,426	132,236
India .. .. .	..	58,579	36,038	36,199
United Kingdom .. .. .	56,699	765,760	276,570	420,071
United States of America .. .. .	73,446	370,401	332,307	422,658
Other Countries .. .. .	145,558	664,646	474,869	527,686
Total Imports .. .. .	514,808	5,858,223	4,895,869	5,722,166

(a) Not available, included in " Other countries ".

(iii) *Exports.* (a) *Countries of Destination.* The countries of destination of Papuan exports are shown below. The reduction in the value in 1953–54 of total exports and exports to Australia in particular arose from the continued decline in the price of rubber from the peak level it attained in 1951–52, and the cessation of production of desiccated coconut. Australia imports practically the whole of the Territory's production of these crops.

## TERRITORY OF PAPUA : COUNTRY OF DESTINATION, OF EXPORTS.

(£.)

Country of Destination.	1938-39.	1951-52.	1952-53.	1953-54.
Australia .. .. .	409,408	2,582,567	1,917,493	1,690,060
United Kingdom .. .. .	25,840	188,430	342,014	154,483
Other Countries .. .. .	54,910	18,160	63,398	76,619
Total Exports .. .. .	490,158	2,789,157	2,322,905	1,921,162

(b) *Principal Commodities.* The following table provides details of the value of the principal domestic exports for the same years. The reduction in value of total domestic exports was caused by the decline in returns from rubber and "other coconut products". The considerable decrease in value of the latter was due to the cessation of production of desiccated coconut.

## TERRITORY OF PAPUA : PRINCIPAL DOMESTIC EXPORTS.

(£.)

Commodity.	1938-39.	1951-52.	1952-53.	1953-54.
Rubber .. .. .	114,949	1,244,259	736,073	612,788
Copra .. .. .	57,999	958,109	848,177	883,814
Other Coconut Products .. .. .	48,140	127,610	328,134	27,617
Cocoa Beans .. .. .	..	588	3,111	3,638
Kenaf Fibre .. .. .	..	4,865	5,740	1,308
Gold .. .. .	152,103	2,185	2,051	4,785
Shell (Marine) .. .. .	9,600	19,281	41,220	38,803
Hides and Skins (Crocodile) .. .. .	105	11,273	13,823	23,038
Other .. .. .	27,770	7,995	7,206	20,995
Total Domestic Exports .. .. .	410,666	2,376,165	1,985,535	1,616,786

3. *Shipping.*—In 1952-53, 125 British and 6 vessels of other nationalities called at Territory ports and discharged 57,303 tons of cargo and loaded 22,537 tons. Corresponding figures for 1953-54 were 150, 1, 62,035 and 27,111 respectively.

Regular passenger and freight services operate between Australia and the Territory of Papua. Vessels trading between Australia and the East also call at Territory ports. Coastal and inter-island shipping services are maintained by vessels operating from the two principal ports of Port Moresby and Samarai.

4. *Other Forms of Transport and Communication.*—Air services link Papua with Australia, New Guinea and the British Solomon Islands. There were 81 aerodromes and seaplane alighting areas in Papua at 30th June, 1954, and of these 23 were the responsibility of the Department of Civil Aviation, 25 were operated and maintained by the Administration, and 29 owned and maintained by Missions, plantations and mining interests. Much of the internal traffic and freight is carried on a charter basis. Regular air services operate from Port Moresby to Daru and Lake Kutubu in the West, Samarai and Esa Ala in the East, to Lae, Wau, Madang and Wewak in New Guinea, and to Rabaul, Manus and Bougainville.

There are nearly 955 miles of road in Papua, about 454 miles being suitable for medium and heavy traffic, and the greater proportion located in the Central and Northern Districts, which are north-east of Port Moresby.

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 Service 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 to outstations from Port Moresby and Samarai.

A medium-wave broadcasting station, 9PA Port Moresby, operates under the control of the Australian Broadcasting Commission.

### § 7. Finance.

The principal source of revenue for the Territory of Papua is the annual grant received from the Commonwealth Government, which in 1953-54 amounted to £2,318,905. Customs duties, £723,080 in 1953-54, are next in importance. The total revenue during 1953-54 was £3,296,593 compared with £2,777,271 in 1952-53 and £165,823 in 1938-39. Of a total expenditure of £3,240,309 in 1953-54, £1,543,739 was spent on public works, £455,932 on medical services, £217,738 on native affairs and £1,022,900 on ordinary votes. Expenditure amounted to £2,808,095 in 1953-54 and to £166,330 in 1938-39.

For particulars of the finances of the combined Territory administration, *see* p. 130.

## TRUST TERRITORY OF NEW GUINEA.

### § 1. General Description.

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 coast of the Territory has 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"), 69,700 sq. miles; Bismarck Archipelago—New Britain, 14,600 sq. miles, New Ireland, 3,340 sq. miles, Lavongai, 460 sq. miles, Admiralty Islands, 800 sq. miles, total Bismarck Archipelago, 19,200 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, p. 613, and in the *Official Handbook of the Territory*.

### § 2. Government.

1. **The Military Occupation (1914-18 War).**—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.

2. **Mandate (1920).**—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 under Mandate from the League of Nations to the Government of the Commonwealth. The issuing of the Mandate was, however, 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 Official Year Book No. 33 (*see* p. 264.)

3. **1939-45 War.**—For the events following the outbreak of the Pacific War and the formation of the Papua-New Guinea Provisional Administration in 1945, *see* p. 130 of this chapter and earlier issues of the Official Year Book.



4. **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 Official Year Book No. 39, pp. 355-7.

5. **Administration.**—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.

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 under a District Commissioner, assisted by a small staff.

### § 3. Population.

1. **Non-indigenous Population.**—At the Census of 30th June, 1954 the non-indigenous population of the Territory of New Guinea was 7,201 males, 4,241 females, 11,442 persons. Corresponding figures at the Census of 30th June, 1947 were, respectively, 4,369, 1,831 and 6,200.

The European population of the Territory increased from 64 in 1885 to 3,191 at the Census of 1933, and it reached its pre-war peak of 4,608 in 1939. At the 1954 Census the European population numbered 8,020 (5,185 males and 2,835 females).

Malays seem to have been the first Asians brought by the Germans to German New Guinea; 37 of them were recorded on the mainland in 1885. About 1889 the New Guinea Company began to bring Chinese, Malays and Javanese in growing numbers from Singapore and Java to work on the plantations; in the year 1892 there were about 1,800 Asians on the mainland. By 1898 the number had decreased to 300 or 400, but it had risen to 1,830 at the time of the 1933 Census, and at 30th June, 1941 numbered 2,228, mostly Chinese. At the Census of 30th June, 1954 non-Europeans numbered 2,404, of whom Chinese (2,192) constituted the major proportion, whilst half-castes with one of the parents a European numbered 1,018.

The total non-indigenous population at the Censuses of 1921, 1933, 1947 and 1954 was, respectively, 3,773, 5,216, 6,200 and 11,442 persons.

2. **Native Population.**—The enumerated and estimated native population of the Territory of New Guinea as at 30th June, 1954 numbered 1,195,307 persons, comprising enumerated, 1,010,593 (538,113 males and 472,480 females), and estimated, 175,826. The total population was distributed throughout the several districts as follows:—Eastern Highlands, 300,234 persons; Western Highlands, 182,264; Sepik, 220,308; Madang, 116,611; Morobe, 189,410; New Britain, 87,892; New Ireland, 34,584; Bougainville, 48,990; Manus, 15,014.

### § 4. The Natives.

1. **General.**—The natives 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*, Pt. V.)

2. **Land Tenure.**—Native customs in regard to the ownership and use of land may be briefly outlined as follows. The ownership and use of the land are generally individual, although, in some rare cases, particularly in North Bougainville, the communal system exists. In districts where a great many coconut palms are growing on native lands

it is often found that the land is the property of a chief or of one of the old men of the tribe, and that the coconut palms growing thereon are divided into small groves, and are the property of several members of the tribe. Customs with regard to the use of unoccupied forest lands vary. Right of inheritance to land is almost invariably through the maternal branch. (*See Official Year Book No. 17, p. 634, and Official Handbook of the Territory.*)

3. **Research Work.**—Research work among the native peoples of New Guinea was initiated under the German Administration and this work has been continued on a wider scale.

4. **Education.**—Education in the Territory is provided by the Administration and various mission organizations. Schools for natives have also been established by Native Village Councils. The Education Ordinance 1952 enables the Administrator to establish an education advisory board, district education committees, European and native schools and to grant financial aid for educational purposes. European teachers are recruited from Australia, and native teachers are trained in the Territory by the Administration and the Missions. During the year ended 30th June, 1954, 79 schools were maintained by the Administration for 4,495 children, of whom 468 were Europeans, 329 Asians, 36 of mixed race and 3,662 natives. The total number of pupils in the various grades of mission schools was 88,492, of whom there were 18 Europeans, 364 Asians and 172 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 £56,597 was distributed among the Missions as grants-in-aid during the year ended 30th June, 1954.

5. **Health of Natives.**—The main diseases affecting the natives are malaria, yaws, respiratory diseases, dysentery, tropical ulcers, hookworm and filariasis. The Department of Health is engaged in combating these diseases with a staff of fully-trained medical officers, medical assistants and orderlies in native hospitals at Administration stations and sub-stations. Its staff also supervises hospitals on plantations. It has adequate facilities for research in tropical medicine, and a training scheme for natives as medical orderlies. The Department also provides the Missions with much of their medical stores and supplies, and maintains two Hansenide colonies for the treatment of natives suffering from Hansen's Disease. The Department also undertakes the general oversight of sanitary conditions in the Territory.

6. **Missions.**—A number of mission societies operate in the Territory.

The Society of the Sacred Heart of Jesus works in the Bismarck Archipelago, the Society of the Holy Ghost, the Franciscan Order and the Society of the Divine Word along the coast of north-east New Guinea from Sepik to the Dutch border and in the Central Highlands, and the Marists in Buka and Bougainville. These are Roman Catholic Missions. The Protestant Missions are the Methodist Overseas Mission in New Britain and New Ireland, the New Zealand Methodist Mission in Bougainville, the Lutheran Mission (supported and staffed by the Lutheran Churches in Australia and America) which works in Morobe, Madang, the Eastern and Western Highlands, New Britain and Manus, the New Guinea Anglican Mission in New Britain, the Seventh Day Adventist Mission in Bougainville, New Britain and the mainland of New Guinea, the East and West Indies Bible Mission and the Baptist Mission in the Central Highlands. The South Seas Evangelical Mission (Undenominational) and the Assemblies of God Mission are also working in the Sepik area. All these societies include teaching with their missionary work.

### § 5. 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. In New Guinea, although under the Land Ordinance 1922-1951 grants of freehold estates may be made, as a matter of policy freehold estates are no longer granted by the Administration, all grants now being restricted to leaseholds. However, in New Guinea 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 in New Guinea that dealings in land are subject to 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, 1954, 1.80 per cent. was alienated. The following was the distribution according to tenure at 30th June, 1954 :—alienated : held by private non-indigenous inhabitants—freehold, 519,297 acres, leasehold, 228,480 acres ; held by administration, 324,496 acres ; native reserves, 26,926 acres ; total alienated, 1,093,199 acres.

Leases in force at 30th June, 1954 were as follows :—Agricultural, 643—186,624 acres ; dairying, 6—1,300 acres ; pastoral, 9—24,606 acres ; residential and business, 915—1,013 acres ; special, 107—2,297 acres ; mission, 558—2,035 acres ; leases granted to Chinese in towns, 302—90 acres ; long period leases from German régime, 104—4,515 acres ; total, 2,644—222,480 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 an Ordinance entitled the *Lands Registration Ordinance 1924-1951*. The land registers were lost during the 1939-45 War, and provision for restoration of the lost titles is made in the *New Guinea Land Titles Restoration Ordinance 1951-53*. A start has been made on the recording of native land interests under the *Native Land Registration Ordinance 1952*.

## § 6. Production.

1. *General*.—The products of the Territory are obtained from its agricultural, mining, fishing and forestry industries. A copra crushing mill at Toboi, near Rabaul, is producing coconut oil at the rate of about 10,000 tons a year. A company (Commonwealth-New Guinea Timbers Ltd.), in which the Commonwealth Government has a controlling interest, has erected a modern factory at Bulolo for the manufacture of plywood and veneer. Production commenced in February, 1954. Native subsistence agriculture, fishing and hunting produce most of the food requirements of the native population. The main native agricultural products are taro, yams, sweet potatoes, coconuts, bananas and papaw. Non-indigenous enterprise produces most of the commodities exported. Natives, however, produce copra for export and in recent years the natives 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 cocoa. Most of the timber milled during 1953-54 was absorbed by local building requirements, exports of sawn timber amounting to approximately 10 per cent. of production. The main products of fisheries exported from New Guinea are trochus and green snail shell. Gold is the principal mineral mined.

For information on the agricultural and pastoral industries, which for the sake of convenience is related to the Territory of Papua and New Guinea as a whole, see pp. 130-133. The following paragraphs relate to the timber, fishing and mining industries in the Territory of New Guinea.

2. *Timber*.—Surveys of the timber resources of the Morobe District indicate that there are approximately 500 million super. feet of timber in the pine forests of the Bulolo Valley. This is supporting sawmills cutting for local use and export, and fitches are also being exported to Australia for the manufacture of battery separator veneer. Commonwealth-New Guinea Timbers Ltd. are now cutting the pine forests for plywood production and the area will be progressively reforested as it is cut. Two sawmills controlled by the Administration established at Yalu and Keravat are supplying local requirements. Exports of sawn timber amounted to nearly 1,400,000 super. feet during 1953-54 and the log export totalled 775,149 super. feet.

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 ; the grant of emergency timber permits to provide 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 natives but must be obtained through the Administration. A prescribed royalty is payable on all forest produce taken under permit or licence. The forest area being exploited in 1953-54 was approximately 271,172 acres.

3. **Fisheries.**—The wealth of the waters of the Territory has been little exploited. Fish are caught at many places along the coast to supply the small local demand of the natives and of the few resident Europeans. Trochus shell to the value of £131,011 and green snail shell to the value of £39,310 were exported during 1953–54.

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 discovered in the Morobe District in 1926; the field is situated about 90 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 occurs as magnetite and haematite in the Baining District, apparently in large quantities. 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. Except for gold and silver, however, production of minerals has not proved economical.

The granting of rights, leases and claims for mining purposes are provided for in the Mining Ordinance 1928–1947 and Regulations thereunder.

The production of gold in New Guinea during the last three pre-war years averaged about 228,000 fine oz. a year, at an average value of £2,000,000. In 1940–41 it amounted to 263,113 fine oz., valued at £2,808,835. Although the market price of gold has been fixed at a much higher level than in 1938–39, mining costs have risen to a much greater extent and, as a consequence production since the war has been on a much smaller scale, averaging 91,000 fine oz., at a value of £1,200,000 a year over the five years ended 1951–52. Production in 1953–54 amounted to 90,856 fine oz., valued at £1,409,480, and in 1952–53 to 138,694 fine oz., valued at £2,147,766.

The Petroleum Ordinance 1936 has been superseded by the Petroleum (Prospecting and Mining) Ordinance 1951–54, which has facilitated the carrying out of geological surveys and prospecting activities generally. A search for petroleum is being conducted by one company which has a permit in the Sepik River area.

## § 7. Trade, Transport and Communication.

1. **Customs Tariff.**—The present customs tariff has been in operation since 1st July, 1950. It provides high revenue rates on ale, spirits, wines, timepieces, cigarette papers, fancy goods, jewellery and certain apparel and piece goods made of silk. Of 75 items now mentioned in the import schedule, 59 are on the free list and two are partially free. The tariff allows duty-free treatment of necessities, but increases rates on non-necessities. The purpose of the revision was to relieve both general industrial costs and the basic costs of living with a view to encouraging further development of the Territory. There is a by-law provision under the Customs Tariff to enable duty-free admission to be granted for plant and machinery to be used mainly for developmental purposes. Under this provision, most agricultural machinery would be admitted duty free. The rate of duty on items not specified in the schedule is 10 per cent. ad valorem. No preferential rates are specified in the schedule. A surcharge equal to 10 per cent. of duty payable was imposed as from 17th January, 1952.

Export duties are imposed on cocoa, copra, trepang, tortoise shell, mother-of-pearl and trochus shell, cassowary, crown pigeon and heron feathers, rubber, sulphur and sulphur-bearing substances.

Provision is made in the Australian Customs Tariff (Papua and New Guinea Preference) for the free entry into Australia of certain goods produced and imported direct from the Territory of New Guinea (*see* Chapter VIII.—Trade), and a proclamation of 25th September, 1935 exempted from primaga duty goods produced or manufactured in the Territory.

2. **Imports and Exports.**—(i) *Total Values.* The table below summarizes and compares the values of imports and exports for the pre-war year 1938–39 and the post-war years 1951–52 to 1953–54.

## TERRITORY OF NEW GUINEA : IMPORTS AND EXPORTS.

(£.)

Particulars.	1938-39.	1951-52.	1952-53.	1953-54.
Imports .. .. .	1,340,835	8,154,102	7,175,612	9,444,628
Exports—				
Domestic Exports .. .. .	2,960,753	5,823,418	7,515,646	8,681,788
Non-Domestic Exports .. .. .	13,142	694,463	975,750	510,322
Total Exports .. .. .	2,973,895	6,517,881	8,491,396	9,192,110

(ii) *Imports.* The following table summarizes the sources of imports. In the post-war years Australia has supplied a far greater proportion of the imports than she did pre-war and this proportion has continued to increase in each successive post-war year. The increase in total imports in 1953-54 was due partly to increased purchasing power arising from the higher Commonwealth Government grant and partly to the progressive relaxation of import restrictions imposed to conserve foreign exchange.

## TERRITORY OF NEW GUINEA : COUNTRY OF ORIGIN OF IMPORTS.

(£.)

Country of Origin.	1938-39.	1951-52.	1952-53.	1953-54.
Australia .. .. .	563,594	4,920,231	4,756,600	6,319,501
Canada .. .. .	6,333	75,240	27,721	15,931
China .. .. .	69,831	19,184	2,614	693
Hong Kong .. .. .	(a)	367,910	238,272	418,468
India .. .. .	20,235	144,455	222,355	151,667
United Kingdom .. .. .	154,501	592,885	386,314	579,443
United States of America .. .. .	265,591	565,513	687,965	991,191
Other Countries .. .. .	260,750	1,468,684	853,771	967,734
Total Imports .. .. .	1,340,835	8,154,102	7,175,612	9,444,628

(a) Not available; included under "Other countries".

(iii) *Exports.* (a) *Countries of Destination.* The countries of destination of New Guinea exports are shown below. The growth in total exports has been outstanding. The decline in exports to Australia in 1953-54 was caused by decreased production of gold. The major source of increased export earnings, however, arose from increased quantities of coconut products at higher prices to the United Kingdom.

## TERRITORY OF NEW GUINEA : COUNTRY OF DESTINATION OF EXPORTS.

(£.)

Country of Destination.	1938-39.	1951-52.	1952-53.	1953-54.
Australia .. .. .	2,313,127	3,746,451	4,344,448	3,493,369
United Kingdom .. .. .	337,605	2,503,723	3,864,907	4,754,945
Other Countries .. .. .	310,021	267,707	282,041	943,796
Total Exports .. .. .	2,960,753	6,517,881	8,491,396	9,192,110

(b) *Principal Commodities.* The following table provides details of the value of the principal domestic exports for the same years. The increase in value of total domestic exports arose mainly from increased exports of copra and other coconut products which more than offset a decline in the returns from gold.

#### TERRITORY OF NEW GUINEA : PRINCIPAL DOMESTIC EXPORTS.

(£.)

Item.	1938-39.	1951-52.	1952-53.	1953-54.
Copra .. .. .	727,949	3,589,383	4,425,057	5,031,676
Other Coconut Products .. .. .	72,274	136,562	523,369	1,503,882
Cocoa Beans .. .. .	6,580	147,503	171,876	245,950
Coffee Beans .. .. .	843	10,348	30,332	58,367
Peanuts .. .. .	105	868	20,853	28,809
Gold .. .. .	2,129,263	1,707,401	2,147,766	1,409,480
Silver .. .. .	..	20,523	23,399	18,402
Shell (Marine) .. .. .	10,649	77,303	87,894	170,321
Timber .. .. .	6,911	127,621	75,833	181,139
Other .. .. .	6,179	5,906	9,267	33,762
Total Domestic Exports .. .. .	2,960,753	5,823,418	7,515,646	8,681,788

3. *Shipping.*—Regular passenger and freight services operate between Australia and the Territory of New Guinea. Vessels trading between Australia and the East also call at Territory 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 Ordinances 1951 and the Coastal Shipping, Ports and Harbours Regulations.

Main ports of call for overseas vessels are established at Lae, Madang 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 Wanimo (mainland), Gasmata and Talasea (New Britain), Namatanai (New Ireland), and Buka Passage (Bougainville).

There are no prepared inland waterways. The natural river system is not generally suitable for vessels except those of small tonnage.

In 1952-53, 173 British vessels and 37 vessels of other nationalities called at Territory ports and discharged 96,437 tons of cargo and loaded 91,574 tons. Corresponding figures for 1953-54 were 180, 53, 106,489 and 111,589 respectively.

4. *Other Forms of Transport and Communication.*—Means of communication on land are scanty. There are no railways. Roads lead from Rabaul to places within 30 or 40 miles, and there is a road 200 miles long in New Ireland and also a road 90 miles long from Lae to Wau in the Morobe District. The total mileage of road in the Territory of New Guinea at 30th June, 1954 was 2,904, of which 815 were suitable for heavy traffic.

The discovery of gold in New Guinea resulted in great aviation activity in the vicinity of the goldfields. On account of the mountainous country and dense undergrowth between the coast and the goldfields the task of transporting food and stores to the fields and of bringing the gold to the seaboard by land was a slow and costly process. The goldfields are situated about 90 miles (40 by air) inland from Lae and air transport played an important part in the development of the area.

Air services link the Territory with Papua, Australia, Netherlands New Guinea and the British Solomon Islands. There are 94 aerodromes and seaplane alighting areas in New Guinea, and of these 27 are controlled by the Department of Civil Aviation, 31 by the Administration, 35 by private interests and one by the Royal Australian Air Force.

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. Six zone or group centres for radio telephone communication with outstations have been established at Lae, Madang, Rabaul, Kavieng, Wewak and Lorengau. From these centres radio telegraph services are also available to 111 outstations.

### § 8. Revenue and Expenditure.

The principal sources of revenue for the Territory of New Guinea are the grant by the Commonwealth Government and customs duties. Total revenue in 1953-54 amounted to £5,094,789, towards which the grant contributed £3,103,076 and customs duties, £1,261,589. The major groupings into which the various items of expenditure during 1953-54 may be classed were as follows:—Health, £905,962; district services and native affairs, £695,184; education, £297,492; justice, £301,910; agriculture, etc., £256,670; customs and marine, £93,594; forestry, £151,175; capital works and services, £1,143,576; maintenance, £681,764. Total expenditure in 1952-53 was £4,314,085. In 1938-39 revenue and expenditure each amounted to about £500,000, customs duties and royalty on gold constituting the major items of revenue and district services and native affairs the major items of expenditure.

For information on the finances of the combined Territory administration *see* Papua and New Guinea, § 2, p. 129.

### 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  $0^{\circ} 32'$  south and longitude  $166^{\circ} 55'$  east. Portion of the island between the sandy beach and the coral cliffs is 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  $76^{\circ}$  F. at night to  $94^{\circ}$  F. during the day and the average humidity about 80 per cent. Normally the rainfall is comparatively low for islands of the Pacific, the 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 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, communications with Nauru ceased, and the island was occupied by Japanese forces. 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, pp. 370-1.

4. **Administration.**—The administration of the island is vested in the Administrator, who is obliged to conform to instructions issued by the Government which appointed him. 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. Native industries such as canoe-building, fishing, mat-making, etc., are encouraged by the provision of prizes at annual competitions. An agency of the Commonwealth Savings Bank has been established. There is a co-operative store managed to a large extent by the natives. The store books, however, are audited by Government officers. Natives are not allowed to carry or be in possession of firearms, and the use by them of intoxicating liquors and deleterious drugs is prohibited.

5. **Population.**—The Nauruan component of the population of Nauru 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, 1954 it had risen again to 1,828. Chinese have for many years formed a considerable part of the population of Nauru; their numbers increased, with some reversals of trend, from about 600 in 1921 to more than 1,500 before the 1939-45 War. After the war they increased from about 800 in 1946 to 1,491 in 1950, but at the Census of 30th June, 1954 numbered only 550. The number of other Pacific islanders in the early 1920's was almost 300, but they subsequently declined to less than 40. In recent years the numbers have increased, and at the 1954 Census there were 623 persons. The European population after 1921 fluctuated, but with a generally upward trend, between one and two hundred persons, and in 1940 numbered 192. In 1948 it numbered 247 and in 1954 it was 262. The total non-indigenous population of Nauru at the Census of 30th June, 1954 was 1,269 males, 376 females, 1,645 persons. The total population was 3,473.

6. **Health.**—Cases of the usual diseases known in the Pacific occur. Venereal disease is rare, but elephantiasis is occasionally met with. An area has been set apart for the segregation of lepers, and the latest methods of treatment are applied. The total number of persons receiving treatment at 30th June, 1954 was 46 of whom 9 were in segregation at the Leper Hospital. Two hospitals are maintained on the island, one by the Administration for Nauruans, and one by the British Phosphate Commissioners for their employees. In common with other natives, the Nauruans are very susceptible to tuberculosis and influenza, and in 1921 an influenza epidemic caused the deaths of 230 islanders. Dysentery, both amoebic and bacillary, is endemic. 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 a medical examination at intervals of three months. Baby clinics have been established to give help and advice to Nauruan mothers in regard to infant nurture.



7. **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 nine primary schools and two secondary schools for natives, together with one primary school for Europeans. At 30th June, 1954, 455 natives and 45 Europeans were enrolled in the primary schools, and 106 at the secondary school. A teacher, who is on loan from the Victorian Education Department, is in charge of the European school, but education is controlled by a Director of Education.

The curriculum is based on that used in Australian schools, and the teaching is generally in English. Education is compulsory for native children from six to sixteen years. At 30th June, 1954, 29 Nauruans were attending secondary schools in Australia, nineteen as scholarship holders and the balance sponsored by their families. In addition to these, there were 3 students at the Central Medical School, Suva.

8. **Judiciary.**—The judicial power is vested in the Administrator in a Central Court and a District Court. The right of appeal is provided.

9. **Religion.**—The London Missionary Society (Protestant) and the Sacred Heart of Jesus Mission (Roman Catholic) operate in Nauru.

10. **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 70 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 in 1919 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, an increased royalty of 1s. 6d. per ton of phosphate exported was payable from 1st July, 1953 as follows:—

- (a) 3d. to the Nauru Royalty Trust Fund to be used for the benefit of Nauruans;
- (b) 10d. to the landowner, being an immediate payment of 8d. per ton, and 2d. per ton to be invested on his account;
- (c) 5d. to the Nauruan Community Long Term Investment Fund.

From 1st July, 1947 the lump sums payable to landowners from whom phosphate-bearing lands are leased were also increased to £45 per acre, with a minimum payment of £7. 10s. for areas less than an acre.

(iii) *Nauru and Ocean Island Phosphate Industry.* Exports of phosphate from Nauru and Ocean Island in 1939–40 amounted to 1,243,428 tons, of which Australia received 54 per cent. and New Zealand 32 per cent. Following the interruption to production by the war in the Pacific, this figure was not exceeded until 1949–50 when 1,285,998 tons were exported (76 per cent. to Australia, 24 per cent. to New Zealand). Figures for 1953–54 were:—1,381,757 tons exported, 63 per cent. Australia, 32 per cent. New Zealand.

Receipts from sale of phosphate in 1939–40 amounted to £1,041,418, and the f.o.b. cost, including interest on capital sinking fund, etc., amounted to £1,037,208. In 1946–47 sales and costs each amounted to about £500,000, but they have since increased to more than £2,500,000. In 1953–54 receipts from sales, etc., amounted to £2,740,859, and costs, etc., to £2,701,967.

During the period of the Japanese occupation from August, 1942 to September, 1945, while waiting to resume activities at Nauru and Ocean Island, the Commissioners were engaged in meeting the phosphate requirements of Australia and New Zealand from other available sources. A programme of improvements and additions to equipment has been commenced.

The amount due by the British Phosphate Commissioners to the partner Governments for purchase-money and other capital sums was £3,666,457 on 30th June, 1921, and at 30th June, 1942, this had been reduced to £3,024,373. The partner Governments agreed to a suspension of interest and sinking fund payments from 1st July, 1942 while operations at Nauru and Ocean Island were curtailed. Modified payments were resumed in 1946-47, pending a review of the position.

The review was carried out in 1950, as a result of which the revised capital indebtedness of the Commissioners to the partner Governments at 30th June, 1950 was determined at £3,881,711. Interest and sinking fund payments were resumed with effect from 1st July, 1950 on the basis of repayment of the revised capital indebtedness in 35 years.

(iv) *Employees.* Apart from a limited number of Europeans, the employees are Chinese and Pacific Islanders engaged under a one year's contract. Increasing numbers of Nauruans are being employed, mainly in trade capacities.

(v) *Christmas Island Phosphates.* It may be appropriate to refer here to the phosphate deposits on Christmas Island in which the Australian Government is interested. The concession to work phosphate at Christmas Island, situated in the Indian Ocean near Java was held from 1897 by the Christmas Island Phosphate Company Limited, a private company incorporated in England.

The Australian and New Zealand Governments, jointly, acquired the Company's interests and assets at Christmas Island as at 31st December, 1948.

The undertaking is controlled by a Board of Commissioners appointed by the Australian and New Zealand Governments. Phosphate is distributed by the British Phosphate Commissioners who have been appointed by the Board as its managing agents.

11. *Transport.*—There is no air service to Nauru. The island has an aerodrome but only two trips were made during the year ended 30th June, 1953.

There is relatively frequent sea communication with the island. During 1953-54, 144 vessels called there. 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.

12. *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, and cylinder blocks for motor cycle engines. Articles imported by the Administration for its own use and spirits for scientific purposes are exempt. The tariff rates apply to all countries alike. Imports into Nauru were valued at £192,749 in 1940 and exports (808,400 tons of phosphate) at £541,168. In 1953-54, imports were valued at £615,716 and exports (1,103,726 tons of phosphate) at £1,931,520. Of the total imports in 1953-54, Australia supplied 66 per cent. (valued at £406,560); the balance came mainly from the United Kingdom, New Zealand, Hong Kong and the United States in that order.

In 1953-54, 863,800 tons of phosphate were exported to Australia, and 432,057 tons to New Zealand.

13. *Revenue and Expenditure.*—The revenue of the Administration has risen from £33,084 in 1939 to £237,174 in 1953-54, and expenditure from £29,391 to £226,996.

Of the revenue for the year ended 30th June, 1954, payments by the British Phosphate Commissioners amounted to £221,342, post office and radio receipts, £11,331, and customs duties, £1,946. Main items of expenditure were salaries, £113,302, works and services, £59,254, and miscellaneous services, £37,578.

### TERRITORY OF HEARD AND McDONALD ISLANDS.

On 26th December, 1947 by an exchange of notes with the United Kingdom Government, the United Kingdom sovereignty over the Heard and McDonald Islands was transferred to the Commonwealth of Australia. The laws of the Australian Capital Territory were declared to be in force in the Territory of Heard and McDonald Islands by the Heard and McDonald Islands Act passed 18th March, 1953.

At the end of 1947 an Australian scientific post was established on Heard Island and maintained as a scientific base. Following on the establishment of the base at Mawson, on MacRobertson Land in the Australian Antarctic Territory, the Heard Island base is not being continued on a permanent basis. Heard Island lies 2,500 miles south-west of Fremantle in the South Indian Ocean, and is about 27 miles long and 13 miles wide. The McDonald Islands are 26 miles to the west of Heard. They are small, rocky and precipitous.

### AUSTRALIAN ANTARCTIC TERRITORY.

On 13th February, 1954 the Australian Antarctic Research Expedition established a base on MacRobertson Land at latitude 67° 36' S. and longitude 62° 53' E. The base has been named Mawson in honour of Sir Douglas Mawson and is 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.

### TERRITORY OF 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' South and longitude 96° 53' East. They lie some 1,720 miles north of Perth and 2,290 miles almost due west of Darwin, whilst Johannesburg is some 3,800 miles further distant to the south-west, and Colombo is 1,400 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, the Admiralty Wireless Station and the Department of Civil Aviation's Marine Base, and Horsburgh. 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, being usually 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 80° F., the rainfall is moderate and there are occasional violent storms. In 1909 the islands were struck by the worst cyclone in their recorded history; about 400,000 coconut palms were uprooted or decapitated and the accompanying tidal wave left only five buildings standing.

2. **History.**—The islands were discovered in 1609 by Captain William Keeling of the East India Company. The islands 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 then, in 1882, to the Government of the Straits Settlement. By indenture in 1886 Queen Victoria granted the land comprised in the islands to John Clunies Ross in perpetuity, and until about 10 years ago 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.

Other items of significance in the islands' history are :—1901—small cable relay station was established at Direction Island ; 1903—Islands were incorporated in the Settlement of Singapore ; 1909—worst cyclone in the history of the islands struck ; 1914—German cruiser *Emden* raided Direction Island but was defeated by H.M.A.S. *Sydney* ; 1944—Islands were under military administration with allied troops stationed there (A military Administrator was appointed during the minority of the Clunies Ross heir who came of age in 1949) ; 1945—a R.A.F. air-strip was constructed on West Island ; 1946—Civil administration was re-established.

3. **Transfer to the Commonwealth of Australia.**—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. 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 are 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.

4. **Administration.**—Responsibility for the administration of the Territory, in terms of the Cocos (Keeling) Islands Act 1955, rests with the Minister for Territories. An Official Representative was appointed on 23rd November, 1955 to take charge of the local administration of the Territory under delegation from the Minister. The laws of the Colony of Singapore which were in force in the islands immediately before the date of the transfer have, with certain exceptions, been continued in force by the Cocos (Keeling) Islands Act 1955. Those laws 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.

5. **Population.**—The population of the Territory in December, 1955 was estimated to be 652, comprising 131 Europeans, 460 Cocos islanders and 61 Asians. The Cocos islanders reside on Home Island.

6. **Transport.**—An airport is established on West Island under the control of the Department of Civil Aviation. This is a re-fueling point for aircraft of the overseas air-service between Australia and South Africa operated by Qantas Empire Airways Ltd. at fortnightly intervals, via Darwin.

## CHAPTER VI.

## LABOUR, WAGES AND PRICES.

NOTE.—Reference is made in this chapter to retail and wholesale price indexes. For particulars of the Export Price Index, see Chapter VIII., § 15, and of the Farm Production Price Index, see Chapter XXIX., § 2.

## A. RETAIL PRICES AND PRICE INDEXES.

## § 1. General.

The information on retail prices and price indexes presented in this chapter is extracted from the annual *Labour Report* of the Commonwealth Bureau of Census and Statistics. For a full explanation of methods adopted and an analysis of problems involved see the detailed reference in Chapter I. of *Labour Report* No. 42, 1953.

Retail prices of an extensive range of commodities and services in common demand have been ascertained at frequent and regular intervals since 1923 for each of the six capital cities and for 27 of the more important towns of Australia. Comparable information is available for the month of November in each year from 1914 to 1922 for each of the six capital cities. The list of items priced for index purposes was published in *Labour Report* No. 41, 1952.

Retail prices of food and groceries and average rentals of houses for earlier years extending back to 1901 were collected by this Bureau, and in some cases have been recorded by the Statisticians of various States as far back as 1864.

## § 2. Previous Retail Price Indexes.

1. General.—Four series of retail price indexes had been compiled at various times for Australia by the Commonwealth Statistician prior to 1954. Each of these was continued until changed conditions required the compilation of indexes more directly relevant to current conditions. The respective indexes were:—

- (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 and published at quarterly intervals from June Quarter, 1922. It was used by the Commonwealth Court of Conciliation and Arbitration for purposes of quarterly wage adjustments from May, 1934 to August, 1953. Some State tribunals use or consider it in their proceedings. Its publication in mimeograph each quarter will be continued for the present in the customary form and on its customary basis. For general statistical purposes it has been replaced by the Interim Retail Price Index (1952-53 base year) described at length in a Statistical Bulletin published on 24th March, 1954, and briefly in the following section of this chapter.
- (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.

Of the four retail price indexes described above, only the "C" Series is now compiled. The new Interim Index will continue in its present form until the components of certain groups are finalized.

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. "Court" Index numbers were an arithmetical conversion of the "C" Series Index.

### § 3. The Interim Retail Price Index (1952-53 Base Year).

1. Origin of the Interim Retail Price Index (1952-53 Base Year).—The list of component items and the weighting pattern of the "C" Series Retail Price Index were first adopted in 1922 but were reviewed by Conference of Statisticians in 1936. (*See Labour Report* No. 41, 1952, page 33, paragraph 2.)

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 the pattern of expenditure. This rendered 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.

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. By the middle of 1949 a considerable number of new price series was coming into being and the body of data available as to expenditure and consumption (in the post-rationing period) was beginning to indicate something of the new weighting pattern likely to be appropriate for post-war review of the components and construction of the "C" Series Index.

There supervened in the next two years conditions which caused wide price dispersion, a very rapid rise in prices and a new sequence of changes in consumption and the pattern of wage earner expenditure. Under these conditions it was not possible to devise any new weighting pattern for the years 1949-50, 1950-51 and 1951-52 likely to be better suited to the index or more continuously representative of conditions then current than was the existing "C" Series Index on the 1936 revision. Conference of Statisticians therefore deferred revision of the weighting system and component items of the "C" Series Index until it was advised by the Acting Commonwealth Statistician in June, 1953 (a) that although the aggregate "C" Series Index (as verified by supplementary indexes) was still reasonably reliable for current use, some of the component groups (more particularly food and miscellaneous) were not satisfactory individually; and (b) that the time had arrived either to produce a new index or to reconstruct the "C" Series Index extensively.

The Interim Retail Price Index has been compiled pursuant to Resolution 13 of the Conference of Statisticians in June, 1953, reading:—

#### " 13. Retail Price Indexes—

- (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.
- (c) That, having regard to the complexities of the problem and the limit of staff resources available, such interim index relate only to each capital city and to the six capital cities combined.
- (d) That attention be drawn again to the statement already published that the "C" Series Retail Price Index cannot measure changes in relative retail price levels as between capital cities consistently with its main purpose of measuring periodic changes in retail price levels for each city.

- (e) That the problem of measuring comparative retail price levels as between cities at any point of time differs in principle from the problem of measuring periodic variations in price level in an individual city ”.

The Interim Retail Price Index (1952-53 base year) is used as the current retail price index in statistical publications of the Commonwealth Statistician for general statistical purposes. It relates only to six capital cities of Australia because it is not practicable with existing staff resources to collect price data for the greatly enlarged list of items for 28 other cities and towns. These will continue to be covered as to the less extensive list of items used for the “ C ” Series Index.

In respect of any divergency in trends shown by the new index as compared with the old, the following comment is paraphrased from comment made in the course of the Statistician’s memoranda to the Commonwealth Court of Conciliation and Arbitration in 1949 : It is to be expected that the new index will for a period show much the same trend as does the “ C ” Series Index. If there is any appreciable difference in trend, it is certain that the new index would be the more accurate reflex of price movements relevant under current conditions.

2. Definition of the Interim Retail Price Index.—This index provides the interim results of researches designed to measure retail price variations (with 1952-53 = 100 as base year) on the basis of :—

- (a) a current pattern of wage earner expenditure using recent consumption weights for foods and recent expenditure weights for combining groups of items into the aggregate index ;
- (b) a wider range of commodities and services than that covered by any existing price index in order to provide greater representativeness ; and
- (c) individual city weights for such items as electricity, gas and fares.

The components and weighting of the Interim Retail Price Index will be reviewed in the light of data derived from the Census of Retail Sales (1952-53) as to consumer expenditure on various kinds of goods, estimates of consumer expenditure on services relevant to construction of a retail price index of this type and data as to rents and housing derived from the Census of 30th June, 1954. It is proposed to cast the index into final form as soon as possible.

3. Differences between the Structure of the Interim Retail Price Index and the “ C ” Series Retail Price Index.—The main differences between the structure of the Interim Retail Price Index and that of the “ C ” Series Retail Price Index are (a) the group weights and item weights of the Interim Index relate broadly to the consumption pattern 1950-53, while those of the “ C ” Series Index relate to pre-war years ; and (b) the Interim Index includes a large number of items not included in the “ C ” Series Index.

A full list of the items used in the Interim Index was shown in Appendix III. of the Statistical Bulletin of 24th March, 1954, and in Section IV. of the Appendix to *Labour Report* No. 42, 1953. The changes in structure of each group of items as adopted for the Interim Retail Price Index are summarized below :—

(i) *Food Group*.—The weights of some of the main items (e.g., milk, eggs, meat, potatoes and flour) in the Interim Index are substantially different from those of the “ C ” Series Index. Twenty-four new items extend the group coverage over a wider field. The total number of items in the Food Group of the Interim Index is 60 as compared with 38 in the “ C ” Series Index. The principal new items are lamb, packaged breakfast foods, biscuits, ice cream, processed cheese, honey, sandwich spreads, coffee, cocoa, soft drinks and certain types of confectionery.

(ii) *Clothing and Drapery Group*.—In the Interim Index, 17 new items have been added to the Clothing and Drapery Group, and 25 items each formerly represented

by one type of article are now each represented by two or more types. Consequential adjustments have been made in weights of individual items. The principal new items added to this group are:—sports coat, sports trousers, cardigan (and other types of knitted wear), overalls, piece-goods (rayon, cotton and woollen) and knitting wool.

(iii) *Rent Group*.—Only minor changes have been made in the Rent Group. Available data indicate (a) that, in general, very few new houses have been built by private owners for renting in the post-war years; (b) that in some cities considerable numbers of new government houses have been built for renting or occupancy on a quasi-rental basis; and (c) that there has been a substantial increase in the numbers of owner-occupied houses, including new instalment-purchase or quasi-instalment-purchase houses under governmental and private housing schemes. In recent years the difficulty of obtaining data suitable for the housing component of a price index has therefore intensified. The facts will be reviewed in the light of data obtained at the Census of 30th June, 1954 and further study given to the hitherto intractable problems associated with measuring at quarterly intervals "housing price" variations in a form suitable for use in a retail price index in respect of owner-occupied houses, instalment-purchase houses, and houses occupied under the various types of governmental housing schemes.

(iv) *Other Groups*.—Six new sub-groups are included in the Interim Index, comprising 75 items as compared with 32 in the "C" Series Index. The principal new items are garden tools, floor coverings, shaving cream, toilet soap, etc., patent medicines, baby foods, haircuts, dry cleaning, shoe repairs, postage, etc. Necessary adjustments have been made to bring the group weight into conformity with recent expenditure and consumption patterns. The weight of this group is much greater than it was in the "C" Series Index.

(v) *Group Weights*.—The group weights in the new Interim Index have been brought into general conformity with the estimated group distribution of wage earner household expenditure in recent years over the field covered. In some cases the weights are putative weights assessed on available data and are subject to some revision.

In the year 1952-53 the ratio of the individual group "aggregate expenditure" to the "aggregate expenditure" of the whole index for the six capital cities combined was as follows:—

Group.	"C" Series Retail Price Index.	Interim Retail Price Index.
	Per cent.	Per cent.
Food .. .. .	41.0	37.1
Clothing and Drapery ..	33.0	26.8
Rent .. .. .	11.3	9.0
Other Groups ..	14.7	27.1
	<div style="display: flex; align-items: center;"> <div style="margin-right: 10px;"> <math>\left. \begin{array}{l} 4.5 \\ 5.3 \\ 2.8 \\ 2.1 \end{array} \right\}</math> </div> </div>	<div style="display: flex; align-items: center;"> <div style="margin-right: 10px;"> <math>\left\{ \begin{array}{l} 4.6 \\ 4.6 \\ 2.5 \\ 3.0 \\ 6.6 \\ 5.8 \end{array} \right.</math> </div> <div>           Fuel and Light Household Sundries Certain Repairs and Services Cinema, Radio, Newspapers Rail, Tram and Bus Fares Tobacco and Cigarettes         </div> </div>
	100.0	100.0

In the Interim Index common weights are adopted for all groups and items in the index for each city except in respect of fares, gas, electricity and some minor items. The resultant indexes show price variations for each city on a basis appropriate to that city. They are not constructed to provide a precise measure of the relative "cost of living", comparing one city with another. For that reason the Interim Index for each city in the base year 1952-53 is 100.



4. Comparison of Trends of the Interim Retail Price Index with Trends of the "C" Series Retail Price Index.—The following table shows for each of the years 1950-51 to 1954-55 and for each quarter from September Quarter, 1952 to December Quarter, 1955 the Interim Index for the six capital cities combined, with the year 1952-53 as base = 100, in comparison with the "C" Series Index recomputed to the same base :—

Period.	Six Capital Cities : Weighted Average. (Base : Year 1952-53 = 100).	
	"C" Series Index.	Interim Index.
Year ended June—		
1951 .. .. .	74.8	74.9
1952 .. .. .	91.7	91.4
1953 .. .. .	100.0	100.0
1954 .. .. .	102.8	102.5
1955 .. .. .	103.7	103.6
Quarter ended—		
1952—September .. .. .	99.0	98.8
December .. .. .	99.2	99.3
1953—March .. .. .	100.3	100.4
June .. .. .	101.4	101.6
September .. .. .	102.7	102.4
December .. .. .	102.9	102.2
1954—March .. .. .	102.9	102.7
June .. .. .	102.8	102.7
September .. .. .	102.6	102.7
December .. .. .	103.2	103.2
1955—March .. .. .	103.9	103.8
June .. .. .	105.0	104.7
September .. .. .	106.6	105.7
December .. .. .	107.7	107.0

The figures appearing after the decimal point possess little significance for general statistical purposes. They are inserted merely to avoid the distortion that would occur in rounding off the figures to the nearest whole number. For instance, if the Interim Indexes for each quarter of 1953 were rounded off to 100, 102, 102 and 102 respectively, they would suggest a rise of 2 per cent. in June Quarter, 1953 and no change in September Quarter, 1953. The figures for the Interim Index as presented in the table indicate a rise of the order of 1 per cent. in June Quarter, 1953 and 1 per cent. in September Quarter, 1953. Price indexes cannot measure aggregate price variations with an accuracy of the order of one-tenth of 1 per cent.

With changing conditions significant divergencies may occur between the movements shown by a retail price index (such as the "C" Series Index) constructed on pre-war weights and a comparatively limited range of major items and a retail price index (such as the Interim Index) constructed on 1950-53 weights and a broader list of items. The two indexes represent, respectively, two distinct approaches to the measurement of retail price variations in recent years.

Due regard should be paid to the fact that a composite price index is necessarily an approximate summary which combines into one aggregate price variations of many items. Any more rigid use of the index for specific purposes is the responsibility of the bodies or persons using the indexes.

### § 4. Tabular Statements of Retail Price Index Numbers.

1. **General.**—Information on retail price movements is published as follows :—

(i) *Monthly.* The *Monthly Review of Business Statistics* contains annual, quarterly and monthly index numbers to the latest available date.

(ii) *Quarterly.* Statements are issued about three weeks after the end of each quarter relating to the Interim and the "C" Series Retail Price Indexes respectively for that quarter and immediately preceding quarters. The *Quarterly Summary of Australian Statistics* contains annual, quarterly and monthly index numbers to the latest available date. This publication also contains certain average prices of items of food and groceries for the latest available quarter.

(iii) *Annual.* The *Labour Report* contains index numbers for past years, and the monthly and quarterly results for recent years. Certain average prices for the latest year of items of food and groceries are also published in this report.

2. **The "C" Series Retail Price Index.**—A table of "C" Series index numbers for the weighted average of the six capital cities combined, together with index numbers for each of the four main groups of items in the "C" Series Index for each year from 1914 to 1955 is shown on page 161. Detailed tables were last published in *Labour Report* No. 41, 1952, pp. 19-31.

3. **The Interim Retail Price Index.**—On this and the following page are published :—

(i) the Interim Retail Price index numbers for each of the years ended June, from 1951 to 1955, and for each quarter during the period September Quarter, 1952 to December Quarter, 1955, for the weighted average of the six capital cities combined, showing also separate indexes for each of the four groups of items (see table below) ;

(ii) the Interim Retail Price index numbers for each of the years ended June from 1951 to 1955, and for each quarter during the period December Quarter, 1954 to December Quarter, 1955, for each capital city and for the six capital cities combined, and showing also separate indexes for each of the four groups of items (page 159).

#### INTERIM RETAIL PRICE INDEX—GROUP INDEXES.

WEIGHTED AVERAGE OF SIX CAPITAL CITIES.

(Base : Year 1952-53 = 100.)

Period.	Food.	Clothing and Drapery.	Rent.(a)	Other Items.	All Groups.
<b>Year ended June—</b>					
1951.. ..	67.9	78.1	90.3	76.3	74.9
1952.. ..	89.4	93.8	92.6	91.3	91.4
1953.. ..	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>
1954.. ..	103.7	101.6	105.0	100.9	102.5
1955.. ..	104.6	102.4	109.6	101.4	103.6
<b>Quarter ended—</b>					
1952—September ..	99.8	98.0	97.0	98.7	98.8
December ..	98.5	99.6	99.0	100.0	99.3
1953—March ..	100.0	100.4	101.4	100.6	100.4
June ..	101.7	102.0	102.6	100.7	101.6
September ..	103.9	101.5	103.3	101.0	102.4
December ..	103.4	101.6	103.9	100.5	102.2
1954—March ..	104.0	101.8	104.9	101.2	102.7
June ..	103.7	101.5	107.7	100.9	102.7
September ..	103.0	101.6	108.9	101.2	102.7
December ..	103.7	102.3	109.3	101.2	103.2
1955—March ..	105.3	102.4	109.7	101.2	103.8
June ..	106.4	103.3	110.5	101.9	104.7
September ..	108.2	103.3	111.4	102.8	105.7
December ..	109.0	103.4	112.0	106.2	107.0

(a) See note (b) on page 159.

## INTERIM RETAIL PRICE INDEX NUMBERS.

(Base of each Index : Year 1952-53=100.)

NOTE.—The index numbers hereunder are designed to measure aggregate variations 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, 1951.	Year ended June, 1952.	Year ended June, 1953.	Year ended June, 1954.	Year ended June, 1955.	1954.		1955.		
						Dec. Qtr.	Mar. Qtr.	June Qtr.	Sept. Qtr.	Dec. Qtr.

## GROUP I.—FOOD.

Sydney ..	66.1	89.9	100.0	102.4	103.6	102.8	104.6	105.1	106.5	107.2
Melbourne ..	69.2	89.1	100.0	104.6	104.3	103.4	104.8	106.2	110.1	111.5
Brisbane ..	69.2	90.1	100.0	104.1	104.2	103.3	105.2	106.0	106.8	105.6
Adelaide ..	69.2	90.5	100.0	103.5	106.2	104.9	106.5	108.2	109.2	109.7
Perth ..	69.3	87.0	100.0	106.3	109.5	108.0	109.0	111.2	109.6	109.8
Hobart ..	66.4	86.8	100.0	107.7	106.8	105.0	107.3	108.7	110.5	113.4
Six Capitals(a)	67.9	89.4	100.0	103.7	104.6	103.7	105.3	106.4	108.2	109.0

## GROUP II.—CLOTHING AND DRAPERY.

Sydney ..	78.6	93.6	100.0	101.7	102.3	102.6	102.2	102.8	103.0	103.1
Melbourne ..	77.6	93.4	100.0	101.3	102.2	101.9	102.2	103.6	103.8	103.9
Brisbane ..	78.7	94.6	100.0	101.7	102.9	102.8	102.8	103.8	103.5	103.2
Adelaide ..	77.0	93.9	100.0	102.2	102.9	102.7	103.1	103.9	102.8	103.3
Perth ..	78.8	95.5	100.0	100.9	101.6	101.5	101.7	102.7	102.7	103.1
Hobart ..	78.9	94.7	100.0	102.6	103.1	103.0	103.3	103.7	103.9	104.4
Six Capitals (a)	78.1	93.8	100.0	101.6	102.4	102.3	102.4	103.3	103.3	103.4

## GROUP III.—RENT(b) (4 AND 5 ROOMED HOUSES).

Sydney ..	86.6	87.7	100.0	107.7	109.5	109.5	109.6	109.7	110.6	111.1
Melbourne ..	99.4	99.6	100.0	100.8	102.3	101.8	102.3	102.3	102.7	102.9
Brisbane ..	93.7	97.7	100.0	102.9	105.2	105.1	105.5	105.7	106.4	106.4
Adelaide ..	82.8	86.0	100.0	102.7	105.6	104.5	105.0	109.3	112.1	113.6
Perth ..	82.1	94.4	100.0	110.8	149.6	148.3	149.5	153.1	154.9	157.0
Hobart ..	85.1	91.4	100.0	108.8	109.4	109.5	109.5	109.5	109.5	110.3
Six Capitals (a)	90.3	92.6	100.0	105.0	109.6	109.3	109.7	110.5	111.4	112.0

## GROUP IV.—OTHER ITEMS.(c)

Sydney ..	78.3	93.6	100.0	100.5	100.9	101.0	100.6	100.9	101.5	103.2
Melbourne ..	73.5	88.7	100.0	100.9	101.3	100.9	101.3	101.8	102.8	110.1
Brisbane ..	78.5	92.7	100.0	103.0	104.5	104.3	104.8	104.9	106.0	109.6
Adelaide ..	76.9	90.2	100.0	99.3	99.9	99.3	99.4	101.7	102.7	102.7
Perth ..	74.6	89.6	100.0	100.8	101.9	101.4	101.6	103.3	104.5	105.1
Hobart ..	72.7	89.0	100.0	108.2	105.1	105.0	105.0	105.5	108.9	109.0
Six Capitals (a)	76.3	91.3	100.0	100.9	101.4	101.2	101.2	101.9	102.8	106.2

## ALL GROUPS.

Sydney ..	74.6	91.7	100.0	102.2	103.1	102.9	103.4	103.8	104.6	105.4
Melbourne ..	75.2	91.0	100.0	102.4	102.7	102.2	102.9	104.0	105.8	108.3
Brisbane ..	76.4	92.7	100.0	103.0	104.0	103.6	104.5	105.1	105.6	106.0
Adelaide ..	74.7	90.9	100.0	102.0	103.6	102.8	103.5	105.4	106.0	106.4
Perth ..	74.5	90.7	100.0	103.9	109.6	108.7	109.3	111.2	111.1	111.6
Hobart ..	73.1	89.9	100.0	106.6	105.6	104.0	105.8	106.6	108.2	109.6
Six Capitals (a)	74.9	91.4	100.0	102.5	103.6	103.2	103.8	104.7	105.7	107.0

(a) Weighted average. (b) Rent.—The rent index numbers shown in the tables in this chapter measure the proportionate rise and fall in the average weekly rentals paid for houses of four and five rooms taking corresponding houses throughout. They are "price" indexes in the strict sense, i.e., they are designed to measure only the "price" element in rent fluctuations. Rentals of new tenanted houses completed since the end of the war are not taken into account. (c) A group of items under the following headings—Electricity, Gas, and Firewood; Household Sundries; Services; Cinema Admission, Radio Licence, and Newspapers; Fares; and Tobacco and Cigarettes.

### § 5. The "C" Series Retail Price Index : 1914-1955.

1. **Construction.**—Full particulars relating to the construction, items, weights and method of tabulation of the "C" Series Retail Price Index were last published in *Labour Report* No. 41, 1952 (see pp. 10-18). Tabular statements of index numbers were shown on pp. 19-27 and historical particulars of the index, and its relation to automatic basic wage variations prior to 12th September, 1953, on pp. 32-40.

2. **Significant Dates.**—The following table furnishes index numbers for the six capital cities as a whole for certain significant dates since November, 1914—the earliest date for which this index is available.

#### "C" SERIES RETAIL PRICE INDEX NUMBERS.

##### WEIGHTED AVERAGE OF SIX CAPITAL CITIES.

(Base : *Weighted Average of Six Capital Cities, 1923-27 = 1,000.*)

1914, November	..	..	..	687	(Beginning of War I.)
1918, November	..	..	..	905	(End of War I.)
1920, November	..	..	..	1,166	(Post-War peak)
1922, November	..	..	..	975	(Post-War trough)
1929, Year	..	..	..	1,033	(Pre-Depression peak)
1933, Year	..	..	..	804	(Depression trough)
1939, September Quarter	..	..	..	916	(Pre-War II.)
1943, March Quarter	..	..	..	1,123	(Pre-Price Stabilization)
1943, June Quarter	..	..	..	1,143	(War II. peak)
1945, September Quarter	..	..	..	1,126	(End of War II.)
1948, September Quarter	..	..	..	1,311	
1950, September Quarter	..	..	..	1,572	
1952, September Quarter	..	..	..	2,238	
1953, September Quarter	..	..	..	2,321	
1954, December Quarter	..	..	..	2,333	
1955, December Quarter	..	..	..	2,435	

The index rose by approximately 32 per cent. during the first world war, and by a further 29 per cent. in the two post-war years (November, 1918 to November, 1920). From November, 1920 to November, 1922, there was a fall of 16 per cent. and the index remained relatively stable until the onset of the depression in 1929. During the four years of the depression 1929 to 1933 the index fell by 22 per cent., rising thereafter steadily until 1939 when it was nearly 14 per cent. above the level of 1933, and approximately at the level it had occupied at the date of the Armistice of 1918. Between the outbreak of war (September, 1939) and March, 1943 (pre-price stabilization) the index rose by approximately 23 per cent. to a level slightly below that reached at the height of the post-war boom in 1920. Compared with the March Quarter, 1943, the index number at the close of the war was practically unchanged.

Immediately after the outbreak of the war price control was established by the Government under Regulations dated 28th September, 1939, and a national policy of price stabilization was applied as from 12th April, 1943, backed by more stringent price control and price subsidies. The retail price level, as measured by the index, remained relatively steady throughout 1944 and 1945 at the level of March, 1943. This stabilized level was approximately 23 per cent. above that of 1939 and 63 per cent. above the level prevailing at the beginning of the first world war in 1914. After June Quarter, 1946, war-time controls, subsidies, etc., were progressively modified and by early 1949 had been virtually eliminated. In the latter part of 1950 export prices (especially for wool) rose very substantially and have remained relatively very high. In December, 1950, the Commonwealth Court of Conciliation and Arbitration raised the basic wage by approximately 14 per cent. Concurrently, public works expenditure and private investment rose to very high levels.

This retail price index rose by 16 per cent. in the three years following the end of the 1939-45 War (i.e., to September Quarter, 1948) and by 77 per cent. in the next five years to September Quarter, 1953 and remained relatively stable at that level until December Quarter, 1954. From December Quarter, 1954 to December Quarter, 1955, it increased by 4 per cent.

3. "C" Series Retail Price Index, Six Capital Cities, 1914 to 1955.—The movement in the various groups of the index and in the index as a whole for each year for which it has been compiled is shown in the following table for the six capital cities combined:—

**"C" SERIES RETAIL PRICE INDEX AND ITS "GROUP" INDEX NUMBERS(a)  
FOR THE SIX CAPITAL CITIES COMBINED.**

(Base of Each Group: Weighted Average of Six Capital Cities, 1923-27=1,000.)

Period.	Food and Groceries.	Rent (4 and 5 Roomed Houses)(b)	Clothing.	Miscell- aneous.	Total "C" Series Index.
1914 (c)	641	649	754	749	687
1915 (c)	842	659	792	786	782
1916 (c)	812	665	881	802	795
1917 (c)	836	685	992	882	847
1918 (c)	861	722	1,097	972	905
1919 (c)	1,026	768	1,238	1,036	1,022
1920 (c)	1,209	851	1,365	1,194	1,166
1921 (c)	950	877	1,246	1,010	1,013
1922 (c)	945	929	1,052	999	975
1923	1,009	950	1,045	999	1,003
1924	969	988	1,003	1,004	987
1925	998	1,008	991	992	997
1926	1,023	1,026	986	998	1,011
1927	1,000	1,030	975	1,008	1,002
1928	985	1,066	997	1,010	1,009
1929	1,044	1,073	996	1,007	1,033
1930	941	1,047	951	999	975
1931	826	901	853	973	873
1932	796	817	804	958	830
1933	751	804	787	950	804
1934	783	810	785	944	817
1935	806	839	783	946	832
1936	825	879	792	947	850
1937	851	912	811	960	873
1938	886	942	829	961	897
1939	927	965	841	962	920
1940	939	973	956	998	957
1941	947	976	1,118	1,060	1,008
1942	1,031	976	1,308	1,112	1,091
1943	1,037	975	1,440	1,160	1,131
1944	1,026	976	1,435	1,165	1,126
1945	1,034	975	1,425	1,161	1,126
1946	1,036	976	1,505	1,167	1,145
1947	1,100	977	1,566	1,199	1,188
1948	1,256	979	1,744	1,257	1,295
1949	1,394	982	1,997	1,338	1,415
1950	1,566	987	2,286	1,435	1,560
1951	2,041	1,009	2,749	1,679	1,883
1952	2,526	1,057	3,096	1,958	2,196
1953	2,641	1,138	3,223	2,053	2,302
1954	2,671	1,192	3,218	2,062	2,326
1955	2,811	1,226	3,237	2,091	2,393
1955—March Quarter	2,730	1,213	3,218	2,046	2,340
June "	2,770	1,222	3,240	2,070	2,375
September "	2,854	1,232	3,243	2,081	2,411
December "	2,891	1,238	3,248	2,128	2,435

(a) "Group" index numbers in the above table cannot be compared with each other in order to show the relative cost of Food and Groceries, Housing, Clothing or Miscellaneous requirements, since each "Group" has its own base = 1,000, namely, the weighted average cost for the six capital cities as a whole during the five-year period 1923-27. (b) See note (b) on page 159. (c) November.

## § 6. International Comparisons.

The following table shows the increases in retail prices in recent years in Australia and certain other countries.

**RETAIL PRICE INDEX NUMBERS.**  
(FOOD, RENT, CLOTHING, MISCELLANEOUS HOUSEHOLD EXPENDITURE.)  
(Base : September Quarter, 1939=100.)

Period.	Australia.	United Kingdom.	Canada.	New Zealand.	Union of South Africa.	United States of America.
1939— September Quarter	100	100	100	100	(a) 100	100
1940—Year .. ..	105	119	105	104	104	100
1941— " .. ..	110	128	111	108	109	105
1942— " .. ..	119	129	116	111	118	116
1943— " .. ..	124	128	117	114	126	123
1944— " .. ..	123	129	118	116	130	125
1945— " .. ..	123	131	119	118	133	127
1946— " .. ..	125	131	123	119	135	138
1947— " .. ..	130	(b) 102	134	122	141	158
1948— " .. ..	141	108	154	132	149	170
1949— " .. ..	154	111	160	(c) 134	154	168
1950— " .. ..	170	114	165	142	160	171
1951— " .. ..	206	124	183	157	172	185
1952— " .. ..	240	136	186	170	187	189
1953— " .. ..	251	140	184	177	194	190
1954— " .. ..	254	143	185	186	197	191
1955— " .. ..	261	149	(d)	190	(d)	(d)
1955—March Quarter	256	146	185	189	202	190
June " ..	259	148	185	190	203	190
Sept. " ..	263	150	185	191	204	191
Dec. " ..	266	153	(d)	191	(d)	(d)

(a) Food, Rent and Miscellaneous Expenditure. (b) New series (Base : 17th June, 1947 = 100), commencing from September Quarter, 1947. (c) Consumers' Retail Price Index from March Quarter, 1949, onwards. Index numbers for earlier periods (shown for purposes of comparison) are obtained by linking the movement in the Retail Price Index (base 1926-30) with the new index. (d) Not available.

## B. 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.

Particulars of the Melbourne Wholesale Price Index, which is now obsolescent, are given in § 3 commencing on page 164 of this chapter.

After reviewing the regimen and weighting of this 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—which extends back to the year 1928 and is compiled monthly, is a special purpose index and one of a series of Wholesale Price Indexes designed for special purposes.

## § 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 price of imported goods is 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 164.

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 regimen comprises 80 commodities, divided into seven main groups. Each group is sub-divided into goods which are mainly imported, and goods which are mainly home-produced. The percentage of the “aggregate expenditure” in 1950 contributed by each group is shown in the following table :—

Group.	Percentage Value-Weight, 1950.		
	Principally Imported.	Principally Home-produced.	Total.
Metals and Coal .. .. .	0.05	15.51	15.56
Oils, Fats and Waxes .. .. .	10.90	0.24	11.14
Textiles .. .. .	1.10	5.11	6.21
Chemicals .. .. .	1.18	2.77	3.95
Rubber and Hides .. .. .	1.17	0.68	1.85
Building Materials .. .. .	5.07	4.31	9.38
Foodstuffs and Tobacco .. .. .	12.31	39.60	51.91
All Groups .. .. .	31.78	68.22	100.00

A full list of the commodities in the regimen, showing the quantity-multipliers (weights) for each commodity and the percentage of the total aggregate value in 1950 contributed by each commodity and group, is set out on page 395 of Official Year Book No. 39.

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” as affecting some commodities, and changes in the industrial structure have affected the validity of some of the weights in the index.

The Bureau is currently developing a plan designed to provide a series of special purpose indexes within an extended field.

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 in the *Monthly Review of Business Statistics*, and a table showing index numbers computed to the base 1928 = 100 will be found in the *Labour Report*.

## WHOLESALE PRICE (BASIC MATERIALS AND FOODSTUFFS) INDEX NUMBERS.

(Base of each Group : Average 3 years ended June, 1939 = 100.)

Period.	Basic Materials.						Food-stuffs and Tobacco.	Basic Materials and Foodstuffs.		
	Metals and Coal.	Oils, Fats and Waxes.	Textiles.	Chemicals.	Rubber and Hides.	Building Materials.		Goods principally Imported. (a)	Goods principally Home-produced.	Total All Groups.
1928-29	127	106	129	121	115	95	114	107	91	118
1929-30	126	111	99	116	87	94	107	110	94	118
1930-31	116	117	80	117	73	96	105	91	100	99
1931-32	108	113	77	119	74	95	101	86	100	92
1932-33	104	109	75	119	69	95	98	80	97	87
1933-34	103	84	102	111	80	94	92	84	89	89
1934-35	97	90	78	102	77	93	89	87	92	89
1935-36	92	95	100	99	88	93	90	92	95	92
1936-37	96	99	118	99	111	99	99	97	99	98
1937-38	101	101	100	100	97	104	102	100	102	100
1938-39	103	100	82	101	92	97	99	103	99	102
1939-40	105	115	104	107	116	108	109	101	111	103
1940-41	107	137	111	114	126	128	122	107	133	106
1941-42	117	151	118	137	135	135	133	117	153	112
1942-43	129	167	147	142	138	163	149	128	176	121
1943-44	131	170	150	143	140	174	153	129	182	122
1944-45	131	168	152	143	140	175	152	131	182	123
1945-46	130	156	152	142	140	177	149	135	178	126
1946-47	132	145	191	140	131	180	149	138	177	129
1947-48	146	161	283	148	126	190	166	153	192	145
1948-49	185	173	342	159	130	198	188	175	201	173
1949-50	214	184	434	187	143	225	214	198	223	198
1950-51	256	196	641	242	292	268	264	232	256	242
1951-52	343	220	577	314	298	370	321	281	288	305
1952-53	392	234	607	350	224	404	350	294	292	331
1953-54	388	222	566	323	191	363	332	313	271	343
1954-55	394	214	510	314	246	372	331	311	277	338
1954-55—										
July ..	384	217	569	313	183	358	327	308	266	337
Aug. ..	384	216	529	313	205	358	325	308	267	336
Sept. ..	385	216	527	313	232	365	327	308	271	336
Oct. ..	385	211	505	313	240	365	325	303	269	332
Nov. ..	393	211	491	314	240	365	327	305	277	331
Dec. ..	393	212	507	315	225	365	328	307	277	333
Jan. ..	396	215	501	315	237	365	330	305	279	332
Feb. ..	399	215	505	315	257	373	333	313	281	340
Mar. ..	400	214	507	315	264	381	336	310	282	345
Apr. ..	401	214	496	315	271	387	337	314	283	342
May ..	403	214	497	315	294	389	339	318	283	346
June ..	402	214	485	315	306	398	340	324	287	350

(a) Represents only such imported commodities as are included in the wholesale price index. This index does not measure changes in the price of imports generally.

NOTE.—The figures given in this table are comparable in the vertical columns but are not directly comparable horizontally.

## § 3. Melbourne Wholesale Price Index.

1. General.—An index of Melbourne wholesale prices was first computed in 1912. It relates chiefly to basic materials and foods weighted in accordance with consumption in the years immediately preceding that date. Neither the component items of the regimen nor the weighting have been varied, except as indicated in footnote (a) to the following table. Consequently, the index is outmoded for current use but it has some historical significance as a measure of changes in the prices of its component items combined in the proportions in which they were in common use about the year 1910. It is used mainly as an approximate indication of long-term trends since the year 1861, for which it was first compiled. It is now published only on an annual basis and consideration is at present being given to the form of its future publication. A description of the index and a list of the commodities included in it were published in *Labour Report* No. 38, 1949, pp. 43-45.



2. Index Numbers.—Index numbers for each group of commodities as well as for all groups combined are shown in the following table:—

### MELBOURNE WHOLESALE PRICE INDEX NUMBERS.

(Base of each Group : Year 1911 = 1,000.)

Year.	I. Metals and Coal.	II. Wool, Cotton, Leather, etc.	III. Agri- cultural Produce, etc.	IV. Dairy Produce.	V. Gro- ceries.	VI. Meat.	VII. Building Ma- terials.	VIII. Chem- icals.	All Groups.
1861..	1,438	1,381	1,583	1,008	1,963	..	1,070	2,030	1,538
1871..	1,096	1,257	1,236	864	1,586	..	1,044	1,409	1,429
1881..	1,178	1,115	1,012	935	1,421	..	1,091	1,587	1,121
1891..	895	847	1,024	995	1,032	888	780	1,194	945
1901..	1,061	774	928	1,029	1,048	1,345	841	917	974
1911..	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000
1921..	2,173	1,361	1,767	2,000	1,977	2,158	2,733	2,303	1,903
1931..	1,826	1,040	1,121	1,398	1,794	1,512	2,025	2,166	1,429
1941..	1,960	1,402	1,721	1,554	1,883	1,776	3,138	2,527	1,796
1949..	3,502	3,966	2,876	2,309	2,558	3,356	4,611	3,221	3,191
1950..	3,902	5,464	3,155	2,459	2,829	4,616	(a)5,567	3,263	3,816
1951..	5,080	7,943	4,512	2,930	2,850	6,438	(a)7,074	3,294	5,098
1952..	6,481	7,365	5,038	4,024	3,455	6,289	(a)9,338	3,723	5,647
1953..	6,615	6,950	4,958	4,533	3,707	6,303	(a)8,519	4,601	5,631
1954..	(b)	(b)	(b)	(b)	(b)	(b)	(a)(b)	(a)(b)	5,384

(a) The regimen and weighting of the original Building Materials and Chemicals groups have become unreal. Movements in the Building Materials group (since 1949) and in the Chemicals group (since 1953) have been calculated in accordance with the movements which occurred in the corresponding groups of the Basic Materials and Foodstuffs Index. These imputed movements have been used in calculating the All Groups indexes whilst maintaining the original group combining weights. (b) Not available for publication.

NOTE.—The figures given in this table are comparable in the vertical columns but are not directly comparable horizontally.

### C. CONTROL OF PRICES DURING AND SINCE THE 1939-45 WAR.

1. General.—An account of the measures taken by the Commonwealth Government to control prices from September, 1939 (immediately after the outbreak of war), until 29th May, 1948 (the date of the Prices Referendum), was given in Official Year Book No. 37, pp. 458-464.

2. Transfer of Price Control to the States.—Consequent upon the rejection of the proposal embodied in the Prices Referendum held on 29th May, 1948, that permanent power to control rents and prices (including charges) be conferred on the Commonwealth Government, responsibility for price fixation was assumed by the State Governments and steps were taken to pass State Prices Acts. These acts were proclaimed to operate simultaneously on 20th September, 1948. Except in the case of Queensland, each Act was to remain in force for a specific period, but the period varied from State to State.

On 20th September, 1948, each State Government issued declarations covering uniform lists of goods and services, which were brought under price control. Existing Commonwealth Prices Regulation Orders continued to apply to these goods and services until specially varied in accordance with the terms of the State legislation. At the same time, the Commonwealth Government issued an identical list of declared items to operate in the Australian Capital Territory and other Territories of the Commonwealth.

In the operation of State price control, the State Prices Commissioners collaborated closely. Conferences of Commissioners were held at intervals of approximately two months. Thus a large degree of uniformity was attained in controlling and decontrolling items and in the fixation of margins and prices of major items.

In each State the number of commodities and services subject to control has been progressively reduced, and in some States price control has been terminated, viz., Western Australia, 31st December, 1953; Tasmania, 31st October, 1954; Victoria, 31st December, 1954; and the Australian Capital Territory, 10th February, 1955.

3. **Price Stabilization.**—Expenditure by the Commonwealth Government on price stabilization subsidies reached a peak in 1947-48 and since then the Commonwealth Government has progressively reduced the range of commodities eligible for subsidy.

In addition to those subsidies which had been an integral part of the Price Stabilization Plan, the Commonwealth Government paid bounties and subsidies for assistance to primary production, and these payments also had a stabilizing influence on prices.

For particulars of expenditure by the Commonwealth Government on price stabilization and other subsidies and bounties, *see* Chapter XX.—Public Finance.

## D. WAGES.

### § 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 conditions of labour 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.

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.

This Act defines "an industrial dispute" as a "dispute (including a threatened, impending or probable dispute) as to industrial matters, which extends beyond the limits of any one State and a situation which is likely to give rise to a dispute as to industrial matters which so extends". Such disputes are dealt with, in part, by a Court constituted under the Act, and otherwise by Conciliation Commissioners appointed under the Act. At the present time, the Court comprises a Chief Judge and six other Judges, whilst there is a Chief Conciliation Commissioner and nine other Conciliation Commissioners.

The Court deals with industrial disputes insofar as they concern the standard hours of work in an industry, the basic wage for both adult males and adult females and questions relating to long service leave with pay, but all other matters in dispute are dealt with by a Conciliation Commissioner. There is, however, provision for a Conciliation Commissioner to refer any dispute or any part of a dispute to the Court for determination, but a Conciliation Commissioner is entitled to so refer a matter only if he is of the opinion, and if the Chief Judge concurs in that opinion, that the matter is one of such importance that, in the public interest, it should be dealt with by the Court.

In addition to the functions outlined above, the Act empowers the Court to make orders concerning the interpretation, and relating to the enforcement, of orders and awards. The Act also makes provision for the registration of associations of employees and employers, and certain powers in connexion therewith are, by the Act, given to the Court.

Although, in certain circumstances, there is a right of approach to the High Court with respect to decisions of the Court, the circumstances are very limited, and, for practical purposes, it can be said that decisions given by the Court are final. Decisions given by a Conciliation Commissioner, however, may be made the subject of appeal to the Court of Conciliation and Arbitration provided the party desiring to appeal can satisfy the Chief Judge, by way of application for leave to appeal, that the order or award, the subject of the application, deals with a matter of such importance that leave to appeal should, in the public interest, be granted.

Whilst many of the minor powers of the Court may be exercised by a Court constituted by one Judge, in all major matters, e.g., questions relating to the basic wage, standard hours of work, long service leave, applications concerning registered organizations and also appeals from orders or awards made by Conciliation Commissioners, the Court must be constituted by at least three Judges one of whom may be the Chief Judge.

Prior to 1947, there was no division of work as between the Court and Conciliation Commissioners, a dispute being dealt with by either one or other part of the Tribunal, with the exception that questions relating to the basic wage and standard hours could only be dealt with by at least three Judges of the Court sitting together. There was also, at that time, a right of appeal to the Court against a decision of a Conciliation Commissioner. The amending Act of 1947 brought about the division of work between the two parts of the Tribunal, and, at the same time, made decisions of Conciliation Commissioners final. However, a further amending Act passed in 1952 altered the position regarding finality of decisions of Conciliation Commissioners, and provided a right of appeal, in the circumstances set out above, to the Court against any such decision.

3. *States*.—In each State, Industrial Tribunals have been established to regulate and arbitrate in industrial matters. The chief of these are the Industrial Commission of New South Wales, the Industrial Courts of Queensland and South Australia, and the Western Australian Court of Arbitration, together with Wages Boards for specific industries or occupations which operate in Victoria, South Australia and Tasmania. Further details concerning the functions and powers of these authorities may be found in *Labour Report* No. 42.

## § 2. Rates of Wage and Hours of Labour.

1. *General*.—The collection of information respecting the current rates of wage payable in different callings and in occupations in various industries was first undertaken by this Bureau in the early part of 1913. The particulars are obtained primarily from awards, determinations and agreements under Commonwealth and State Industrial Acts and are therefore the minimum rates prescribed. They refer generally to the capital city in each State, but in industries which are not carried on in the capital cities, e.g., mining, agriculture, etc., the rates in the more important centres are taken. In those cases where no award, determination or agreement is in force, particulars are taken of the ruling union or predominant rate. During recent years the number of predominant rates of wage included in the tabulations has been reduced considerably, as most of the industries and occupations are now covered by awards, determinations or industrial agreements. The statistics of nominal wages and hours of labour are in course of revision to meet changes in industrial structure. The amounts should not be regarded as actual current averages, but as an index of changes expressed in money and hour terms.

The index numbers for male adult workers are computed with the weighted average wage in 1911 as base (= 1,000). In the case of females, however, it has not been possible to secure information for the years prior to 1914, and the index numbers are therefore computed with the weighted average rate of wage payable to adult female workers in Australia at 30th April, 1914 as base (= 1,000).

An extensive tabular presentation of the minimum rates of wage for adult male and female workers in the main occupations in the capital city of each State is given each year in the Appendix to the *Labour Report*.

2. *Weekly Rates of Wage, 1939 and 1950 to 1954*.—(i) *General*. The average rate of wage for each industrial group is computed by taking the arithmetic average of the rates of wage payable for all classified occupations within that group. These averages are weighted to give the averages for the States and for Australia.

(ii) *Adult Males—States.* The following table gives the weighted average nominal weekly rates of wage payable to adult male workers at the dates specified :—

### WEEKLY WAGE RATES : ADULT MALES.

WEIGHTED AVERAGE NOMINAL WEEKLY RATES PAYABLE FOR A FULL WEEK'S WORK  
(EXCLUDING OVERTIME) AND INDEX NUMBERS OF WAGE RATES.(a)

Particulars.	N.S.W.	Vic.	Q'land.	S.A.	W.A.	Tas.	Aust.
No. of Occupations Included(b) ..	870	894	615	562	477	466	3,884

RATES OF WAGE.							
	s. d.	s. d.	s. d.	s. d.	s. d.	s. d.	s. d.
31st December, 1939 ..	96 7	93 6	97 5	88 11	100 6	89 5	95 3
" " 1950 ..	209 6	204 5	199 10	200 6	208 3	199 7	205 6
" " 1951 ..	255 0	245 5	240 10	241 8	251 4	247 3	248 7
" " 1952 ..	284 8	274 5	267 9	274 6	284 7	276 2	278 2
" " 1953 ..	296 8	282 6	273 10	278 9	292 5	296 11	287 7
" " 1954 ..	298 4	284 3	278 7	282 2	293 3	299 2	290 0

### INDEX NUMBERS.

(Base : Weighted Average Wage for Australia (51s. 3d.), 1911 = 1,000.)

31st December, 1939 ..	1,885	1,825	1,900	1,735	1,962	1,745	1,858
" " 1950 ..	4,088	3,989	3,900	3,911	4,064	3,895	4,009
" " 1951 ..	4,975	4,789	4,699	4,715	4,904	4,825	4,850
" " 1952 ..	5,555	5,354	5,224	5,356	5,553	5,388	5,428
" " 1953 ..	5,788	5,513	5,342	5,439	5,705	5,794	5,611
" " 1954 ..	5,820	5,547	5,435	5,506	5,722	5,837	5,658

(a) The statistics of nominal wages and hours of labour are in course of revision to meet changes in industrial structure. The amounts shown should not be regarded as actual current averages but as an index of changes expressed in money and hour terms.

(b) As at 31st December, 1954.

(iii) *Adult Males—Industrial Groups.* The following table shows for Australia the average weekly rates of wage and index numbers in each industrial group and for all groups at the dates specified.

### WEEKLY WAGE RATES : ADULT MALES, INDUSTRIAL GROUPS, AUSTRALIA.

WEIGHTED AVERAGE NOMINAL WEEKLY RATES PAYABLE FOR A FULL WEEK'S WORK  
(EXCLUDING OVERTIME) AND INDEX NUMBERS OF WAGE RATES IN EACH INDUSTRIAL GROUP.(a)

Industrial Group.	31st Dec., 1939.	31st Dec., 1950.	31st Dec., 1951.	31st Dec., 1952.	31st Dec., 1953.	31st Dec., 1954.
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RATES OF WAGE.							
	s. d.	s. d.	s. d.	s. d.	s. d.	s. d.	s. d.
I. Wood, Furniture, etc. ..	100 1	199 8	238 8	270 2	276 11	281 11	
II. Engineering, etc. ..	99 3	198 2	237 1	267 10	274 2	284 1	
III. Food, Drink, etc. ..	96 9	199 11	239 3	271 5	279 5	280 9	
IV. Clothing, Textiles, etc. ..	93 2	202 10	242 10	273 6	278 10	278 10	
V. Books, Printing, etc. ..	114 3	228 9	274 5	305 5	313 11	324 11	
VI. Other Manufacturing ..	95 8	199 0	238 10	270 2	276 10	279 7	
VII. Building ..	106 5	215 11	259 0	293 11	301 3	307 6	
VIII. Mining, etc. ..	109 1	211 0	249 2	281 8	288 2	288 0	
IX. Railways, etc. ..	96 6	199 2	238 0	269 4	278 3	289 9	
X. Other Land Transport ..	92 10	192 7	233 2	263 11	270 3	273 3	
XI. Shipping, etc.(b) ..	98 6	230 2	271 11	303 1	308 9	308 9	
XII. Agricultural, etc.(b) ..	84 0	222 2	279 1	300 11	319 8	319 7	
XIII. Domestic, etc.(b) ..	89 11	186 8	224 8	255 8	262 5	263 0	
XIV. Miscellaneous ..	92 10	192 9	232 0	262 10	270 1	270 5	
All Industrial Groups ..	95 3	205 6	248 7	278 2	287 7	290 0	

For notes see next page.

WEEKLY WAGE RATES: ADULT MALES, INDUSTRIAL GROUPS, AUSTRALIA  
—continued.

Industrial Group.	31st Dec., 1939.	31st Dec., 1950.	31st Dec., 1951.	31st Dec., 1952.	31st Dec., 1953.	31st Dec., 1954.
INDEX NUMBERS.						
(Base : Weighted Average Wage for All Groups in 1911 (51s. 3d.) = 1,000.)						
I. Wood, Furniture, etc.	1,953	3,896	4,656	5,272	5,403	5,501
II. Engineering, etc.	1,936	3,867	4,626	5,226	5,349	5,542
III. Food, Drink, etc.	1,888	3,901	4,668	5,296	5,452	5,478
IV. Clothing, Textiles, etc.	1,817	3,957	4,738	5,337	5,441	5,441
V. Books, Printing, etc.	2,229	4,463	5,355	5,959	6,124	6,340
VI. Other Manufacturing	1,867	3,883	4,631	5,272	5,401	5,455
VII. Building	2,076	4,212	5,054	5,735	5,878	6,000
VIII. Mining, etc.	2,142	4,118	4,861	5,495	5,622	5,620
IX. Railways, etc.	1,884	3,887	4,643	5,256	5,429	5,654
X. Other Land Transport	1,812	3,757	4,550	5,150	5,274	5,332
XI. Shipping, etc.(b)	1,924	4,491	5,306	5,914	6,025	6,025
XII. Agricultural, etc.(b)	1,639	4,335	5,445	5,871	6,237	6,236
XIII. Domestic, etc.(b)	1,755	3,643	4,384	4,989	5,121	5,132
XIV. Miscellaneous	1,811	3,761	4,527	5,128	5,269	5,276
All Industrial Groups	1,858	4,009	4,850	5,428	5,611	5,658

(a) See note (a) to table on page 168.

(b) Includes the value of keep, where supplied.

(iv) *Adult Females—States.* The following table shows the weighted average nominal weekly rates of wage payable to adult female workers for a full week's work, in each State and Australia at the dates specified.

WEEKLY WAGE RATES: ADULT FEMALES.

WEIGHTED AVERAGE NOMINAL WEEKLY RATES PAYABLE FOR A FULL WEEK'S WORK (EXCLUDING OVERTIME) AND INDEX NUMBERS OF WAGE RATES.(a)

Particulars.	N.S.W.	Vic.	Q'land.	S.A.	W.A.	Tas.	Aust.
No. of Occupations included(b) ..	84	87	38	47	24	32	31*

RATES OF WAGE.

	s. d.	s. d.	s. d.	s. d.	s. d.	s. d.	s. d.
31st December, 1939	53 3	51 9	55 2	49 7	55 8	50 8	52 8
" " 1950	139 11	142 11	135 11	142 1	132 3	137 2	140 5
" " 1951	171 1	172 10	161 7	171 4	163 2	168 7	170 4
" " 1952	193 11	196 2	184 4	195 8	186 0	191 2	193 5
" " 1953	198 5	200 10	188 7	199 6	190 5	196 4	197 11
" " 1954	198 9	200 2	190 0	199 5	190 5	196 7	197 11

INDEX NUMBERS.

(Base : Weighted Average Wage for Australia (27s. 2d.), 30th April, 1914 = 1,000.)

31st December, 1939	1,960	1,906	2,031	1,826	2,049	1,866	1,938
" " 1950	5,510	5,259	5,003	5,229	4,866	5,050	5,169
" " 1951	6,296	6,362	5,948	6,395	6,007	6,204	6,268
" " 1952	7,138	7,220	6,784	7,202	6,846	7,037	7,120
" " 1953	7,302	7,392	6,940	7,342	7,007	7,226	7,285
" " 1954	7,314	7,367	6,994	7,339	7,007	7,236	7,285

(a) See note (a) to table on page 168.

(b) As at 31st December, 1954.

It should be noted that the base of these index numbers is 1914 and not 1911 as in the foregoing tables for adult males. This is because there was no tabulation for adult female rates prior to 1914.

(v) *Adult Females—Industrial Groups.* The following table shows the weighted average weekly rates of wage payable in Australia to adult female workers in the industrial groups in which they are mainly employed, and in all groups combined.

### WEEKLY WAGE RATES : ADULT FEMALES, INDUSTRIAL GROUPS, AUSTRALIA.

WEIGHTED AVERAGE NOMINAL WEEKLY RATES PAYABLE FOR A FULL WEEK'S WORK (EXCLUDING OVERTIME) AND INDEX NUMBERS OF WAGE RATES IN EACH INDUSTRIAL GROUP.(a)

Date.	Industrial Group.					
	III. Food, Drink, etc.	IV. Clothing, Textiles, etc.	I., II., V., and VI. All Other Manufacturing.	XIII. Domestic, etc.(b)	XIV. Miscellaneous.	All Groups.
RATES OF WAGE.						
	s. d.	s. d.	s. d.	s. d.	s. d.	s. d.
31st December, 1939 ..	48 9	50 9	51 11	54 5	56 8	52 8
" " 1950 ..	135 9	139 2	147 1	132 1	149 9	140 5
" " 1951 ..	164 2	169 6	177 1	160 10	179 10	170 4
" " 1952 ..	186 8	192 5	200 9	183 6	203 10	193 5
" " 1953 ..	191 3	196 6	201 3	188 7	210 2	197 11
" " 1954 ..	191 2	196 6	201 8	188 11	209 11	197 11
INDEX NUMBERS.						
(Base : Weighted Average Wage for Australia (27s. 2d.), 30th April, 1914 = 1,000.)						
31st December, 1939 ..	1,795	1,869	1,910	2,003	2,085	1,938
" " 1950 ..	4,996	5,121	5,412	4,861	5,512	5,169
" " 1951 ..	6,043	6,238	6,517	5,919	6,618	6,268
" " 1952 ..	6,869	7,081	7,389	6,755	7,501	7,120
" " 1953 ..	7,039	7,232	7,407	6,941	7,735	7,285
" " 1954 ..	7,036	7,232	7,422	6,951	7,725	7,285

(a) See note (a) to table on page 168

(b) Includes the value of keep, where supplied.

3. *Hourly Wage Rates, 1939 and 1950 to 1954.*—(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. The number of hours constituting a full week's work differs, however, in some instances between various trades and occupations in each State, and between the same trades and occupations in the several States. To secure what may be for some purposes a better comparison, the results in the preceding paragraphs are reduced to a common basis, namely, the rate of wage per hour. The particulars of weighted average nominal hourly rates of wage given in the following tables relate to all industrial groups except Groups XI. (Shipping, etc.) and XII. (Pastoral, Agricultural, etc.). Some of the occupations included in these groups are of a casual or seasonal nature, and in a number of cases the hours of labour are not regulated either by awards or determinations of industrial tribunals or by legislation. Thus the necessary 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 nominal hourly rates of wage payable to adult male workers in each State at the dates specified. Index numbers are also given for each State with the weighted average for Australia at 30th April, 1914 as base (= 1,000).

HOURLY WAGE RATES(a) : ADULT MALES.

WEIGHTED AVERAGE NOMINAL HOURLY RATES PAYABLE AND INDEX NUMBERS OF HOURLY RATES.

Date.	N.S.W.	Vic.	Q'land.	S. Aust.	W. Aust.	Tas.	Aust.
RATES OF WAGE.							
31st December, 1939	2 3½	2 1½	2 3½	1 11½	2 4	2 0	2 2½
" " 1950	5 1½	5 0½	4 8½	4 9½	5 1½	4 11	5 0
" " 1951	6 2½	5 11½	5 6½	5 9	6 2½	5 11	6 0
" " 1952	6 11½	6 8½	6 4½	6 7½	7 0½	6 8½	6 9½
" " 1953	7 1½	6 11½	6 6½	6 8½	7 3	7 0½	6 11½
" " 1954	7 2½	7 0	6 8½	6 10½	7 3½	7 1½	7 0½

INDEX NUMBERS.

(Base : Weighted Average Wage for Australia (13.96d.), 30th April, 1914 = 1,000).

31st December, 1939	1,963	1,834	1,979	1,692	2,001	1,717	1,903
" " 1950	4,393	4,318	4,047	4,142	4,430	4,230	4,301
" " 1951	5,318	5,142	4,756	4,948	5,319	5,079	5,153
" " 1952	5,985	5,785	5,464	5,697	6,066	5,782	5,833
" " 1953	6,128	5,959	5,599	5,787	6,239	6,042	5,986
" " 1954	6,175	6,015	5,756	5,888	6,262	6,112	6,054

(a) Weighted average hourly rates of wage for all industrial groups except Groups XI. (Shipping, etc.), and XII. (Pastoral, Agricultural, etc.). Working hours have not been generally regulated by industrial tribunals for some of the occupations classified in Industrial Groups XI. and XII. See also note (a) to table on page 168.

(iii) *Adult Females—States.* The following table shows the weighted average nominal hourly rates of wage payable to adult female workers in each State at the dates specified. Index numbers are also given for each State with the average for Australia at 30th April, 1914 as base (= 1,000).

HOURLY WAGE RATES(a) : ADULT FEMALES.

WEIGHTED AVERAGE NOMINAL HOURLY RATES PAYABLE AND INDEX NUMBERS OF HOURLY RATES.

Date.	N.S.W.	Vic.	Q'land.	S. Aust.	W. Aust.	Tas.	Aust.
RATES OF WAGE.							
31st December, 1939	1 2½	1 2	1 3	1 1	1 2½	1 1½	1 2½
" " 1950	3 6	3 6½	3 4½	3 6½	3 3½	3 5½	3 6½
" " 1951	4 3½	4 3½	4 0½	4 3½	4 1	4 2½	4 3
" " 1952	4 10½	4 10½	4 7½	4 10½	4 7½	4 9½	4 10
" " 1953	4 11½	5 0½	4 8½	4 11½	4 9	4 11	4 11½
" " 1954	4 11½	5 0	4 9	4 11½	4 9	4 11	4 11½

INDEX NUMBERS.

(Base : Weighted Average Wage for Australia (6.64d.), 30th April, 1914 = 1,000.)

31st December, 1939	2,193	2,107	2,267	1,952	2,217	2,032	2,145
" " 1950	6,322	6,455	6,142	6,419	5,973	6,199	6,345
" " 1951	7,729	7,810	7,301	7,741	7,373	7,616	7,694
" " 1952	8,762	8,863	8,328	8,840	8,404	8,639	8,739
" " 1953	8,964	9,074	8,520	9,012	8,601	8,870	8,943
" " 1954	8,979	9,044	8,586	9,009	8,601	8,883	8,943

(a) See note (a) to table on page 168.

4. **Weekly Hours of Labour, 1939 and 1950 to 1954.**—(i) *General.* The number of hours constituting a full week's work (excluding overtime) differs in some instances between various trades and occupations in each State and between the same trades and occupations in the several States. The particulars of weekly hours of labour given in the following tables relate to all industrial groups except Groups XI. (Shipping, etc.) and XII. (Pastoral, Agricultural, etc.). Some of the occupations included in these groups are of a casual or seasonal nature, and in a number of cases the hours of labour are not regulated either by awards or determinations of industrial tribunals or by legislation. Thus the necessary particulars for the computation of average working hours for these groups are not available.

(ii) *Adult Males—States.* The following table shows the weighted average nominal hours of labour (excluding overtime) in a full working week for adult male workers in each State and Australia at 31st December, 1939 and 1950 to 1954. Index numbers are given for each State with the weighted average hours of labour for Australia at 30th April, 1914, as base (= 1,000).

### WEEKLY HOURS OF LABOUR (EXCLUDING OVERTIME)(a): ADULT MALES.

WEIGHTED AVERAGE NOMINAL HOURS OF LABOUR (EXCLUDING OVERTIME) WORKED DURING A FULL WORKING WEEK AND INDEX NUMBERS OF HOURS OF LABOUR.

Date.	N.S.W.	Vic.	Q'land.	S. Aust.	W. Aust.	Tas.	Aust.
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#### WEEKLY HOURS OF LABOUR.

31st December, 1939	..	43.92	44.61	43.46	45.83	44.33	45.33	44.29
" " 1950	..	39.99	39.99	40.00	40.00	39.54	40.00	39.96
" " 1951	..	39.99	39.98	40.00	40.00	39.51	40.00	39.95
" " 1952	..	39.99	39.98	40.00	40.00	39.51	40.00	39.95
" " 1953	..	39.99	39.98	40.00	40.00	39.51	40.00	39.95
" " 1954	..	39.99	39.98	40.00	40.00	39.51	40.00	39.95

#### INDEX NUMBERS.

(Base : Weighted Average for Australia (48.93), 30th April, 1914 = 1,000).

31st December, 1939	..	898	912	888	937	906	926	905
" " 1950	..	817	817	817	817	808	817	817
" " 1951	..	817	817	817	817	807	817	816
" " 1952	..	817	817	817	817	807	817	816
" " 1953	..	817	817	817	817	807	817	816
" " 1954	..	817	817	817	817	807	817	816

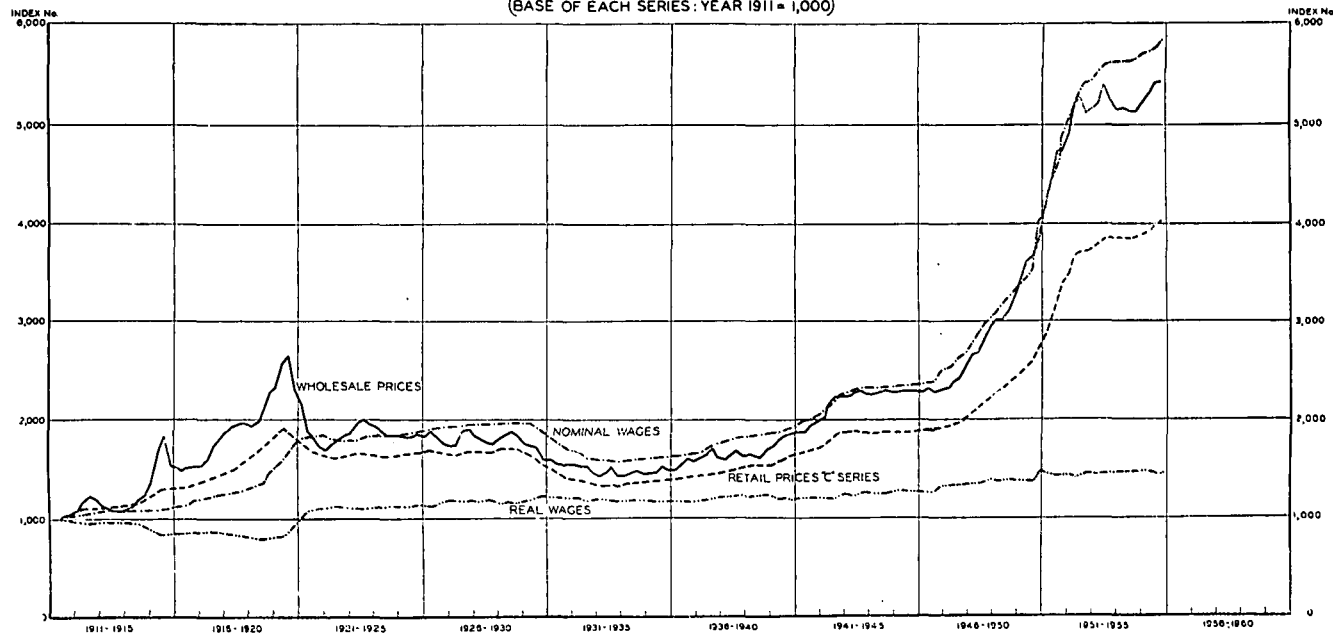
(a) Weighted average working hours per week for all industrial groups except Groups XI. (Shipping, etc.), and XII. (Pastoral, Agricultural, etc.). Working hours have not been generally regulated by industrial tribunals for some of the occupations classified in Industrial Groups XI. and XII. See also note (a) to table on page 168.

(iii) *Adult Females—States.* The following table shows the weighted average nominal hours of labour (excluding overtime) in a full working week for adult female workers in each State and Australia at 31st December, 1939 and 1950 to 1954. Index numbers are given for each State with the weighted average hours of labour for Australia at 30th April, 1914, as base (= 1,000).



# WHOLESALE AND RETAIL PRICES, NOMINAL, AND EFFECTIVE OR REAL WAGES - INDEX NUMBERS AUSTRALIA, 1911 to 1955

(BASE OF EACH SERIES: YEAR 1911 = 1,000)

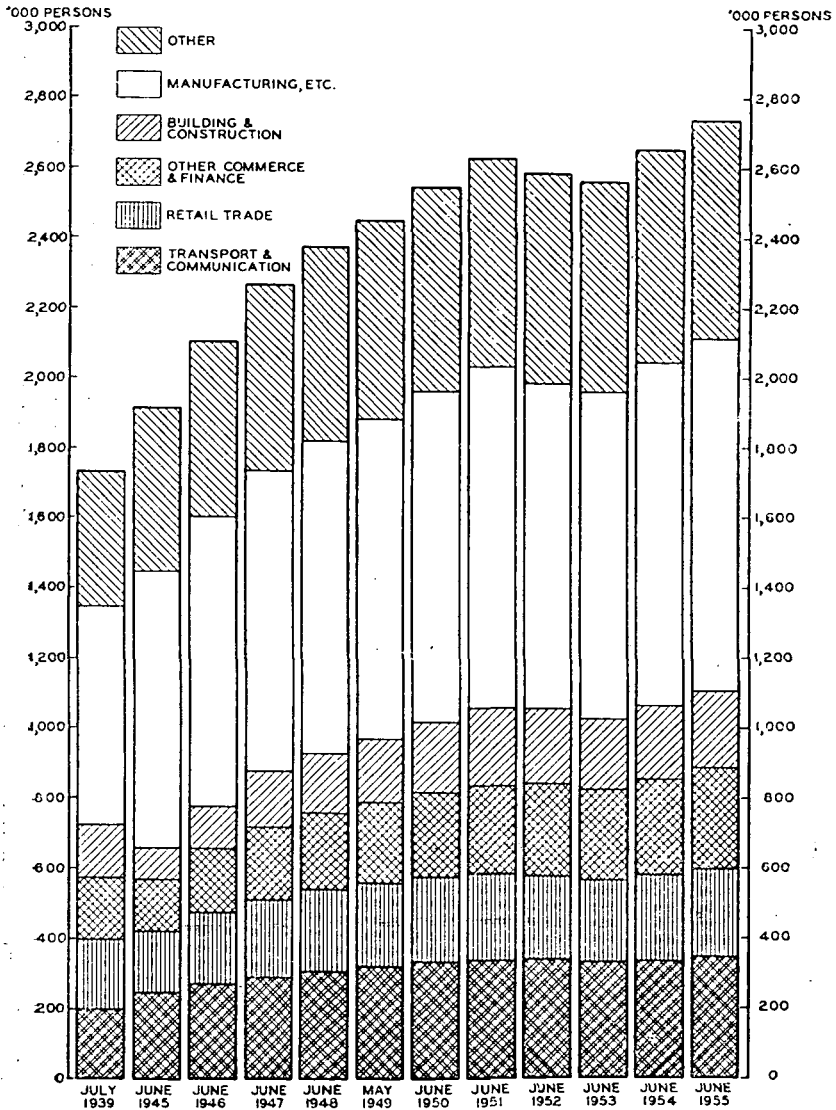


EXPLANATION.—The index numbers in the graph above are for the Six Capital Cities as a whole, with the exception of those for Wholesale Prices up to the fourth quarter of 1927, which are for Melbourne. The wholesale prices graph shows the trend of prices according to the "old" Melbourne Index up to the fourth quarter of 1927, but thereafter, this index having been "spliced" with the Basic Materials and Foodstuffs Index, the curve line moves in accordance with the variations of the latter. The price quotations for this index are, in the main, obtained from Melbourne sources, but their movements may be taken as representative of fluctuations in most Australian markets. For the period 1911-1914 the "C" Series index numbers are taken back from the true base (November, 1914 = 1,000) by means of the "A" Series Index (Food and Rent of All Houses). Real wages are computed on the basis of the "C" Series Retail Price Index.

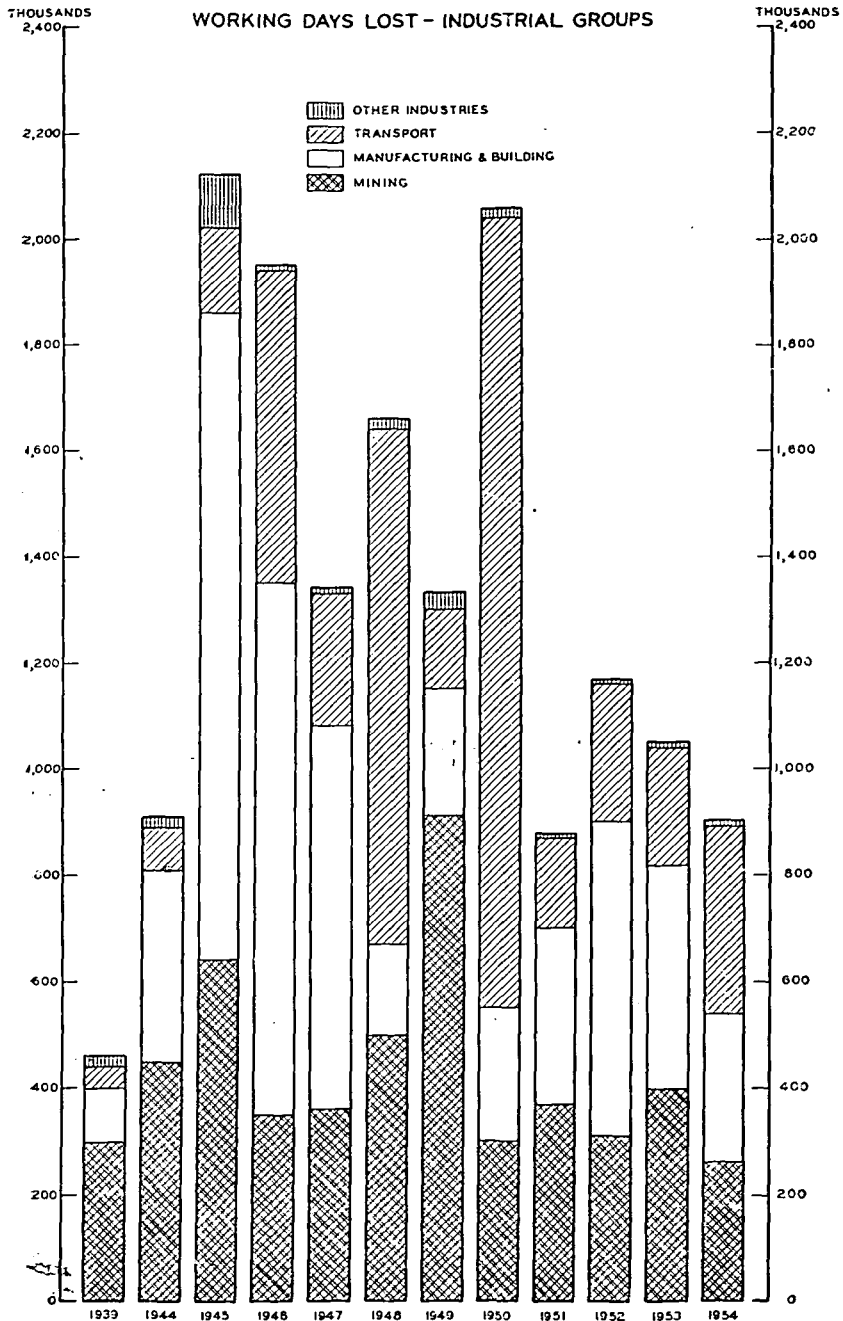
# WAGE AND SALARY EARNERS IN CIVILIAN EMPLOYMENT: AUSTRALIA 1939 AND 1945 TO 1955

BY MAIN INDUSTRIAL GROUPS

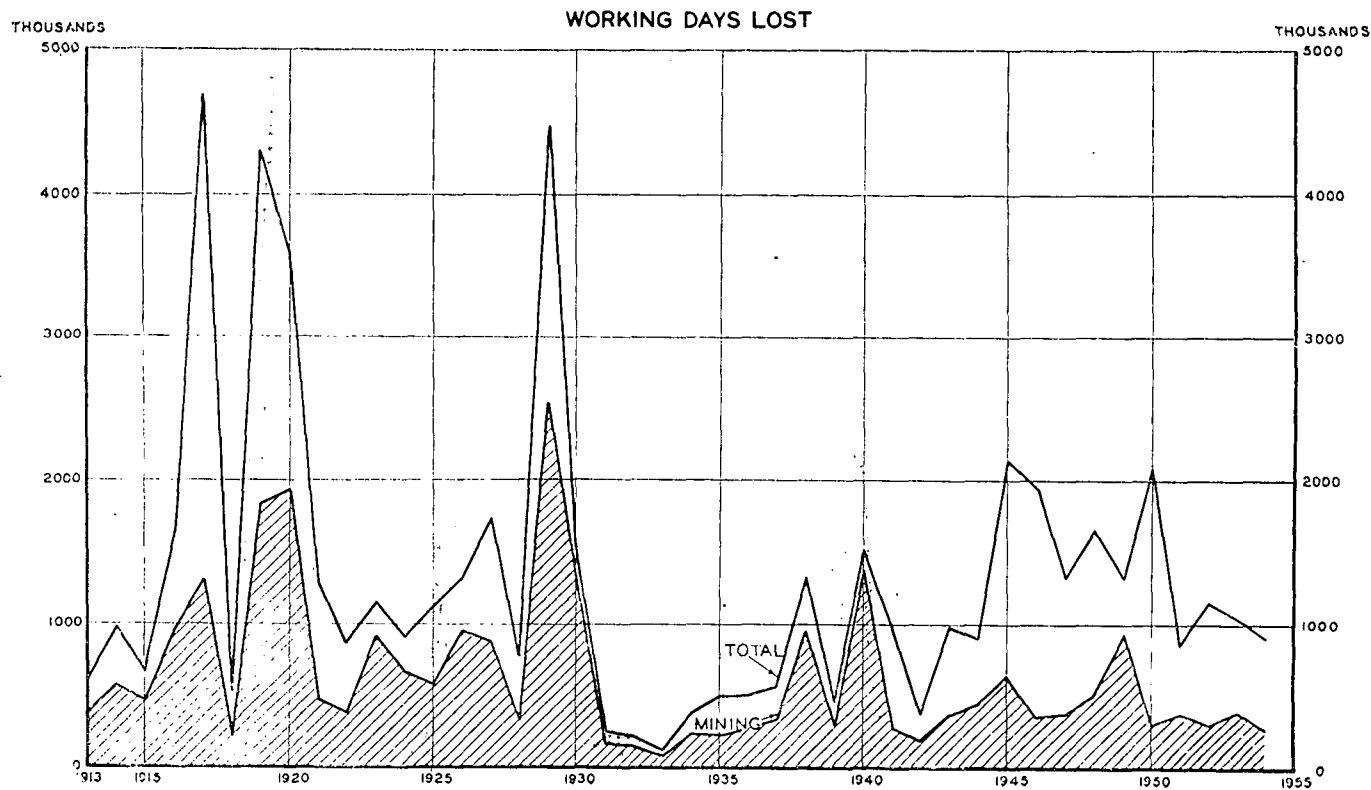
(EXCLUDING RURAL AND PRIVATE DOMESTIC WORKERS)



# INDUSTRIAL DISPUTES: AUSTRALIA 1939 AND 1944 TO 1954



# INDUSTRIAL DISPUTES: AUSTRALIA, 1913 TO 1954



WEEKLY HOURS OF LABOUR (EXCLUDING OVERTIME)(a) : ADULT FEMALES.

WEIGHTED AVERAGE NOMINAL HOURS OF LABOUR (EXCLUDING OVERTIME) WORKED DURING A FULL WORKING WEEK AND INDEX NUMBERS OF HOURS OF LABOUR.

Date.	N.S.W.	Vic.	Q'land.	S. Aust.	W. Aust.	Tas.	Aust.
WEEKLY HOURS OF LABOUR.							
31st December, 1939	43.88	44.42	44.01	45.96	45.38	45.10	44.36
" " 1950	40.00	40.00	40.00	40.00	40.00	40.00	40.00
" " 1951	40.00	40.00	40.00	40.00	40.00	40.00	40.00
" " 1952	40.00	40.00	40.00	40.00	40.00	40.00	40.00
" " 1953	40.00	40.00	40.00	40.00	40.00	40.00	40.00
" " 1954	40.00	40.00	40.00	40.00	40.00	40.00	40.00

INDEX NUMBERS.

(Base : Weighted Average for Australia (49.08), 30th April, 1914 = 1,000).

31st December, 1939	894	905	897	936	925	919	904
" " 1950	814	814	814	814	814	814	814
" " 1951	814	814	814	814	814	814	814
" " 1952	814	814	814	814	814	814	814
" " 1953	814	814	814	814	814	814	814
" " 1954	814	814	814	814	814	814	814

(a) See note (a) to table on page 168.

5. Nominal and Effective Wage Rates.—(i) *General*. Index numbers of wage rates are said to be *nominal* when they represent changes in the wage rates themselves but are described as *effective* or *real* when they represent changes in equivalent purchasing power, that is, the purchasing power of the corresponding wages in terms of some definite composite unit or regimen the cost of which can be ascertained at different times. The relation between *nominal* and *effective* or *real* wages was discussed at some length in *Labour Report* No. 6, and was also referred to in *Labour Report* No. 11.

Prior to 1936 it was the practice of this Bureau to compute effective wage rate index numbers by dividing the nominal wage rate index numbers by the corresponding retail price index numbers for food, groceries and rent of all houses ("A" series). While wage rates were generally varied on the basis of the "A" series index numbers there was a good deal to be said for this procedure. When the Commonwealth Court abandoned the "A" series, the merits of the "C" series for "deflating" nominal wage rates were strengthened and real wages to the end of 1937 were measured in terms of their purchasing power over both regimens. Since 1938, when computation of the "A" series was discontinued, real wages have been measured in terms of their purchasing power over the "C" series only. The "C" series covers food, groceries, rent of four- and five-roomed houses, clothing and miscellaneous household requirements.

(ii) *Nominal Weekly Wage Rate Index Numbers*. The following table shows, for the period 1911 to 1954, index numbers of the weighted average nominal weekly rates of wage payable for adult males in each State, the weighted average rate for Australia in 1911 being taken as the base (=1,000). These results are based generally upon rates of wage prevailing in the capital city of each State, but in certain industries, such as mining, rates are necessarily taken for places other than the capital cities. The index numbers for 1911 are based on rates current at the end of December, 1911, annual averages not being available. For 1914 and subsequent years, however, the index numbers are based on the average rates current at the end of the four quarters of each year.

## NOMINAL WAGE RATE(a) INDEX NUMBERS : ADULT MALES.

(Base : Weighted Average Nominal Wage Rate(a) for Australia, 1911 = 1,000.)

State.	1911.	1914.	1921.	1929.	1931.	1939.	1941.	1950.	1951.	1952.	1953.	1954.
N.S. Wales ..	1,003	1,093	1,862	2,012	1,851	1,874	2,024	3,649	4,588	5,367	5,699	5,797
Victoria ..	985	1,062	1,803	1,964	1,683	1,808	1,984	3,584	4,458	5,158	5,451	5,523
Queensland ..	997	1,035	1,879	1,976	1,769	1,885	1,981	3,548	4,377	5,113	5,280	5,419
South Australia ..	1,013	1,061	1,697	1,891	1,580	1,725	1,897	3,503	4,376	5,124	5,384	5,456
W. Australia ..	1,152	1,223	1,832	1,960	1,745	1,956	2,106	3,638	4,557	5,325	5,647	5,711
Tasmania ..	799	1,027	1,745	1,840	1,625	1,738	1,895	3,472	4,441	5,176	5,718	5,805
Australia ..	1,000	1,081	1,826	1,972	1,752	1,846	1,997	3,596	4,495	5,241	5,539	5,632

(a) For a full week's work (excluding overtime).

(iii) *Effective or Real Wage Rate Index Numbers.* In obtaining the effective wage rate index numbers in the following table, the nominal wage rate index numbers shown above have been divided by the corresponding retail price index numbers for the capital city and multiplied by 1,000. Since the "C" series index numbers were not compiled for periods prior to November, 1914, it has been assumed that fluctuations between 1911 (the base of the table) and 1914 in the "C" series would have been similar to the fluctuations observed in the "A" series. A table showing effective or real wage rate index numbers from 1901 to 1937 measured in terms of purchasing power over the "A" series regimen appeared in earlier issues of the Official Year Book (see No. 37, page 473).

## EFFECTIVE OR REAL WAGE RATE(a) INDEX NUMBERS : ADULT MALES.

Measured in terms of purchasing power over the "C" series regimen.

(Base : Weighted Average Real Wage Rate (a) for Australia, 1911 = 1,000.)

State.	1911.	1914.	1921.	1929.	1931.	1939.	1941.	1950.	1951.	1952.	1953.	1954.
N.S. Wales ..	..	925	1,073	1,130	1,210	1,207	1,187	1,380	1,430	1,428	1,450	1,467
Victoria ..	..	954	1,084	1,164	1,200	1,180	1,187	1,381	1,429	1,432	1,438	1,455
Queensland ..	..	1,022	1,227	1,290	1,336	1,306	1,240	1,453	1,498	1,494	1,490	1,506
South Australia ..	..	914	1,034	1,099	1,137	1,147	1,158	1,388	1,439	1,430	1,445	1,444
W. Australia ..	..	1,043	1,096	1,152	1,189	1,308	1,279	1,426	1,477	1,479	1,483	1,400
Tasmania ..	..	902	984	1,108	1,120	1,153	1,142	1,371	1,438	1,432	1,436	1,454
Australia ..	1,000	948	1,087	1,151	1,210	1,211	1,194	1,389	1,439	1,438	1,450	1,459

(a) For a full week's work (excluding overtime).

In earlier issues of the Official Year Book (see No. 39, page 410) a table was included showing similar index numbers for Australia as a whole under both the "A" and "C" series at intervals from 1901 to 1950.

## § 3. Average Weekly Wage Earnings.

1. *Average Weekly Total Wages Paid and Average Earnings, All Industries.*—The following figures are derived from employment and wages recorded on Pay-roll Tax returns (which cover approximately 80 per cent. of the total employment for Australia) and from estimates of the unrecorded balance. The figures relate to civilian wages and salaries only, pay and allowances of members of the armed forces being excluded. Corresponding figures for each quarter are published in the *Monthly Review of Business Statistics* and the *Quarterly Summary of Australian Statistics*.

## AVERAGE WEEKLY TOTAL WAGES PAID AND AVERAGE EARNINGS.

Year.	N.S.W. (a)	Vic.	Q'land.	S. Aust. (b)	W. Aust.	Tas.	Aust.
AVERAGE WEEKLY TOTAL WAGES PAID. (£'000.)							
1947-48 .. ..	6,976	4,719	2,069	1,369	954	492	16,579
1948-49 .. ..	8,133	5,540	2,503	1,644	1,120	580	19,520
1949-50 .. ..	9,018	6,370	2,838	1,894	1,315	672	22,107
1950-51 .. ..	11,385	7,916	3,501	2,389	1,639	817	27,647
1951-52 .. ..	14,364	9,816	4,319	3,018	2,108	1,059	34,684
1952-53 .. ..	15,090	10,490	4,750	3,311	2,344	1,178	37,163
1953-54 .. ..	16,043	11,305	5,065	3,561	2,586	1,280	39,840
1954-55 .. ..	17,357	12,221	5,398	3,839	2,731	1,365	42,911
AVERAGE WEEKLY EARNINGS PER EMPLOYED MALE UNIT.(c) (£.)							
1947-48 .. ..	7.73	7.80	6.58	7.02	6.87	6.72	7.44
1948-49 .. ..	8.73	8.84	7.63	8.03	7.75	7.56	8.44
1949-50 .. ..	9.50	9.78	8.34	8.83	8.65	8.49	9.26
1950-51 .. ..	11.46	11.70	9.82	10.58	10.23	9.99	11.09
1951-52 .. ..	14.24	14.20	11.93	13.13	12.80	12.59	13.65
1952-53 .. ..	15.50	15.46	13.32	14.58	14.13	13.97	14.95
1953-54 .. ..	16.15	16.27	14.05	15.30	15.04	14.92	15.69
1954-55 .. ..	16.96	17.06	14.51	16.09	15.55	15.60	16.42

(a) Includes Australian Capital Territory. (b) Includes Northern Territory. (c) Male units represent total male employment plus a proportion of female employment based on the approximate ratio of female to male earnings. The same ratio has been used in each State, and because the average ratio of female to male earnings may vary between States, precise comparisons between average earnings in different States cannot be made on the basis of the figures above.

2. Average Weekly Wage Earnings Index Numbers.—The following table shows, for "All Industries" and for "Manufacturing", the movement in average weekly wage earnings from 1945-46 to the June Quarter, 1955. The "All Industries" index is based on Pay-roll Tax returns and other data. The index for manufacturing industries for the years 1945-46 to 1953-54 is based on the average earnings of male wage and salary earners employed in factories as disclosed by annual factory returns (*see* Chapter IX.—Manufacturing Industry, § 8, para. 2 (iii)); figures subsequent to June, 1954 are preliminary estimates based on Pay-roll Tax returns.

The index numbers show for "All Industries" and "Manufacturing" the movement in average earnings over a period of time. They do not, however, give, at any point of time, a comparison of actual earnings in the two groups. The base of each series is the year 1945-46 = 1,000 and both series have been seasonally adjusted.

## AVERAGE WEEKLY WAGE EARNINGS(a) INDEX NUMBERS: AUSTRALIA.

SEASONALLY ADJUSTED.

(Base of each Series: Year 1945-46 = 1,000.)

Year.	All Industries.(b)	Manufacturing.(c)	Quarter.	All Industries.(b)	Manufacturing.(c)
1945-46 .. ..	1,000	1,000	1953—March Qtr. ..	2,362	2,405
1946-47 .. ..	1,037	1,056	June .. ..	2,377	2,427
1947-48 .. ..	1,164	1,206	Sept. .. ..	2,445	2,479
1948-49 .. ..	1,322	1,365	Dec. .. ..	2,436	2,477
1949-50 .. ..	1,451	1,505	1954—March .. ..	2,491	2,552
			June .. ..	2,477	2,534
1950-51 .. ..	1,742	1,810	Sept. .. ..	2,522	2,609
1951-52 .. ..	2,145	2,213	Dec. .. ..	2,524	2,588
1952-53 .. ..	2,350	2,394	1955—March .. ..	2,589	2,705
1953-54 .. ..	2,462	2,490	June .. ..	2,652	2,730
1954-55 .. ..	2,572	2,635			

(a) Including salaries. (b) Average earnings per male unit employed. Male units represent total male employment plus a proportion of female employment based on the approximate ratio of female to male earnings. (c) Average earnings of male wage and salary earners in factories.

### § 4. 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 dominant factor in fixing the basic wage . . . . is the economic or productivity factor and that the basic wage must be the highest that industry as a whole can pay”.\*

Under the Commonwealth Conciliation and Arbitration Act 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 a 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”. In practice, the Court holds general basic wage inquiries from time to time and its findings are then applied to industrial awards within its jurisdiction. In New South Wales and South Australia, in general, the State industrial authorities are required to adopt the relevant basic wage prescribed by the Commonwealth Court of Conciliation and Arbitration. In Victoria and Tasmania, where the Wages Boards systems operate, no provision is included in the industrial Acts for the declaration of a basic wage, although, in fact, the Wages Boards have 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 Arbitration or Industrial Courts and (subject to State law) they have regard to rates determined by the Commonwealth Court.

In addition to the basic wage, “secondary” wage payments, including margins for skill, loadings and other special considerations peculiar to the occupations 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.

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 way of 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. per day or £2 2s. per 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 with regard to variations in 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. per week (or the base of the index (1,000) to 48s. per week).

\* 44 C.A.R., p. 57.

† 2 C.A.R., p. 3.



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 Report was presented in 1920. 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. 40, p. 106.

The system of making automatic quarterly adjustments of 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 practice adopted by the Commonwealth Court in 1921 of making automatic quarterly adjustments on a sliding scale continued until the Court's judgment of 12th September, 1953 (see page 184).

In 1922 an amount known as the "Powers' 3s." was added by the Court as a general "loading" to the weekly basic wage for the purpose of maintaining during a period of rising prices the full equivalent of the "Harvester" standard. This loading continued until 1934.

(ii) *Basic Wage Inquiries, 1930-31, 1932, 1933.* No change was made in the method of fixation and adjustment of the basic wage until the onset of depression, which began to be felt severely during 1930. Applications were then made to the Court for some greater measure of reduction of wages than that which resulted from the automatic adjustments due to falling retail prices. The Court held a general inquiry, and, while declining to make any change in the existing method of calculating the basic wage, reduced all wage rates under its jurisdiction by 10 per cent. from 1st February, 1931. In June, 1932 the Court refused applications by employee organizations for the cancellation of the 10 per cent. reduction of wage rates. In May, 1933 the Court again refused to cancel the 10 per cent. reduction in wage rates, but decided that the existing method of adjustment of the basic wage in accordance with the "A" series retail price index number had resulted in some instances in a reduction of more than 10 per cent. In order to rectify this the Court adopted the "D" series of retail price index numbers for future quarterly adjustments of the basic wage.

Particulars of the 1930-31 and the 1932 Inquiries may be found in *Labour Report* No. 22, pp. 45-48 and of the 1933 Inquiry in *Labour Report* No. 23, pp. 45-46.

(iii) *Basic Wage Inquiry, 1934.* A summary of the judgment delivered on 17th April, 1934, was shown in *Official Year Book* No. 29, page 545. Until this judgment the "Harvester" standard, adjusted to retail price variations, continued to be the theoretical basis of the wage of the Commonwealth Court. The new rate for the six capital cities 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.

Automatic quarterly adjustment of the basic wage was transferred from the "A" and the "D" series to the "C" Series Retail Price Index. The base of the index (1,000) was taken by the Court as equal to 81s. per week. This gave rates as declared on this occasion for the capital cities on the basis of their respective index numbers ranging from 61s. for Brisbane to 67s. for Sydney and Hobart, the average wage for the six capital cities being 65s.

(iv) *Basic Wage Inquiry, 1937.* In May, 1937, the Commonwealth Court heard an application by the combined unions for an increase in the basic wage. The unions asked that the equivalent of the base (1,000) of the "C" Series Index be increased from 81s. to 93s., which on index numbers then current would have represented an average increase of about 10s. per week. The chief features of the judgment delivered on 23rd June were :—

(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, which were referred to in the judgment as the "needs" portion of the total resultant basic wages. 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 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 (*See page 154*).

(c) Female and junior rates were left for adjustment by individual Judges when dealing with specific awards.

The main parts of the judgment were reprinted in Official Year Book No. 30, pp. 564-75 and in *Labour Report* No. 28, pp. 77-87.

(v) *Basic Wage Inquiry, 1940.* On 5th August, 1940 the Full Court commenced the hearing of an application by the combined unions for an increase in the existing basic wage by raising the value of 1,000 (the base of the "C" Series Index upon which the "Court" series was based) from 81s. to 100s. per week, and the incorporation of the existing "Prosperity" loadings in the new rate mentioned. 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 (vi) following*).

The Chief Judge stated : "The Court has always conceded that the 'needs' of an average family should be kept in mind in fixing a basic wage. But it has never, as the result of its own inquiry, specifically declared what is an average family, or what is the cost of a regimen of food, clothing, shelter and miscellaneous items necessary to maintain it in frugal comfort, or that a basic wage should give effect to any such finding. In the end economic possibilities have always been the determining factor . . . . what should be sought is the independent ascertainment and prescription of the highest basic wage that can be sustained by the total of industry in all its primary, secondary and ancillary forms".\*

The Chief Judge also suggested that the more logical system would be to grade the basic wage 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.†

(vi) "*Interim*" *Basic Wage Inquiry, 1946.* As the result of (a) an application made by the Commonwealth Attorney-General for the restoration to the Full Court List of certain adjourned 1940 basic wage applications (*see (v) above*), (b) a number of fresh cases which had come to the Court since 1941, and (c) an application by the combined unions for an "interim" basic wage declaration, the Court commenced the hearing of this case on 25th November, 1946. Judgment was delivered on 13th December, 1946 whereby an increase of 7s. per week was granted in the "needs" portion of the basic

\* 44 C.A.R., pp. 47-8.

† Legislation covering a scheme to become operative on 1st July, 1941 was passed by the Commonwealth Parliament on 3rd April, 1941. For details *see* Chapter XV.—Welfare Services.

wage then current, the rate for the six capital cities as a whole being increased from 93s. to 100s. per 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.

(vii) *Basic Wage Inquiry*, 1949-50. This finalized the case begun in 1940 and continued in 1946 (*see above*). Evidence was completed on 22nd August, 1950, and the three judges (Kelly *C.J.*, Foster and Dunphy *JJ.*) delivered separate judgments on 12th October, 1950. In these judgments, which were in the nature of general declarations, 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 per week, and that for adult females should be 75 per cent. of the adult male rate. Kelly *C.J.*, dissenting, considered that no increase in either the male or female wage was justified.

On 24th October, 1950, and 23rd November, 1950, the Court made further declarations regarding the "Prosperity" loading of 1937 (*see page 182*) which was being paid at rates between 3s. and 6s. per week according to localities, etc., and the future basis of quarterly adjustments. The "Prosperity" loading was standardized at a uniform rate of 5s. per week for all localities and was declared to be an adjustable part of the basic wage. The Court also declared that the "war" loadings were not part of the basic wage.

With regard to other "loadings" the Court on 17th November, 1950 proceeded to examine the individual awards in the claims before it, for the purpose of determining to what extent such "loadings" formed part of the basic wage. Any "loading" declared to be part of the basic wage ceased to be paid as a separate entity, but apart from the special case of the Australian Capital Territory there were very few "loadings" which fell within this category.

The new rates operated from the beginning of the first pay-period in December, 1950, in all cases being the "needs" rate (Second Series) on the indexes of September quarter, 1950, plus a flat-rate addition of £1, together with the standardized "Prosperity" loading of 5s. (*see above*).

The basic wage rate for the six capital cities (weighted average) arrived at by the Court after applying the foregoing declarations was £8 2s., comprising £6 17s. "needs" (Second 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 1572 for the six capital cities (weighted average) for 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.

The basic wage rates operative in November, 1950, are shown below in comparison with those operative from the beginning of the first pay-period commencing in December, 1950 :—

Date of Operation.	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>
November, 1950 ..	146 0	143 0	135 0	137 0	139 0	139 0	142 0
December, 1950 ..	165 0	162 0	154 0	158 0	160 0	160 0	162 0

Further details of this judgment were given in *Labour Report* No. 40, page 81.

(viii) *Basic Wage and Standard Hours Inquiry*, 1952-53. On 5th August, 1952, the Commonwealth Court of Conciliation and Arbitration began hearing claims by—

- (1) The Metal Trades Employers Association and other employers' organizations—
  - (a) that the basic wage for adult males be reduced ;
  - (b) that the basic wage for adult females be reduced ;
  - (c) that the standard hours of work be increased ;
  - (d) that the system of adjusting the basic wages in accordance with variations occurring in retail price index numbers be abandoned.
- (2) The Metal Trades Federation, an association of employees' organizations, that the basic wage for adult males be increased, which would also have resulted in increasing the amount, though not the proportion it bore to the basic wage for adult males, of the basic wage for adult females.

A number of Governments, organizations and other bodies obtained leave to intervene and in this role the Australian Council of Trade Unions supported the claims of the Metal Trades Federation.

The Court consisted of Kelly *C.J.*, Foster, Kirby, Dunphy, Wright, McIntyre and Morgan, *JJ.*, but before the hearing of evidence commenced Wright *J.* withdrew and during the hearing of the case Foster *J.* withdrew from the bench. The Court gave its decision on 12th September, 1953 and stated that reasons for its decision would be delivered later. Before the reasons for the judgment could be delivered McIntyre *J.*, who had been ill during the case, died.

In the early stages of the case the employers applied for an immediate and separate hearing of the question of suspension of the basic wage adjustment provisions in awards. The Court however, after hearing argument, indicated that it was not satisfied that a sufficient case had been made out for such a separate hearing.

Evidence in the employers' case began on 16th September, 1952. On completion of the employers' case the counsel for employee organizations submitted that there was "no case to answer" and asked for the dismissal of the case. The Court rejected this claim and the hearing of evidence for the employee organizations was concluded on 11th September, 1953.

The decision of the Court, announced on 12th September, 1953, was expressed in the following terms :—

"1. The employers' applications for reduction of the current basic wages for adult males and for reduction of the current basic wages for adult females are refused.

2. The employers' applications for an increase of the standard hours of work in the industries covered thereby are refused.

3. The employers' applications for omission or deletion of clauses or sub-clauses providing for the adjustment of basic wages are granted.

4. The Unions' applications for increases of basic wages are refused.

The Court makes orders accordingly, to operate as from to-day. The reasons for the above decisions will be delivered at a later date. The form of the appropriate orders will be settled by the Industrial Registrar." \*

The reasons for the above decision were delivered on 27th October, 1953.

The Court in the course of its judgment said that in the present case nothing had been put before the Court in support of a departure from its now 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.

No evidence was submitted in the inquiry to suggest that the basic wage in its character of a "foundational wage" of providing, or helping to provide, a just and

reasonable standard of living to employees whose income is based or dependent upon it, was inadequate, and the arguments of both the employers and employees were directed towards a basic wage based on the capacity of industry to pay.

The Court, in reviewing the claims of the respondents, in the light of the existing economic situation, indicated that although aware of the difficulties besetting industry and of the dependence of Australia's prosperity upon that large part of her productive effort whose rewards are conditioned by good seasons and whose prices are largely beyond her control, the Court was not satisfied that the employers had discharged the onus of proving that the existing situation called for a reduction of general standards either in the matter of the basic wage or in the ordinary working week. The Court was satisfied that there could be, in the existing situation, no increase in the basic wage, as was claimed by the Metal Trades Federation.

The Court decided to discontinue the principle of automatically adjusting the basic wage in accordance with variations in retail price index numbers while the basic wage was assessed on the capacity of industry. It was considered that "the further the Court has withdrawn from relating the basic wage to the fulfilment of any particular standard of needs, the less has become the justification for keeping the nominal wage 'automatically adjusted' during the currency of an award".\* Moreover, there was no ground for assuming that the capacity of industry to pay will be maintained at the same level or that it will rise or fall coincidentally with the purchasing power of money. The Court found that the system of automatic adjustments had undoubtedly been an accelerating factor in the rapid increase in prices in Australia particularly in the years 1951 and 1952 and this factor supported the Court's decision to abolish the system.

In regard to the basic wage for female employees the Court decided that no basis for a review of the existing ratio which the female basic wage bears to the male basic wage existed on the material presented to it, the Court being satisfied that industry had the capacity to maintain the existing female basic wage rates.

In rejecting the claim for an increase in the standard hours of work, the Court considered that the industry of the country was healthy and prosperous enough at present to sustain the existing standard.

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, such as indicated by a study of—

- Employment
- Investment
- Production and Productivity
- Overseas Trade
- Overseas Balances
- Competitive position of secondary industry
- Retail Trade.

In order to remove certain misconceptions about the function of the Court it was stated during the course of the judgment that "the Arbitration Court is neither a social nor an economic legislature. Its function under section 25 of the Act is to prevent or settle specific industrial disputes".† However, this function "must be exercised in the social and economic setting of the time at which it makes its decision. It must settle industrial disputes upon terms which seem to it to be just, having regard to conditions which exist at the time of its decision." In addition, the Court stressed that "the primary rule that a claimant is required to substantiate his claim should always be observed".

In accordance with its decision to abolish the automatic adjustment clause from its awards, the Court began, on 21st October, 1953, to deal with awards which were not

\* 77 C.A.R., p. 497.

† Ibid., p. 506.

actually affected by the original order. During this process the Court announced that it had no other method in mind in substitution of the automatic adjustment clauses. In fact the only issue before the Court was the abolition or retention of the adjustment principle and that issue had been determined. The basic wage as fixed by the Court in the new or amended clauses in awards was that which had become operative in August, 1953, and no provision was made for its automatic quarterly adjustment. The last such adjustment had been made on the "Court" Series Index for June quarter, 1953.

After the Court had amended all the awards listed before it as a result of applications by one of the parties to the awards, the Court, on its own motion under Section 49 of the Commonwealth Conciliation and Arbitration Act, listed those awards not the subject of an application by one of the parties and then proceeded to delete the clauses providing for the automatic adjustment of the basic wage.

The power of the Commonwealth Court of Conciliation and Arbitration to vary awards not the subject of an application by one of the parties was unsuccessfully challenged in the High Court of Australia.

(ix) *Rates Operative, Principal Towns.* The basic wage rates of the Commonwealth Court of Conciliation and Arbitration for adult males and females, operative as from the beginning of the first pay-period commencing in August, 1953, were as shown in the following table:—

COMMONWEALTH BASIC WAGE : WEEKLY RATES.(a)

City or Town.	Rate of Wage.		City or Town	Rate of Wage.	
	Males.	Females.		Males.	Females.
	<i>s. d.</i>	<i>s. d.</i>		<i>s. d.</i>	<i>s. d.</i>
New South Wales—			South Australia—		
Sydney ..	243 0	182 0	Adelaide ..	231 0	173 0
Newcastle ..	243 0	182 0	Whyalla and Iron		
Port Kembla-Wol-			Knob (d) ..	236 0	177 0
longong ..	243 0	182 0	Five Towns (b)	230 0	172 6
Broken Hill ..	247 0	185 0			
Five Towns (b) ..	242 0	181 6	Western Australia—		
Victoria—			Perth ..	236 0	177 0
Melbourne ..	235 0	176 0	Kalgoorlie ..	243 0	182 0
Geelong ..	235 0	176 0	Geraldton ..	249 0	187 6
Warrnambool ..	235 0	176 0	Five Towns (b)	237 0	177 6
Mildura ..	235 0	176 0			
Yallourn (c) ..	241 6	181 0	Tasmania—		
Five Towns (b) ..	235 0	176 0	Hobart ..	242 0	181 6
Queensland—			Launceston ..	238 0	178 6
Brisbane ..	218 0	163 6	Queenstown ..	233 0	174 6
Five Towns (b) ..	219 0	164 0	Five Towns (b)	240 0	180 0
			Thirty Towns (b) ..	236 0	177 0
			Six Capital Cities (b) ..	236 0	177 0

(a) Operative from the beginning of the first pay-period commencing in August, 1953. By decision of the Commonwealth Court of Conciliation and Arbitration, announced on 12th September, 1953, automatic adjustment of basic wages in accordance with variations occurring in retail price index numbers was discontinued in Commonwealth awards. (See page 184.) (b) Weighted average. (c) Melbourne rate plus 6s. 6d. loading for males; 7s per cent. of male rate for females. (d) Adelaide rate plus 5s. for males; 7s per cent. of male rate for females.

The rate for provincial towns, other than those mentioned above, is 3s. less than that for their respective capital cities.

The following table shows the movements of this wage in all State capital cities and the six capital cities as a whole during the years 1939 to 1953.

## BASIC WAGE : WEEKLY RATES(a), CAPITAL CITIES, PRESCRIBED BY COMMONWEALTH COURT OF CONCILIATION AND ARBITRATION FOR ADULT MALES.

Date Operative.(b)	Sydney.	Melbourne.	Brisbane.	Adelaide.	Perth.	Hobart.	Six Capitals.
	s. d.	s. d.	s. d.	s. d.	s. d.	s. d.	s. d.
September, 1939 ..	81 0	81 0	76 0	78 0	77 0	77 0	79 0
November, 1940 ..	85 0	84 0	79 0	80 0	80 0	81 0	83 0
" 1941 ..	89 0	88 0	84 0	84 0	85 0	85 0	87 0
" 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 ..	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
November, 1952 ..	237 0	228 0	216 0	229 0	228 0	230 0	231 0
February, 1953 ..	238 0	229 0	215 0	225 0	229 0	232 0	231 0
May, 1953 ..	241 0	232 0	217 0	228 0	231 0	239 0	234 0
August, 1953 (c) ..	243 0	235 0	218 0	231 0	236 0	242 0	236 0

(a) Rates include "prosperity" loadings where applicable. (b) Rates operative from beginning of the first pay-period commencing in the month indicated. (c) By decision of the Commonwealth Court of Conciliation and Arbitration, announced on 12th September, 1953, automatic adjustment of basic wages in accordance with variations occurring in retail price index numbers was discontinued in Commonwealth awards. (See page 184.)

3. Australian Territories.—In the Australian Capital Territory the rates payable as from the beginning of the first pay-period commencing in August, 1953, were £11 18s. for adult males and £8 18s. 6d. for adult females.

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 in August, 1953, were:—"Darwin" rate, adult males, £12 15s., adult females, £9 11s.; "Port Augusta" rate, adult males, £12 2s., adult females, £9 1s. 6d.

In addition to the above rates special loadings were prescribed in Northern Territory awards following the fixation of the new basic wage rates operative from November, 1951.

4. Basic Wage Rates for Females.—Reference should be made to *Labour Report* No. 42, 1953 (page 60) 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 a new 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.

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, by the Court of Industrial Arbitration.

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 to the Industrial Commission of New South Wales as from 15th April, 1926.

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. With the adoption in 1937 of the Commonwealth basic wage, however, the identification of a specified family unit with the basic wage disappeared.

A table showing the variations in the living wages determined by the industrial tribunals of New South Wales up to 27th April, 1937 was published in earlier issues of the Official Year Book (*see* No. 37, page 481). Since that date the rates adopted have followed the Commonwealth basic wage.

Shortly after the Commonwealth Court of Conciliation and Arbitration announced its judgment 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.

The principle of supplementing wages by a payment in respect of dependent children under fourteen years of age was operative in New South Wales from July, 1927 until superseded by the Commonwealth Government Scheme operative from 1st July, 1941, and a brief account of the main features of the system appears in Official Year Book No. 37, pp. 485-6.

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.

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.

The decision of the Commonwealth Court of Conciliation and Arbitration in September, 1953, to discontinue the system of automatic adjustment of the basic wage consequent on changes in the "Court" series retail price index numbers was considered by the New South Wales Industrial Commission. On 23rd October, 1953, it certified that there had been an alteration in the principles of fixation of the basic wage, and instructed that the automatic adjustment clause be deleted from awards, etc., within its jurisdiction.

As a result, the basic wages applicable for the State (excluding Broken Hill) and operative from the beginning of the first pay-period commencing in August, 1953, remained unchanged at £12 3s. per week for adult males and £9 2s. for adult females 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 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. The rates then payable were £12 13s. for adult males and £9 9s. 6d. for adult females.

(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, employees and 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. From 1st July, 1954 the Factories and Shops Acts 1928-1953 were replaced by the Labour and Industry Act 1953, which was, in general, a consolidation of the previous Acts and retained the requirement providing for the automatic adjustment of wages in accordance with variations in retail price index numbers.

The basic wages generally payable under the Victorian Wages Boards determinations from the beginning of the first pay-period commencing in November, 1955, were £12 6s. for adult males and £9 4s. 6d. for adult females.

(iii) *Queensland.* The first formal declaration of a basic wage (£4 5s. for adult males) by the Queensland Court of Industrial Arbitration was gazetted on 24th February, 1921. Prior to this declaration the rate of £3 17s. per 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.

The rates declared by the Queensland Court at various dates were shown in the table on page 74 of *Labour Report* No. 42, 1953.

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 number for Brisbane.

The Queensland Industrial 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 conducted an inquiry as to what change, if any, should be made to the State basic wage for Queensland. The Industrial Court granted an increase of 15s. weekly 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. The basic wage payable to adult females was approximately 66 per cent. of the male rate.

In January, 1953, the Queensland Industrial Court departed from the practice (established in 1942) of varying the basic wage in accordance with quarterly variations in the "C" series of retail price index numbers. If the practice had been continued, a reduction of one shilling in the basic wage for adult males from January, 1953, would have been made. The Court was not satisfied, however, that the movement in the "C" series index for Brisbane for December quarter, 1952 was a true representation or reflex of the economic position for Queensland as a whole and so declined to make any alteration to the then existing basic wage. Quarterly adjustments were made for the next four quarters and the basic wage became £11 5s. for adult males from 1st February, 1954.

Commencing in March, 1954 a Basic Wage Inquiry was conducted by the Court and in its judgment of 11th June, 1954 the Court stated that there would be no change in the basic wage rates declared for February, 1954.

At subsequent hearings consequent on the movement in the "C" series of retail price index numbers for Brisbane in respect of the quarters ended 30th June, 30th September and 31st December, 1954 and 31st March, 1955 the Court again 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 of cost of living in 1955 the basic wage for adult males should be increased from £11 5s. to £11 7s. from 1st August, 1955. In this judgment the Court emphasized that it holds itself free whether or not to adjust the basic wage upwards or downwards in accordance with movement in the "C" series of retail price index numbers.

Subsequently, the basic wage rates were again increased by the Court as a result of the movement in the "C" series of retail price index numbers for the quarter ended 30th September, 1955 and the rates payable from 24th October, 1955 became £11 9s. for adult males and £7 14s. for adult females in the Southern Division (Eastern District).

The rates shown above are applicable throughout the Southern Division (Eastern District), which includes the metropolitan area; allowances are added for the following divisions—Northern (Eastern District) 10s., Northern (Western District) 17s. 4d., Mackay 5s. 6d., and Southern (Western District) 7s. 4d. Half of these allowances are granted to females.

(iv) *South Australia.* The Industrial Code 1920–1951 provides that the Board of Industry shall after public inquiry declare the living wages to be paid to adult male and 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 is to be declared is a man with a wife and three children.

The first declaration by the Board of Industry was made on 15th July, 1921, when the living wage for adult male employees in the metropolitan area was determined at £3 19s. 6d. per week. A table showing the living wages declared from time to time was published on page 76 of *Labour Report* No. 42, 1953.

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 not able to make a determination for a further 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.

The basic wages of the Commonwealth Court of Conciliation and Arbitration for Adelaide have remained unchanged from the beginning of the first pay-period commencing in August, 1953, consequent on the discontinuance of quarterly adjustments. The rates payable in accordance with the quarterly notifications, by the President of the Board of Industry, of the South Australian living wage for the metropolitan area have also remained unchanged over the period at £11 11s. for adult males and £8 13s. for adult females.

(v) *Western Australia.* The Industrial Arbitration Act 1912-1952 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 last preceding 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 the Court deems relevant.

The Act provides that the Court of Arbitration may make adjustments of the "basic wage" each quarter if the official statement supplied to the Court by the State Government Statistician relating to the cost of living shows that a variation of 1s. or more per week has occurred, compared with the preceding quarter. These adjustments apply from the dates of declaration by the Court.

The first declaration of the basic wage by the Court of Arbitration, since the authority to fix one was vested in the Court in 1925, was made on 11th June, 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. A table showing annual and special declarations of the basic wage by the Court of Arbitration will be found in *Labour Report* No. 42, page 78.

Following the judgment of the Commonwealth Court of Conciliation and Arbitration in the 1949-50 Basic Wage Inquiry the Western Australian Court of Arbitration resumed an inquiry which had been adjourned, to ascertain what change should be made in the State basic wage rates. In its judgment of 7th December, 1950 the Court decided that the basic wage should be increased by £1 per week for adult males and by 15s. per 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 between the basic wage and the total wage as specified by the appropriate award or determination.

The Commonwealth Court of Conciliation and Arbitration announced on 12th September, 1953 the discontinuance of quarterly adjustments. Following this decision the Western Australian Court of Arbitration exercised its discretionary power, and after reviewing the cost of living statements prepared by the Government Statistician for each quarter from September quarter, 1953 to March quarter, 1955, declined to make, where applicable, any adjustment to the basic wage.

However, after reviewing the cost of living statement for the quarter ended 30th June, 1955 the Court decided, from 9th August, 1955, to increase the basic wage for Perth by 5s. 11d. a week for adult males and to make corresponding increases for the other areas. No change was announced in the basic wage for Perth following a review of the cost of living statement for the quarter ended 30th September, 1955.

The rates payable in the metropolitan area in November, 1955 were £12 12s. 3d. for adult males and £8 4s. 1d. for adult females.

(vi) *Tasmania*. A State basic wage is not declared in Tasmania. Wages Boards are constituted for a number of industries, from representatives of employers and employees and an independent chairman, and determine the minimum rate of wage payable in each industry. In general these Boards have adopted the basic wages of the Commonwealth Court of Conciliation and Arbitration in determining the rate of wage to be paid.

The Wages Board Act gives Wages Boards power to adjust their wage rates with variations in 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.

The rates commonly adopted by Tasmanian Wages Boards since the Commonwealth Court's decision to suspend the system of automatic adjustment are £12 2s. for adult males and £9 1s. 6d. for adult females.

(vii) *State Basic Wage Rates*. The "basic" wage rates of State industrial tribunals operative in November, 1954 and November, 1955 are summarized in the following table:—

STATE BASIC WAGES—WEEKLY RATES.

State.	November, 1954.			November, 1955.		
	Date of Operation.	Males.	Females.	Date of Operation.	Males.	Females.
	(a)	s. d.	s. d.	(a)	s. d.	s. d.
New South Wales(b)—						
Metropolitan and Country, excluding Broken Hill .. ..	Aug., 1953	243 0	182 0	Nov., 1955	253 0	189 6
Broken Hill .. ..	Aug., 1953	247 0	185 0	Nov., 1955	254 0	190 6
Victoria(c) .. ..	Nov., 1954	234 0	175 6	Nov., 1955	246 0	184 6
Queensland(d)—						
Southern Division (Eastern District), including Brisbane ..	1.2.54	225 0	151 0	24.10.55	229 0	154 0
Southern Division (Western District) .. ..	1.2.54	232 4	154 8	24.10.55	236 4	157 8
Mackay Division .. ..	1.2.54	230 6	153 9	24.10.55	234 6	156 9
Northern Division (Eastern District) .. ..	1.2.54	235 0	156 0	24.10.55	239 0	159 0
Northern Division (Western District) .. ..	1.2.54	242 4	159 8	24.10.55	246 4	162 8
South Australia(e) .. ..	Aug., 1953	231 0	173 0	Aug., 1953	231 0	173 0
Western Australia(f)—						
Metropolitan Area .. ..	27.7.53	246 6	160 3	9.8.55	252 5	164 1
South-West Land Division ..	27.7.53	246 0	159 11	9.8.55	251 8	163 7
Goldfields and other areas ..	27.7.53	249 4	162 1	9.8.55	254 1	165 2
Tasmania(g) .. ..	Aug., 1953	242 0	181 6	Aug., 1953	242 0	181 6

(a) Where dates are not quoted wage rates operate from beginning of first pay-period commencing in month shown. (b) Automatic adjustment discontinued from August, 1953 until November, 1955 (see page 188). (c) No basic wage declared but rates shown (Melbourne) are those commonly adopted by Wages Boards. The Victorian Labour and Industry Act 1953 requires Wages Boards to provide for the automatic adjustment of wage rates in accordance with variations in retail price index numbers. (d) Between February, 1954 and August, 1955 the Queensland Industrial Court declined to make any alteration in the basic wage consequent on quarterly movements in the "C" series retail price index numbers. (e) The "living wage" declared for the metropolitan area is also adopted in country areas except at Whyalla, where a loading of 5s. is generally payable. Automatic adjustments consequent on variations in retail price index numbers have not been made to the "living wage" since August, 1953, following the decision of the Commonwealth Court of Conciliation and Arbitration on 12th September, 1953. (f) The basic wage remained unchanged from July, 1953 to 9th August, 1955; during this period the Western Australian Arbitration Court declined to adjust the basic wage rates in accordance with movements in the cost of living statements prepared by the Government Statistician. (g) None declared but rates shown (Hobart) are those commonly adopted by Wages Boards. From 9th December, 1953 automatic adjustment was suspended and the adjustment increases of 10s. for males and 7s. 6d. for females payable from early November, 1953 were cancelled.

### § 5. Wage Margins.

On 5th November, 1954 the Commonwealth Court of Conciliation and Arbitration delivered a judgment\* which in effect became a general determination of the basis upon which all relevant wage and salary margins should be assessed. This became known as the Metal Trades Case, 1954.

General principles of marginal rate fixation had previously 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, and the Court adopted these insofar as they were applicable to current circumstances.

"Margins" were 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."

A brief account of the Metal Trades Case is as follows :—

The Amalgamated Engineering Union, the Electrical Trades Union and other 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 Mr. Conciliation Commissioner Galvin 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. per week payable to a fitter in the metal trades should be increased to 80s. per 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 applications for increased margins.

The Metal Trades Employers' Association and other respondents to the Metal Trades Award had 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 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 margin of a fitter from 52s. per week to 75s. per week, increased similarly margins of other skilled occupations, and made no increases in margins of what may generally be described as the unskilled or only slightly skilled employees 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 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".

Extracts from the judgment are set out in some detail in *Labour Report* No. 43, 1954.

## § 6. Child Endowment in Australia.

1. *General*.—The principle of supplementing wages by a payment in respect of dependent children under sixteen years of age became prominent in Australia following the recommendations of the Royal Commission on the Basic Wage, 1920, and was implemented in Australia as described in the following paragraphs. The system has been in force in various forms in England and on the Continent as far back as 1795, the first instance occurring in England in that year.

2. *National Scheme*.—Details of the appointment of another Royal Commission in 1927 and a brief summary of its findings and of consequent Government decisions were given in earlier issues of the *Official Year Book* (see No. 39, page 425).

In 1941, the Commonwealth Government introduced a scheme of child endowment throughout Australia. The main features of the scheme and a summary of the operations under the scheme from 1st July, 1947 to 30th June, 1955 are given in Chapter XV.—Welfare Services.

3. *Earlier Schemes*.—Consequent upon the operation of the Commonwealth Child Endowment Scheme, appropriate steps were taken for the termination of the schemes operating in the Commonwealth Public Service and in New South Wales. The Commonwealth Public Service Scheme was the first system instituted in Australia and came into operation on 1st November, 1920. In New South Wales an unsuccessful attempt to institute the system was made in 1919 and a scheme was adopted under the Family Endowment Act 1927 which operated from 23rd July, 1927. For further details of these schemes reference may be made to *Official Year Book* No. 37, pages 485 and 486.

## E. EMPLOYMENT AND UNEMPLOYMENT.

### § 1. Employment.

1. *Total Occupied Persons*.—(i) *General*. The following estimates of the total numbers of occupied males and females are based principally on data from the National Register (July, 1939), the Civilian Register (June, 1943), the Occupation Survey (June, 1945) and the Censuses of 1933 and 1947 (June). These sources of information have been supplemented by employment details from Pay-roll Tax returns, which first became available for July, 1941. Owing to some difference in coverage, 1947 figures in the following tables differ slightly from Census figures as shown in Chapter XVI.—Population. The 1947 figures are subject to revision.

(ii) *Australia*. The estimates in the table below are divided into three categories (a) defence forces; (b) all persons fully occupied as employers, or as self-employed in businesses or on farms; and (c) wage or salary earners fully employed, or occupied as casual, part-time, intermittent or seasonal workers. Wage earners unemployed, in the sense that they are incapacitated or have no work to go to, are excluded, as also are persons engaged on Government relief works.

All unpaid "helpers" in non-rural industry have been included with wage and salary earners. Male unpaid "helpers" in rural industry have been included with employers and self-employed persons, as it is considered that the majority of these are sons or other close relatives of farmers working in an unofficial partnership, or as learners with the farm owner. Unpaid female "helpers" on farms are very numerous, but their exact number is not known. Generally they combine part-time dairy or other farm work with part-time duties in the home. Together with women occupied in unpaid home duties they have been excluded from the category of occupied persons.

Statistics of net enlistments in the defence forces shown in the table below represent total enlistments for full-time duty less deaths and discharges. Prior to December, 1941, men in certain age groups were called up for short training courses but these men are excluded from the figures. In July, 1941 the number of such men was approximately 50,000.

## TOTAL OCCUPIED PERSONS : AUSTRALIA.

('000.)

Year and Month.	De- fence Forces (Net Enlist- ments). (a)	Employers and Self- employed.			Wage and Salary Earners.			Total Occupied Civilians.	Total Occupied Persons, including Forces. (a)
		Rural Indus- try.	Other Indus- tries.	Total.	Rural Indus- try.	Other Indus- tries.	Total.		

## MALES.

1933—June ..	5.8	292.4	248.3	540.7	200.0	992.0	1,192.0	1,732.7	1,738.5
1939—July ..	12.9	300.0	299.0	599.0	202.0	1,293.1	1,495.1	2,094.1	2,107.0
1941—July ..	6282.8	284.0	208.0	492.0	188.0	1,363.4	1,551.4	2,043.4	2,326.2
1943—June ..	685.0	262.0	150.0	412.0	120.9	1,273.2	1,394.1	1,806.1	2,491.1
1945—June(e) ..	603.5	287.5	187.1	474.6	130.2	1,294.2	1,424.4	1,899.0	2,502.5
1947—June ..	53.2	278.9	286.8	565.7	148.2	1,649.4	1,797.6	2,363.3	2,416.3

## FEMALES.

1933—June ..	..	15.1	56.2	71.3	4.4	(e) 447.5	451.9	523.2	523.2
1939—July ..	..	16.0	62.0	78.0	4.0	561.6	565.6	643.6	643.6
1941—July ..	1.8	14.0	56.8	70.8	6.0	656.2	662.2	733.0	734.8
1943—June ..	44.0	11.7	34.4	46.1	28.1	682.1	710.2	756.3	800.3
1945—June(e) ..	45.4	17.0	43.1	60.1	23.0	667.1	690.1	750.2	795.6
1947—June ..	0.8	13.8	55.8	69.6	8.1	d 659.9	d 668.0	d 737.6	d 738.4

## PERSONS.

1933—June ..	5.8	307.5	304.5	612.0	204.4	1,439.5	1,643.9	2,255.9	2,261.7
1939—July ..	12.9	316.0	361.0	677.0	206.0	1,854.7	2,060.7	2,737.7	2,750.6
1941—July ..	6284.6	298.0	264.8	562.8	194.0	2,019.6	2,213.6	2,776.4	3,061.0
1943—June ..	729.0	273.7	184.4	458.1	149.0	1,955.3	2,104.3	2,562.4	3,291.4
1945—June(e) ..	648.9	304.5	230.2	534.7	153.2	1,961.3	2,114.5	2,649.2	3,298.1
1947—June ..	54.0	292.7	342.6	635.3	156.3	d 2,309.3	d 2,465.6	d 3,100.9	d 3,154.9

(a) Includes those serving outside Australia. (b) Excludes approximately 50,000 men called up for short training courses. (c) Occupation Survey, 1st June, 1945. (d) Subject to revision. (e) Includes females, in thousands, in private domestic service as follows:—106.7 in June, 1933; 124.5 in July, 1939; 100.0 in July, 1941; 41.5 in June, 1943; 47.6 in June, 1945; and 40.3 in June, 1947.

From June, 1933 to July, 1939, the number of occupied persons of both sexes increased by 488,900, due to the increase of 223,700 in the number of available breadwinners and to the decrease of 265,200 in the number unemployed from 563,200 to 298,000. During the war years from July, 1939 to June, 1943, the number of males occupied as civilians decreased by 288,000, while females occupied as civilians increased by nearly 113,000, representing a net decrease of 175,000 persons. This decrease, together with decrease of unemployment (272,000), normal increase of breadwinners (91,000) and an abnormal war-time increase of 178,000 breadwinners (persons who would not otherwise have been working), balanced the net intake into the defence forces at June, 1943 (716,000). The estimate of 659,900 female wage and salary earners employed in non-rural industries in June, 1947, includes 40,300 private domestics (the Census figure). The remaining 619,600 females in the estimate include females working part-time. The 1947 Census figure for the same industries (i.e., excluding rural

and private domestic) was 579,200. Persons working regularly but for considerably less than normal working hours were instructed on the Census Schedule to exclude themselves from the work force, unless their earnings from such work formed their principal means of livelihood.

(iii) *States.* The following table shows total occupied males and females in each State in July, 1939 and June, 1947, divided into defence forces, employers and self-employed, and wage and salary earners.

## TOTAL OCCUPIED PERSONS : STATES.

('000.)

State.	Defence Forces (Net Enlistments). (a)		Employers and Self-employed.		Wage and Salary Earners.		Total Occupied Persons, including Forces. (a)	
	July, 1939.	June, 1947.	July, 1939.	June, 1947.	July, 1939.	June, 1947.(b)	July, 1939.	June, 1947.(b)
MALES.								
New South Wales ..	4.9	23.1	216.2	197.5	596.2	723.6	817.3	944.2
Victoria ..	4.4	15.9	162.9	158.1	399.5	480.9	566.8	654.9
Queensland ..	1.0	5.9	95.1	96.9	218.6	255.4	314.7	358.2
South Australia ..	1.1	2.6	54.6	51.8	127.7	154.4	183.4	208.8
Western Australia ..	1.0	3.4	47.4	39.8	99.7	115.6	148.1	158.8
Tasmania ..	0.5	0.8	21.5	20.1	46.9	58.1	68.9	79.0
Australia(c) ..	12.9	53.2	599.0	565.7	1,495.1	1,797.6	2,107.0	2,416.5

## FEMALES.

New South Wales ..	..	0.3	28.4	25.4	220.8	268.8	249.2	294.5
Victoria ..	..	0.4	25.5	22.4	175.3	203.4	200.8	226.2
Queensland ..	..	0.1	11.1	10.2	71.2	83.2	82.3	93.5
South Australia ..	..	..	6.0	5.2	47.4	52.9	53.4	58.1
Western Australia ..	..	..	4.8	4.3	33.2	38.4	38.0	42.7
Tasmania ..	..	..	2.2	1.9	16.3	19.0	18.5	20.9
Australia(c) ..	..	0.8	78.0	69.6	565.6	668.0	643.6	738.4

## PERSONS.

New South Wales ..	..	4.9	23.4	244.6	222.9	817.0	992.4	1,066.5	1,238.7
Victoria ..	..	4.4	16.3	188.4	180.5	574.8	684.3	767.6	881.1
Queensland ..	..	1.0	6.0	106.2	107.1	289.8	338.6	397.0	451.7
South Australia ..	..	1.1	2.6	60.6	57.0	175.1	207.3	236.8	266.9
Western Australia ..	..	1.0	3.4	52.2	44.1	132.9	154.0	186.1	201.5
Tasmania ..	..	0.5	0.8	23.7	22.0	63.2	77.1	87.4	99.9
Australia(c) ..	..	12.9	54.0	677.0	635.3	2,060.7	2,465.6	2,750.6	3,154.9

(a) Includes those serving outside Australia.  
Australian Capital Territory and Northern Territory.

(b) Subject to revision.

(c) Includes Aus-

Between July, 1939 and June, 1947, the occupied population of Australia (including defence forces but excluding unemployed, pensioners, retired persons of independent means and dependants) increased by approximately 14.7 per cent. The percentage increase in each State was as follows: New South Wales, 16.1; Victoria, 14.8; Queensland, 13.8; South Australia, 12.7; Western Australia, 8.3; Tasmania, 14.3.



2. **Wage and Salary Earners in Civilian Employment.**—(i) *Australia and States.* Estimates are made monthly of wage and salary earners in employment (excluding employees in rural industry and female domestics in private homes), based on Pay-roll Tax returns and supplementary returns of Government employment. Pay-roll Tax returns cover only a small proportion of wage earners on rural holdings, and practically no private domestic servants. It is not possible to obtain actual numbers of farm employees and private domestic servants except when a Census or quasi-Census such as the Occupation Survey (1st June, 1945) is taken, but estimates have been made from time to time using available data. The next table shows for each State and for Australia as a whole the trend in that section of wage and salary earning employment which it is possible to estimate monthly. Figures are shown as at June, 1933 (Census) and July, 1939 (based on National Register). From July, 1941 (commencement of Pay-roll Tax returns) the estimates are available for each month, and the table shows the level in June in each of the years 1950 to 1955.

### WAGE AND SALARY EARNERS IN CIVILIAN EMPLOYMENT.

(*Excluding Rural Wage Earners, Female Domestics in Private Homes, Persons on Paid Strength of Defence Forces and National Service Trainees in Camp.*)

('000.)

Year and Month.	New South Wales.	Victoria.	Queensland.	South Australia.	Western Australia.	Tasmania.	Australia (a)
<b>MALES.</b>							
1933—June .. ..	380.6	288.6	139.8	80.5	70.1	29.0	992.0
1939—July .. ..	529.9	357.5	172.8	106.7	82.9	37.4	1,293.1
1950—June(b) .. ..	740.8	510.7	250.4	165.7	120.5	58.4	1,858.7
1951—June(b) .. ..	758.2	525.8	259.3	170.0	125.3	60.2	1,911.5
1952—June(b) .. ..	754.4	524.4	258.1	171.5	126.0	61.0	1,908.1
1953—June(b) .. ..	734.3	521.6	255.2	170.6	130.2	61.8	1,886.6
1954—June(b) .. ..	758.1	539.7	263.7	176.0	135.0	62.8	1,948.4
1955—June(b) .. ..	779.2	556.7	272.0	178.7	136.4	64.0	2,000.5
<b>FEMALES.</b>							
1933—June .. ..	125.8	118.2	40.5	26.0	20.6	9.1	340.8
1939—July .. ..	168.0	142.9	53.2	34.0	26.2	11.6	437.1
1950—June(b) .. ..	278.5	210.0	83.1	54.3	39.9	19.4	688.2
1951—June(b) .. ..	290.9	219.6	86.1	57.0	41.6	20.3	718.8
1952—June(b) .. ..	270.5	206.6	83.8	54.9	40.5	19.8	679.4
1953—June(b) .. ..	266.2	205.9	83.7	53.4	41.0	20.1	673.7
1954—June(b) .. ..	279.5	217.7	86.1	56.0	42.8	21.0	707.5
1955—June(b) .. ..	292.5	227.0	89.3	60.2	43.9	21.7	738.5
<b>PERSONS.</b>							
1933—June .. ..	506.4	406.8	180.3	106.5	90.7	38.1	1,332.8
1939—July .. ..	697.9	500.4	226.0	140.7	109.1	49.0	1,730.2
1950—June(b) .. ..	1,019.3	720.7	333.5	220.0	160.4	77.8	2,546.9
1951—June(b) .. ..	1,049.1	745.4	345.4	227.0	166.9	80.5	2,630.3
1952—June(b) .. ..	1,024.9	731.0	341.9	226.4	166.5	80.8	2,587.5
1953—June(b) .. ..	1,000.5	727.5	338.9	224.0	171.2	81.9	2,560.5
1954—June(b) .. ..	1,037.6	757.4	349.8	232.9	177.8	83.8	2,655.9
1955—June(b) .. ..	1,071.7	783.7	361.3	238.9	180.3	85.7	2,739.0

(a) Includes Australian Capital Territory and Northern Territory.

(b) Subject to revision.

Estimates for recent months for Australia, corresponding to the foregoing, together with details for certain industrial groups, are published regularly in the *Monthly Review of Business Statistics* and the *Monthly Bulletin of Employment Statistics*.

(ii) *Industrial Groups.* The following table shows the total male and female wage and salary earners in civilian employment (excluding employees in rural industry, female private domestics, persons on the paid strength of the defence forces and National Service trainees in camp) subdivided to show the extent of employment provided by Government authorities and by private employers respectively. Some principal industrial groups included in the total are shown separately and include both Government and private employees, except in the case of retail trade, where there are no Government employees.

### WAGE AND SALARY EARNERS IN CIVILIAN EMPLOYMENT : INDUSTRIAL GROUPS, AUSTRALIA.

(*Excluding Rural Wage Earners, Female Domestics in Private Homes, Persons on Paid Strength of Defence Forces and National Service Trainees in Camp.*)

('000.)

Industrial Group.	July, 1939.	June, 1951. (a)	June, 1952. (a)	June, 1953. (a)	June, 1954. (a)	June, 1955. (a)
<b>MALES.</b>						
Mining and Quarrying .. ..	52.2	55.8	58.8	58.0	58.7	58.3
Manufacturing, etc.(b) .. ..	456.1	733.0	721.4	726.4	756.8	777.2
Building and Construction .. ..	149.7	212.7	214.0	193.2	205.7	211.8
Rail and Air Transport .. ..	73.0	100.9	106.9	104.9	106.3	108.5
Other Transport and Communication .. ..	112.9	193.8	193.0	190.2	193.8	200.2
Retail Trade .. ..	259.7	129.7	124.8	125.0	128.4	129.2
Other Commerce and Finance .. ..	17.8	188.4	191.2	191.0	198.3	207.1
Health .. ..	17.8	24.8	25.3	25.5	25.9	26.0
Education .. ..	22.1	31.9	33.2	35.4	36.7	38.7
Entertainment, Sport and Recreation .. ..	17.4	18.0	18.1	18.2	18.3	18.5
Personal Services .. ..	37.0	54.6	53.2	51.6	52.1	54.3
Other .. ..	95.2	167.9	168.2	167.4	167.4	170.7
<b>Total .. ..</b>	<b>1,293.1</b>	<b>1,911.5</b>	<b>1,908.1</b>	<b>1,886.8</b>	<b>1,948.4</b>	<b>2,000.5</b>
Governmental(c) .. ..	349.8	570.4	577.4	567.8	581.4	599.1
Private Employers .. ..	943.3	1,341.1	1,330.7	1,319.0	1,367.0	1,401.4
<b>Total .. ..</b>	<b>1,293.1</b>	<b>1,911.5</b>	<b>1,908.1</b>	<b>1,886.8</b>	<b>1,948.4</b>	<b>2,000.5</b>
<b>FEMALES.</b>						
Mining and Quarrying .. ..	0.3	0.8	0.9	0.9	1.0	1.1
Manufacturing, etc.(b) .. ..	169.0	241.1	206.3	209.8	226.8	232.5
Building and Construction .. ..	1.2	3.8	4.2	4.3	4.7	4.9
Rail and Air Transport .. ..	2.5	8.2	8.6	7.7	8.0	8.4
Other Transport and Communication .. ..	10.1	31.9	30.9	28.5	28.5	30.0
Retail Trade .. ..	114.9	119.1	112.6	109.9	115.3	121.6
Other Commerce and Finance .. ..	34.0	71.3	72.9	71.5	77.0	83.1
Health .. ..	34.0	67.4	68.7	68.8	70.8	73.5
Education .. ..	32.0	39.7	41.8	43.3	44.9	47.9
Entertainment, Sport and Recreation .. ..	4.0	8.7	8.6	8.7	8.6	8.8
Personal Services .. ..	43.0	72.1	68.9	65.8	67.0	69.6
Other .. ..	26.1	54.7	55.0	54.5	54.9	57.1
<b>Total .. ..</b>	<b>437.1</b>	<b>718.8</b>	<b>679.4</b>	<b>673.7</b>	<b>707.5</b>	<b>738.5</b>
Governmental(c) .. ..	55.2	113.8	115.2	112.0	114.5	122.8
Private Employers .. ..	381.9	605.0	564.2	561.7	593.0	615.7
<b>Total .. ..</b>	<b>437.1</b>	<b>718.8</b>	<b>679.4</b>	<b>673.7</b>	<b>707.5</b>	<b>738.5</b>

NOTE.—See footnotes on page 199.

## WAGE AND SALARY EARNERS IN CIVILIAN EMPLOYMENT: INDUSTRIAL GROUPS, AUSTRALIA.

('000.)

Industrial Group.	July, 1939.	June, 1951. (a)	June, 1952. (a)	June, 1953. (a)	June, 1954. (a)	June, 1955. (a)
PERSONS.						
Mining and Quarrying .. ..	52.5	56.6	59.7	58.9	59.7	59.4
Manufacturing, etc.(b) .. ..	625.1	974.1	927.7	936.2	983.6	1,009.7
Building and Construction .. ..	150.9	216.5	218.2	197.5	210.4	216.7
Rail and Air Transport .. ..	75.5	109.1	115.5	112.6	114.3	116.9
Other Transport and Communication	123.0	225.7	223.9	218.7	222.3	230.2
Retail Trade .. ..	374.6	248.8	237.4	234.9	243.7	250.8
Other Commerce and Finance .. ..		259.7	264.1	262.5	275.3	290.2
Health .. ..	51.8	92.2	94.0	94.3	96.7	99.5
Education .. ..	54.1	71.6	75.0	78.7	81.6	86.6
Entertainment, Sport and Recreation	21.4	26.7	26.7	26.9	26.9	27.3
Personal Services .. ..	80.0	126.7	122.1	117.4	119.1	123.9
Other .. ..	121.3	222.6	223.2	221.9	222.3	227.5
Total .. ..	1,730.2	2,630.3	2,587.5	2,560.5	2,655.9	2,739.0
Governmental(c) .. ..	405.0	684.2	692.6	679.8	695.9	721.9
Private Employers .. ..	1,325.2	1,946.1	1,894.9	1,880.7	1,960.0	2,017.1
Total .. ..	1,730.2	2,630.3	2,587.5	2,560.5	2,655.9	2,739.0

(a) Subject to revision. (b) Estimates (subject to revision) based on Pay-roll Tax returns, etc., of employees engaged predominantly in secondary production. The figures include a considerable number of employees outside the scope of the factory employment figures as defined and published in Chapter IX.—Manufacturing Industry. (c) Includes employees of Commonwealth, State and Semi-Government and Local Government Authorities.

A graph showing wage and salary earners in civilian employment by main industrial groups appears on page 174.

(iii) *Factories.* Actual mid-monthly factory employment derived from the results of annual factory censuses is published in the *Secondary Industries Bulletin* issued by this Bureau.

Additional tables regarding employment in factories may be found in Chapter IX.—Manufacturing Industry.

An index of factory employment in Australia, published in the *Monthly Review of Business Statistics*, shows that employment in factories increased steadily throughout 1954–55 to a new post-war peak in June, 1955. For the year 1954–55, the index showed the level of employment in factories to be 77 per cent. higher than the average factory employment for the three years ended June, 1939.

3. *Government Employees.*—(i) *Australia, 1939 and 1951 to 1955.* The following table shows at June in each of the years 1951 to 1955, in comparison with 1939, the number of civilian employees of Commonwealth, State and Semi-Government and Local Government authorities. These include all employees of Government authorities on services such as railways, tramways, banks, post office, air transport, education, broadcasting, police, public works, factories and munitions establishments, migrant hostels, etc., as well as administrative employees, within Australia.

## CIVILIAN EMPLOYEES OF GOVERNMENT AUTHORITIES(a) : AUSTRALIA.

June—	Commonwealth.			State and Semi-Government.			Local Government.			Total.		
	Males.	Fe-males.	Persons.	Males.	Fe-males.	Persons.	Males.	Fe-males.	Persons.	Males.	Fe-males.	Persons.
1939(b) ..	56,099	11,764	67,863	235,066	40,586	275,652	58,637	2,887	61,524	349,802	55,237	405,039
1951 ..	160,690	48,063	208,753	348,447	61,090	409,537	62,096	4,751	66,847	571,233	113,904	685,137
1952 ..	157,880	45,117	202,997	359,340	65,061	424,401	61,167	5,111	66,278	578,387	115,289	693,676
1953 ..	159,002	41,571	200,573	349,096	65,129	414,225	59,641	5,315	64,956	567,739	112,015	679,754
1954 ..	156,604	41,579	198,183	363,095	67,466	430,561	61,643	5,493	67,136	581,342	114,538	695,880
1955 ..	160,840	44,291	205,131	373,250	72,728	445,978	65,026	5,771	70,797	599,116	122,790	721,906

(a) See explanation above.

(b) July.

(ii) *States and Territories, June, 1955.* The numbers of civilian employees of Commonwealth Government, State and Semi-Government and Local Government authorities in each State and Territory at June, 1955 are shown in the following table :—

## CIVILIAN EMPLOYEES OF GOVERNMENT AUTHORITIES(a) : JUNE, 1955.

State or Territory.	Commonwealth.			State and Semi-Government.			Local Government.			Total.		
	Males.	Fe-males.	Persons.	Males.	Fe-males.	Persons.	Males.	Fe-males.	Persons.	Males.	Fe-males.	Persons.
N.S.W. ..	55,016	14,747	69,763	133,969	24,914	158,883	26,151	2,669	28,820	215,136	42,330	257,466
Vic. ..	50,278	15,509	65,787	95,425	22,314	117,739	12,478	1,430	13,908	158,181	39,253	197,434
Qld. ..	17,717	4,594	22,311	54,328	7,188	61,516	17,840	896	18,736	89,894	12,678	102,572
S.A. ..	15,291	3,351	18,642	37,835	8,602	46,437	2,932	294	3,226	56,058	12,247	68,305
W.A. ..	8,979	2,157	11,136	37,086	6,152	43,238	3,303	315	3,618	49,422	8,624	58,046
Tas. ..	4,304	1,218	5,522	14,613	3,558	18,171	2,252	167	2,419	21,170	4,943	26,113
N.T. ..	2,309	530	2,839	..	..	..	..	..	..	2,309	530	2,839
A.C.T. ..	6,946	2,185	9,131	..	..	..	..	..	..	6,946	2,185	9,131
Total	160,840	44,291	205,131	373,250	72,728	445,978	65,026	5,771	70,797	599,116	122,790	721,906

(a) See explanation in para. 3 (i) above.

## § 2. Unemployment.

1. *Total Persons Unemployed.*—The total number of persons unemployed has been recorded only at the dates of the various censuses and quasi-censuses. The census records include all persons who state that they are unemployed, and distinguish between unemployment on account of sickness, accident, scarcity of work, industrial dispute, and all other causes combined. The following table sets out the number of unemployed at the Censuses of 1911, 1921, 1933 and 1947, the National Register, 1939, and the Occupation Survey, 1945. The percentage which the unemployed bore at each date to all wage and salary earners of the same sex, comprising those estimated to be in employment and those unemployed, is also shown.

## UNEMPLOYMENT (ALL CAUSES) : AUSTRALIA.

Year and Month.	Wage and Salary Earners Unemployed..			Proportion of Wage and Salary Earners Unemployed.		
	Males.	Females.	Total.	Males.	Females.	Total.
	'000.	'000.	'000.	%	%	%
1911—April (Census) ..	48.0	8.3	56.3	4.3	2.7	4.0
1921—April " ..	139.4	21.5	160.9	10.7	5.7	9.6
1933—June(a) " ..	460.2	103.1	563.3	27.9	19.1	25.8
1939—July(b) ..	264.0	34.0	298.0	15.0	5.7	12.6
1945—June(c) ..	39.9	16.2	56.1	2.7	2.3	2.6
1947—June (Census)(d)	66.6	16.9	83.5	3.6	2.5	3.3

(a) The figures shown for 1933 are in excess of those actually recorded at the Census, through an allowance having been made for a number of youths and girls who would normally have been wage and salary earners, but who, on account of the economic depression, having never been employed, were not classed as wage and salary earners. (b) Derived from the National Register, 1939. (c) Derived from the Occupation Survey, 1945. (d) Persons in the work force who were not at work at the time of the Census.

The estimates and percentages of unemployment given above for periods subsequent to the Census of 1933 should be interpreted in conjunction with the notes below.

The estimates for 1939 were based on the National Register, which covered males aged 18–64 years, and data available from other sources. The proportion of wage earners unemployed in July, 1939, immediately prior to the 1939–45 War, was estimated at approximately 12½ per cent. In July, 1941, it was about 4 per cent. and by June, 1943, under conditions of intensive mobilization of manpower for war purposes, involuntary unemployment was practically nil. Owing to the use on the Occupation Survey (1945) card of the definition "a person normally working for wages but without a job on 1st June", it appears that the 1945 figures exclude some persons who were temporarily absent from their jobs at the date of the survey.

Of the numbers at the 1947 Census shown above 25.6 per cent. were not at work owing to sickness or accident and 26.6 per cent. stated that they were resting. Of the latter, approximately half said they expected to resume their former jobs.

2. *Commonwealth Unemployment and Sickness Benefits.*—Details of conditions governing the payment of unemployment and sickness benefits under the Social Services Act 1947–1955, and tables showing numbers on benefit and payments made, may be found in Chapter XV.—Welfare Services.

### § 3. Commonwealth Employment Service.

The Commonwealth Employment Service was established under Section 47 of the Re-establishment and Employment Act 1945. The principal functions of the Service, as set out in Section 48 of this Act, are to provide services and facilities for the benefit of persons seeking employment or to change employment, or to engage labour, and to provide facilities to assist in bringing about and maintaining a high and stable level of employment throughout the Commonwealth.

The Commonwealth Employment Service operates within the Employment Division of the Department of Labour and National Service, and is under the control of the Permanent Head of that Department. The Central Office is in Melbourne, and there is a Regional Office in the capital city of each State, with 119 District Employment

Offices and 16 Branch offices in suburban and the larger provincial centres, and 340 agents in the smaller country centres. The District Employment Offices are distributed as follows :—New South Wales, 46 (including Canberra); Victoria, 30; Queensland, 19; South Australia, 9 (including Darwin); Western Australia, 11; Tasmania, 4.

In assisting persons to obtain employment and to engage labour, the Commonwealth Employment Service provides specialist facilities for persons with physical and mental handicaps, older workers, rural workers, youths and persons with professional and technical qualifications. It assists in the administration of the Unemployment and Sickness Benefits provisions of the Social Services Act 1947-1955, and of the Re-employment Allowance provision of the Re-establishment and Employment Act 1945 for certain classes of discharged members of the Forces. All persons who wish to claim unemployment benefits or re-employment allowances are required to register at a District Employment Office which is responsible for certifying whether or not suitable employment can be offered to them.

In each State, other than New South Wales, vocational guidance is provided, free of charge, by a staff of qualified psychologists. (In New South Wales a similar service is provided by officers of the New South Wales Department of Labour and Industry and Social Welfare which acts as agent for the Commonwealth Employment Service in this regard.) Whilst vocational guidance is available to any person, it is provided particularly for youths, ex-servicemen and the physically handicapped.

The Commonwealth Employment Service is responsible for placing in employment all Commonwealth-nominated migrant workers coming to Australia under the free and assisted passage schemes from the United Kingdom and other countries, and, as required, it provides assistance to other migrants wishing to obtain employment. When migrants coming under Commonwealth nomination arrive in Australia, the Commonwealth Employment Service arranges for them to be transported to their initial employment and for their admission, if necessary, to Commonwealth-controlled hostels. From the inception of the various free and assisted schemes, including the Displaced Persons Scheme, to the end of July, 1955 more than 136,000 British and European migrant workers had been placed in employment by the Commonwealth Employment Service.

Since 1951, the Commonwealth Employment Service has been responsible for recruiting experts for 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 its placement activities, the Commonwealth Employment Service carries out regular surveys of the labour market in all areas and industries and supplies detailed information to interested Commonwealth and State Government Departments and instrumentalities and to the public. It also advises employers, employees and others on labour availability and employment opportunities in various occupations and areas and on other matters concerning employment.

The Commonwealth Employment Service is responsible for the medical examination and interview of young men for training in the armed forces under the National Service Act 1951-1953, which is administered by the Department of Labour and National Service. The Commonwealth Employment Service also administers the provisions of the Act relating to the protection of the rights of National Service trainees in relation to their civil employment.

The Service completed its ninth year of operation in May, 1955. During the year ended June, 1955, there were 526,474 new registrations of applicants for employment, of whom 441,596 were referred to employers and 310,063 placed in employment, and 471,971 new vacancies were notified. Vacancies unfilled at the end of June, 1955 numbered 37,645.

With the setting up of the Commonwealth Employment Service most of the State Labour Exchange Organizations existing previously were superseded. Details of the organization and administration of these exchanges in the several States were given in *Labour Report* No. 30, page 133.

#### § 4. Industrial Disputes.

1. **General.**—Information with regard to the collection of particulars and the methods of tabulation of industrial disputes involving stoppage of work is given in the annual *Labour Report*.

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 the previous year and were still in progress during the current year will be duplicated in the figures for both years. The number affected is given in a footnote so that allowance can be made in comparing annual figures.

2. **Industrial Disputes involving Stoppage of Work, Classified in Industrial Groups, 1954.**—The following table gives for Australia as a whole particulars of industrial disputes which were in progress during 1954, classified according to industrial groups. Figures for States and Territories on a comparable basis may be found in *Labour Report* No. 43, 1954.

#### INDUSTRIAL DISPUTES IN INDUSTRIAL GROUPS: AUSTRALIA, 1954.(a)

Class.	Industrial Group.	Num- ber.	Workers Involved.			Working Days Lost.	Esti- mated Loss in Wages. (£.)
			Directly.	In- directly. (b)	Total.		
I.	Wood, Furniture, etc. . . . .	1	6	..	6	114	400
II.	Engineering, Metal Works, etc. . . . .	92	13,212	3,027	16,239	119,309	376,083
III.	Food, Drink, etc. . . . .	68	25,187	7,517	32,704	77,940	244,590
IV.	Clothing, Textiles, etc. . . . .	5	849	7	856	4,704	14,280
V.	Books, Printing, etc. . . . .	2	464	2	466	627	2,060
VI.	Other Manufacturing . . . . .	24	5,942	797	6,739	42,076	129,638
VII.	Building . . . . .	47	6,099	826	6,925	31,751	115,972
VIII.	(i) Coal-mining . . . . .	942	154,870	760	155,630	255,726	862,384
	(ii) Other Mining, Quarries, etc. . . . .	4	488	6	494	7,720	41,265
IX.	Railway and Tramway Services . . . . .	39	10,060	978	11,038	13,661	40,926
X.	Other Transport . . . . .	10	3,780	..	3,780	12,670	33,865
XI.	(i) Stevedoring . . . . .	234	129,661	4	129,665	319,366	1,110,262
	(ii) Shipping, etc. . . . .	7	488	550	1,038	6,614	22,879
XII.	Pastoral, Agricultural, etc. . . . .	2	1,026	..	1,026	1,096	3,189
XIII.	Domestic, Hotels, etc. . . . .	2	259	..	259	1,050	2,764
XIV.	Miscellaneous . . . . .	11	3,189	20	3,209	7,215	20,654
	Total . . . . .	1,490	355,580	14,494	370,074	901,639	3,021,211

(a) Two disputes in New South Wales and one in Tasmania involving respectively 184 and 236 workers commenced in 1953 and were still in progress at the beginning of 1954. Particulars of these disputes have been included in statistics of disputes for both 1953 and 1954. (b) Persons thrown out of work at the establishments where the stoppages occurred but not themselves parties to the dispute.

Graphs showing, for a number of years, the working days lost as a result of industrial disputes in the main industrial groups will be found on pp. 175-6.

3. **Industrial Disputes, States and Territories, 1939 and 1952 to 1954.**—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 1939 and 1952 to 1954.

## INDUSTRIAL DISPUTES : STATES AND TERRITORIES.

State or Territory.	Year.	Number.	Workers Involved.			Working Days Lost.	Estimated Loss in Wages. (£.)
			Directly.	Indirectly. (a)	Total.		
New South Wales	1939	386	139,301	9,230	148,531	410,183	419,330
	1952	1,316	333,990	13,106	347,096	763,860	2,279,619
	1953	1,080	302,007	6,375	308,382	759,391	2,403,242
	1954	1,063	217,081	5,205	222,286	501,573	1,654,814
Victoria	1939	10	1,989	180	2,169	27,313	19,946
	1952	33	60,753	1,167	61,920	116,339	339,109
	1953	53	65,962	2,164	68,126	57,160	176,330
	1954	76	42,476	2,337	44,813	135,611	460,213
Queensland	1939	5	373	2	375	1,870	1,753
	1952	195	39,298	1,624	40,922	76,286	235,914
	1953	265	87,986	3,511	91,497	133,448	465,830
	1954	278	77,006	6,075	83,081	183,855	611,331
South Australia	1939	2	170	5	175	1,880	1,416
	1952	32	24,408	1,623	26,031	64,738	175,043
	1953	24	18,502	190	18,692	55,476	200,610
	1954	23	7,291	45	7,336	31,207	108,100
Western Australia	1939	7	1,108	145	1,253	14,100	9,578
	1952	21	19,154	2	19,156	127,826	369,658
	1953	11	3,665	..	3,665	4,977	15,663
	1954	15	5,398	96	5,494	21,651	75,387
Tasmania	1939	4	53	..	53	166	93
	1952	26	10,298	34	10,332	14,143	39,640
	1953	18	5,069	6	5,075	18,441	88,259
	1954	31	5,951	136	6,087	25,915	105,042
Northern Territory	1939	2	234	40	274	3,642	3,600
	1952	3	257	..	257	272	762
	1953	5	535	..	535	1,807	7,161
	1954	2	239	..	239	1,452	5,082
Australian Capital Territory	1939	..	..	..	..	..	..
	1952	1	20	..	20	40	105
	1953	3	74	..	74	130	342
	1954	2	138	..	138	375	1,242
Australia	1939	416	143,228	9,602	152,830	459,154	455,716
	1952	1,627	488,178	17,556	505,734	1,163,504	3,439,850
	1953	1,459	483,800	12,246	496,046	1,050,830	3,337,437
	1954	1,490	355,580	14,494	370,074	901,639	3,021,211

(a) Persons thrown out of work at the establishments where the stoppages occurred but not themselves parties to the dispute.

Detailed information in regard to the disputes during the above-mentioned and previous years is given in the *Labour Report*.

4. **Duration of Industrial Disputes, 1954.**—The following table gives particulars of industrial disputes during 1954 in the three groups "Coal-mining", "Stevedoring" and "Other Industries" classified according to duration.

## DURATION OF INDUSTRIAL DISPUTES : AUSTRALIA, 1954.

Limits of Duration.	Coal-mining.	Stevedoring.	Other Industries.	All Industries.
NUMBER OF DISPUTES.				
1 day and less	627	156	107	890
2 days and more than 1 day	176	54	37	267
3 days and more than 2 days	60	9	33	102
Over 3 days and less than 1 week	39	3	23	65
1 week and less than 2 weeks	32	11	43	86
2 weeks and less than 4 weeks	6	1	38	45
4 weeks and less than 8 weeks	1	..	22	23
8 weeks and over	1	..	11	12
Total	942	234	314	1,490



## DURATION OF INDUSTRIAL DISPUTES: AUSTRALIA, 1954—continued.

Limits of Duration.	Coal-mining.	Stevedoring.	Other Industries.	All Industries.
WORKERS INVOLVED.				
1 day and less .. .. .	81,926	79,588	35,107	196,621
2 days and more than 1 day .. .. .	49,113	25,299	11,380	85,792
3 days and more than 2 days .. .. .	8,141	1,363	15,028	24,532
Over 3 days and less than 1 week .. .. .	4,992	351	6,853	12,196
1 week and less than 2 weeks .. .. .	4,991	23,051	6,349	34,391
2 weeks and less than 4 weeks .. .. .	3,805	13	6,871	10,689
4 weeks and less than 8 weeks .. .. .	69	..	1,644	1,713
3 weeks and over .. .. .	2,593	..	1,547	4,140
Total .. .. .	155,630	129,665	84,779	370,074
WORKING DAYS LOST.				
1 day and less .. .. .	80,254	62,827	27,334	170,415
2 days and more than 1 day .. .. .	77,685	34,521	23,287	135,493
3 days and more than 2 days .. .. .	19,606	3,772	41,276	64,744
Over 3 days and less than 1 week .. .. .	18,486	1,420	24,622	44,528
1 week and less than 2 weeks .. .. .	26,096	216,696	34,352	277,144
2 weeks and less than 4 weeks .. .. .	9,261	130	64,854	74,245
4 weeks and less than 8 weeks .. .. .	1,813	..	39,004	40,817
3 weeks and over .. .. .	22,435	..	71,818	94,253
Total .. .. .	255,726	319,366	326,547	901,639

5. Causes of Industrial Disputes.—(i) *General.* In issues of the Official Year Book prior to No. 40 the causes of industrial disputes were classified in some detail for all industries combined. As from 1950 a new classification was introduced and stoppages are now analysed in three separate groups, "Coal-mining", "Stevedoring" and "Other industries". This dissection has been made because the pattern of the disputes in coal-mining and stevedoring differs significantly from that in other industries.

Under this classification, causes are 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 those arising from 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, Trade Unionism, 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 (mainly occurring in the coal-mining industry) where the cause of the stoppage is not officially made known to the management.

As the items included under these headings differ somewhat from those included under the similar headings used for classifying causes of disputes in years prior to 1950, figures for the years 1950 to 1954 are not strictly comparable with those for earlier years.

(ii) *Fears 1939 and 1950 to 1954.* The following table gives particulars of industrial disputes according to causes for the years 1939 and 1950 to 1954.

## CAUSES OF INDUSTRIAL DISPUTES : AUSTRALIA.

Cause of Dispute.	1939.	1950.(a)	1951.(a)	1952.(a)	1953.(a)	1954.(a)
NUMBER OF DISPUTES.						
Wages, Hours and Leave .. ..	96	128	186	161	105	100
Physical Working Conditions and Managerial Policy .. ..	197	894	803	967	896	975
Trade Unionism .. ..	50	114	159	204	187	160
Other .. ..	73	140	196	295	271	255
Total .. ..	416	1,276	1,344	1,627	1,459	1,490

## WORKERS INVOLVED.

Wages, Hours and Leave .. ..	29,290	104,075	117,409	201,274	89,443	42,923
Physical Working Conditions and Managerial Policy .. ..	56,783	173,705	151,655	183,123	218,809	214,060
Trade Unionism .. ..	18,651	15,651	27,684	51,819	26,176	45,437
Other .. ..	48,106	138,270	111,844	69,518	161,618	67,654
Total .. ..	152,830	431,701	408,592	505,734	496,046	370,074

## WORKING DAYS LOST.

Wages, Hours and Leave .. ..	128,525	1,448,462	338,026	545,017	208,776	136,738
Physical Working Conditions and Managerial Policy .. ..	189,510	443,493	359,383	444,286	657,835	413,118
Trade Unionism .. ..	54,749	37,580	67,280	93,133	58,038	278,332
Other .. ..	86,370	133,353	108,285	81,068	126,181	73,451
Total .. ..	459,154	2,062,888	872,974	1,163,504	1,050,830	901,639

(a) Owing to the use of a new classification, figures for 1950 to 1954 are not strictly comparable with those for earlier years.

(iii) Year 1954. The following table shows particulars of industrial disputes for 1954 classified according to cause in three industry groups:—

## CAUSES OF INDUSTRIAL DISPUTES : AUSTRALIA, 1954.

Cause of Dispute.	Coal-mining.	Stevedoring.	Other Industries.	All Industries.
NUMBER OF DISPUTES.				
Wages, Hours and Leave .. ..	12	6	82	100
Physical Working Conditions and Managerial Policy .. ..	616	172	187	975
Trade Unionism .. ..	114	15	31	160
Other .. ..	200	41	14	255
Total .. ..	942	234	314	1,490

## WORKERS INVOLVED.

Wages, Hours and Leave .. ..	13,516	3,190	26,217	42,923
Physical Working Conditions and Managerial Policy .. ..	90,985	86,292	36,783	214,060
Trade Unionism .. ..	12,590	23,890	8,957	45,437
Other .. ..	38,539	16,293	12,822	67,654
Total .. ..	155,630	129,665	84,779	370,074

## WORKING DAYS LOST.

Wages, Hours and Leave .. ..	14,304	3,432	119,002	136,738
Physical Working Conditions and Managerial Policy .. ..	173,951	86,077	153,090	413,118
Trade Unionism .. ..	21,858	215,483	40,991	278,332
Other .. ..	45,613	14,374	13,464	73,451
Total .. ..	255,726	319,366	326,547	901,639

6. Results of Industrial Disputes.—In issues of the Official Year Book prior to No. 40, tables were included showing analyses of the results of industrial disputes over a period of years. This tabulation was discontinued because of the difficulty of obtaining the details necessary to make a classification in precise terms of the results of industrial disputes.

7. Methods of Settlement.—The following table shows particulars of industrial disputes for 1954 classified according to method of settlement, in three industry groups :—

### INDUSTRIAL DISPUTES : METHODS OF SETTLEMENT, AUSTRALIA, 1954.(a)

Method of Settlement.	Coal-mining.	Stevedoring.	Other Industries.	All Industries.
NUMBER OF DISPUTES.				
1. By private negotiation .. .. .	191	5	86	282
2. By mediation not based on legislation .. .. .	5	1	5	11
3. State legislation—				
(a) Under State Conciliation, etc., legislation .. .. .	3	2	65	70
(b) By reference to State Government officials .. .. .	7	..	..	7
4. Commonwealth and Commonwealth-State legislation—				
(a) Industrial Tribunals under—				
(i) Conciliation and Arbitration Act .. .. .	..	3	47	50
(ii) Coal Industry Acts .. .. .	51	..	..	51
(iii) Stevedoring Industry Act .. .. .	..	11	1	12
(iv) Other Acts .. .. .	..	..	1	1
(b) By reference to Commonwealth Government officials .. .. .	..	16	..	16
5. By filling places of workers on strike or locked out .. .. .	..	1	1	2
6. By closing down establishment permanently .. .. .	..	..	..	..
7. By resumption without negotiation .. .. .	684	195	104	983
8. By other methods .. .. .	..	..	2	2
Total .. .. .	941	234	312	1,487

### WORKERS INVOLVED.

1. By private negotiation .. .. .	18,504	812	23,053	42,369
2. By mediation not based on legislation .. .. .	768	129	1,787	2,684
3. State legislation—				
(a) Under State Conciliation, etc., legislation .. .. .	670	378	21,511	22,559
(b) By reference to State Government officials .. .. .	1,610	..	..	1,610
4. Commonwealth and Commonwealth-State legislation—				
(a) Industrial Tribunals under—				
(i) Conciliation and Arbitration Act .. .. .	..	322	7,346	7,668
(ii) Coal Industry Acts .. .. .	11,072	..	..	11,072
(iii) Stevedoring Industry Act .. .. .	..	13,518	600	14,118
(iv) Other Acts .. .. .	..	..	40	40
(b) By reference to Commonwealth Government officials .. .. .	..	2,340	..	2,340
5. By filling places of workers on strike or locked out .. .. .	..	190	9	199
6. By closing down establishment permanently .. .. .	..	..	..	..
7. By resumption without negotiation .. .. .	120,413	111,976	30,265	262,654
8. By other methods .. .. .	..	..	90	99
Total .. .. .	153,037	129,665	84,710	367,412

### WORKING DAYS LOST.

1. By private negotiation .. .. .	34,525	1,795	84,912	121,232
2. By mediation not based on legislation .. .. .	1,366	260	7,199	8,825
3. State legislation—				
(a) Under State Conciliation, etc., legislation .. .. .	1,769	407	111,830	114,006
(b) By reference to State Government officials .. .. .	4,154	..	..	4,154
4. Commonwealth and Commonwealth-State legislation—				
(a) Industrial Tribunals under—				
(i) Conciliation and Arbitration Act .. .. .	..	979	67,255	68,234
(ii) Coal Industry Acts .. .. .	34,786	..	..	34,786
(iii) Stevedoring Industry Act .. .. .	..	11,256	1,800	13,056
(iv) Other Acts .. .. .	..	..	1,020	1,020
(b) By reference to Commonwealth Government officials .. .. .	..	2,671	..	2,671
5. By filling places of workers on strike or locked out .. .. .	..	451	9	460
6. By closing down establishment permanently .. .. .	..	..	..	..
7. By resumption without negotiation .. .. .	156,691	301,547	48,313	506,551
8. By other methods .. .. .	..	..	1,460	1,460
Total .. .. .	233,291	319,366	323,807	876,464

(a) As there are usually disputes in progress at the end of each year, totals in the above table will not necessarily agree with those shown in preceding tables.

### F. WORKERS' COMPENSATION LEGISLATION.

A conspectus of the principal provisions of Workers' Compensation Acts in force in Australia at 30th June, 1954 will be found in *Labour Report* No. 42, 1953, pages 114-121.

## G. LABOUR ORGANIZATIONS.

## § 1. Labour Organizations in Australia.

1. *Registration.*—(i) *Under Trade Union Acts.* In earlier issues of the Official Year Book (*see* No. 39, page 448) reference was made to the registration of trade unions under the Trade Union Acts. In general the available information is inadequate for statistical purposes.

(ii) *Under State Industrial Legislation.* Information with regard to registrations of employers' associations and trade unions under the various State Industrial Arbitration Acts will be found in earlier issues of the Official Year Book (*see* No. 39, page 448).

(iii) *Under the (Commonwealth) Conciliation and Arbitration Act.* Under Part VI. of the Conciliation and Arbitration Act any association of employers in any industry who have, or any employer who has, employed 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.\* Registered unions include both interstate associations and associations operating within one State only. Registration under Commonwealth legislation began in 1906. At the end of 1954 the number of employers' organizations registered under the provisions of the Commonwealth Conciliation and Arbitration Act was 56. The number of unions of employees registered at the end of 1954 was 150, with a membership of 1,447,646 representing 81 per cent. of the total membership of all trade unions in Australia.

2. *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:—(i) the local independent; (ii) the State; (iii) the interstate; and (iv) 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. The leading characteristics of each of these types were briefly outlined in *Labour Report* No. 2.

(ii) *Number and Membership.* Returns showing membership by States as at 31st December each year are obtained for all trade unions and employee organizations. The affairs of single organizations 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. The substantial increase in the number of members of trade unions in 1954 was partly the result of an amendment to the New South Wales Industrial Arbitration Act 1940-1953, which gave absolute preference of employment to members of appropriate trade unions, and also made it compulsory for persons over 18 years of age, working under State awards or agreements (except students, those holding managerial positions, conscientious objectors and ex-servicemen), to join an appropriate trade union. The following table shows the position at the end of 1939, 1953 and 1954.

TRADE UNIONS : NUMBER AND MEMBERSHIP.

State or Territory.	Number of Separate Unions.			Number of Members.			Percentage Increase in Membership.(a)		
	1939.	1953.	1954.	1939.	1953.	1954.	1939.	1953.	1954.
New South Wales	200	224	228	358,391	665,737	732,737	3.4	2.6	10.1
Victoria ..	149	159	158	216,803	424,428	433,891	0.8	1.9	2.2
Queensland. .	114	129	129	180,653	285,218	305,304	6.5	3.9	6.9
South Australia ..	117	138	138	67,282	140,154	147,555	8.7	1.9	5.3
Western Australia	141	152	154	67,833	107,642	109,589	0.1	2.1	1.8
Tasmania ..	79	98	98	22,062	48,293	50,290	4.8	2.9	4.1
Northern Territory	4	18	18	761	2,535	2,168	5.6	8.3	-14.5
Australian Capital Territory ..	15	28	29	1,685	5,251	5,970	9.6	7.7	13.7
Australia ..	(b) 380	(b) 365	(b) 371	915,470	1,679,758	1,787,504	3.4	2.6	6.4

(a) On preceding year.

(b) Without interstate duplication. *See letterpress below.*

NOTE.—Minus sign (—) denotes decrease.

\* 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.

In the table just given, under the heading "Number of Separate Unions", a union reporting members in a State is counted as one union within that State. The figures by States do not add to the Australian total (shown in the last line) because a union represented in more than one State is included in the figure for each State in which it is represented, but is counted only once in the Australian total.

Because of the difficulties involved, the collection of statistics relating to the "Number of Branches" of trade unions appearing in issues of the Official Year Book prior to No. 39 was discontinued.

(iii) *Classification in Industrial Groups.* The following table shows the number of unions and members thereof in Australia at the end of each of the years 1939, 1953 and 1954. Compared with 1939, membership in 1954 had increased by 95 per cent.

#### TRADE UNIONS : INDUSTRIAL GROUPS, AUSTRALIA.

Industrial Group.	1939.		1953.		1954.	
	No. of Unions.(a)	No. of Members.	No. of Unions.(a)	No. of Members.	No. of Unions.(a)	No. of Members.
<b>Manufacturing—</b>						
I. Wood, Furniture, etc. . .	4	27,990	6	43,051	6	43,572
II. Engineering, Metal Works, etc. . .	22	99,731	15	246,217	15	258,838
III. Food, Drink, Tobacco, etc. . .	35	80,328	36	95,806	39	104,335
IV. Clothing, Textiles, etc. . .	12	68,847	6	111,788	6	117,292
V. Books, Printing, etc. . .	8	22,303	6	35,467	6	38,912
VI. Other Manufacturing . .	37	52,074	37	80,027	36	84,456
VII. Building . . .	28	45,651	28	123,811	28	143,071
VIII. Mining, Quarrying, etc. . .	13	48,812	12	50,515	13	49,833
IX. Railway and Tramway Services . .	29	105,938	25	143,542	26	143,680
X. Other Transport . . .	6	19,488	9	59,494	9	62,025
XI. Shipping, etc. . .	21	28,760	13	39,941	13	40,372
XII. Pastoral, Agricultural, etc. . .	5	40,276	3	62,070	3	63,831
XIII. Domestic, Hotels, etc. . .	18	13,177	14	33,025	12	36,611
<b>XIV. Miscellaneous—</b>						
(i) Banking, Insurance and Clerical . . .	20	39,013	17	108,605	18	112,946
(ii) Public Service . . .	50	89,848	63	195,777	61	202,797
(iii) Retail and Wholesale . .	8	36,290	13	62,723	13	72,664
(iv) Municipal, Sewerage and Labouring . . .	11	46,552	10	75,097	10	81,115
(v) Other Miscellaneous . .	53	50,392	52	112,702	57	131,154
<b>Total . . .</b>	<b>380</b>	<b>915,470</b>	<b>365</b>	<b>1,679,758</b>	<b>371</b>	<b>1,787,504</b>

(a) Without interstate duplication. See letterpress above.

(iv) *Number of Members and Proportion of Wage and Salary Earners, Australia.* 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 females in private domestic service the percentages have been calculated on figures obtained by adding to the end of year estimates (see page 197 above) the number of employees in rural industry and females in private domestic service recorded at the Census of June, 1947. 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.
1939..	778,336	137,134	915,470	52	24	44
1950..	1,301,868	303,476	1,605,344	65	40	58
1951..	1,368,694	321,577	1,690,271	66	42	60
1952..	1,354,248	283,294	1,637,542	67	40	60
1953..	1,381,103	298,655	1,679,758	67	40	60
1954..	1,448,223	339,281	1,787,504	69	44	62

(v) *Interstate or Federated Trade Unions.* The following table gives particulars of the number and membership of interstate or federated unions in 1954 :—

INTERSTATE OR FEDERATED TRADE UNIONS(a) : AUSTRALIA, 1954.

Particulars.	Unions Operating in—					Total.
	2 States.	3 States.	4 States.	5 States.	6 States.	
Number of Unions ..	12	11	26	32	58	139
„ „ Members ..	32,889	54,725	179,527	496,509	809,283	1,572,933

(a) Certain unions in this group have, in addition to branches in the States, branches in the Northern Territory and in the Australian Capital Territory.

The number of organizations operating in two or more States increased from 72 in 1912 to 139 in 1954, and the ratio of the membership of such organizations to the total membership of all organizations rose from 65 to 88 per cent. during the same period.

3. *Central Labour Organizations.*—In each of the capital cities and in a number of industrial centres elsewhere, delegate organizations, consisting of representatives from a group of trade unions, have been established. 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 or the Trades Hall Council. In Western Australia a unified system of organization extends over the industrial centres throughout the State. In this State there is a provincial branch of the Australian Labour Party, having a central council and executive, and metropolitan and branch district councils, with which the local bodies are affiliated. The central council, on which all district councils are represented, meets periodically. In the other five States, however, the organization is not so close, and, while provision usually exists in the rules of the central council at the capital city of each State for the organization of district councils or for the representation of the central council on the local councils in the smaller industrial centres of the State, the councils in each State are, as a matter of fact, 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 at the end of the year 1954 :—

CENTRAL LABOUR ORGANIZATIONS : NUMBER, AND UNIONS AND BRANCH UNIONS AFFILIATED, 1954.

Particulars.	N.S.W.	Vic.	Q'land.	S. Aust.	W. Aust.	Tas.	N.T.	A.C.T.	Total.
Number of Councils..	11	9	13	6	10	4	1	1	55
Number of Unions and Branch Unions affiliated ..	288	270	152	124	399	92	4	21	1,350

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 Australian Council of Trade Unions 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 Australian Council of Trade Unions and has the right to appoint two representatives to act on the Executive of the Council. In addition to the representatives from the Metropolitan or State Labour Councils, the Executive consists of four officers—the President, two Vice-Presidents and a Secretary—who are elected by and from the Australian Congress of Trade Unions.

The objectives of the Australian Council of Trade Unions 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; political action to secure satisfactory working-class legislation.

The Australian Council of Trade Unions is 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.

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 Organization.

The International Labour Organization (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. In 1946 the Organization 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 Organization 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 four times each year; and the International Labour Office, which provides the secretariat of the Organization. The Conference is composed of delegations from the Member States of the Organization. In June, 1955 there were 70 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. In accordance with amendments adopted at the 36th Session of the International Labour Conference, the Governing Body, as from the elections held in Geneva in 1954, has consisted of the representatives of twenty governments, and ten employers' and ten workers' representatives. Particulars are given in the *Labour Report* of the proceedings of International Labour Conferences up to the 38th Session, held in Geneva in June, 1955.

## H. COMPARATIVE INDEX NUMBERS.

In order to show the relative movements of certain price and related data, the following table of annual and quarterly index numbers for the six capital cities combined has been compiled with a common base 1911 = 1,000.

## COMPARATIVE INDEX NUMBERS FOR THE SIX CAPITAL CITIES COMBINED.

(Bases of each Group : Weighted Average of Six Capital Cities, 1911 = 1,000 (a).)

Period.	Retail Price Index Numbers.					Nominal Wages, Adult Males.	Real Wages. (c)
	Food and Grocer- ies.	Rent (4 and 5 Roomed Houses.) (b)	Cloth- ing.	Miscel- laneous.	Total "C" Series Index.		
Year—							
1911 .. .. .	1,000	1,000	(d)1,000	(d)1,000	(d)1,000	1,000	1,000
1914 .. .. .	1,144	1,082	1,140	1,140	1,140	1,081	948
1921 .. .. .	1,902	1,410	1,883	1,537	1,680	1,826	1,087
1928 .. .. .	1,761	1,743	1,507	1,537	1,675	1,963	1,172
1932 .. .. .	1,425	1,336	1,215	1,438	1,377	1,639	1,100
1938 .. .. .	1,384	1,540	1,253	1,463	1,488	1,799	1,209
1939 .. .. .	1,657	1,577	1,271	1,465	1,526	1,846	1,210
1946 .. .. .	1,852	1,596	2,276	1,776	1,900	2,400	1,263
1947 .. .. .	1,967	1,597	2,367	1,825	1,971	2,598	1,318
1948 .. .. .	2,245	1,601	2,637	1,913	2,148	2,914	1,357
1949 .. .. .	2,402	1,605	3,019	2,037	2,349	3,210	1,367
1950 .. .. .	2,800	1,613	3,455	2,184	2,589	3,596	1,389
1951 .. .. .	3,649	1,649	4,156	2,555	3,124	4,495	1,439
1952 .. .. .	4,516	1,728	4,657	2,980	3,645	5,241	1,438
1953 .. .. .	4,723	1,861	4,872	3,126	3,820	5,539	1,450
1954 .. .. .	4,776	1,949	4,865	3,139	3,860	5,632	1,459
Quarter—							
1954—							
March .. .. .	4,798	1,900	4,880	3,151	3,861	5,622	1,456
June .. .. .	4,774	1,947	4,856	3,137	3,856	5,624	1,459
September .. .. .	4,746	1,970	4,853	3,133	3,851	5,622	1,460
December .. .. .	4,787	1,977	4,870	3,136	3,870	5,658	1,462

(a) The index numbers given in the separate columns of the table cannot be compared with each other in order to show, for example, the relative cost of housing and food and groceries, since the cost in 1911 in each group or combination of groups is made equal to 1,000.

(b) See footnote (b) on page 159.

(c) Index of nominal weekly wage rates for adult males divided by "C" Series Retail Price Index number.

(d) Taken back from true base (November, 1914 = 1,000) by means of the "A" Series Index (Food and Rent of all Houses).



## CHAPTER VII.

### TRANSPORT AND COMMUNICATION.

NOTE.—The statistics in some divisions of this chapter cover the year 1953-54; in other divisions, however, it has been possible to include 1954-55 figures. In these cases corresponding figures for 1953-54 will be found in *Transport and Communication Bulletin* No. 45 unless otherwise specifically indicated.

#### A. SHIPPING.

##### § 1. 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* § 5 following, paragraph 1).

On arrival at, or departure from, a port in Australia, whether from or for an oversea country or from 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 this Bureau. This arrangement has been in operation since 1st July, 1924.

The volume of the vessel, as distinct from the cargo it carries, is recorded in net tons, i.e., the gross tonnage or internal cubic capacity less certain deductions on account of crew spaces, engine room, water ballast and other spaces not used for passengers or cargo. It is thus a rough measure of the capacity of the vessel for cargo or passengers. The unit of measurement is the *ton register* of 100 cubic feet.

Cargo is recorded in *tons weight* or in *tons measurement* (40 cubic feet).

From 1st July, 1914 the Trade and Shipping of Australia have been recorded for the financial years ending 30th June.

##### § 2. 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 1949-50 to 1954-55 :—

**OVERSEA SHIPPING : ENTRANCES AND CLEARANCES (COMBINED) OF  
VESSELS DIRECT, AUSTRALIA.**

Particulars.	1949-50.	1950-51.	1951-52.	1952-53.	1953-54.	1954-55.
Number of Vessels . . .	3,907	3,903	4,136	4,041	4,127	4,505
Net Tonnage '000 tons	17,378	17,307	18,225	17,571	17,733	20,003

The average net tonnage per vessel has risen from 2,919 tons per vessel in 1921-22 to 4,440 tons in 1954-55.

Particulars of the total oversea movement of shipping for each year from 1822 to 1920-21 will be found in Official Year Book No. 15, p. 507, and for years subsequent thereto, but not shown in the table above, in Official Year Book No. 40, p. 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 overseas countries, and the aggregate net tonnage, during the year 1954-55 :—

**OVERSEA SHIPPING : ENTRANCES AND CLEARANCES OF VESSELS DIRECT. STATES, 1954-55.**

Particulars.	N.S.W.	Vic.	Qld.	S.A.	W.A.	Tas.	N.T.	Aust.
Entrances	No. 640	452	328	211	561	37	16	2,245
'ooo net tons	2,588	2,103	1,072	831	3,175	124	46	9,939
Clearances	No. 555	393	480	201	578	39	14	2,260
'ooo net tons	2,328	1,826	1,780	821	3,027	230	52	10,064

3. **Shipping Communication with Various Countries.**—Records of the number and tonnage of vessels arriving from and departing to particular countries, as they are invariably made, may be misleading for the reason that the tonnage of a vessel can be recorded against one country only, notwithstanding that the same vessel on the same voyage may carry cargo or passengers to or from Australia from or to several countries. For instance, a mail steamer on a voyage from the United Kingdom to Australia, through the Suez Canal, may call at Marseilles, Genoa, Port Said, Aden and Colombo, yet can be credited only to the United Kingdom, the country where the voyage commenced, to the exclusion of all of the others from the records. Also a number of vessels touch at New Zealand ports on their voyages to and from the United States of America and Canada, but their tonnages are not included in the records of Australian shipping trade with New Zealand. Similarly, the record of shipping engaged in trade between Australia and the United Kingdom via South African ports does not show tonnage to and from South Africa, the whole of it being included in the figures for the United Kingdom. In view of this defect, statistics relating to the direction of the shipping to and from Australia are restricted to the following tables in which countries situated on the main trade routes are grouped together. This grouping into larger geographical divisions to some extent avoids the limitations referred to, except, as already pointed out, in the case of Africa and New Zealand.

**OVERSEA SHIPPING : COUNTRY GROUPS FROM WHICH ENTERED OR FOR WHICH CLEARED, AUSTRALIA.**

Country Group.	With Cargo or in Ballast.	Net Tonnage Entered ('ooo).			Net Tonnage Cleared ('ooo).		
		1952-53.	1953-54.	1954-55.	1952-53.	1953-54.	1954-55.
United Kingdom and European Countries .. .. .	Cargo	2,484	2,786	3,072	3,276	2,860	2,760
	Ballast	35	43	12	38	93	428
New Zealand(a) .. .. .	Cargo	541	521	642	719	761	912
	Ballast	358	255	339	34	91	100
Asiatic Countries and Pacific Islands .. .. .	Cargo	3,401	3,623	4,471	1,969	2,001	1,971
	Ballast	892	791	403	1,927	2,087	3,128
Africa(a) .. .. .	Cargo	97	96	95	94	101	61
	Ballast	99	48	18	27	22	45
North and Central America .. .. .	Cargo	740	674	842	442	455	452
	Ballast	3	9	5	337	376	198
South America .. .. .	Cargo	49	35	40	4	..	..
	Ballast	5	..	..	..	3	4
Antarctica .. .. .	Cargo	..	1	..	..	1	..
	Ballast	..	..	..	..	..	1
<b>Total .. .. .</b>	Cargo	7,312	7,736	9,162	6,504	6,179	6,157
	Ballast	1,392	1,146	777	2,363	2,677	3,907
<b>Total Cargo and Ballast..</b>	..	8,704	8,882	9,939	8,867	8,851	10,064

(a) See explanation above.

4. **Nationality of Oversea Shipping.**—Owing to war conditions, the proportion of shipping of British nationality progressively declined from 72.82 per cent. of the total tonnage entered in 1938-39 to 43.40 per cent. in 1943-44. On the other hand, the proportion of American (U.S.) shipping visiting Australia during the same period advanced from 2.61 per cent. in 1938-39 to 33.07 per cent. in 1943-44. Thereafter the trend was reversed, and in 1950-51 the proportion of British shipping entered was 70.83 per cent. and of American 2.34 per cent. In 1954-55 the proportion of British shipping entered had fallen to 62.56 per cent.

Particulars of the nationality of overseas shipping which entered Australia during each of the years 1952-53 to 1954-55 are given in the following table :—

**OVERSEA SHIPPING : NATIONALITY OF VESSELS ENTERED, AUSTRALIA.**  
(’000 Net Tons.)

Nationality.	1952-53.	1953-54.	1954-55.	Nationality.	1952-53.	1953-54.	1954-55.
<b>BRITISH—</b>				<b>FOREIGN—continued.</b>			
Australian ..	229	300	347	Japanese ..	161	142	209
Canadian ..	17	4	..	Norwegian ..	719	776	1,129
New Zealand ..	375	400	423	Panamanian ..	386	310	382
United Kingdom ..	4,839	4,933	5,207	Swedish ..	267	329	326
Other British ..	189	199	241	Other Foreign ..	213	223	163
 In Cargo ..	 4,732	 5,107	 5,694	 In Cargo ..	 2,580	 2,629	 3,467
In Ballast ..	917	729	524	In Ballast ..	475	417	254
 Total British Proportion total ..	 5,649 of	 5,836 %	 6,218 %	 Total Foreign Proportion total ..	 3,055 of	 3,046 %	 3,721 %
	64.90	65.71	62.56		35.10	34.29	37.44
<b>FOREIGN—</b>				<b>ALL NATIONALITIES—</b>			
American (U.S.) ..	205	160	160	In Cargo ..	7,312	7,736	9,161
Danish ..	109	144	173	Proportion of total% ..	84.01	87.10	92.17
Dutch ..	470	531	608	In Ballast ..	1,392	1,146	778
French ..	148	163	185	Proportion of total% ..	15.99	12.90	7.83
German ..	10	2	54				
Italian ..	367	266	332	Total, All Nationalities	8,704	8,882	9,939

The Australian tonnage which entered Australian ports from overseas during the year 1954-55 represented 3.49 per cent. of the total tonnage entered and was confined mainly to the New Zealand and Pacific Islands trade.

The proportion of overseas shipping tonnage which entered Australia in cargo fell from 88.87 per cent. in 1938-39 to 79.37 per cent. in 1947-48. In 1954-55 it was 92.17 per cent. The proportion of shipping which cleared in cargo, however, declined from 87.64 per cent. in 1938-39 to 66.12 per cent. in 1951-52, the trend over the period being generally downward. A further fall, to 61.17 per cent., occurred in 1954-55.

### § 3. Shipping at Principal Ports.

1. **Total Shipping, Australia.**—The following table shows the total volume of shipping—overseas, interstate and coastwise—which entered the principal ports of Australia during the years 1953-54 and 1954-55. Warships are excluded from the table. Corresponding figures for each year from 1948-49 will be found in *Transport and Communication Bulletin* No. 45.

## TOTAL SHIPPING : ENTRANCES AT PRINCIPAL PORTS, AUSTRALIA.

Port of Entry.	1953-54.		1954-55.		Port of Entry.	1953-54.		1954-55.	
	Num-ber.	Net Tons.	Num-ber.	Net Tons.		Num-ber.	Net Tons.	Num-ber.	Net Tons.
		'000.		'000.			'000.		'000.
<b>New South Wales—</b>					<b>South Australia—</b>				
Sydney ..	4,538	9,357	4,399	9,702	Adelaide ..	3,003	5,358	2,621	5,215
Newcastle ..	2,370	3,665	2,261	3,516	Port Lincoln ..	284	383	298	372
Port Kembla ..	534	1,586	611	1,885	Port Pirie ..	353	903	352	892
					Rapid Bay ..	65	184	79	192
					Wallaroo ..	87	134	105	124
					Whyalla ..	467	1,358	475	1,373
<b>Victoria—</b>					<b>Western Australia—</b>				
Melbourne ..	2,496	8,643	2,527	9,029	Fremantle ..	931	4,870	1,078	5,708
Geelong ..	384	1,106	474	1,611	Albany ..	54	229	62	289
					Bunbury ..	72	200	64	168
					Carnarvon ..	108	159	115	152
					Geraldton ..	91	247	105	307
					Yampi ..	135	324	132	330
<b>Queensland—</b>					<b>Tasmania—</b>				
Brisbane ..	1,062	3,425	1,167	3,707	Hobart ..	360	807	360	856
Bowen ..	88	262	77	235	Burnie ..	221	286	229	331
Cairns ..	311	650	279	622	Devonport ..	247	244	260	209
Gladstone ..	75	247	80	248	Launceston ..	409	463	433	461
Mackay ..	106	280	93	271	<b>Northern Territory—</b>				
Rockhampton ..	100	203	112	217	Darwin ..	53	81	58	134
Townsville ..	296	1,026	294	987					

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 during 1954-55, New Zealand during 1954 and the United Kingdom during 1953.

## 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>		<b>AUSTRALIA—continued.</b>		<b>ENGLAND AND WALES—</b>	
Sydney (N.S.W.)	9,702	Albany (W.A.) ..	289	<i>continued.</i>	
Melbourne (Vic.)	9,029	Mackay (Qld.) ..	271	Hull ..	4,968
Fremantle (W.A.)	5,768			Manchester (Including Runcorn) ..	4,187
Adelaide (S.A.) ..	5,215	<b>NEW ZEALAND—</b>		Dover ..	3,860
Brisbane (Qld.) ..	3,707	Wellington ..	3,660	Swansea ..	3,455
Newcastle (N.S.W.)	3,516	Auckland ..	2,650	Bristol ..	3,393
Port Kembla (N.S.W.) ..	1,885	Lyttleton ..	2,527	Harwich ..	3,261
Geelong (Vic.) ..	1,611	Otago ..	1,056	Tyne Ports ..	3,216
Whyalla (S.A.) ..	1,373	Napier ..	517	Middlesbrough ..	2,897
Townsville (Qld.) ..	987	Tinianu ..	446	Plymouth ..	1,947
Port Pirie (S.A.) ..	892	Bluff ..	431		
Hobart (Tas.) ..	856			<b>SCOTLAND—</b>	
Cairns (Qld.) ..	622	<b>ENGLAND AND WALES—</b>		Glasgow ..	4,736
Launceston (Tas.)	461	London ..	22,899		
Port Lincoln (S.A.)	372	Liverpool (including		<b>NORTHERN IRELAND—</b>	
Burnie (Tas.) ..	331	Birkenhead) ..	15,084	Belfast ..	977
Yampi (W.A.) ..	330	Southampton ..	14,581		
Geraldton (W.A.) ..	307				

## § 4. Vessels Built and Registered.

1. Vessels Built.—The following table shows the number and tonnage of vessels built in Australia during each of the calendar years 1949 to 1954, so far as such information can be ascertained from the Shipping Registers of the various States. The Merchant Shipping Act, under which vessels are registered in Australia, does not, however, 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.

## VESSELS BUILT AND REGISTERED IN AUSTRALIA.

Year.	Steam.		Motor.(a)				Sailing.		Total.			
	No.	Tonnage.		No.	Tonnage.		No.	Tonnage.		No.	Tonnage.	
		Gross.	Net.		Gross.	Net.		Gross.	Net.		Gross.	Net.
1949 ..	2	9,673	5,427	9	726	383	..	..	..	11	10,399	5,810
1950 ..	2	8,005	4,141	9	1,213	648	..	..	..	11	9,218	4,789
1951 ..	2	13,515	7,522	9	5,435	2,843	..	..	..	11	18,950	10,365
1952 ..	1	4,054	2,070	7	2,520	1,382	1	5	3	9	6,579	3,455
1953 ..	3	11,744	6,647	4	7,886	4,051	3	23	22	10	19,656	10,720
1954 ..	2	11,289	5,706	12	11,896	6,546	..	..	..	14	23,179	12,252

(a) Includes vessels with auxiliary motors.

2. Vessels Registered.—The following table shows the number and net tonnage of steam, sailing and other vessels on the register of each State on 31st December, 1954 :—

## VESSELS ON STATE REGISTERS, 31st DECEMBER, 1954.

State or Territory.	Steam and Motor.		Sailing.				Barges, Hulks, Dredges, etc., not Self-propelled.		Total.	
	No.	Net Tons.	Propelled by Sail only.		Fitted with Auxiliary Power.		No.	Net Tons.	No.	Net Tons.
			No.	Net Tons.	No.	Net Tons.				
New South Wales	303	69,081	27	2,097	92	1,282	10	948	432	73,408
Victoria ..	192	183,579	49	595	52	1,545	40	16,069	333	201,788
Queensland ..	95	31,309	61	741	63	854	11	1,421	230	34,325
South Australia	82	28,212	15	307	41	2,116	39	6,172	177	36,807
Western Australia	79	7,096	211	3,144	59	1,475	4	351	353	12,066
Tasmania ..	41	6,411	44	1,458	89	2,270	2	513	176	10,652
Northern Territory	..	..	16	154	9	177	..	..	25	331
Australia ..	792	325,688	423	8,496	405	9,719	106	25,474	1,726	369,377

3. World Shipping Tonnage.—Issues of the Official Year Book prior to No. 39 contained tables, compiled from *Lloyd's Register of Shipping*, showing the number and gross tonnage of steam, motor and sailing vessels owned by the various maritime countries of the world. The tables are not repeated in this issue, but the following information is derived from the same source.

At 1st July, 1953, the total steamers, motorships and sailing vessels of 100 gross tons and upwards throughout the world amounted to 32,603 with a gross tonnage of 93,978,000. Of these totals, steamers numbered 17,864 for 64,237,000 gross tons, motorships 13,933 for 29,115,000 gross tons and sailing vessels and barges 806 for 626,000 gross tons. In addition, there were 3,210 oil tankers of 100 gross tons and upwards with a gross tonnage of 21,964,000. Australian steamers, motor-ships and sailing vessels, 364 for 579,000 gross tons, constituted 1.12 per cent. and 0.62 per cent. respectively of the total numbers and tonnage. There were no Australian oil tankers of 100 gross tons and upwards registered.

## § 5. 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 voyage proceeding from one State to another. (It should be mentioned that these vessels, except under special circumstances, do not engage in interstate carrying.) 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 (which are prepared in this Bureau) 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 for 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 *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 *via* other 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 pre-federation 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 movement, must for the individual States be recorded as “Oversea *via* other States” or “Interstate” according to the direction of the movement. The significance of the record of these movements will be more clearly seen from the following tabular presentation of the inward and outward voyages to and from Australia of a mail steamer 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.
<b>Inward Voyage—</b>		
Enters Fremantle from United Kingdom	Oversea direct	
Clears Fremantle for Adelaide	.. ..	Interstate direct
Enters Adelaide from United Kingdom	.. ..	
<i>via</i> Fremantle	.. ..	Oversea <i>via</i> States
Clears Adelaide for Melbourne	.. ..	Interstate direct
Enters Melbourne from United Kingdom	.. ..	
<i>via</i> Adelaide	.. ..	Oversea <i>via</i> States
Clears Melbourne for Sydney	.. ..	Interstate direct
Enters Sydney from United Kingdom <i>via</i> Melbourne	.. ..	Oversea <i>via</i> States
<b>Outward Voyage—</b>		
Clears Sydney for United Kingdom <i>via</i> Melbourne	.. ..	Oversea <i>via</i> States
Enters Melbourne from Sydney	.. ..	Interstate direct
Clears Melbourne for United Kingdom <i>via</i> Adelaide	.. ..	Oversea <i>via</i> States
Enters Adelaide from Melbourne	.. ..	Interstate direct
Clears Adelaide for United Kingdom <i>via</i> Fremantle	.. ..	Oversea <i>via</i> 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 overseas 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 overseas 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*”, to furnish figures showing the total interstate movement of shipping.

It should be remembered, however, that all overseas vessels do not follow the same itinerary as the vessel in the table above.

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 overseas vessels on interstate direct voyages) during each of the years 1952–53 to 1954–55. The shipping of the Murray River, between the States of New South Wales, Victoria and South Australia, is excluded.

## INTERSTATE MOVEMENT OF SHIPPING : ENTRANCES OF VESSELS INTERSTATE DIRECT.

State or Territory.	Number.			Net Tons ('000).		
	1952-53.	1953-54.	1954-55.	1952-53.	1953-54.	1954-55.
New South Wales .. ..	1,460	1,595	1,584	4,141	4,470	4,552
Victoria .. ..	1,540	1,586	1,555	3,934	4,030	4,057
Queensland .. ..	404	559	598	1,162	1,409	1,541
South Australia .. ..	859	928	963	3,054	3,301	3,475
Western Australia .. ..	497	491	524	2,575	2,428	2,725
Tasmania .. ..	864	965	960	759	1,068	1,085
Northern Territory .. ..	29	30	40	40	41	77
Australia .. ..	5,761	6,154	6,224	15,665	16,747	17,512

From 1938-39 the total net tonnage of interstate shipping declined steadily each year until 1942-43, when it represented only 38 per cent. of the total for the pre-war year. It remained practically unchanged during the next three years, but increased by almost one-third in 1946-47. By 1954-55 the total had risen to 88 per cent. of the 1938-39 total.

(ii) *Oversea via States.* To ascertain the aggregate movement of shipping between the States, including the total interstate movement of overseas vessels, the figures in the following table, which show the number of entrances and clearances of vessels to and from overseas countries via other Australian States and the aggregate tonnage, must be added to those in the preceding table.

## INTERSTATE MOVEMENT OF SHIPPING : ENTRANCES AND CLEARANCES OF VESSELS OVERSEA VIA OTHER AUSTRALIAN STATES, 1954-55.

Particulars.		N.S.W.	Vic.	Qld.	S.A.	W.A.	Tas.	N.T.	Aust.
Entrances	No.	623	711	269	337	50	84	2	2,076
	'000 net tons	3,337	3,790	1,392	1,816	244	410	10	10,999
Clearances	No.	469	473	176	299	34	102	..	1,553
	'000 net tons	2,391	2,632	863	1,529	201	436	..	8,052

Overseas vessels moving interstate are with few exceptions not engaged in the active interstate trade of Australia, but are merely proceeding to the several States in continuation of their overseas voyages.

(iii) *Total, Australia.* The following table shows the total interstate movement of shipping, including overseas vessels travelling overseas via States and interstate direct, for each of the years 1949-50 to 1954-55 :—

## INTERSTATE MOVEMENT OF SHIPPING : TOTAL, AUSTRALIA.

Particulars.			1949-50.	1950-51.	1951-52.	1952-53.	1953-54.	1954-55.
Entrances	..	No.	6,588	6,723	6,694	7,525	7,983	8,300
	'000 net tons		23,110	23,852	24,072	25,583	26,925	28,515
Clearances	..	No.	6,710	6,754	6,652	7,481	8,036	8,151
	'000 net tons		23,296	23,946	23,875	25,359	27,190	28,292

(iv) *Total, States.* 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 overseas vessels) during the year 1954-55, together with the aggregate net tonnage.

## INTERSTATE MOVEMENT OF SHIPPING : TOTAL, STATES, 1954-55.

Particulars.		N.S.W.	Vic.	Qld.	S.A.	W.A.	Tas.	N.T.	Aust.
Entrances	No.	2,207	2,266	867	1,300	574	1,044	42	8,300
	'000 net tons	7,889	7,849	2,933	5,292	2,969	1,496	87	28,515
Clearances	No.	2,280	2,331	734	1,321	558	887	40	8,151
	'000 net tons	8,088	8,123	2,241	5,338	3,117	1,313	72	28,292

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 during the year 1954-55, together with the net tonnage.

## SHIPPING ENGAGED SOLELY IN INTERSTATE TRADE : ENTRANCES, 1954-55.

Particulars.		N.S.W.	Vic.	Qld.	S.A.	W.A.	Tas.	N.T.	Australia.
Ships Entered	..	1,241	1,206	363	743	176	877	38	4,644
Net Tons	'000	3,054	2,038	650	2,256	678	667	61	9,404

4. *Interstate and Coastal Shipping Services.*—The following table shows particulars so far as they are available, of all vessels engaged in the regular interstate or coastal services at the end of each of the years 1950 to 1954 :—

## INTERSTATE AND COASTAL SHIPPING SERVICES : AUSTRALIA.

Particulars.		1950.	1951.	1952.	1953.	1954.
Number of companies operating	..	31	32	31	31	28
Number of vessels	..	179	173	173	172	174
Tonnage	Gross	490,496	492,558	494,580	501,782	524,975
	Net	272,801	272,003	273,824	277,294	289,854
Horse-power (Nominal)	..	57,500	47,027	47,126	49,159	53,017
Number of passengers for which licensed(a)	1st class	2,003	2,171	2,244	2,208	2,198
	2nd class	..	..	..	..	..
	and steerage	559	706	648	621	626
Complement of Crew	Masters and officers	650	629	652	650	675
	Engineers	736	738	742	751	785
	Other	4,985	4,907	4,884	4,886	4,950

(a) Excludes purely day-passenger accommodation.

NOTE.—This table excludes particulars of a small number of chartered vessels for which returns could not be obtained.

## § 6. Shipping Cargo.

1. *Oversea and Interstate Cargo.*—(i) *Australia.* The table hereunder shows the aggregate tonnage of oversea cargo discharged and shipped and the tonnage of interstate cargo shipped in Australian ports for the years 1949-50 to 1954-55. Cargo which was stated in cubic feet has been converted to tons measurement on the basis of 40 cubic feet to the ton.

## SHIPPING CARGO MOVEMENT : AUSTRALIA.

('000.)

Year.	Oversea Cargo.				Interstate Cargo.	
	Discharged.		Shipped.		Shipped.	
	Tons Weight.	Tons Meas.	Tons Weight.	Tons Meas.	Tons Weight.	Tons Meas.
1949-50	7,686	3,576	5,061	1,388	6,419	1,207
1950-51	9,084	3,989	5,405	1,295	6,723	1,326
1951-52	9,727	4,682	4,487	1,231	7,697	1,324
1952-53	7,733	1,029	6,045	1,452	8,447	1,275
1953-54	8,520	2,812	5,765	1,355	9,105	1,539
1954-55	10,993	3,402	6,084	1,420	10,212	1,472



(ii) *Principal Ports.* The following table shows the tonnage of oversea and interstate cargo discharged and shipped at principal ports during 1954-55.

**CARGO DISCHARGED AND SHIPPED AT PRINCIPAL PORTS, 1954-55.**  
(<sup>000.</sup>)

Port.	Discharged.				Shipped.			
	Oversea.		Interstate.		Oversea.		Interstate.	
	Tons Wt.	Tons Meas.	Tons Wt.	Tons Meas.	Tons Wt.	Tons Meas.	Tons Wt.	Tons Meas.
Sydney .. .. .	2,381	1,320	618	349	687	426	370	399
Newcastle .. .. .	539	9	1,411	..	304	10	2,667	..
Port Kembla .. .. .	206	..	2,482	..	165	..	585	..
Other.. .. .	..	..	..	..	22	16	7	..
<b>Total, New South Wales ..</b>	<b>3,126</b>	<b>1,329</b>	<b>4,511</b>	<b>349</b>	<b>1,178</b>	<b>452</b>	<b>3,629</b>	<b>399</b>
Melbourne .. .. .	2,371	1,239	1,980	353	553	554	412	423
Geelong .. .. .	1,529	43	239	1	699	..	471	..
Portland .. .. .	38	4	3	..	12	2	..	..
<b>Total, Victoria .. ..</b>	<b>3,938</b>	<b>1,286</b>	<b>2,222</b>	<b>354</b>	<b>1,264</b>	<b>556</b>	<b>883</b>	<b>423</b>
Brisbane .. .. .	703	177	304	259	428	95	47	81
Cairns .. .. .	74	3	16	21	185	5	104	25
Gladstone .. .. .	54	..	8	..	29	2	144	..
Mackay .. .. .	16	..	14	..	198	..	82	..
Townsville .. .. .	78	3	48	31	243	10	78	5
Other.. .. .	2	2	17	18	203	10	63	5
<b>Total, Queensland ..</b>	<b>927</b>	<b>185</b>	<b>407</b>	<b>329</b>	<b>1,286</b>	<b>122</b>	<b>518</b>	<b>116</b>
Port Adelaide .. .. .	718	359	1,436	178	379	117	227	193
Ardrossan .. .. .	..	..	..	..	160	..	97	..
Port Pirie .. .. .	151	..	108	..	409	..	210	..
Rapid Bay .. .. .	..	..	..	..	..	..	346	..
Whyalla .. .. .	6	..	289	4	44	..	2,764	..
Other.. .. .	90	..	66	..	332	6	167	..
<b>Total, South Australia ..</b>	<b>965</b>	<b>359</b>	<b>1,899</b>	<b>182</b>	<b>1,324</b>	<b>123</b>	<b>3,811</b>	<b>193</b>
Fremantle .. .. .	1,612	201	384	234	580	68	234	47
Geraldton .. .. .	34	..	15	..	202	16	37	1
Yampl .. .. .	..	..	1	..	..	..	581	..
Other.. .. .	112	6	31	4	116	26	22	51
<b>Total, Western Australia ..</b>	<b>1,758</b>	<b>207</b>	<b>431</b>	<b>238</b>	<b>898</b>	<b>110</b>	<b>874</b>	<b>99</b>
Hobart .. .. .	133	20	434	4	95	36	233	6
Burnie .. .. .	30	6	29	37	21	1	75	85
Launceston .. .. .	57	10	91	75	17	14	41	87
Other.. .. .	18	..	76	53	..	5	144	64
<b>Total, Tasmania .. ..</b>	<b>238</b>	<b>36</b>	<b>630</b>	<b>169</b>	<b>133</b>	<b>56</b>	<b>493</b>	<b>242</b>
Darwin (Northern Territory) ..	41	..	36	..	1	1	4	..
<b>AUSTRALIA .. .. .</b>	<b>10,993</b>	<b>3,402</b>	<b>10,136</b>	<b>1,621</b>	<b>6,084</b>	<b>1,420</b>	<b>10,212</b>	<b>1,472</b>

Corresponding figures for the year 1953-54 may be found in *Transport and Communication Bulletin* No. 45, p. 45.

2. Oversea Cargo by Nationality of Vessels.—The following table shows the total oversea cargo discharged and shipped combined, according to the nationality of the vessels, during the years 1952-53 to 1954-55 :—

**OVERSEA CARGO DISCHARGED AND SHIPPED : NATIONALITY OF VESSELS.  
AUSTRALIA.**

('000.)

Vessels Registered at Ports In—	1952-53.		1953-54.		1954-55.	
	Tons Wt.	Tons Meas.	Tons Wt.	Tons Meas.	Tons Wt.	Tons Meas.
<b>British Countries—</b>						
Australia .. ..	162	83	218	108	357	106
Canada .. ..	45	..	9	1	<del>460</del>	<del>35</del>
New Zealand .. ..	334	231	452	298	472	327
United Kingdom .. ..	7,294	2,286	7,678	2,801	8,792	3,014
Other British .. ..	232	87	272	115	<del>274</del> 434	<del>134</del> 169
<b>Total British .. ..</b>	<b>8,067</b>	<b>2,687</b>	<b>8,629</b>	<b>3,323</b>	<b>10,055</b>	<b>3,616</b>
<b>Proportion of Total %</b>	<b>58.55</b>	<b>79.45</b>	<b>60.41</b>	<b>79.75</b>	<b>58.88</b>	<b>74.97</b>
<b>Foreign Countries—</b>						
Denmark .. ..	298	20	310	32	388	44
France .. ..	226	29	229	31	242	41
Germany .. ..	35	..	20	4	134	69
Italy .. ..	299	43	148	52	217	71
Japan .. ..	291	4	247	17	432	63
Netherlands .. ..	822	138	862	168	1,091	198
Norway .. ..	1,681	121	1,814	168	2,499	246
Panama .. ..	684	37	627	10	765	27
Sweden .. ..	576	118	749	156	719	221
United States of America ..	347	151	192	188	235	174
Other Foreign .. ..	451	34	458	18	299	53
<b>Total Foreign .. ..</b>	<b>5,710</b>	<b>695</b>	<b>5,656</b>	<b>844</b>	<b>7,021</b>	<b>1,207</b>
<b>Proportion of Total %</b>	<b>41.45</b>	<b>20.55</b>	<b>39.59</b>	<b>20.25</b>	<b>41.12</b>	<b>25.03</b>
<b>Grand Total .. ..</b>	<b>13,777</b>	<b>3,382</b>	<b>14,285</b>	<b>4,167</b>	<b>17,076</b>	<b>4,823</b>

Owing to war conditions the proportion of cargo carried in British vessels decreased from 72.43 per cent. in 1938-39 to 41.37 per cent. in 1943-44, but increased to 77.51 per cent. in 1946-47. It has since declined, and in 1954-55 was 62.42 per cent.

### § 7. Control of Shipping.

1. War-time Control.—An account of the action taken by the Commonwealth Government to control and regulate shipping throughout Australian waters during the 1939-45 War was given in Official Year Book No. 36, pp. 121-130.

2. Post-war Control and Developments.—A brief account of the post-war control of shipping and the establishment of the Australian Stevedoring Industry Board and the Australian Shipping Board will be found in Official Year Book No. 39, pp. 147-8.

The Maritime Industry Commission established during the 1939-45 War under National Security legislation was abolished on 19th December, 1952. Permanent legislation to cover many of the matters formerly dealt with by the Commission was enacted in 1952 in the form of amendments to the Navigation Act 1912-1950 by Act No. 109 of 1952 (see page 224).

As at 30th June, 1955, the Australian Shipping Board operated 46 vessels totalling 168,490 gross tons, of which five vessels totalling 25,169 gross tons were operated on time charter from private owners. The Government-owned shipping, totalling 41 vessels of 143,320 gross tons (of which two vessels totalling 4,601 gross tons were on charter to private companies or other shipping organizations), comprised thirteen "A" or River Class vessels of an average of 5,133 gross tons, four "B" Class vessels of an average of 3,930 gross tons, seven "D" Class vessels of an average of 2,334 gross tons, two "D/A" Class vessels of an average of 2,407 gross tons, five "E" Class vessels of an average of 584 gross tons, two "Y" Class vessels of an average of 3,460 gross tons and a collier of 4,887 gross tons, all of which were built in Australian yards, plus seven vessels, totalling 24,992 gross tons, which were built overseas.

In the international sphere, ratification is still being awaited from 21 ship-owning nations of a Convention establishing an Inter-Governmental Maritime Consultative Organization within the framework of the United Nations. The major objectives of this organization are to provide machinery for co-operation among governments with shipping engaged in international trade, and to encourage the removal by governments of discriminatory action and unnecessary restrictions regarding such shipping.

This organization is designed to replace the United Maritime Consultative Council which was established on a tentative basis after the expiry of the war-time United Maritime Authority and Combined Adjustment Board.

Up to 1st July, 1955, ratifications by seventeen countries had been lodged, and there is a possibility of the four others ratifying in the near future, thus bringing the organization into force.

## § 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 the ports of the capital cities of Australia and the most important ports in other countries which trade with Australia are shown in *Transport and Communication Bulletin* No. 45.

3. Shipping Freight Rates.—The *Quarterly Summary of Australian Statistics* shows a list of the ruling freight rates for general merchandise in respect of both oversea and interstate shipments. At 31st December, 1955, the rate for general merchandise from Australia to the United Kingdom and Continent was £8 6s. 6d. per ton weight or measurement while the rates for wheat (bagged) and wool (greasy) were respectively £8 15s. per ton weight and 2.76d. less 7 per cent. per lb. These rates, which are expressed in sterling, are subject to an adjustment of 25½ per cent. when freight is prepaid in Australia.

4. Depth of Water at Main Ports.—A table, compiled from information supplied by the Director of Navigation, showing the depth of water available and tides at principal ports of Australia at 1st January, 1955, is included in *Transport and Communication Bulletin* No. 45.

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 casualties reported on or near the coast during the years 1950 to 1954 are shown in the table below. This information also was furnished by the Director of Navigation.

#### SHIPPING LOSSES AND CASUALTIES : AUSTRALIA.

Year.	Shipping Losses.			Shipping Casualties.		
	Vessels.	Net Tons.	Lives Lost.	Vessels.	Net Tons.	Lives Lost.
1950 ..	4	9,735	20	191	611,084	22
1951 ..	5	2,908	5	205	650,718	5
1952 ..	1	197	16	153	431,851	16
1953 ..	..	..	..	85	242,972	..
1954 ..	..	..	..	149	426,878	..

6. 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 the power in this particular respect is further defined as extending to navigation and shipping.

A review of the introduction and development of the Navigation Act 1912–1950 was given in Official Year Book No. 40, pp. 110–2. Amendments to the Principal Act were made by the Navigation Act 1952, the provisions of which covered the settlement of maritime industrial disputes, standards of accommodation to be provided on ships and the engagement and discipline of seamen.

Other shipping Acts under the Trade and Commerce power of the Commonwealth are the Sea-Carriage of Goods Act 1924, the Seamen's Compensation Act 1911–1954, and the Seamen's War Pensions and Allowances Act 1940–1955.

7. Ports and Harbours.—A report on "The Turn-round of Ships in Australian Ports" was submitted to the Commonwealth Government by Henry Basten, C.M.G., on 4th January, 1952. The report deals with all factors affecting the turn-round of ships and congestion in Australian ports and the measures that might be taken to effect improvement on both short-term and long-term bases.

#### B. GOVERNMENT RAILWAYS.

1. General.—The first steam-operated railway in Australia, between Melbourne and Port Melbourne, a distance of two miles, was opened on 12th September, 1854. It was owned and operated by the Melbourne and Hobson's Bay Railway. In the next one hundred years the mileage increased greatly and at 30th June, 1954, 26,633 route-miles (excluding several hundred miles of privately-owned line) were open for traffic. The operation of Australia-wide services is, however, greatly hampered by the presence of many break-of-gauge stations, necessitated by the several gauges at present in use. The policy of Government ownership and control of railways has been adopted in each State and at 30th June, 1954, 24,432 route-miles were owned by the State Governments and 2,201 route-miles by the Commonwealth Government. In the following tables 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 *Transport and Communication Bulletin* issued by this Bureau.

In some States there are comparatively small privately-owned railway systems offering passenger and freight services to the public. Details of these private railways were included in Official Year Book No. 39 and previous issues, but owing to their relative unimportance and the incomplete nature of the statistics available the series has been discontinued.

2. **Railway Communication in Australia.**—An account of the progress of railway construction in Australia since the opening of the first line in 1854 will be found in Official Year Books No. 6, p. 681 and No. 22, p. 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 which reaches 600 miles at some points. However, Darwin in the Northern Territory is not connected by rail to any other port in Australia. 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 northwards to Alice Springs in Central Australia, a distance of 771 miles. The report by the late Sir Harold Clapp to the Commonwealth Government, details of which appear in Official Year Book No. 37, p. 146, did not recommend the linking of the termini at Alice Springs and Birdum.\* An all-weather road was built to cover the intervening distance and much goods traffic now passes along this road. The travelling times of trains on the main lines of Australia are being lessened and the haulage capacity increased by the introduction of diesel railcars and diesel-electric locomotives. Eleven diesel-electric locomotives now operate all train services on the Trans-Australia Railway between Port Pirie and Kalgoorlie, and, in the near future, steam locomotive power on the Central and North Australia Railways will be replaced by diesel-electric power. The State railway systems also are making increasing use of diesel-electric locomotives, particularly to lessen the time taken on long-distance passenger and goods services.

3. **Government Railways Development.**—In spite of the great extensions of State railways since 1875 and also the construction of various railways by the Commonwealth Government, there are still, in some States, immense areas of country which are as yet practically undeveloped, and in which little in the nature of permanent settlement has been accomplished. The general policy of the States was to extend the existing lines inland in the form of light railways as settlement increased, and while it is true that lines which were not likely to be commercially successful in the immediate future have been constructed from time to time for the purpose of encouraging settlement, the general principle that the railways should be self-supporting was kept in view.

The greatest recorded route-mileage of Government railways was 27,251 at 30th June, 1940. Although short lengths of line have been opened since that date, most railway construction is being confined to the duplication and electrification of existing main lines. The closure of other lines (mainly developmental branch lines whose retention would have been uneconomic), especially in Victoria and Western Australia, has resulted in a considerable decrease in route-mileage. Variations in route-mileage in each State and Territory during the ten years ended 30th June, 1954 are shown in the following table.

GOVERNMENT RAILWAYS : VARIATIONS IN ROUTE-MILEAGE, TEN YEARS  
ENDED 30th JUNE, 1954.  
(Miles.)

State or Territory.	Route-mileage at 30th June, 1944.	Variations during Ten Years ended 30th June, 1954 due to—		Route-mileage at 30th June, 1954.
		Lines Opened.	Lines Closed.	
New South Wales .. ..	6,369	..	27	6,342
Victoria .. ..	4,507	15	281	4,241
Queensland .. ..	6,566	..	6	6,560
South Australia .. ..	3,799	17	..	3,816
Western Australia .. ..	4,835	8	278	4,565
Tasmania .. ..	642	..	28	614
Northern Territory .. ..	490	..	..	490
Australian Capital Territory ..	5	..	..	5
<b>Australia .. ..</b>	<b>27,213</b>	<b>40</b>	<b>620</b>	<b>26,633</b>

\* This is, however, provided for in the Commonwealth-South Australia Agreement referred to in para. 4.

4. **Standardization of Railway Gauges.**—A summary of the report and recommendations relating to the standardization of Australia's railway gauges on the basis of a 4 ft. 8½ in. gauge, made in March, 1945 at the request of the Commonwealth Government by the late Sir Harold Clapp, then Director-General of Land Transport, Commonwealth Department of Transport, 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 is contained in Official Year Book No. 37, pp. 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 failed to ratify 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. Action was also taken to invite the Victorian Government to discuss the subject of a separate agreement, but to date there has been no legislative action. 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 over a period of years the Commonwealth should contribute 70 per cent. and South Australia be responsible for the remaining 30 per cent. of the estimated cost.

5. **Grafton-South Brisbane (Uniform Gauge) Line.**—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, p.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.

6. **Mileage Open for Traffic, all Lines.**—Almost all the railways open for general traffic in Australia are owned and controlled by the State or Commonwealth Governments. Private lines have been laid down for the purpose of opening up forest lands, mining districts or sugar areas. These lines are not generally used for the conveyance of passengers or the public conveyance of goods.

The following table shows the route-mileage of Commonwealth and State lines open in each State at different periods since the inauguration of railways in Australia in 1854 up to the year 1953-54:—

GOVERNMENT RAILWAYS : ROUTE-MILEAGE OPEN.  
(Miles.)

At 30th June—	N.S.W. (a)	Vic.	Qld.	S.A.	W.A.	Tas.	N.T.	A.C.T.	Aust.
1855(b) ..	14	2	..	7	..	..	..	..	23
1861(b) ..	73	114	..	56	..	..	..	..	243
1871(b) ..	358	276	218	133	..	45	..	..	1,030
1881(b) ..	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	23,206
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	605	490	5	26,946
1954 ..	6,342	4,241	6,560	3,816	4,565	605	490	5	26,624

(a) Includes route-mileage under the control of the Victorian Railways Department as follows—1931, 203 route-miles; 1941 and later years, 241 route-miles. (b) At 31st December.

At 30th June, 1954, 172 route-miles in Victoria and 126 route-miles in New South Wales were electrified.

The next table shows for each State the length of Government lines open in relation to both population and area at 30th June, 1954.

**GOVERNMENT RAILWAYS : ROUTE-MILEAGE OPEN AT 30th JUNE, 1954.**  
(Miles.)

Particulars.	N.S.W.	Vic.	Qld.	S.A.	W.A.	Tas.	N.T.	A.C.T.	Aust.
Route-mileage open	6,342	4,241	6,560	3,816	4,565	605	490	5	26,624
Per 1,000 of population .. ..	1.85	1.73	4.98	4.79	7.14	1.96	29.78	0.17	2.96
Per 1,000 square miles	20.50	48.26	9.78	10.04	4.68	23.08	0.94	5.32	8.95

7. Classification of Lines according to Gauge, 1953-54.—The next table shows the route-mileage of Government railways open in each State and Territory at 30th June, 1954, classified according to gauge.

**GOVERNMENT RAILWAYS : GAUGES, AT 30th JUNE, 1954.**  
(Route-miles.)

Gauge.	N.S.W.	Vic.	Qld.	S.A.	W.A.	Tas.	N.T.	A.C.T.	Aust.
5 ft. 3 in. ..	(a) 241	4,197	..	1,596	..	..	..	..	6,034
4 ft. 8½ in. ..	6,101	..	(b) 69	(c) 654	(c) 454	..	..	(e) 5	7,283
3 ft. 6 in. ..	..	..	6,461	(d) 1,566	4,111	605	(e) 490	..	13,233
2 ft. 6 in. ..	..	44	..	..	..	..	..	..	44
2 ft. 0 in. ..	..	..	30	..	..	..	..	..	30
Total ..	6,342	4,241	6,560	3,816	4,565	605	490	5	26,624

(a) Portion of Victorian system. (b) Queensland section of Grafton-South Brisbane Uniform Gauge Line. (c) Portion of Commonwealth system. (d) Includes 598 miles of Commonwealth system.

8. Summary of Operations, 1953-54.—In the following table a summary is shown of the working of Government railways open in Australia during the year ended 30th June, 1954 :—

**GOVERNMENT RAILWAYS : SUMMARY OF OPERATIONS, 1953 54.**

Particulars.	Common-wealth Railways.	State Railways.	Total.
Route-mileage open, 30th June, 1954 .. miles	2,201	24,423	26,624
Gross revenue .. .. £'000	3,402	166,461	169,863
“ “ per traffic train-mile .. pence	418	437	436
Working expenses .. .. £'000	(a) 2,897	165,287	168,184
“ “ per traffic train-mile .. pence	356	433	432
Net revenue .. .. £'000	505	1,174	1,679
“ “ per traffic train-mile .. pence	62	3	4
Traffic train-miles .. .. '000	1,953	91,511	93,464
Passenger-journeys .. .. '000	224	510,457	510,681
Goods and livestock carried .. .. '000 tons	762	46,486	47,248
Average number of employees(b) .. ..	2,490	140,967	143,457
“ earnings per employee .. .. £	780	825	824

(a) Excludes amounts paid for Commissioner's salary, Government contributions under the Superannuation Act, Accident and Insurance Fund and proportion of salaries of Auditor-General's staff—total, £75,327. (b) Excludes construction staff except in respect of Victoria.

9. **Summary, States, 1953-54.**—The following table shows, for Government railways in Australia, particulars of the mileage open, cost of construction and equipment, passengers and goods carried and train-miles run during 1953-54.

**GOVERNMENT RAILWAYS : SUMMARY, 1953-54.**

Railway System.	Mileage Open.(a)		Cost of Construction and Equipment during Year.	Passenger-journeys.	Goods and Livestock Carried.	Traffic Train-miles (b)
	Route.	Track.				
	Miles.	Miles.	£'000.	'000.	'000 tons.	'000.
New South Wales ..	6,101	8,439	13,303	278,904	(c) 20,140	37,506
Victoria ..	4,482	5,875	8,082	166,106	9,200	18,303
Queensland ..	6,560	7,501	8,614	35,879	8,081	19,241
South Australia ..	2,564	3,178	2,069	17,605	4,133	7,359
Western Australia ..	4,111	4,686	6,110	8,678	3,206	7,204
Tasmania ..	605	706	352	3,285	968	1,898
Commonwealth ..	2,201	2,365	1,236	224	762	1,953
<b>Australia ..</b>	<b>26,624</b>	<b>32,750</b>	<b>39,766</b>	<b>510,681</b>	<b>46,790</b>	<b>93,464</b>

(a) At 30th June, 1954.

(b) Excludes non-revenue train-miles and assistant and light locomotive-miles.

(c) Partly estimated.

10. **Gross Revenue.**—(i) *General.* The gross revenue is composed of (a) receipts from coaching traffic, including the carriage of mails, horses, parcels, etc., by passenger trains; (b) receipts from the carriage of goods and livestock; and (c) rents and miscellaneous items. State Government grants are excluded. Details of these grants made during 1953-54 are as follows:—£1,000,000 for the working of country development lines and £800,000 to subsidize payments from Superannuation Account in New South Wales; £1,930,908 to limit interest payments to 1 per cent. on loan liability in Victoria; £3,200,000 towards working expenses and £800,000 towards debt charges in South Australia; and £10,000 for sick leave funds in Tasmania.

(ii) *Coaching, Goods and Miscellaneous Receipts.* (a) *Summary.* In the following table the gross revenue is shown for the years 1951-52 to 1953-54, together with the revenue per average route-mile worked and per traffic train-mile:—

**GOVERNMENT RAILWAYS : GROSS REVENUE.(a)**

Year.	N.S.W.	Vic.	Q'land.	S. Aust.	W. Aust.	Tas.	C'wealth.	Aust.
<b>TOTAL GROSS REVENUE.</b>								
(£'000.)								
1951-52 ..	68,910	24,186	23,357	9,457	8,885	1,798	2,925	139,518
1952-53 ..	72,676	31,864	25,985	11,891	7,667	2,039	2,710	154,832
1953-54 ..	74,569	35,707	30,223	12,718	11,111	2,133	3,402	169,863

**GROSS REVENUE PER AVERAGE ROUTE-MILE WORKED.**

(£.)								
1951-52 ..	11,273	5,160	3,561	3,704	2,160	2,972	1,329	5,198
1952-53 ..	11,889	6,811	3,061	4,658	1,866	3,370	1,231	5,777
1953-54 ..	12,222	7,806	4,607	4,960	2,703	3,526	1,546	6,380

(a) Excludes Government grants; see para. 10 (i) above.



GOVERNMENT RAILWAYS: GROSS REVENUE(a)—*continued*.

Year.	N.S.W.	Vic.	Q'land.	S. Aust.	W. Aust.	Tas.	C'wealth.	Aust
GROSS REVENUE PER TRAFFIC TRAIN-MILE. (Pence.)								
1951-52 ..	413.33	341.99	300.54	326.86	313.53	206.24	371.70	358.63
1952-53 ..	480.65	432.29	335.94	396.40	350.13	245.96	374.16	418.81
1953-54 ..	477.16	468.21	376.98	414.78	370.17	269.72	418.09	436.18

(a) Excludes Government grants; see para. 10 (i) above.

(b) *Distribution*. The following table shows the gross revenue for the year 1953-54 classified according to the main three sources of receipts and the proportion of the total receipts obtained from each source.

## GOVERNMENT RAILWAYS: DISTRIBUTION OF GROSS REVENUE, 1953-54.

Railway System.	Gross Revenue.			Proportion of Total.		
	Coaching.	Goods and Livestock.	Miscellaneous.	Coaching.	Goods and Livestock.	Miscellaneous.
	£'000.	£'000.	£'000.	%	%	%
New South Wales ..	18,041	52,847	3,681	24.19	70.87	4.94
Victoria ..	11,013	22,655	2,039	30.84	63.45	5.71
Queensland ..	4,593	24,815	815	15.20	82.10	2.70
South Australia ..	1,823	10,007	888	14.34	78.68	6.98
Western Australia ..	1,251	9,308	552	11.26	83.77	4.97
Tasmania ..	216	1,855	62	10.12	86.99	2.89
Commonwealth ..	789	2,320	293	23.19	68.20	8.61
Australia ..	37,726	123,807	8,330	22.21	72.89	4.90

NOTE.—Details of gross revenue classified according to coaching, goods and livestock and miscellaneous receipts for the years 1944-45 to 1953-54 are shown in *Transport and Communication Bulletin* No. 45.

11. *Working Expenses*.—(i) *General*. In order to make an adequate comparison of the working expenses as between 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. When traffic is light, the proportion of working expenses to revenue is naturally greater than when traffic is heavy; and this is especially true in Australia, where ton-mile rates are in many cases based on a tapering principle—i.e., a lower rate per ton-mile is charged upon merchandise from remote interior districts—and where on many of the lines there is but little back loading.

Working expenses, wherever presented in the Railways section of this chapter, exclude interest, sinking fund, exchange and certain other payments (see paras. 12 and 13 following).

During the war years large amounts were set aside by the railways as reserves, mainly to provide for depreciation and accrued leave, to be expended as circumstances permit. Particulars of these amounts, which were included in working expenses and which in the year 1942-43 aggregated nearly £10 million and over the whole period about £30 million, were given in *Official Year Book* No. 38, page 175.

(ii) *Working Expenses.* The following table shows the total working expenses, the ratio of working expenses to gross revenue and working expenses per average route-mile worked and per traffic train-mile for the years 1951-52 to 1953-54 :—

**GOVERNMENT RAILWAYS : WORKING EXPENSES.**

Year.	N.S.W.	Vic.	Q'land.	S. Aust.	W. Aust.	Tas.	C'wealth. (a)	Aust.
<b>TOTAL WORKING EXPENSES.</b> (£'000.)								
1951-52 ..	64,020	29,612	24,646	13,505	11,016	2,567	2,808	148,174
1952-53 ..	66,452	34,008	27,979	15,013	12,510	2,864	2,728	161,554
1953-54 ..	68,197	35,951	29,103	14,934	14,298	2,804	2,897	168,184
<b>RATIO OF WORKING EXPENSES TO GROSS REVENUE.</b> (Per cent.)								
1951-52 ..	92.90	122.43	105.51	142.81	123.98	142.81	95.99	106.20
1952-53 ..	91.44	106.73	103.67	126.26	163.18	140.44	100.66	104.34
1953-54 ..	91.45	100.68	96.30	117.42	128.68	131.48	85.14	99.01
<b>WORKING EXPENSES PER AVERAGE ROUTE-MILE WORKED.</b> (£.)								
1951-52 ..	10,473	6,318	3,757	5,290	2,678	4,243	1,276	5,521
1952-53 ..	10,871	7,270	4,265	5,881	3,045	4,734	1,239	6,028
1953-54 ..	11,178	7,860	4,436	5,825	3,478	4,635	1,316	6,317
<b>WORKING EXPENSES PER TRAFFIC TRAIN-MILE.</b> (Pence.)								
1951-52 ..	384.00	418.72	317.11	466.79	388.72	294.54	356.80	380.88
1952-53 ..	439.49	461.38	361.71	500.49	571.34	345.42	376.63	436.69
1953-54 ..	436.39	471.41	363.01	487.05	476.35	354.64	355.98	431.86

(a) See para. 8, note (a), page 227.

(iii) *Distribution.* The following table shows the total working expenses for the year 1953-54 classified according to the main four expenditure headings.

**GOVERNMENT RAILWAYS : DISTRIBUTION OF WORKING EXPENSES, 1953-54.**  
(£'000.)

Railway System.	Maintenance of Way and Works.	Motive Power.(a)	Traffic.	Other Charges.	Total Working Expenses.
New South Wales ..	12,409	27,369	15,777	12,642	68,197
Victoria ..	7,774	12,054	8,818	7,305	35,951
Queensland ..	7,089	13,572	6,733	1,709	29,103
South Australia ..	2,536	7,429	3,514	1,455	14,934
Western Australia ..	2,456	6,814	3,031	1,997	14,298
Tasmania ..	676	1,198	597	333	2,804
Commonwealth(b) ..	782	1,396	526	193	2,897
<b>Australia..</b> ..	<b>33,722</b>	<b>69,832</b>	<b>38,996</b>	<b>25,634</b>	<b>168,184</b>

(a) Includes maintenance of rolling stock.

(b) See para. 8, note (a), page 227.

12. Net Revenue.—The following table shows for the years 1951-52 to 1953-54 the net revenue, i.e., the excess of gross revenue over working expenses, the amount of such net revenue per average route-mile worked and per traffic train-mile, the interest on railway loan expenditure and the profit or loss after paying interest :—

## GOVERNMENT RAILWAYS : NET REVENUE, INTEREST, AND PROFIT OR LOSS.

Year.	N.S.W.	Vic.	Q'land.	S. Aust.	W. Aust.	Tas.	C'wealth.	Aust.
TOTAL NET REVENUE.								
(£'000.)								
1951-52 ..	4,890	-5,426	-1,288	-4,048	-2,131	-770	(a) 117	-8,656
1952-53 ..	6,224	-2,144	-1,993	-3,122	-4,844	-825	(a) - 18	-6,722
1953-54 ..	6,372	- 244	1,120	-2,216	-3,187	-671	(a) 505	1,679

## NET REVENUE PER AVERAGE ROUTE-MILE WORKED.

(£.)

1951-52 ..	800	-1,158	-196	-1,586	- 518	-1,271	(a) 53	-323
1952-53 ..	1,018	- 459	-304	-1,223	-1,179	-1,364	(a) - 5	-251
1953-54 ..	1,044	- 54	171	- 865	- 775	-1,109	(a) 230	63

## NET REVENUE PER TRAFFIC TRAIN-MILE.

(Pence.)

1951-52 ..	29.33	-76.73	-16.57	-139.93	- 75.19	-88.30	(a) 14.90	-22.25
1952-53 ..	41.16	-29.09	-25.77	-104.09	-221.21	-99.46	(a) -2.47	-18.18
1953-54 ..	40.77	- 3.20	13.97	- 72.27	-106.18	-84.92	(a) 62.11	4.32

## INTEREST PAYMENTS.

(£'000.)

1951-52 ..	6,121	2,041	1,669	1,064	717	196	290	(b) 12,180
1952-53 ..	6,342	2,128	1,874	1,076	841	222	290	(b) 12,855
1953-54 ..	6,523	2,303	2,211	1,162	1,134	254	(c) 404	(b) 14,073

## NET PROFIT OR LOSS.

(£'000.)

1951-52 ..	-1,232	-7,447	-2,957	-5,113	-2,847	- 966	(a) -173	-20,837
1952-53 ..	- 118	-4,272	-3,867	-4,199	-5,685	-1,047	(a) -308	-19,578
1953-54 ..	- 151	-2,547	-1,091	-3,378	-4,321	- 925	(a) 101	-12,394

(a) See para. 8, note (a), page 227.  
Uniform Gauge Railway. £82,375.

(b) Includes Commonwealth Government share of interest on  
(c) Includes exchange.

NOTE.—Minus sign (—) denotes loss.

In the graphs accompanying this chapter the gross and net revenue and working expenses are shown from 1870 to 1954.

13. *Exchange.*—Exchange on interest payments abroad and certain other charges are not included in the table above. These items are not charged against the railways in Queensland and Western Australia and have been excluded for the purposes of comparison. In the remaining States the amounts paid on account of exchange during 1953-54 were :—New South Wales, £527,000; Victoria, £126,506; South Australia, £67,877; and Tasmania, £5,432.

14. *Traffic.*—(i) *General.* Reference has already been made to the difference in the traffic conditions on many of the lines. These conditions differ not only in the several State and Commonwealth systems, but also on different lines in the same system, and apply to both passenger and goods traffic. By far the greater part of the population of Australia is confined to a fringe of country near the coast, more especially in the eastern and southern districts. A large proportion of the railway traffic between the chief centres of population is therefore carried over lines in the neighbourhood of the coast, and is thus, in some cases, open to seaborne competition. In recent years competition from road and air transport has become an important factor.

The following table shows particulars of railway traffic for the years 1951-52 to 1953-54 :—

#### GOVERNMENT RAILWAYS : TRAFFIC.

Year.	N.S.W.	Vic.	Q'land.	S. Aust.	W. Aust.	Tas.	C'wealth.	Aust.
PASSENGER-JOURNEYS. ('000.)								
1951-52 ..	268,168	165,131	35,003	18,269	10,536	3,186	101	500,484
1952-53 ..	271,699	162,857	35,819	17,565	6,339	3,151	190	497,620
1953-54 ..	278,904	166,106	35,879	17,605	8,678	3,285	224	510,681
PASSENGER-JOURNEYS PER AVERAGE ROUTE-MILE WORKED. (Number.)								
1951-52 ..	43,868	35,232	5,336	7,156	2,562	5,266	87	18,648
1952-53 ..	44,446	34,813	5,460	6,880	1,543	5,208	86	18,568
1953-54 ..	45,714	36,315	5,469	6,866	2,111	5,430	102	19,181
GOODS AND LIVESTOCK CARRIED. ('000 Tons.)								
	(a)							
1951-52 ..	19,817	9,204	6,741	3,941	3,063	889	694	44,349
1952-53 ..	19,121	9,192	7,351	4,147	2,619	897	660	43,987
1953-54 ..	20,140	9,200	8,081	4,433	3,206	968	762	46,790
GOODS, ETC., CARRIED PER AVERAGE ROUTE-MILE WORKED. (Tons.)								
1951-52 ..	3,242	1,964	1,028	1,544	745	1,469	315	1,652
1952-53 ..	3,128	1,905	1,121	1,674	638	1,483	300	1,641
1953-54 ..	3,301	2,011	1,232	1,729	780	1,600	346	1,757

(a) Partly estimated.

(ii) *Metropolitan and Country Passenger Traffic and Revenue, 1953-54.* A further indication of the difference in passenger traffic conditions is obtained from the comparison of the volume of metropolitan and suburban and country traffic during 1953-54 shown below.

**GOVERNMENT RAILWAYS : METROPOLITAN AND SUBURBAN AND COUNTRY  
PASSENGER TRAFFIC AND RECEIPTS, 1953-54.**

Railway System.	Passenger-journeys. ('000.)			Revenue. (£'000.)		
	Metro- politan and Suburban.	Country.	Total.	Metro- politan and Suburban.	Country.	Total.
New South Wales ..	(a)	(a)	278,904	(a)	(a)	(b) 16,210
Victoria ..	157,659	8,447	166,106	5,856	3,963	9,819
Queensland ..	29,475	6,404	35,879	755	2,616	3,371
South Australia ..	16,122	1,483	17,605	531	865	1,396
Western Australia ..	7,816	862	8,678	238	645	883
Tasmania ..	2,509	776	3,285	53	121	174
Commonwealth ..	..	224	224	..	605	605
Australia ..	(a)	(a)	510,681	(a)	(a)	32,458

(a) Not available.

(b) Estimated.

(iii) *Goods Traffic.* (a) *Classification.* Some indication of the differing conditions of the traffic in each system may be gained by an examination of the tonnage of the various classes of commodities carried, and of the revenue derived therefrom. The following table shows the number of tons of various commodities carried during 1953-54.

**GOVERNMENT RAILWAYS : CLASSIFICATION OF COMMODITIES CARRIED.  
1953-54.  
('000 Tons.)**

Railway System.	Coal, Coke and Shale.	Other Minerals.	Grain and Flour.	Wool.	Live- stock.	All Other Com- modities.	Total
New South Wales ..	(a)	(a)	(b) 1,222	(c) 197	(c) 789	17,932	20,140
Victoria ..	1,855	114	1,511	120	579	5,021	9,200
Queensland ..	(d) 1,667	(e) 641	(f) 3,288	68	761	1,656	8,081
South Australia ..	601	974	988	44	227	1,599	4,433
Western Australia ..	536	271	852	51	123	1,373	3,206
Tasmania ..	207	43	(f) 43	3	20	652	968
Commonwealth ..	476	8	6	5	84	183	762
Australia ..	(g)	(g)	(g)	488	2,583	28,416	46,790

(a) Included with "All Other Commodities". (b) Grain only. (c) Estimated.  
(d) Excludes shale. (e) Includes shale. (f) Agricultural produce. (g) Not available.

(b) *Revenue.* The following table shows the revenue derived from goods and live-stock traffic during 1953-54 :—

**GOVERNMENT RAILWAYS : REVENUE FROM GOODS AND LIVESTOCK TRAFFIC.  
1953-54.  
 (£'000.)**

Railway System.	Coal, Coke and Shale.	Other Minerals.	Grain and Flour.	Wool.	Live- stock.	All Other Com- modities.	Total.
New South Wales ..	9,015	(a)	(a)	(a)	3,930	39,902	52,847
Victoria ..	2,165	171	4,590	738	1,633	13,358	22,655
Queensland ..	(b) 2,972	(c) 1,819	(d) 4,995	1,032	3,130	10,867	24,815
South Australia ..	391	2,580	1,342	243	725	4,726	10,007
Western Australia ..	987	549	1,507	275	344	5,646	9,308
Tasmania ..	428	78	82	10	50	1,207	1,855
Commonwealth ..	721	14	10	27	270	1,278	2,320
Australia ..	16,679	(e)	(e)	(e)	10,082	76,984	123,807

(a) Included with revenue from "All Other Commodities". (b) Excludes revenue from shale  
(c) Includes revenue from shale. (d) Agricultural produce. (e) Not available.

(iv) *Passenger-mileage.* The following table shows particulars of passenger-mileage in respect of the Government railways in Australia for the years 1951-52 to 1953-54.

### GOVERNMENT RAILWAYS : PASSENGER-MILEAGE SUMMARY.

Year ended 30th June—	Passenger Train-miles.	Total Passenger-miles.	Average Number of Passengers per Train-mile.	Average Mileage per Passenger-journey.	Passenger Earnings.				Density of Traffic. (a)
					Gross.	Per Average Route-mile Worked.	Per Passenger-mile.	Per Passenger Train-mile.	
	('000.)	('000.)		(Miles.)	(£'000.)	(£)	(Pence.)	(Pence.)	
NEW SOUTH WALES.									
1952	(b)	(b)	(b)	(b)	c 15,474	2,531	(b)	(b)	(b)
1953	21,925	(b)	(b)	(b)	c 15,871	2,596	(b)	174	(b)
1954	22,157	(b)	(b)	(b)	c 16,210	2,657	(b)	176	(b)
VICTORIA.									
1952	11,196	1,780,854	159	10.78	8,116	1,732	1.09	174	380,037
1953	11,933	1,805,506	151	11.09	9,371	2,003	1.25	188	385,957
1954	12,808	1,857,959	145	11.19	9,819	2,147	1.27	184	406,200
QUEENSLAND.(d)									
1952	6,916	(b)	(b)	(b)	2,915	444	(b)	101	(b)
1953	7,087	(b)	(b)	(b)	2,971	453	(b)	101	(b)
1954	7,155	(b)	(b)	(b)	3,242	500	(b)	109	(b)
SOUTH AUSTRALIA.									
1952	3,951	281,364	71	15.40	1,279	501	1.09	78	110,029
1953	4,052	275,341	68	15.68	1,359	532	1.18	81	107,850
1954	4,157	280,524	67	15.93	1,396	544	1.19	81	109,409
WESTERN AUSTRALIA.									
1952	2,147	147,907	69	14.04	911	221	1.48	102	35,961
1953	1,584	109,574	69	17.28	698	170	1.53	106	26,673
1954	2,216	135,841	61	15.65	883	215	1.56	96	33,043
TASMANIA.									
1952	927	38,539	42	12.09	177	293	1.10	46	63,701
1953	887	36,039	41	11.44	173	286	1.15	47	57,569
1954	878	37,751	43	11.49	174	288	1.11	48	61,398
COMMONWEALTH.(e)									
1952	583	60,446	104	316.58	501	228	1.99	206	27,463
1953	641	62,885	98	330.71	516	234	1.97	193	28,571
1954	740	73,370	99	327.54	605	275	1.98	197	33,335

(a) Total passenger-miles per average route-mile worked. (b) Not available. (c) Estimated.  
 (d) Excludes Queensland portion of Grafton-South Brisbane (Uniform Gauge) Line. (e) Railways controlled by Commonwealth Government.

NOTE.—Train-miles refer to traffic mileages only and exclude non-revenue train-miles and assistant and light locomotive-miles.

(v) *Ton-mileage.* Particulars of ton-mileage in respect of Government railways in Australia are shown in the following table for each of the years 1951-52 to 1953-54.

## GOVERNMENT RAILWAYS: TON-MILEAGE SUMMARY.

Year ended 30th June—	Goods Train-miles.	Total Net Ton-miles.	Average Train Load (Paving Traffic).	Average Haul per Ton.	Goods and Livestock Earnings.				Density of Traffic. (a)
					Gross.	Per Average Route-mile Worked.	Per Net Ton-mile.	Per Goods Train-mile.	
	('000.)	('000.)	(Tons.)	(Miles.)	(£'000.)	(£)	(Pence.)	(Pence.)	
NEW SOUTH WALES.									
1952	(b)	2,906,947	(b)	147	43,361	7,093	3.58	(b)	475,535
1953	14,364	2,800,366	195	146	48,728	7,971	4.18	814	458,100
1954	15,349	2,849,803	186	142	52,847	8,662	4.45	826	467,104
VICTORIA.									
1952	5,777	1,280,191	222	139	13,319	2,842	2.50	553	273,136
1953	5,757	1,262,454	219	137	19,381	4,143	3.68	808	269,870
1954	5,495	1,269,772	231	138	22,655	4,926	4.28	990	277,606
QUEENSLAND.(d)									
1952	11,506	1,265,664	110	196	17,887	2,756	3.39	373	194,988
1953	11,252	1,275,179	113	180	20,390	3,241	3.84	435	106,453
1954	11,883	1,355,948	114	173	24,217	3,756	4.27	489	208,897
SOUTH AUSTRALIA.									
1952	2,993	592,818	198	136	7,062	2,766	2.86	566	232,205
1953	3,148	613,771	195	135	9,233	3,617	3.61	704	260,412
1954	3,202	684,848	214	140	10,007	3,903	3.51	791	267,101
WESTERN AUSTRALIA.									
1952	4,654	469,748	101	153	7,150	1,739	3.65	369	114,210
1953	3,671	409,591	112	156	6,203	1,510	3.63	406	99,706
1954	4,988	537,799	108	168	9,308	2,226	4.15	440	130,819
TASMANIA.									
1952	1,164	88,696	76	100	1,539	2,511	4.16	317	146,005
1953	1,102	83,689	76	93	1,776	2,636	5.09	387	138,329
1954	1,020	87,533	86	90	1,855	3,066	5.09	437	144,683
COMMONWEALTH.(e)									
1952	1,306	151,248	116	218	2,009	913	3.19	369	68,718
1953	1,097	128,408	117	194	1,798	817	3.36	391	58,341
1954	1,213	167,468	138	220	2,320	1,054	3.33	459	76,087

(a) Total ton-miles per average route-mile worked. (b) Not available. (c) Partly estimated.  
(d) Excludes Queensland portion of Grafton-South Brisbane (Uniform Gauge) Line. (e) Railways controlled by the Commonwealth Government.

NOTE.—Train-miles refer to traffic mileages only and exclude non-revenue train-miles and assistant and light locomotive miles.

15. *Rolling Stock.*—The following table shows the number of rolling stock of Government railways at 30th June, 1954. Further details may be found in *Transport and Communication Bulletin* No. 45.

## GOVERNMENT RAILWAYS : ROLLING STOCK(a) AT 30th JUNE, 1954.

Railway System.	Locomotives.				Coaching Stock.(b)	Goods Stock.	Service Stock.
	Steam.	Diesel-electric.	Other.	Total.			
New South Wales ..	1,192	31	5	1,228	3,859	25,792	1,131
Victoria ..	533	39	35	607	(c) 2,413	21,922	(d) 1,049
Queensland ..	842	19	2	863	1,502	26,748	1,333
South Australia ..	366	12	..	378	(c) 720	8,774	(d) 498
Western Australia ..	413	13	10	436	634	12,962	665
Tasmania ..	101	32	6	139	184	2,584	104
Commonwealth ..	151	15	..	166	182	1,787	472
Australia ..	3,598	161	58	3,817	(e) 9,545	100,569	(e) 5,253

(a) Included in Capital Account. (b) Includes all brake vans. (c) Excludes 51 interstate coaching stock owned jointly by Victoria and South Australia. (d) Excludes one dynamometer car owned jointly by Victoria and South Australia. (e) Includes stock owned jointly by Victoria and South Australia.

16. 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 1953-54 :—

## GOVERNMENT RAILWAYS : ACCIDENTS(a), 1953-54.

Particulars.	N.S.W.	Vic.	Qld.	S.A.	W.A.	Tas.	C'wth.	Aust.
Persons killed ..	55	56	17	18	21	2	1	170
Persons injured ..	1,013	544	110	72	205	15	5	1,964

(a) Excludes accidents to railway employees.

Corresponding figures for earlier years will be found in the *Transport and Communication Bulletin*.

17. Consumption of Coal, Oil and Petrol.—The following table shows the quantities of coal, oil and petrol consumed by the various Government railways during 1953-54 :—

## GOVERNMENT RAILWAYS : COAL, OIL AND PETROL CONSUMED, 1953-54.

Railway System.	Coal.		Oil.				Petrol for Rail Cars.
	Locomotives.	Other Purposes.	Lubrication.	Diesel and Distillate.	Furnace Oil.	Other Purposes.	
	'000 tons.	'000 tons.	'000 gals.	'000 gals.	'000 gals.	'000 gals.	'000 gals.
New South Wales ..	1,478	23	440	16,120	352	125	115
Victoria ..	286	10	323	4,212	11,204	1,178	21
Queensland ..	724	21	338	1,248	522	49	124
South Australia ..	242	8	(a)	1,346	17,647	(a)	268
Western Australia ..	392	4	138	(b) 3,379	(c)	779	..
Tasmania ..	41	(d)	47	972	79	56	..
Commonwealth ..	45	1	65	1,457	216	634	6
Australia ..	3,208	67	(a)	(e) 28,734	(e) 30,020	(a)	534

(a) Not available. (b) Includes furnace oil. (c) Included with " Diesel and Distillate ".  
(d) 240 tons. (e) See notes (b) and (c).

Particulars of the value of coal, oil and petrol consumed during 1953-54 will be found in *Transport and Communication Bulletin* No. 45.

18. 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 1953-54. Corresponding figures for 1952-53 will be found in *Transport and Communication Bulletin* No. 44.



**GOVERNMENT RAILWAYS: AVERAGE STAFF EMPLOYED, AND SALARIES  
AND WAGES PAID, 1953-54.**

Railway System.	Number of Operating Staff.			Number of Construction Staff. (a)			Total Salaries and Wages Paid.	Average Earnings Per Employee.
	Salaried.	Wages.	Total.	Salaried.	Wages.	Total.		
New South Wales ..	9,543	45,467	55,010	23	182	205	£'500.	£
Victoria ..	(b) 5,059	24,121	29,180	(c)	(c)	(c)	46,808	851
Queensland ..	4,343	23,661	28,004	9	390	399	24,973	856
South Australia ..	1,911	8,770	10,681	12	1,275	1,287	22,172	792
Western Australia ..	2,086	13,294	15,380	1	10	11	10,105	946
Tasmania ..	351	2,361	2,712	15	132	147	10,459	680
Commonwealth ..	382	2,108	2,490	5	185	190	1,802	664
Australia ..	d 23,675	d 119,782	d 143,457	65	2,174	2,239	1,041	780
							2,230	824

(a) In Victoria, Queensland and Western Australia a considerable amount of construction work is carried out by private contractors and the staff engaged are therefore not under the control of the Railways Commissioners. (b) Includes construction staff. (c) Included with operating staff. (d) Includes construction staff, Victoria.

### C. TRAMWAYS.

NOTE.—Particulars of trolley-bus services in New South Wales, South Australia, Western Australia and Tasmania are included in this section. Particulars of those in Queensland are included with government and municipal omnibus services (see page 240).

1. Systems in Operation.—(i) *General.* Tramway systems are in operation in all the capital cities and in a number of the larger towns of Australia.

Since 1st April, 1947, all systems have been operated by government or municipal authorities. Tramway systems are located in the following cities—New South Wales, Sydney; Victoria, Melbourne, Geelong, Bendigo and Ballarat; Queensland, Brisbane; South Australia, Adelaide; Western Australia, Perth; and Tasmania, Hobart. In Sydney, Brisbane, Adelaide, Perth and Hobart, tramway systems are supplemented by trolley-bus services whilst in Launceston, Tasmania, trolley-buses have completely replaced trams. From 1941-42 all systems have been 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) *Total Mileage Open and Classification of Lines.* The following table shows, for each State, the total route-mileage of tramway lines open for general passenger traffic at 30th June, 1955, classified (a) according to the controlling authority; (b) according to gauge. Trolley-bus route-mileage also is shown.

#### ELECTRIC TRAMWAYS: ROUTE-MILEAGE OPEN AT 30th JUNE, 1955.

(Miles.)

Particulars—	N.S.W.	Vic.	Q'land.	S. Aust.	W. Aust.	Tas.	Aust.
ACCORDING TO CONTROLLING AUTHORITY.							
Government ..	117	175	..	..	31	..	323
Municipal ..	..	..	67	92	..	30	189
Total ..	117	175	67	92	31	30	512
ACCORDING TO GAUGE.							
Tramways—							
5 ft. 3 in. ..	..	5	..	..	..	..	5
4 ft. 8½ in. ..	III	170	67	69	..	..	417
3 ft. 6 in. ..	..	..	..	..	11	9	20
Trolley-buses ..	6	..	(a)	23	20	21	(b) 70
Total ..	117	175	(a) 67	92	31	30	(b) 512

(a) Excludes 13 trolley-bus route-miles which are included with the Brisbane Municipal Omnibus Service. (b) Excludes 13 trolley-bus route-miles in Queensland.

2. Summary of Operations, Australia.—The following table gives a summary of the working of all tramway systems in Australia for the years 1950-51 to 1954-55 :—

**ELECTRIC TRAMWAYS : SUMMARY OF OPERATIONS, AUSTRALIA.(a)**

Particulars.	Unit.	1950-51.	1951-52.	1952-53	1953-54.	1954-55.
Average mileage open for traffic ..	route-mile	546	542	525	522	516
	truck-mile	998	988	981	978	973
Tramcars(b) .. .. .	..	3,085	2,984	2,814	2,694	2,600
Net increase in capital equipment during year .. .. .	£'000	1.205	2.075	911	861	910
Gross revenue(c) .. .. .	..	13,610	15,121	15,968	15,780	15,267
Working expenses(d) .. .. .	..	14,553	17,109	18,420	18,181	17,797
Net revenue .. .. .	..	943	1,988	2,452	2,401	2,530
Interest .. .. .	..	491	536	628	656	714
Ratio of working expenses to gross revenue .. .. .	per cent.	106.93	113.15	115.36	115.22	116.57
Car-miles .. .. .	'000	71,746	67,923	65,895	63,762	60,275
Gross revenue per car-mile .. .. .	d.	45.53	53.43	58.16	59.40	60.79
Working expenses per car-mile .. .. .	d.	48.68	60.45	67.09	68.43	70.86
Net revenue per car-mile .. .. .	d.	3.15	7.02	8.93	9.03	10.07
Passenger-journeys .. .. .	'000	749,138	685,724	647,417	629,557	609,254
Passenger-journeys per car-mile .. .. .	..	10.44	10.10	9.82	9.87	10.11
Average gross revenue per passenger-journey .. .. .	d.	4.36	5.29	5.92	6.01	6.01
Persons employed at end of year(e) .. .. .	..	16,566	18,309	16,051	15,743	15,030
Accidents—						
Persons killed .. .. .	..	71	72	72	59	58
„ injured .. .. .	..	5,409	5,448	3,255	2,933	3,177

(a) Includes particulars of Hobart Municipal Council Omnibus Service 1950-51 to 1951-55 and Launceston Municipal Council Omnibus Service 1951-52 to 1954-55. (b) Includes trolley-buses. (c) Excludes Government grants. (d) Includes provision of reserves for depreciation, etc. (e) Includes motor omnibus employees, South Australia, but excludes a number of employees in New South Wales who cannot be distributed between tramways and omnibuses.

NOTE.—Minus sign (—) denotes loss.

3. Traffic and Accidents.—Particulars of the traffic of electric tramways and the accidents which occurred in the movement of rolling stock during 1954-55 are shown for each State in the following table :—

**ELECTRIC TRAMWAYS : TRAFFIC AND ACCIDENTS, 1954-55.**

State.	Average Mileage Open for Traffic.		Number of Tram-cars. (a)	Car-miles.	Passenger-journeys.	Average Number of Passenger-journeys per Car-mile.	Accidents.	
	Route-miles.	Track-miles.					Persons—	
							Killed	Injured.
New South Wales ..	122	233	835	'000. 14,663	'000. 191,958	13.09	(b) 21	(b) 946
Victoria ..	175	324	829	23,173	220,095	9.50	15	1,268
Queensland ..	67	124	407	9,642	101,885	10.57	11	578
South Australia ..	92	178	269	7,646	54,909	7.18	(c) 11	(c) 207
Western Australia ..	30	57	130	2,205	17,289	7.84	..	154
Tasmania ..	30	57	130	(d) 2,946	(d) 23,118	(d) 7.85	..	(d) 21
Australia ..	516	973	2,600	60,275	609,254	10.11	58	3,177

(a) Includes trolley-buses, except for 26 in Queensland which are included with motor omnibuses. (b) Excludes accidents to employees. (c) Includes particulars for municipal-owned omnibus services. (d) Includes particulars of Hobart and Launceston Municipal Council Omnibus Services.

4. State Details.—(i) *General.* For details of the various systems operating in the several States see Official Year Book No. 37 and issues prior to No. 32.

(ii) *Summary of Operations.* The following table shows particulars of the working of electric tramways in each State for the years 1952-53 to 1954-55.

## ELECTRIC TRAMWAYS : SUMMARY OF OPERATIONS.

Year ended 30th June—	Mileage Open for Traffic at 30th June. (Route-miles.)	Net Increase in Capital Equip-ment during year. (£'000.)	Gross Revenue. (a) (£'000.)	Working Ex-penses. (b) (£'000.)	Net Revenue. (£'000.)	In-terest. (£'000.)	Ratio of Working Ex-penses to Gross Revenue. (Per cent.)	Car-miles. (°000.)	Passenger-journeys. (°000.)	Persons em-ployed at end of year.
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## NEW SOUTH WALES.

1953	126	151	5,245	7,285	-2,040	174	138.90	18,134	210,173	(d) 4,831
1954	126	-135	5,056	6,883	-1,827	183	136.15	16,542	203,508	(d) 4,656
1955	117	-829	4,731	6,416	-1,685	194	135.61	14,663	191,958	(e) 4,073

## VICTORIA.

1953	174	195	5,463	5,359	104	111	98.10	24,341	225,213	5,414
1954	175	667	5,441	5,588	-147	114	102.70	24,130	222,541	5,408
1955	175	1,389	5,345	5,092	-347	132	106.48	23,173	220,095	5,409

## QUEENSLAND.(f)

1953	67	96	2,171	2,137	34	107	98.42	9,839	107,891	2,397
1954	67	63	2,293	2,237	56	105	97.55	9,879	104,790	2,420
1955	67	140	2,306	2,317	-11	111	100.46	9,642	101,885	2,481

## SOUTH AUSTRALIA.

1953	96(g)	244	1,851	2,371	-520	170	128.10	8,020	57,926(h)	2,290
1954	92(g)	161	1,776	2,236	-460	190	125.93	7,916	56,966(h)	2,216
1955	92(g)	130	1,787	2,133	-346	206	119.39	7,646	54,909(h)	2,054

## WESTERN AUSTRALIA.

1953	33	113	588	673	-85	33	114.37	2,565	20,611	537
1954	30	33	509	610	-101	37	119.82	2,307	18,743	470
1955	31	32	487	573	-86	34	117.63	2,205	17,289	445

## TASMANIA.(i)

1953	(j) 27	112	650	595	55	33	91.61	2,996	25,603	582
1954	(j) 30	72	705	627	78	27	88.94	2,988	23,009	573
1955	(j) 30	48	611	666	-55	37	109.14	2,946	23,118	568

## AUSTRALIA.(k)

1953	5.3	911	15,968	18,420	-2,452	628	115.36	65,895	647,417	16,051
1954	5.20	861	15,780	18,181	-2,401	656	115.22	63,762	629,557	15,743
1955	5.12	910	15,267	17,797	-2,530	714	116.57	60,275	609,254	15,030

(a) Excludes Government grants. (b) Includes provision of reserves for depreciation, etc.  
 (c) Estimated. (d) Excludes administrative staff not distributable between omnibus and tramway services.  
 (e) Excludes 1,447 administrative staff and 566 salaried staff who cannot be distributed between omnibus and tramway services. (f) Excludes trolley-bus services, particulars of which are included with omnibus services. (g) Includes capital expenditure on motor omnibus services.  
 (h) Includes motor omnibus employees of Adelaide Municipal Tramways Trust. (i) Includes particulars of Hobart and Launceston Municipal Council Omnibus Services. (j) Tramway and trolley-bus mileage only. At 30th June, 1955. Hobart and Launceston Municipal Council Omnibus route-mileage was 29 miles. (k) See notes (a) to (j).

## D. MOTOR OMNIBUS SERVICES.

1. General.—Motor omnibus services have been in operation for some years in the capital cities and many of the larger towns of the States of Australia, and in the Australian Capital Territory.

(Government and municipal authorities operate certain services and the others are run by private operators; in the States the former are run in conjunction with the existing electric tramway systems.

2. Government and Municipal Services.—(i) *Summary of Operations, 1953-54.* The following table gives a summary of the operations during the year ended 30th June, 1954 of omnibus systems controlled by government and municipal authorities.

### MOTOR OMNIBUS SERVICES : GOVERNMENT AND MUNICIPAL, 1953-54.

Particulars.	N.S.W.	Vic.	Qld. (a)	S.A.	W.A.	Tas. (b)	A.C.T.	Aust.
Length of route .. miles	463	64	409	38	3,036	563	46	4,619
Omnibuses .. ..	1,258	336	272	104	209	44	65	2,282
Net increase in capital equipment during year .. £'000	359	169	139	(c)	28	13	3	711
Gross revenue(d) .. £'000	4,612	1,477	849	296	1,020	207	134	8,595
Working expenses .. £'000	(e) 7,216	1,462	890	442	960	194	200	11,373
Omnibus-miles .. '000	31,820	7,897	5,954	2,251	7,370	1,156	866	57,318
Passenger-journeys .. '000	212,200	59,111	33,934	10,066	26,474	1,785	(f) 3,800	347,310
Persons employed .. ..	(g) 4,906	1,290	616	(h)	(i) 160	75	167	(j) 7,308

(a) Includes particulars of trolley-bus services. (b) Excludes Hobart and Launceston Municipal Council Services. (c) Separate particulars for trams and omnibuses not available—total included with tramways (see p. 239). (d) Excludes Government grants. (e) Includes estimate of administrative and general charges. (f) Estimated. (g) Excludes administrative staff not distributable between omnibus and tramway services. (h) Not available; employees are interchangeable with electric tramway employees and are included therewith (see p. 239). (i) Excludes 567 government employees. (j) See notes (g) to (i).

(ii) *Summary of Operations, Australia.* The following table gives a summary of the working of motor omnibus services in Australia under government and municipal control during each of the years 1949-50 to 1953-54.

### MOTOR OMNIBUS SERVICES : GOVERNMENT AND MUNICIPAL, AUSTRALIA.

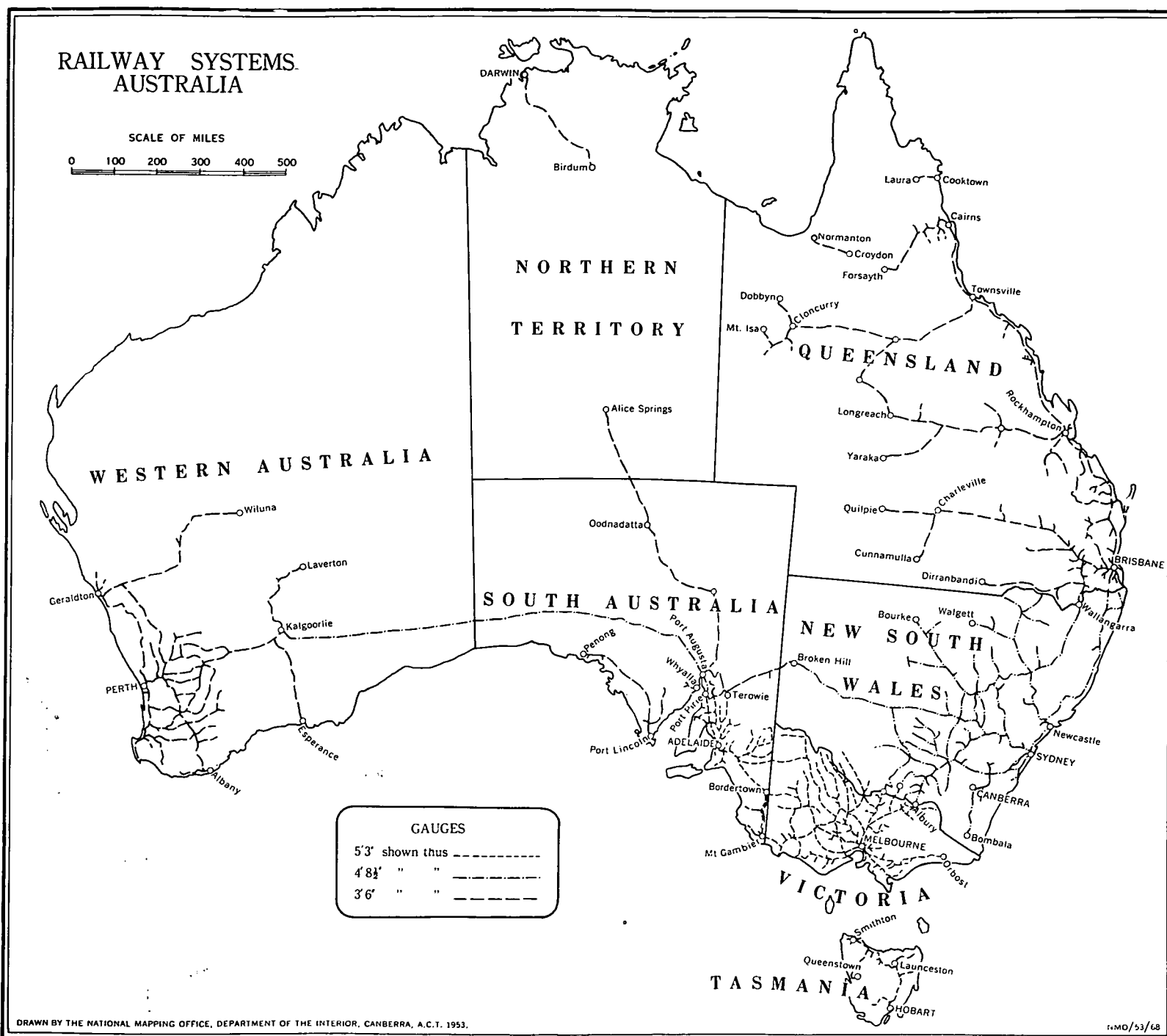
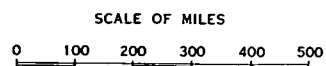
Particulars.	Unit.	1949-50.	1950-51.	1951-52.	1952-53.	1953-54.
Length of route .. ..	miles	3,208	3,994	4,491	4,569	4,619
Number of omnibuses .. ..	..	1,962	1,981	2,160	2,230	2,282
Capital cost during year(a) ..	£'000	(b)	1,600	2,334	(c) 1,494	(c) 711
Gross revenue(a) .. ..	£'000	6,307	7,572	8,542	9,320	8,853
Working expenses(a) .. ..	£'000	6,743	8,234	10,298	11,465	11,387
Net revenue(a) .. ..	£'000	-436	-662	-1,756	-2,145	-2,534
Ratio of working expenses to gross revenue(a) .. ..	per cent.	106.91	108.74	120.56	123.01	128.61
Omnibus-miles(a) .. ..	'000	53,817	53,548	54,124	55,672	57,318
Gross revenue per omnibus-mile(a) .. ..	d.	28.12	33.94	37.87	40.18	37.07
Working expenses per omnibus-mile(a) .. ..	d.	30.06	36.90	45.66	49.43	47.68
Net revenue per omnibus-mile(a) .. ..	d.	-1.94	-2.96	-7.79	-9.25	-10.61
Passenger-journeys(a) .. ..	'000	325,079	340,314	333,200	340,477	347,310
Passenger-journeys per omnibus-mile(a) .. ..	..	6.04	6.36	6.16	6.12	6.06
Average gross revenue per passenger-journey(a) .. ..	d.	4.66	5.34	6.15	6.57	6.12
Number of persons employed (a) (d) .. ..	..	7,721	7,720	8,174	7,663	7,308

(a) Excludes Hobart Municipal Council Service 1948-49 to 1952-53 and Launceston Municipal Council Service 1951-52 and 1952-53. (b) Not available. (c) Excludes South Australia. (d) See relevant notes to table above.

NOTE.—Minus sign (—) denotes loss.

3. *Private Services.*—(i) *General.* Particulars of motor omnibus services under the control of private operators are recorded in the States of New South Wales, Victoria, South Australia and Western Australia only.

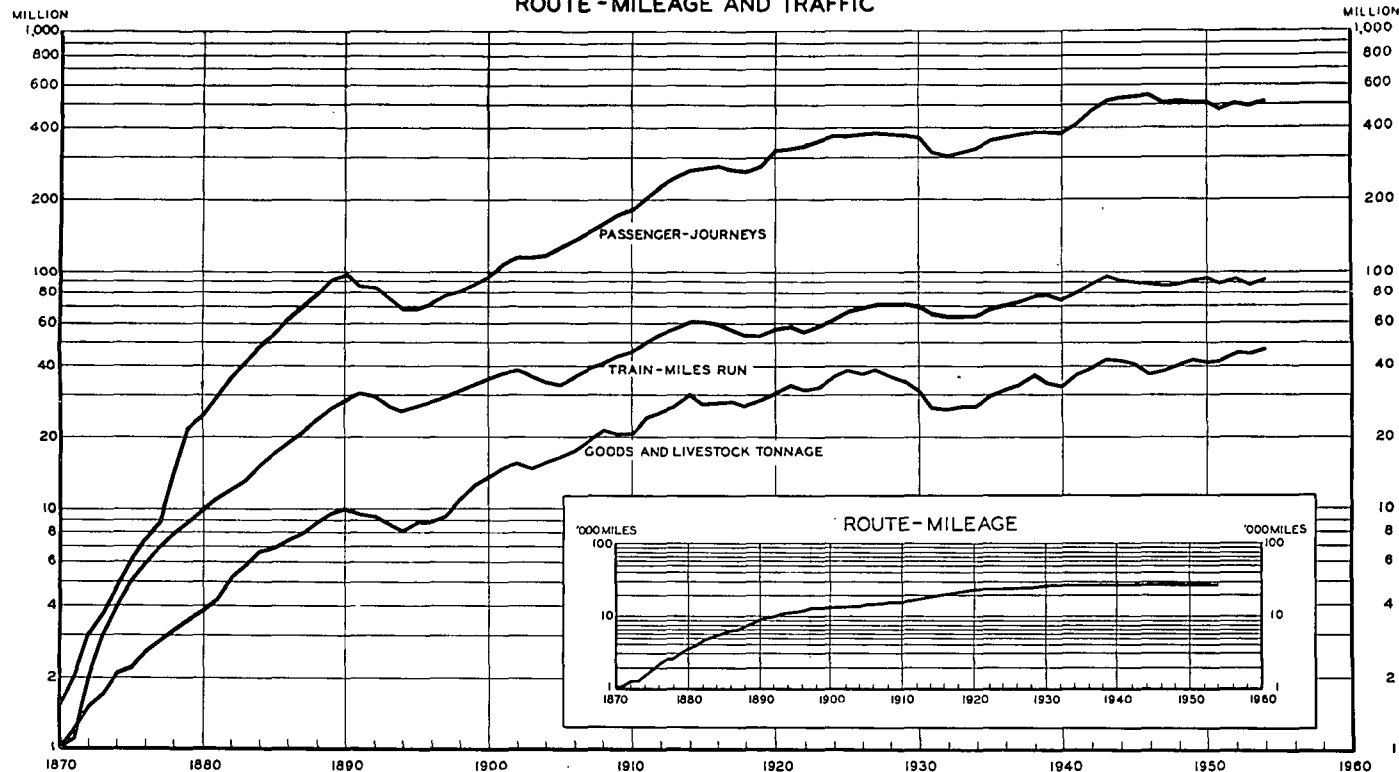
# RAILWAY SYSTEMS. AUSTRALIA



# GOVERNMENT RAILWAYS: AUSTRALIA, 1870 TO 1954

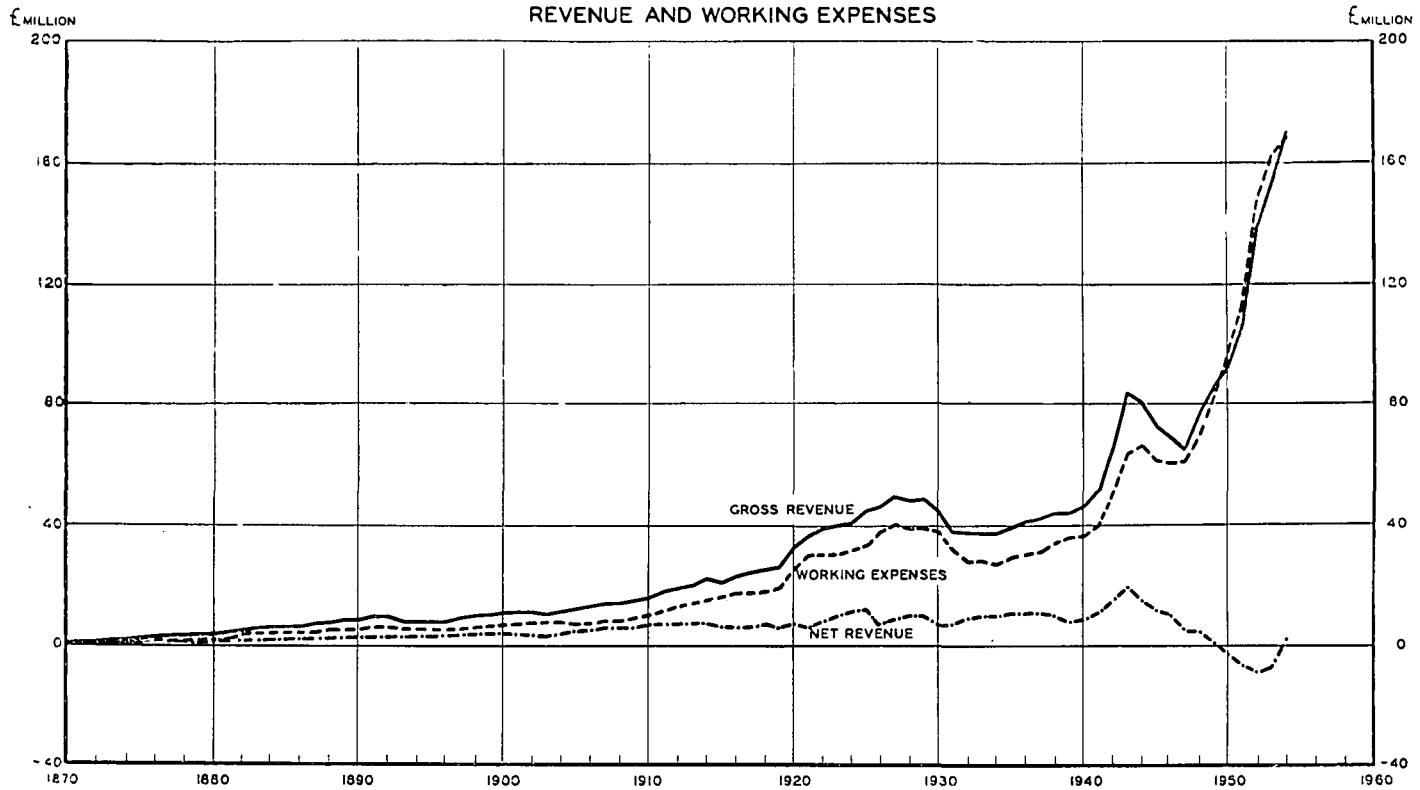
RATIO GRAPH

## ROUTE - MILEAGE AND TRAFFIC



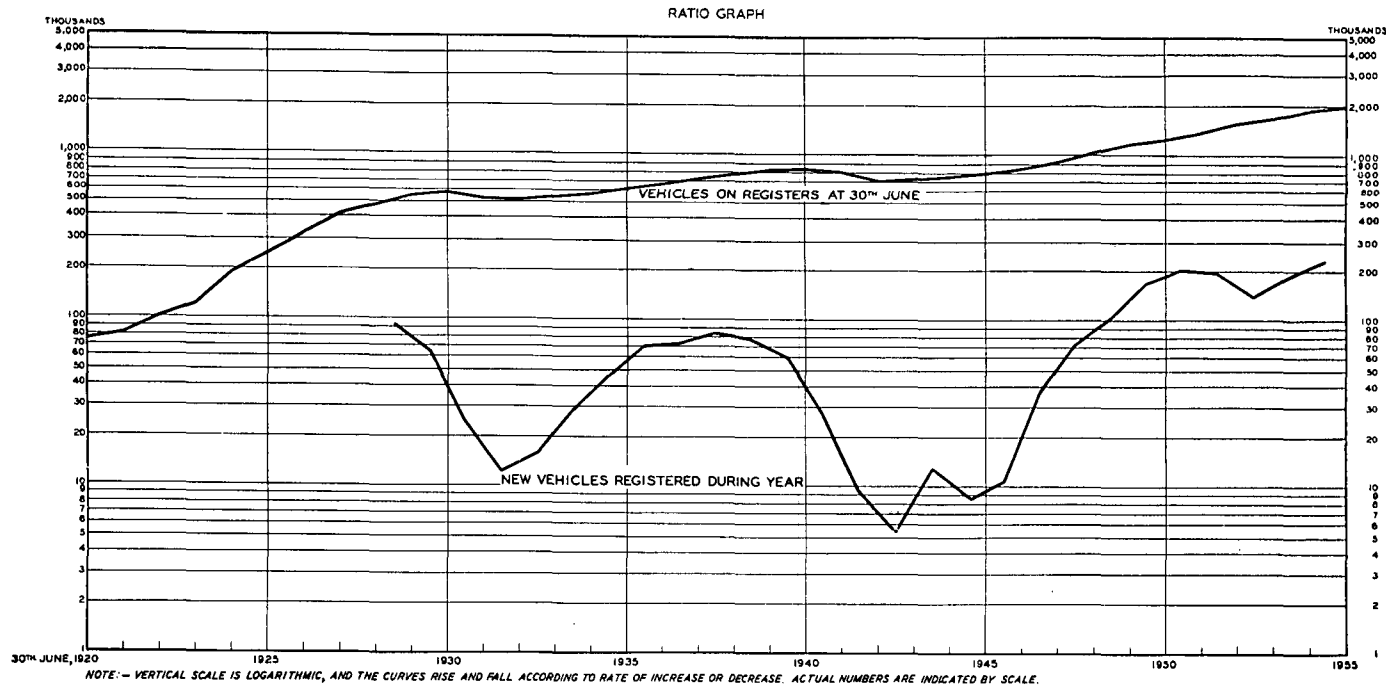
NOTE:— VERTICAL SCALE IS LOGARITHMIC, AND THE CURVES RISE AND FALL ACCORDING TO RATE OF INCREASE OR DECREASE. ACTUAL NUMBERS ARE INDICATED BY SCALE.

# GOVERNMENT RAILWAYS: AUSTRALIA, 1870 TO 1954



# MOTOR VEHICLE REGISTRATIONS : AUSTRALIA, 1920 TO 1955

(EXCLUDING MOTOR CYCLES)



(See pages 247-48.)



In New South Wales, particulars are compiled for the Metropolitan and Newcastle Transport districts only, and in Victoria for the Metropolitan district only, but in South Australia and in Western Australia particulars of all services throughout the State are included.

(ii) *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 ended June, 1952 to 1954 :—

## MOTOR OMNIBUS SERVICES : PRIVATE.

Year.	Number of Omnibuses.	Omnibus-miles Run. ( <sup>000</sup> miles.)	Passenger-journeys. ( <sup>000</sup> ).	Value of Plant and Equipment. (£ <sup>000</sup> .)	Gross Revenue. (£ <sup>000</sup> .)	Persons Employed.
NEW SOUTH WALES.(a)						
1951-52 ..	790	17,358	94,917	999	2,342	1,289
1952-53 ..	792	20,613	87,274	950	2,347	1,273
1953-54 ..	806	20,195	88,639	990	2,426	1,369
VICTORIA.(b)						
1951-52 ..	(c) 407	17,985	79,928	(d)	1,601	972
1952-53 ..	420	17,548	84,006	(e) 473	1,839	905
1953-54 ..	433	(f) 17,606	(f) 83,771	(e)(f) 456	(f) 1,885	(f) 911
SOUTH AUSTRALIA.						
1951-52 ..	(b) 116	5,926	12,516	(d)	593	(d)
1952-53 ..	116	5,972	12,816	(d)	633	(d)
1953-54 ..	112	5,845	13,373	(d)	658	(d)
WESTERN AUSTRALIA.						
1951-52 ..	393	12,331	34,546	910	1,432	976
1952-53 ..	379	11,976	34,592	1,047	1,576	944
1953-54 ..	423	12,550	34,211	1,124	1,661	971

(a) Metropolitan and Newcastle Transport districts only. (b) Metropolitan area only.  
(c) Excludes omnibuses held in reserve. (d) Not available. (e) Vehicles only. (f) Estimated.

## E. FERRY (PASSENGER) SERVICES.

1. *General.*—Ferry services to transport passengers are operated in Sydney and Newcastle, New South Wales, on the Swan River at Perth in Western Australia, and on the Derwent River at Hobart and in Devonport, Tasmania. Control is exercised both by governmental authorities and by private operators. In Victoria and Queensland the services operated are not extensive, and there are no ferry 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 1951-52 to 1953-54 are summarized in the following table. Particulars of passengers carried on vehicular ferries are not included.

## FERRY (PASSENGER) SERVICES.

Year.			Number of Vessels.	Passenger Accom- modation.	Passenger- Journeys. (‘000.)	Gross Revenue. (£.)	Persons Employed.
NEW SOUTH WALES—SYDNEY AND NEWCASTLE.							
1951-52	..	..	38	24,135	20,874	717,565	512
1952-53	..	..	38	22,244	20,184	739,590	473
1953-54	..	..	38	21,388	19,294	771,697	466
WESTERN AUSTRALIA—PERTH.							
1951-52	..	..	4	785	670	11,472	16
1952-53	..	..	4	785	577	12,383	17
1953-54	..	..	4	785	530	10,754	12
TASMANIA—HOBART AND DEVONPORT.							
1951-52	..	..	6	1,537	944	23,556	27
1952-53	..	..	6	1,537	1,112	26,908	27
1953-54	..	..	5	1,512	1,253	29,165	25

## F. MOTOR VEHICLES.

1. **Motor Industry.**—Chapter IX.—Manufacturing Industry contains summarized information on the motor industry of Australia and includes therein some data on the imports of motor bodies and chassis. Chapter VIII.—Trade contains further data on imports, including those of petroleum products.

2. **Registration.**—The arrangements for the registration of motor vehicles and the licensing of drivers and riders are not uniform throughout Australia. Particulars regarding methods of registration, licences, fees payable, etc., in each State and Territory at 30th June, 1952 were given in Official Year Book No. 40, pp. 135-8.

3. **Taxi-cabs and Other Hire Vehicles.**—In the capital cities of the States and in many 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. As most of these vehicles are independently controlled by individuals or small companies, it has not been possible to obtain complete data in respect of their operations.

4. **Motor Omnibuses.**—In both urban and provincial centres motor omnibus traffic has assumed considerable proportions during recent years and in some States the railway and tramway systems run motor services complementary to their main services. There has been a considerable replacement also, during the last few years, of existing tramway services by trolley-bus and motor omnibus services. (*See Divisions C. and D. of this chapter.*)

5. **Motor Vehicles on the Register, etc.**—(i) *Registrations and Revenue.* The following table shows particulars of the registration of motor vehicles, licences issued and revenue received for 1954-55 and a summary for Australia for each of the years 1950-51 to 1954-55. It should be noted that in Victoria registration is made on the basis of the purpose for which the vehicle is to be used; consequently, motor car registrations are overstated by the inclusion of commercial vehicles registered for private use.

A graph showing for all motor vehicles other than motor cycles the registrations in force at 30th June of each year from 1920 to 1955 will be found on p. 244.

## MOTOR VEHICLES : REGISTRATIONS AND REVENUE.

(Including Commonwealth-owned vehicles other than those of the Departments of Army and Air.)

State or Territory, and Year.	Number of Motor Vehicles Registered at 30th June.(a)					Number of Drivers' and Riders' Licences in force at 30th June.	Gross Revenue derived from—			
	Motor Cars.(b)	Commercial Vehicles.(c)	Motor Cycles.	Total.	Per 1,000 of Population at 30th June.		Vehicle Registrations and Motor Tax.	Drivers' and Riders', etc., Licences.	Other Sources.	Total.
							(£'000.)	(£'000.)	(£'000.)	(£'000.)
STATES AND TERRITORIES, 1954-55.										
N. S. Wales	441,896	227,353	39,787	709,036	203	999,751	8,788	783	1,490	11,061
Victoria(d)	456,024	143,930	29,193	629,147	249	725,826	5,263	363	965	6,591
Queensland	163,697	122,623	21,401	307,721	229	(e)	4,112	129	915	5,156
S. Australia	142,733	65,129	21,640	229,502	286	275,798	2,880	373	91	3,344
W. Aust. . .	90,255	63,891	14,662	168,808	256	191,051	1,228	112	151	1,491
Tasmania . .	44,884	21,483	5,306	71,673	228	83,775	600	42	147	789
Nor. Terr. . .	1,601	2,836	562	4,999	283	7,310	33	5	..	38
A.C.T. . .	5,992	2,364	478	8,834	272	12,343	47	7	1	55
Australia . .	1,347,082	649,609	133,029	2,129,720	231	2,295,854	22,951	1,814	3,760	28,525

## SUMMARY, AUSTRALIA.

	(d)	(d)			(g)					
1950-51(h)	88,455	548,373	145,132	1,575,960	187	1,985,821	12,333	1,141	2,404	15,878
1951-52(h)	1,030,992	380,502	153,933	1,765,427	205	2,194,167	15,996	1,336	3,607	20,939
1952-53 . .	1,107,659	579,444	147,639	1,834,742	208	2,288,370	18,780	1,403	3,708	23,891
1953-54 . .	1,199,833	606,899	140,614	1,947,346	218	2,148,119	20,450	1,932	4,31	26,411
1954-55 . .	1,347,082	649,609	133,029	2,129,720	231	2,295,854	22,951	1,814	3,760	28,525

(a) Excludes, at 30th June, 1955, trailers (118,742), road tractors, etc. (25,895), and dealers' plates (8,225). Excludes Northern Territory registrations prior to 1953-54. (b) Includes taxis and hire cars. (c) Includes lorries, vans, omnibuses and utilities. (d) See para. 5 on previous page. (e) As from 1st October, 1952, drivers' and riders' licences have not been issued on an annual basis in Queensland. (f) Excludes Queensland. (g) Includes Queensland prior to 1953-54. (h) Prior to 12th November, 1951, primary producers' cars registered in Victoria were included with commercial vehicles.

(ii) *Relation to Population.* The table hereunder shows the number of vehicles (excluding motor cycles) registered per 1,000 of population in each State and Territory at 31st December, 1921, and at 30th June for each of the years 1939 and 1951 to 1955.

## MOTOR VEHICLES (EXCLUDING MOTOR CYCLES) REGISTERED PER 1,000 OF POPULATION.

(Including Commonwealth-owned vehicles other than those of the Departments of Army and Air.)

Date.	N.S.W.	Vic.	Q'land.	S.A.	W.A.	Tas.	N.T.	A.C.T.	Aust.
31st Dec., 1921 . .	15	16	8	24	12	13	(a)	..	(b) 15
30th June, 1939 . .	107	125	118	137	133	96	218	174	118
" 1951 . .	152	180	178	206	179	153	(a)	206	170
" 1952 . .	163	212	184	224	195	167	(a)	223	187
" 1953 . .	168	211	188	234	204	180	(a)	226	192
" 1954 . .	179	215	199	245	217	193	206	241	201
" 1955 . .	193	241	216	257	238	212	269	267	220

(a) Not available.

(b) Excludes Northern Territory.

6. *New Vehicles Registered.*—(i) *States and Territories, 1954-55.* The following table shows the number of new vehicles registered in each State and Territory during 1954-55. A graph showing the number of new motor vehicles (excluding motor cycles) registered during each of the years 1929 to 1955 will be found on p. 244.

## NEW MOTOR VEHICLES REGISTERED, 1954-55.

(Including Commonwealth-owned vehicles other than those of the Departments of Army and Air.)

Vehicles.	N.S.W.	Vic. (a)	Q'land.	S.A.	W.A.	Tas.	N.T.	A.C.T.	Total.
Motor cars(b) ..	56,202	52,416	20,579	18,218	12,406	5,738	210	1,032	166,801
Commercial vehicles, etc.(c) ..	24,915	14,479	11,954	6,845	6,065	2,328	331	271	67,188
Motor cycles ..	3,437	2,348	1,583	2,185	1,206	417	47	59	11,282
Total ..	84,554	69,243	34,116	27,248	19,677	8,483	588	1,362	245,271

(a) See para. 5 on page 246.  
vans, omnibuses and utilities.

(b) Includes taxis and hire cars.

(c) Includes lorries,

(ii) *Australia*. Particulars of the number of new vehicles registered in Australia during each of the years 1949-50 to 1954-55 are shown in the following table :—

## NEW MOTOR VEHICLES REGISTERED : AUSTRALIA.(a)

(Including Commonwealth-owned vehicles other than those of the Departments of Army and Air.)

Vehicles.	1949-50.	1950-51.	1951-52.	1952-53.	1953-54.	1954-55.
Motor cars(b) ..	115,012	128,067	125,760	93,417	125,595	166,801
Commercial vehicles, etc.(c) ..	57,946	77,537	73,020	52,290	57,402	67,188
Motor cycles ..	26,782	27,151	22,155	(d) 11,289	10,860	11,282
Total ..	199,740	232,755	220,935	d 156,996	193,857	245,271

(a) Excludes Northern Territory for years prior to 1952-53.

except those registered in Victoria in 1949-50.

(b) Includes taxis and hire cars,

(c) Includes lorries, vans, omnibuses, utilities,

and, for 1949-50, taxis and hire cars registered in Victoria.

(d) Excludes motor cycles registered

in the Northern Territory.

(e) See para. 5 on page 246.

7. *World Motor Vehicle Statistics, 1955*.—Particulars of motor vehicle registrations throughout the world were included in issues of the *Official Year Book* prior to No. 39. This information was derived from the results of the *World Motor Census*, conducted by the *American Automobile* magazine. Detailed information is not repeated in this issue, but the following particulars from the same source show that there were 87,035,434 motor cars, trucks and omnibuses registered in various countries of the world at 1st January, 1955. This was an increase of 11 per cent. on the figure for the previous year, 81,903,496, and was the highest figure attained to that date. Of these vehicles, 57,595,376 or 66 per cent. of the world total were in the United States of America, and Australian registrations amounted to 2 per cent.

8. *Survey of Motor Vehicles, 1947-48*.—A survey of motor vehicles (excluding motor cycles) on the roads during 1947-48 was carried out by the Commonwealth Statistician in collaboration with the Government Statisticians and Road Transport authorities in the States. Results were published in a series of bulletins dealing with each State separately and with Australia as a whole, and summarized particulars were included in *Transport and Communication Bulletin* No. 40, 1948-49 published by this Bureau. Similar surveys, but of modified scope, have been carried out for later periods in respect of new vehicles only. The results have been published by this Bureau in the *Transport and Communication Bulletin* and, since July, 1951, in the *Monthly Bulletin of Registrations of New Motor Vehicles*. Information contained in the latter includes the make, type and R.A.C. horse-power of new motor vehicles registered in each State and Territory.

## G. ROAD TRAFFIC ACCIDENTS.

1. **General.**—Prior to the year 1949–50 it was not possible to make proper comparisons between States of the number of accidents recorded, because of the differences in legislation regarding the reporting of accidents and the degree to which the legislation could be enforced. However, arrangements were made, in co-operation with the Australian Road Safety Council and the various police and transport authorities concerned, to obtain the numbers of road traffic accidents on a comparable basis from all States in respect of the year ended 30th June, 1950 and subsequent years. This has been achieved by restricting the statistics so that they relate only to those accidents which result in death or bodily injury to any person, or in damage in excess of £10 to property. It should be noted, however, that the comparability of the statistics between States even on this basis still depends on the degree to which accidents so defined are in fact recorded by the police. It is considered that there was little difference in the recording of accidents as between States for the years 1949–50 to 1953–54, except in the case of Western Australia where statistics shown relate to all accidents which occurred in the metropolitan area and, in the remainder of the State, for periods prior to 1st January, 1953, only to those which involved fatal or “near-fatal” injury. Since that date statistics for Western Australia have been collected on a basis comparable with that for the other States. Under legislation passed in Tasmania on 10th August, 1954, it is no longer obligatory to report accidents involving only damage to property. The figures for Tasmania in the tables below are not, however, affected by this legislation.

For further particulars of traffic accidents see the *Transport and Communication Bulletin*.

2. **Total Accidents Recorded, 1953–54.**—(i) *Summary.* The following table shows, for each State and the Australian Capital Territory, the total number of accidents recorded by the police, the number involving casualties, and the number of persons killed or injured during the year 1953–54, together with the number of persons killed or injured per 100,000 of mean population and per 10,000 motor vehicles registered.

**ACCIDENTS (KNOWN TO THE POLICE) WHICH OCCURRED IN PUBLIC THOROUGHFARES : ACCIDENTS RECORDED AND CASUALTIES, 1953–54.**

State or Territory.	Total Accidents Recorded. (a)	Accidents Involving Casualties. (b)	Persons Killed.			Persons Injured.(c)		
			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.
N.S. Wales ..	29,514	11,691	728	21	11	14,660	430	224
Victoria ..	16,314	10,537	569	23	10	13,351	551	239
Queensland ..	17,875	6,349	278	21	10	7,933	110	279
South Australia ..	10,320	2,742	153	19	7	3,420	435	157
W. Australia ..	8,979	3,079	175	28	11	3,935	624	257
Tasmania ..	3,957	982	67	22	10	1,156	374	178
Aust. Cap. Ter.	265	143	6	20	8	171	591	218
<b>Total, 1953–54</b>	<b>87,224</b>	<b>35,523</b>	<b>1,976</b>	<b>22</b>	<b>10</b>	<b>41,679</b>	<b>507</b>	<b>230</b>

(a) Total accidents causing death or injury to persons or damage exceeding £10 to property.

(b) Accidents involving persons killed, and persons injured to an extent requiring surgical or medical treatment.

(c) Persons injured 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 1953–54 in each State and the Australian Capital Territory, classified into riders, drivers, pedestrians, etc.

**ACCIDENTS (KNOWN TO THE POLICE) WHICH OCCURRED IN PUBLIC THOROUGHFARES : RIDERS, DRIVERS, PEDESTRIANS, ETC., KILLED OR INJURED, 1953-54.**

Riders, Drivers, Pedestrians, etc.	N.S.W.	Vic.	Q'land.	S. Aust.	W. Aust.	Tas.	A.C.T.	Total.
<b>PERSONS KILLED.</b>								
Drivers of Motor Vehicles	132	106	44	27	32	10	2	353
Motor Cyclists	124	75	65	40	28	13	2	347
Pedal Cyclists	33	39	20	17	12	6	1	128
Passengers (all types) (a)	217	146	81	29	49	16	..	538
Pedestrians	220	202	62	39	54	21	1	599
Other Classes (b)	2	1	6	1	..	1	..	11
Total	728	569	278	153	175	67	6	1,976

<b>PERSONS INJURED.(c)</b>								
Drivers of Motor Vehicles	2,997	2,764	1,464	631	704	240	44	8,844
Motor Cyclists	2,158	1,687	1,671	972	810	257	29	7,584
Pedal Cyclists	1,086	1,520	1,023	330	481	114	35	4,589
Passengers (all types) (a)	5,353	4,541	2,678	1,016	1,333	350	48	15,319
Pedestrians	3,017	2,778	1,071	468	598	192	18	8,142
Other Classes (b)	43	61	26	3	9	3	..	145
Not Stated	6	..	..	..	..	..	..	6
Total	14,660	13,351	7,033	3,420	3,035	1,156	174	44,629

(a) Includes pillion riders. (b) Includes tram drivers, riders of horses and drivers of animal-drawn vehicles. (c) Persons injured to an extent requiring surgical or medical treatment.

(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 the Australian Capital Territory during 1953-54 :—

**ACCIDENTS (KNOWN TO THE POLICE) WHICH OCCURRED IN PUBLIC THOROUGHFARES : AGES OF PERSONS KILLED OR INJURED, 1953-54.**

Age Group (Years).	N.S.W.	Vic.	Q'land.	S. Aust.	W. Aust.	Tas.	A.C.T.	Total.
<b>PERSONS KILLED.</b>								
Under 5	35	24	5	3	9	5	..	81
5 and under 7	13	15	5	2	6	..	..	41
7 " " 17	40	38	22	10	13	5	..	128
17 " " 21	82	46	47	18	19	5	1	218
21 " " 30	143	116	64	42	32	15	1	413
30 " " 40	115	62	39	18	24	10	1	269
40 " " 50	82	71	27	12	18	7	3	220
50 " " 60	66	57	31	14	19	7	..	194
60 and over	152	118	38	22	31	12	..	373
Not Stated	..	22	..	12	4	1	..	39
Total	728	569	278	153	175	67	6	1,976

<b>PERSONS INJURED.(a)</b>								
Under 5	511	454	203	101	128	34	5	1,436
5 and under 7	342	377	165	89	102	37	..	1,112
7 " " 17	1,723	1,596	1,053	336	465	154	16	5,343
17 " " 21	2,001	1,516	1,426	504	587	194	21	6,249
21 " " 30	3,429	3,240	1,963	876	847	254	50	10,659
30 " " 40	2,205	2,147	1,064	648	450	155	38	6,707
40 " " 50	1,580	1,574	820	404	337	96	18	4,829
50 " " 60	1,144	1,129	592	221	235	62	15	3,398
60 and over	1,259	1,125	623	241	250	72	9	3,579
Not Stated	466	193	24	..	534	08	2	1,317
Total	14,660	13,351	7,033	3,420	3,035	1,156	174	44,629

(a) Persons injured 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 1953-54, the number of accidents in which each of several classes of vehicles, road users, etc., was involved. The accidents involving casualties and persons killed and injured are similarly classified.

**ACCIDENTS (KNOWN TO THE POLICE) WHICH OCCURRED IN PUBLIC THOROUGH-  
FARES : ACCIDENTS RECORDED AND CASUALTIES, CLASSIFIED ACCORDING  
TO TYPE OF VEHICLE, ROAD USER, ETC., INVOLVED, AUSTRALIA, 1953-54.(a)**

Particulars.	Motor Vehicle.	Motor Cycle.	Pedal Cycle.	Tram.	Animal and Animal- drawn Vehicle.	Pedes- trian.	Fixed Object.	Other Vehicle.
Total Accidents Reported <i>b</i>	81,020	11,977	5,233	1,949	2,759	8,282	7,666	398
Accidents Involving								
Casualties ..	29,958	9,040	4,910	840	658	8,209	2,033	184
Persons Killed ..	1,703	424	134	42	30	593	136	60
Persons Injured(c) ..	38,244	10,513	5,190	981	769	8,282	2,715	238

(a) It should be noted that, 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 table excludes 117 accidents recorded for which no cause was stated, of which 60 involved casualties—9 persons killed and 57 persons injured. (b) Total accidents causing death or injury to persons or damage exceeding £10 to property. (c) Persons injured to an extent requiring surgical or medical treatment.

It will be seen, therefore, that motor vehicles were involved in 81,020 accidents, of which 29,958 involved casualties (1,703 persons killed and 38,244 persons injured). The 81,020 accidents in which motor vehicles were involved comprised 39,177 collisions with other motor vehicles, 7,671 with motor cycles, 3,730 with pedal cycles, 1,266 with trams, 2,245 with animals and animal-drawn vehicles, 6,892 with pedestrians, 7,126 with fixed objects, 347 with vehicles other than those mentioned, 11,890 instances of overturning or leaving the roadway, and 676 accidents to passengers only. The particulars of accidents in which motor cycles, pedal cycles, etc., were involved with motor vehicles are also included under their respective headings in the table above. Consequently, since the figures in each column refer to the *total* accidents in which the particular type of vehicle, etc., was involved, any aggregation across would result, through duplication, in considerable overstatement of the actual totals.

3. Persons Killed or Injured in Road Traffic Accidents.—The following table shows the numbers of persons killed or injured in road traffic accidents in each State and the Australian Capital Territory during each of the years 1948-49 to 1953-54 :—

**ACCIDENTS (KNOWN TO THE POLICE) WHICH OCCURRED IN PUBLIC THOROUGH-  
FARES : PERSONS KILLED OR INJURED.**

Year.	N.S.W.	Vic.	Q'land.	S. Aust.	W. Aust.	Tas.	A.C.T.	Total.	Per 10,000 Motor Vehicles Regis- tered.
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**PERSONS KILLED.**

1948-49 ..	564	426	169	119	90	53	3	1,424	12
1949-50 ..	561	501	202	170	142	64	3	1,643	12
1950-51 ..	699	581	218	107	167	57	7	1,926	12
1951-52 ..	741	603	251	172	194	87	6	2,054	12
1952-53 ..	663	515	301	136	182	56	3	1,856	10
1953-54 ..	728	569	278	153	175	67	6	1,976	10

**PERSONS INJURED.(a)**

1948-49 ..	9,253	8,223	4,017	2,025	(b) 747	952	91	25,310	207
1949-50 ..	10,405	10,538	4,771	2,514	(c) 1,929	1,154	136	31,447	224
1950-51 ..	11,817	11,364	5,512	2,332	(c) 2,686	1,212	172	33,095	223
1951-52 ..	12,637	12,531	6,561	2,497	(c) 2,771	1,215	164	38,376	217
1952-53 ..	12,459	12,564	7,152	2,449	(c) 3,373	1,246	162	39,405	215
1953-54 ..	14,660	13,351	7,933	3,420	3,935	1,156	174	44,629	230

(a) Persons injured to an extent requiring surgical or medical treatment. (b) Includes persons injured and detained in hospital only. (c) Includes all persons injured (i.e., requiring surgical or medical treatment) in the metropolitan area but in the remainder of the State, prior to 1st January, 1953, only those suffering "near-fatal" injuries.

## H. 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 Official Year Book No. 16, pp. 334-5.

2. **Foundation and Administration of Civil Aviation.**—A brief account of the foundation and objects of this Administration will be found in Official Year Book No. 19, p. 299. Official 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 was partially re-organized in June, 1954 to provide for the more effective distribution of duties and responsibilities among senior officers. This included the appointment of an additional Assistant Director-General to the executive staff to control all ground facilities. The number of Divisions was increased from six to nine—the three administrative Divisions (Air Transport and External Relations; Administration, Personnel and Establishments; and Finance and Stores) remained unchanged, while in the technical field the Division of Airports remained unchanged; the Division of Air Navigation became the Division of Flying Operations; the Division of Airways was divided into two—Division of Airways Operations and Division of Airways Engineering; and the status of two Branches—Aviation Medicine and Accident Investigation and Analysis—was raised to that of Divisions.

3. **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 Official Year Book No. 37 and particulars of subsequent activity in the international field were included in issue No. 38. I.C.A.O. had a membership of 65 nations at 3rd June, 1955. Australia has continued her representation on the Council, a position which she has held since the organization was established in 1947. The Commonwealth was represented at the ninth I.C.A.O. Assembly meeting at Montreal in June, 1955. The ninth meeting of the South Pacific Air Transport Council was held at Waitomo, New Zealand, in July, 1955. Further details will be found in Official Year Book No. 39 and earlier issues.

(ii) *International Air Services.* Major changes in the organization of trans-Pacific and trans-Tasman airline operations were outlined in Official Year Book No. 41. Qantas Empire Airways continues to operate services to the United Kingdom through the Middle East, to Japan via Hong Kong and Manila, to South Africa across the Indian Ocean, to North America, to the British Solomon Islands, and through Noumea to the New Hebrides. Their total route-mileage at 30th June, 1955 was 53,427. Q.E.A. has re-equipped these services with twelve Super Constellation aircraft which are now operating on the Pacific, United Kingdom and Japan services. This type of aircraft will be used on the South African service at an early date. A summary of the operations of overseas services wholly or partly Australian-owned appears on page 256.

In 1955 Douglas DC4 land planes were substituted for flying-boats on the Pacific Islands service. No Australian international services are now operated by flying-boats. DC6 aircraft now link Sydney with both Auckland and Christchurch and Melbourne with Christchurch.

4. **Regular Air Services within Australia.**—Under the Government's rationalization plan, introduced in 1954, it was agreed that services on competitive routes such as in Queensland and the Riverina (New South Wales), should be regulated to avoid wasteful operations.

A summary of the operations of regular air services within Australia appears on page 255 and a map showing air routes on pp. 261-2.



5. **Air Ambulance Services.**—A brief statement of the foundation and objects of the Air Ambulance Services will be found in Official Year Book No. 32, pp. 145 and 146.

During the year 1954-55 the Air Ambulance and Royal Flying Doctor Services continued to provide medical aid for the outback regions of Australia. The Commonwealth Department of Health operates the Northern Territory Aerial Medical Service with two Drover aircraft and two DH84A aircraft. The Royal Flying Doctor Service of Australia, operating from Archerfield (one Beechcraft), Broken Hill (one DH84A and one Drover) and Port Hedland (one DH83) covers a wide area of inland Australia. The Bush Church Aid Society for Australia and Tasmania, supported by funds from the Church of England, maintains two aircraft (one DH84A and one Percival Proctor III at Ceduna). The Federal Methodist Inland Mission (one DH82A) operates services from Meekatharra, Western Australia, and the Queensland Ambulance Transport Brigade operates a service from Cairns with a DH89A aircraft.

6. **Training of Air Pilots.**—A brief statement of the pre-war policy of the Commonwealth Government regarding assistance to Aero Clubs was given in Official Year Book No. 32, p. 146.

Payment to the clubs, under a plan initiated in July, 1951, continues to be made as follows:—(i) a maintenance grant (for each aircraft-hour flown) at the following rates per hour subject to certain limitations—(a) at home base, £1 13s. 9d., (b) away from home base, £2 7s. 6d.; (ii) an issue bonus (for each pupil trained *ab initio* to "A" licence standard)—(a) at home base, £84, (b) away from home base, £107 10s.; (iii) a renewal bonus (for each licence renewed on club aircraft)—(a) at home base, £11, (b) away from home base, £15. In addition, the Commonwealth has accepted a contingent liability to contribute at the rate of 10s. per flying hour towards each club's replacement reserve. This amount is intended to supplement the club's reserve for the purchase of aircraft and spares specifically approved by the Department of Civil Aviation.

During the year 1954-55, 305 issue and 1,005 renewal courses were gained by the Assisted Flying Training Organization (non-profit aero clubs and commercial flying schools). Hours flown by the subsidized aero clubs totalled 51,964 and a total subsidy of £139,308 was earned by all training organizations, 17 of which were aero clubs. In addition to civil flying training, 11,992 hours were flown on training for the Royal Australian Air Force, 8,213 of which were carried out by the aero clubs.

7. **Gliding Clubs.**—For the year 1954-55 a total subsidy of £2,000 was distributed among the gliding associations in the various States. Of this amount, £1,500 was distributed among member clubs on an active membership basis, and £500 according to the number of gliding certificates issued.

8. **Aeronautical Telecommunications.**—During the year 1954-55 development and modernization of the aeronautical telecommunications system within Australia was continued. The V.H.F. telephone communication services for aircraft, which were introduced in 1949, were progressively developed with more modern equipment. Teletype and tape relay services are being developed extensively along the major Australian routes and at important overseas terminals with which Australia has direct air communication. The Distance Measuring Equipment programme is expected to be completed during 1956 with 75 beacons installed. In 1954-55 Instrument Landing Systems were operating in part at Sydney and Melbourne, together with high-intensity approach lighting. Full Instrument Landing System service is being provided at these airports and similar installations will be placed progressively at Launceston, Hobart, Adelaide and Canberra.

9. **Air Traffic Control.**—Work of the Air Traffic Control Branch has been concentrated primarily on advances in procedures and planning, the full benefits of which will become apparent in the near future. Control areas were established in the Darwin Flight Information Region, giving positive anti-collision service to both international and domestic

aircraft. A procedure using Distance Measuring Equipment was introduced which significantly reduced the handling delays of aircraft arriving in the terminal areas. Procedures for the handling of jet turbine aircraft have been introduced to permit the utmost flexibility in operating this type of aircraft.

10. *Meteorological Aids to Civil Aviation.*—Professional meteorological officers of the Department of the Interior are on duty at many of Australia's aeradio stations. At the remainder, communications personnel make local weather observations and take barometer and thermometer readings for transmission to Area Meteorological Offices.

11. *Aircraft Parts and Materials.*—At 30th June, 1955 the number of firms and organizations approved by the Department of Civil Aviation to trade in the aircraft industry was 430. With the introduction of gas turbine engines and pressurized aircraft certain firms have been approved to undertake the specialized work of overhaul, repair and maintenance of these engines and of accessories. The major fuel and oil companies have been brought under a system of quality control.

12. *Aircraft Overhaul and Repair.*—Aircraft overhaul and repair is carried out in workshops approved by the Director-General of Civil Aviation. Components and accessories are now certified on release notes signed by approved members of the firms' inspection organization.

13. *Test and Examination of Aircraft Parts and Materials.*—In the past the Department adopted the practice of approving laboratories for this work, but these approvals have now been terminated in favour of test houses and laboratories registered by the National Association of Testing Authorities, except when production is for the manufacturer's own use. Certificates issued under registration by the Association are acceptable to any Commonwealth Government Department.

14. *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 of each of the years 1950 to 1955.

#### CIVIL AVIATION : REGISTRATIONS, LICENCES, ETC., AUSTRALIA. (a)

Particulars.	At 30th June—					
	1950.	1951.	1952.	1953.	1954.	1955.
Registered Aircraft Owners .. ..	359	351	343	369	384	414
Registered Aircraft .. ..	779	838	786	821	845	887
Pilots' Licences—						
Private .. ..	872	1,065	1,444	1,677	2,035	2,245
Commercial .. ..	469	441	470	518	552	582
Student .. ..	1,778	1,840	2,644	2,639	2,831	3,193
1st Class Airline Transport ..	417	475	513	495	515	548
2nd " " " ..	30	35	35	45	34	25
3rd " " " ..	326	377	400	371	368	390
Navigators' Licences—						
Flight Navigator .. ..	126	139	155	163	166	161
Cadet " " .. ..	18	(b)	(b)	(b)	(b)	(b)
Radio Operators' Licences—						
1st Class Flight Radio Telegraphy Operator .. ..	103	96	98	93	88	78
Flight Radio Telephony Operators—						
1st Class .. ..	701	754	825	850	834	820
2nd " " .. ..	211	237	258	243	275	309
3rd " " .. ..	38	33	41	70	113	137
Flight Engineers' Licences .. ..	40	39	53	58	67	98
Ground Engineers' Licences .. ..	1,684	1,643	1,720	1,790	1,757	1,747
Aerodromes—						
Government .. ..	183	184	189	186	198	185
Public (c) .. ..	213	230	269	260	262	303
Flying Boat Bases .. ..	11	11	11	15	16	13

(a) Except for aerodromes and flying boat bases, includes the Territory of Papua and New Guinea. (b) Category cancelled during 1950-51. (c) Includes emergency landing grounds.

(ii) *Aircraft on the Australian Register.* A summary of aircraft on the Australian register at 30th June, 1955, classified according to the principal types of operation in which they are engaged, is shown in the following table.

**AIRCRAFT ON THE AUSTRALIAN REGISTER(a), 30th JUNE, 1955.**

Type of Aircraft.	Number.	Type of Aircraft.	Number.
(i) <i>Aircraft Engaged in Regular Public Transport—</i>		(iii) <i>Aircraft Used for Private Purposes—</i>	
Douglas DC3 .. .. .	74	Auster (all types) .. .. .	81
Douglas DC4 (Skymaster) .. .. .	19	DH82, DH82A (Tiger Moth) .. .. .	68
Lockheed 1049 (Super Constellation) .. .. .	10	Percival Proctor .. .. .	14
Convair Liners (Types 240 and 340) .. .. .	7	DH94 (Moth Minor) .. .. .	13
Avro Anson .. .. .	7	DH37 (Hornet Moth) .. .. .	10
DH102 (Dove) .. .. .	5	Miles Gemini .. .. .	10
Short Sandringham .. .. .	5	Other Types .. .. .	118
Vickers Viscount 720 .. .. .	5		
Other Types .. .. .	30		
		Total .. .. .	314
Total .. .. .	162		
(ii) <i>Aircraft Available for Air Charter—</i>		(iv) <i>Aircraft Used for other Purposes(b)—</i>	
Auster (all types) .. .. .	39	DH82, DH82A (Tiger Moth) .. .. .	186
Avro Anson .. .. .	22	Auster (all types) .. .. .	26
DH82, DH82A (Tiger Moth) .. .. .	13	DHC-1 (Chipmunk) .. .. .	12
Percival Proctor .. .. .	11	Other Types .. .. .	47
DH84 (Dragon) .. .. .	10		
Other Types .. .. .	45	Total .. .. .	271
Total .. .. .	140	Grand Total .. .. .	887

(a) Includes those based in the Territory of Papua and New Guinea. training, aerial top-dressing, etc.

(b) Flying School

(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 1949-50 to 1954-55.

**CIVIL AVIATION : OPERATIONS OF REGULAR INTERNAL SERVICES, AUSTRALIA.**

Particulars.	1949-50.	1950-51.	1951-52.	1952-53.	1953-54.	1954-55.
Hours flown .. .. .	225,841	252,333	260,947	237,640	251,019	257,787
Miles .. .. .	36,519	40,680	41,831	39,059	41,014	43,513
Paying passengers .. .. .	1,499,816	1,685,089	1,828,506	1,706,446	1,772,357	1,918,125
Paying passenger-miles .. .. .	590,429	669,087	721,573	667,321	702,139	765,652
Freight—						
Tons (a) .. .. .	49,441	59,362	57,464	57,635	69,479	78,711
Ton-miles(a) .. .. .	22,258	27,102	26,684	27,167	32,650	36,984
Mail—						
Tons (a) .. .. .	2,905	3,233	2,681	2,311	2,316	2,317
Ton-miles(a) .. .. .	1,400	1,493	1,285	1,166	1,225	1,257

(a) 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 overseas services, wholly or partly owned by Australian interests, operating between Australia and overseas countries, including Pacific islands, during the years 1949-50 to 1954-55. The operations of Qantas Empire Airways, Tasman Empire Airways Ltd. and British Commonwealth Pacific Airlines are included, but not those of Canadian Pacific Airlines, K.L.M. and Pan-American Airways.

## CIVIL AVIATION : OPERATIONS OF OVERSEA SERVICES.(a)

Particulars.	1949-50.	1950-51	1951-52.	1952-53.	1953-54.	1954-55.
Route-miles at 30th June .. ..	39,217	43,633	43,455	66,558	64,230	63,774
Hours flown .. ..	40,692	48,947	50,336	54,148	53,580	49,326
Miles .. ..	'000 8,768	10,500	10,664	11,565	11,464	11,128
Paying passengers .. ..	59,832	87,599	95,134	97,753	102,965	114,371
Paying passenger-miles .. ..	'000 165,077	241,817	265,756	275,206	290,603	317,565
Freight—						
Tons (b) .. ..	1,256	2,213	2,138	1,957	2,295	2,662
Ton-miles (b) .. ..	'000 4,481	6,960	6,716	7,401	8,331	9,372
Mail—						
Tons (b) .. ..	729	943	1,141	1,168	1,379	1,442
Ton-miles (b) .. ..	'000 3,867	5,367	6,162	6,122	7,718	7,927

(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 and the number of persons killed or injured are shown in the following table for each of the years 1949-50 to 1954-55.

## CIVIL AVIATION : ACCIDENTS INVOLVING AUSTRALIAN AIRCRAFT.(a)

Particulars.	Year ended 30th June—					
	1950.	1951.	1952.	1953.	1954.	1955.
Number .. ..	22	33	25	16	26	22
Persons killed .. ..	61	13	37	5	36	27
Persons injured .. ..	22	35	22	19	27	19

(a) Accidents involving aircraft on the Australian register, irrespective of the location of the accident. Includes gliders.

15. *Papua-New Guinea Activities.*—(i) *General.* Issues of the Official Year Book up to and including No. 34, 1941 showed particulars of the development of civil aviation in New Guinea and of the companies operating at the outbreak of war with Japan, while issues Nos. 35 to 37 carried the accompanying statistical summary of operations up to the end of September, 1941.

(ii) *Territory of Papua and New Guinea.* In this area there are now 24 Government and 11 licensed aerodromes, approximately 120 authorized landing grounds, 10 cleared heliports and 300 helicopter clearings.

Three companies conduct regular services between the major aerodromes. Charter flights can be arranged to almost any locality. Further information may be found in Chapter V.—The Territories of Australia.

During the year ended 30th June, 1954, three accidents occurred in which six people were injured. There were no fatalities. In the year ended 30th June, 1955 there were no accidents.

## I. POSTS, TELEGRAPHS, TELEPHONES AND WIRELESS.

NOTE.—In all the tables in this Division particulars for the Australian Capital Territory are included with those for New South Wales, while the South Australian figures include particulars for the Northern Territory.

## § 1. General.

1. *The Postmaster-General's Department.*—Under the provisions of the Post and Telegraph Act 1901, the Department was placed under the control of the Postmaster-General, being a responsible Minister. The Director-General of Posts and Telegraphs controls the Department under the Postmaster-General, whilst the principal officer in each State is the Deputy-Director of Posts and Telegraphs.

2. **Postal Facilities.**—(i) *Relation to Area and Population.* The following statement 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, 1954. In order to judge clearly the relative postal facilities provided in each State, the area of country to each office as well as the number of inhabitants per office should be taken into account.

**POSTAL FACILITIES : RELATION TO AREA AND POPULATION,  
AT 30th JUNE, 1954.**

Particulars.	N.S.W.	Vic.	Q'land.	S.A.	W.A.	Tas.	Aust.
Number of post offices (a) ..	2,554	2,374	1,270	889	639	518	8,244
Number of square miles of territory per office .. .. .	122	37	528	1,017	1,527	51	361
Number of inhabitants per office ..	1,352	1,033	1,038	916	1,001	596	1,090
Number of inhabitants per 100 square miles .. .. .	1,113	2,790	197	106	66	1,178	302

(a) Includes "official," "semi-official," and "non-official" offices.

The foregoing table does not include "telephone" offices at which there is no postal business.

(ii) *Number of Offices.* The following table shows the number of post offices (exclusive of telephone offices) in each State at 30th June, 1954.

**NUMBER OF POST OFFICES AT 30th JUNE, 1954.**

Type of Office.	N.S.W.	Vic.	Q'land.	S. Aust.	W. Aust.	Tas.	Aust.
Official and Semi-official ..	499	301	209	165	151	51	1,376
Non-official .. .. .	2,055	2,073	1,061	724	488	467	6,868
Total .. .. .	2,554	2,374	1,270	889	639	518	8,244

(iii) *Employees and Mail Contractors.* The number of employees and mail contractors in the Central Office and in each of the States at 30th June, 1954 are given in the following table:—

**NUMBER OF POSTAL EMPLOYEES AND MAIL CONTRACTORS AT 30th JUNE, 1954.**

Particulars.	Central Office.	N.S.W.	Vic.	Q'land.	S.A.	W. Aust.	Tas.	Aust.
Employees .. .. .	962	32,519	23,303	12,624	7,783	5,534	3,152	85,877
Mail Contractors(a) ..	..	2,095	1,026	1,245	374	292	277	5,309

(a) Includes persons employed to drive vehicles.

Particulars of persons employed are shown in greater detail in *Transport and Communication Bulletin No. 45*.

3. **Gross Revenue, Branches**—Postmaster-General's Department.—The gross revenue (actual collections) in respect of each branch of the Department during the year 1953-54 is shown in the table hereunder:—

**POSTMASTER-GENERAL'S DEPARTMENT : GROSS REVENUE(a), 1953-54.  
(£'000.)**

Sources.	N.S.W.	Vic.(b)	Q'land.	S. Aust.	W. Aust.	Tas.	Aust.
Postage .. .. .	8,972	6,799	3,009	1,938	1,499	676	22,893
Money order commission and poundage on postal notes	356	298	92	72	46	23	887
Private boxes and bags ..	62	40	32	20	13	8	175
Miscellaneous .. .. .	761	594	302	145	160	58	2,020
Total, Postal .. .. .	10,151	7,731	3,435	2,175	1,718	765	25,975
Telegraphs .. .. .	1,754	1,246	783	432	377	117	4,709
Telephones .. .. .	14,580	11,200	5,013	3,231	2,086	1,003	37,113
Grand Total .. .. .	26,485	20,177	9,231	5,838	4,181	1,885	67,797

(a) The figures in this table relate to revenue actually collected during the year as recorded for Treasury purposes. (b) Includes Central Office collections.

Corresponding figures for the year 1952-53 will be found in *Transport and Communication Bulletin* No. 44. For each of the years 1949-50 to 1953-54 the gross revenue for Australia was £38,349,000, £44,777,000, £59,371,000, £64,398,000 and £67,797,000 respectively.

Gross revenue for the year 1953-54 increased by 5.3 per cent. compared with that for the previous year. Revenue of the Postal, Telegraph and Telephone branches increased by 5.3 per cent., 3.6 per cent. and 5.5 per cent. respectively.

4. Expenditure, Postmaster-General's Department.—(i) *Distribution, 1953-54.* The following table shows, as far as possible, the distribution of expenditure (actual payments) on various items in each State during the year ended 30th June, 1954, 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(a),  
1953-54.  
(£'000.)

Particulars.	Central Office.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas.	Aust.
Expenditure from Ordinary Votes—								
Salaries and payments in the nature of salary ..	328	12,948	8,826	4,858	3,006	1,998	1,179	33,143
General expenses ..	44	1,230	777	381	235	182	80	2,938
Stores and material ..	16	514	344	200	126	108	68	1,376
Mail services ..	(b)2,863	1,250	620	689	314	220	101	6,057
Engineering services (other than capital works) ..	545	8,711	6,035	3,325	1,976	1,549	732	22,873
Other services ..	201	..	..	..	..	..	..	201
Total ..	3,997	24,653	16,602	9,453	5,657	4,057	2,169	66,588
Rent, repairs, maintenance Proportion of audit expenses ..	..	344	221	134	86	74	19	878
Capital works and services (c)—	..	12	8	4	3	2	1	30
Telegraph, telephone and wireless ..	30	9,677	6,269	3,037	2,224	1,420	780	23,437
New buildings, etc. ..	..	1,177	1,291	449	426	320	135	3,798
Other expenditure, not allocated to States ..	(d)4,747	..	..	..	..	..	..	4,747
Grand Total ..	8,774	35,863	24,391	13,077	8,396	5,873	3,104	99,478

(a) The figures in this table represent actual payments made during the year as recorded for Treasury purposes.

(b) Expenditure on air-mail services, £2,662,000, and conveyance of Australian mails in other countries, £201,000.

(c) Includes expenditure from loan fund.

(d) Includes expenditure not apportioned to States, i.e., interest on loans, £1,207,000; sinking fund, £2,313,000; superannuation contributions, £1,198,000; transferred officers' pensions and allowances, £5,000; pensions and retiring allowances, £11,000; and loans redemption and conversion, £13,000.

(ii) *Totals.* Actual payments made for each of the years 1949-50 to 1953-54, respectively, were:—£64,297,000, £89,699,000, £93,109,000, £98,344,000 and £99,478,000. Total expenditure increased by 1.2 per cent. during 1953-54.

5. Profit or Loss, Postmaster-General's Department.—(i) *States, 1953-54.* The foregoing statements 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 in the several States, after providing for working expenses (including superannuation, pensions and depreciation) and interest charges including exchange, were as follows.

POSTMASTER-GENERAL'S DEPARTMENT : PROFIT OR LOSS, 1953-54.  
(£'000.)

Branch.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas.	Aust.
Postal .. ..	-1,268	281	-593	-1	-136	-132	-1,849
Telegraph .. ..	-403	-197	-314	-164	-110	-31	-1,219
Telephone .. ..	1,654	1,840	-192	198	-40	-239	3,221
All Branches ..	-17	1,924	-1,099	33	-286	-402	153

NOTE.—Minus sign (—) indicates loss.

(ii) *Branches.* The following statement shows particulars of the operating results of each branch for the years 1948-49 to 1953-54.

POSTMASTER-GENERAL'S DEPARTMENT : PROFIT OR LOSS, BRANCHES.  
(£'000.)

Branch.	1948-49.	1949-50.	1950-51.	1951-52.	1952-53.	1953-54.
Postal .. ..	-297	-1,154	-1,813	-544	-2,417	-1,849
Telegraph .. ..	-1,080	-722	-818	-900	-1,453	-1,219
Telephone .. ..	-346	721	-26	2,107	2,932	3,221
All Branches ..	-1,723	-1,155	-2,657	663	-938	153

NOTE.—Minus sign (—) indicates loss.

6. *Fixed Assets.*—(i) *Details, 1953-54.* The following statement shows particulars of the fixed assets of the Postmaster-General's Department from 1st July, 1953 to 30th June, 1954 :—

POSTMASTER-GENERAL'S DEPARTMENT : FIXED ASSETS.  
(£'000.)

Particulars.	Net Value, 1st July, 1953.	Capital Expendi- ture, 1953-54.	Gross Value, 30th June, 1954.	Deprecia- tion, etc., 1953-54. (a)	Net Value, 30th June, 1954.
Telephone service plant (excluding trunk lines) .. ..	154,184	25,141	179,325	2,158	177,167
Joint trunk and telegraph plant (aerial wires, conduits, and cables) .. ..	27,693	2,901	30,594	224	30,370
Telegraph service plant .. ..	1,823	236	2,059	81	1,978
Postal service plant .. ..	937	95	1,032	..	1,032
Sites, buildings, furniture and office equipment .. ..	28,160	3,969	32,129	471	31,658
Miscellaneous plant .. ..	10,184	1,445	11,629	207	11,422
Total .. ..	222,981	33,787	256,768	3,141	253,627

(a) Includes dismantled assets, depreciation written off, and assets transferred.

(ii) *Net Value.* The net value of the fixed assets of the Postmaster-General's Department at 30th June in each of the years 1950 to 1954, respectively, was :—£134,933,000, £162,046,000, £194,749,000, £222,981,000 and £253,627,000.

§ 2. Posts.

1. *Postal Matter Dealt With.*—(i) *States, 1953-54.* The following table shows summary of the postal matter dealt with in each State during the year 1953-54. 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) : STATES, 1953-54.**  
(<sup>000</sup>.)

State.	Letters. (b)	Papers and Packets. (c)	Parcels. (d)	Regis- tered Articles. (e)	Letters. (b)	Papers and Packets. (c)	Parcels. (d)	Regis- tered Articles. (e)
	Posted for delivery within Australia.				Posted for delivery Overseas.			
New South Wales ..	451,602	96,349	5,969	6,100	13,579	8,942	334	538
Victoria ..	370,531	53,844	4,007	4,135	7,261	3,100	135	202
Queensland ..	154,885	27,349	2,653	1,960	5,288	913	63	68
South Australia ..	101,174	10,773	1,340	1,031	3,213	752	68	50
Western Australia ..	85,289	9,668	1,083	829	3,967	1,359	50	68
Tasmania ..	56,136	7,649	220	543	455	22	20	80
<b>Australia ..</b>	<b>1,219,637</b>	<b>205,632</b>	<b>15,272</b>	<b>14,598</b>	<b>33,763</b>	<b>15,088</b>	<b>720</b>	<b>1,006</b>
	Received from Overseas.				Total postal matter dealt with.			
New South Wales ..	34,978	18,329	299	750	500,159	123,620	6,602	7,388
Victoria ..	9,269	7,717	179	195	387,081	64,661	4,371	4,532
Queensland ..	3,976	3,989	60	30	164,149	32,251	2,776	2,058
South Australia ..	3,478	3,909	46	29	107,865	15,434	1,454	1,110
Western Australia ..	2,802	4,737	47	63	92,058	15,764	1,180	960
Tasmania ..	1,196	1,779	16	32	57,787	9,450	256	655
<b>Australia ..</b>	<b>55,699</b>	<b>40,460</b>	<b>647</b>	<b>1,099</b>	<b>1,309,099</b>	<b>261,180</b>	<b>16,639</b>	<b>16,793</b>

(a) See explanation in para. 1. (i) above. (b) Includes letters, cards and other postal articles enclosed in envelopes and sorted with letters. (c) Includes newspapers and postal articles 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 during each of the years 1948-49 to 1953-54.

**TOTAL POSTAL MATTER DEALT WITH : AUSTRALIA.**

Year.	Letters, Postcards and Letter-cards.		Newspapers and Packets.		Parcels.(a)		Registered Articles other than Parcels.	
	Total ( <sup>000</sup> .)	Per 1,000 of Mean Popula- tion.	Total ( <sup>000</sup> .)	Per 1,000 of Mean Popula- tion.	Total ( <sup>000</sup> .)	Per 1,000 of Mean Popula- tion.	Total ( <sup>000</sup> .)	Per 1,000 of Mean Popula- tion.
1948-49 ..	1,094,617	140,398	238,939	30,647	21,200	2,719	20,705	2,656
1949-50 ..	1,178,837	146,542	247,134	30,721	21,340	2,653	19,165	2,382
1950-51 ..	1,228,285	147,931	257,384	30,999	20,714	2,495	19,400	2,336
1951-52 ..	1,197,990	140,407	249,678	29,275	16,670	1,955	17,948	2,104
1952-53 ..	1,228,685	140,675	244,363	27,978	16,313	1,868	16,479	1,887
1953-54 ..	1,309,099	147,084	261,180	29,345	16,639	1,869	16,703	1,877

(a) Includes registered, cash on delivery and duty parcels.

2. **Cash on Delivery Parcels Post.**—(i) *General.* The Postmaster-General's Department undertakes, upon prepayment of a prescribed commission, to deliver registered articles sent by parcels post within Australia, or between Australia and Lord Howe Island, Norfolk Island, Nauru, Territory of Papua and New Guinea, or Fiji, to recover from the addressee on delivery a sum of money specified by the sender, and to remit the sum to the sender. The object of the system is to meet the requirements of persons who wish to pay at the time of receipt for articles sent to them, and of traders and others who do not wish their goods to be delivered except on payment.

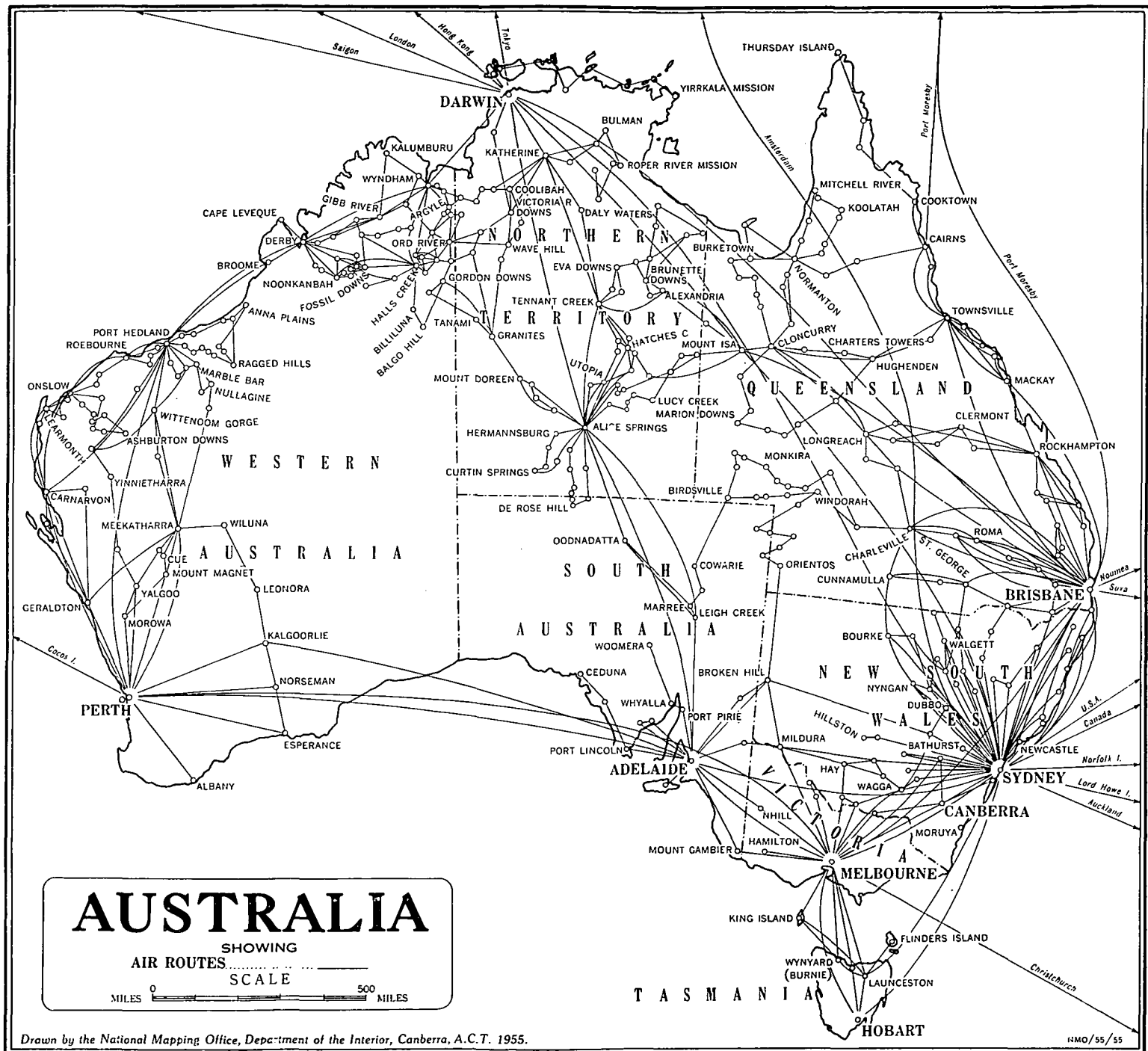
(ii) *States, 1953-54.* The next table shows particulars regarding the cash on delivery parcels posted in each State for the year 1953-54.

**CASH ON DELIVERY PARCELS POST : STATES, 1953-54.**

Particulars.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas.	Aust.
Parcels posted <sup>000</sup>	367	175	205	58	80	3	888
Value .. £ <sup>000</sup>	1,304	621	604	175	163	9	2,876
Revenue(a) £ <sup>000</sup>	96	54	50	18	20	1	239

(a) From commission and postage.







(iii) *Australia.* In the following table particulars of cash on delivery parcels posted in Australia are shown for the years 1948-49 to 1953-54.

**CASH ON DELIVERY PARCELS POST : AUSTRALIA.**

Particulars.		1948-49.	1949-50.	1950-51.	1951-52.	1952-53.	1953-54.
Parcels posted ..	'000	1,079	1,106	1,155	899	837	888
Value ..	£'000	2,361	2,697	2,933	2,876	2,656	2,876
Revenue(a) ..	£'000	157	188	212	236	221	239

(a) From commission and postage.

3. **Total Cost of Carriage of Mails.**—During 1953-54 the total amounts paid for the carriage of mails, as disclosed by the Profit and Loss Account of the Postal Branch, were as follows :—Inland mails—road £2,064,000, railway £842,000, air £812,000 ; Coastwise mails—£29,000 ; Oversea mails—sea £356,000, air £1,862,000 ; Grand Total—£5,965,000.

4. **Transactions of the Dead Letter Offices.**—During the year 1953-54 2,085,000 letters were returned to writers or delivered, 298,000 were destroyed in accordance with the Act, and 177,000 were returned to other countries as unclaimed—a total of 2,560,000. Corresponding particulars for packets were—396,000, 240,000, 35,000 and 671,000. There were 3,231,000 articles handled in all.

5. **Money Orders and Postal Notes.**—(i) *General.* The issue of money orders and postal notes is regulated by Sections 74-79 of the Post and Telegraph Act 1901-1949. 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 to any person in the dollar area is £A.5 per month and for remittances to countries outside the dollar area, £A.10 per week. A postal note cannot be issued for a sum larger than twenty shillings.

(ii) *States, 1953-54.* Particulars regarding the business transactions in each State for 1953-54 are shown hereunder :—

**MONEY ORDERS AND POSTAL NOTES : TRANSACTIONS, 1953-54.**

(£'000.)

Particulars.	N.S.W.	Vic.	Qld.	S.A.	W.A.	Tas.	Aust.
<b>Money Orders—</b>							
Issued ..	27,174	13,314	6,926	3,750	3,108	1,903	56,175
Paid ..	27,823	13,514	6,539	3,476	2,999	1,731	56,082
Net Commission Received	184	95	56	28	25	14	402
<b>Postal Notes—</b>							
Issued ..	4,393	4,368	942	1,005	534	223	11,465
Poundage Received	170	203	36	44	21	9	483

(iii) *Australia.* The next table shows the number and value of money orders and postal notes issued and paid in Australia in each of the years 1948-49 to 1953-54.

## MONEY ORDERS AND POSTAL NOTES : TRANSACTIONS, AUSTRALIA.

Year.	Money Orders.				Postal Notes.			
	Issued.		Paid.		Issued.		Paid.	
	Number.	Value.	Number.	Value.	Number.	Value.	Number.	Value.
	'000.	£'000.	'000.	£'000.	'000.	£'000.	'000.	£'000.
1948-49 ..	4,194	33,012	4,215	33,262	28,059	11,266	27,810	11,246
1949-50 ..	4,587	37,014	4,626	37,503	30,181	12,206	29,998	12,130
1950-51 ..	5,166	44,110	5,135	43,990	29,440	12,746	29,297	12,680
1951-52 ..	5,404	49,495	5,362	49,439	26,476	11,608	26,590	11,675
1952-53 ..	5,666	53,088	5,578	53,075	26,793	11,658	26,658	11,614
1953-54 ..	6,080	56,175	5,960	56,082	26,168	11,465	26,082	11,441

(iv) *Classification of Money Orders Issued and Paid.* Of the total money orders issued in Australia during 1953-54, 5,838,000 valued at £55,372,000 were payable in Australia, 12,000 (£24,000) in New Zealand, 175,000 (£542,000) in the United Kingdom and 55,000 (£237,000) in other countries. Of the total money orders paid in Australia during 1953-54, 5,824,000 (£55,358,000) were issued in Australia, 36,000 (£97,000) in New Zealand, 61,000 (£314,000) in the United Kingdom and 39,000 (£313,000) in other countries.

Money orders payable or issued in foreign countries, and which have been sent from or to Australia through the General Post Office in London, are included in those payable or issued in the United Kingdom.

(v) *Postal Notes Paid.* The following table shows the number and value of postal notes paid in each State during 1953-54. The number and value of postal notes issued and paid in each of the years 1948-49 to 1953-54 have been given in the previous table.

## POSTAL NOTES PAID : STATE OF ISSUE, 1953-54.

Issued in—	Postal Notes Paid in—						
	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas.	Aust.
Same State '000	7,419	4,140	1,456	951	741	376	15,083
Value £'000	3,738	2,029	707	487	374	155	7,490
Other States '000	1,331	793	813	117	356	7,589	10,999
Value £'000	571	351	387	60	89	2,493	3,951
Total '000	8,750	4,933	2,269	1,068	1,097	7,965	26,082
Value £'000	4,309	2,380	1,094	547	463	2,648	11,441

## § 3. Telegraphs.

1. *General.*—A review of the development of telegraph services in Australia up to 1921 appeared in Official Year Book No. 15, p. 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 reorganization. The external circulation system of the Australian telegraph service has been considerably modified, and direct communication has been established between cities and towns which formerly were served through intermediate repeating centres.

Telephone subscribers may telephone telegrams for onward transmission, or have messages telephoned to them. The fee for the service is small, and the system means, in effect, that the telegraph system is brought into the home of every telephone subscriber. The number of telegrams lodged by telephone during the year ended 30th June, 1954 was about 7.5 million or approximately 33 per cent. of the total lodgments. The number of telegrams telephoned to subscribers totalled 3.9 million.

A radiogram service is provided to certain isolated places throughout Australia and a number of privately-operated wireless transceiver stations have been established at various centres throughout the Commonwealth, enabling telegrams to be exchanged with departmental telegraph offices. Stations sponsored by the Royal Flying Doctor Service of Australia can communicate by wireless with base stations.

The picturegram service between Melbourne and Sydney, which was established in 1929, but which was suspended during 1942, was restored and extended to Brisbane and Adelaide in 1949, to Perth in 1950 and to Hobart and Newcastle in 1951. The equipment installed at these points also permits the direct transmission and reception of oversea photo-telegrams. Portable picture-transmitting apparatus has been provided for use at country centres in New South Wales and Victoria and was first used for the opening of the 19th Federal Parliament at Canberra on 21st February, 1950. In 1953-54, 9,407 picturegrams were lodged for destinations within Australia, 888 were transmitted to oversea destinations and 1923 were received from other countries. The service between Australia and overseas was extended by the establishment of facilities for the transmission of pictures to and from Denmark, Greece, Portugal, Switzerland, Federal Republic of Germany, Italy and Singapore.

As from 20th May, 1953, the Department authorized the connexion of privately-owned picturegram equipment to the public telephone trunk line network for the transmission of pictures. The new facilities are provided subject to certain restrictions where Departmental picturegram services operate and to payment of appropriate charges to cover the use of trunk line channels and equipment. Pictures from overseas may now be routed direct to private receivers.

Teleprinter services (i.e., typewriting over electrical circuits), affording the great advantage of direct and instantaneous communication between points within the same building or separated by distances up to thousands of miles, and printergram services, that is, leased teleprinter channels between the premises of subscribers and chief telegraph offices for the transmission and reception of telegrams, are available. The number of printergram services rose from 103 to 110 during 1953-54. Messages transmitted over these services totalled 1.8 million.

2. **Telegraph and Telephone Mileages.**—At 30th June, 1954 the combined single-wire mileages for both telegraph and telephone purposes were :—aerial, underground and submarine cables—exchange 5,211,000 miles, trunk telephone and telegraph 186,000 miles ; aerial wires—telephone, trunk and/or telegraph purposes 514,000 miles, exchange and non-exchange service lines 679,000 miles. The mileages of conduits and pole routes were 9,600 duct miles and 123,000 miles respectively. Conduits now include only ducts and conduits with an internal diameter of two inches or over. Those with a diameter of less than two inches are not recorded separately and are included with underground cables. The mileages in each State at 30th June, 1954 may be found in *Transport and Communication Bulletin* No. 45.

3. **Telegraph Offices.**—(i) *States.* The numbers of telegraph offices, including railway telegraph offices, in the various States at 30th June, 1954 were :—New South Wales, 3,256 ; Victoria, 2,385 ; Queensland, 1,750 ; South Australia, 949 ; Western Australia, 998 ; Tasmania, 571.

(ii) *Australia.* The numbers of telegraph offices in Australia at 30th June of each of the years 1950 to 1954 respectively were :—9,700, 9,764, 9,830, 9,902 and 9,909.

4. **Telegrams Dispatched within Australia.**—(i) *States.* The following table shows, for each State, the number of telegrams dispatched to places within the Commonwealth and to adjacent islands and to ships at sea during 1953-54, according to the class of message transmitted :—

### TELEGRAMS DISPATCHED, 1953-54.

('000.)

State.	Paid and Collect.						Unpaid.			Total Telegrams.
	Ordinary.	Urgent.	Press.	Letter-gram.	Radio-gram.	Total.	Service.	Meteorological.	Total.	
N. S. Wales ..	7,254	430	68	21	53	7,826	293	340	633	8,459
Victoria ..	4,521	166	27	19	5	4,738	149	157	306	5,044
Queensland ..	3,443	139	40	13	55	3,690	175	233	408	4,098
South Australia	1,629	64	32	13	39	1,777	56	230	286	2,063
Western Australia	1,732	52	26	17	58	1,885	63	262	325	2,210
Tasmania ..	520	22	7	6	1	556	32	74	106	662
<b>Australia ..</b>	<b>19,099</b>	<b>873</b>	<b>200</b>	<b>89</b>	<b>211</b>	<b>20,472</b>	<b>768</b>	<b>1,296</b>	<b>2,064</b>	<b>22,536</b>

(ii) *Australia.* Telegrams dispatched to destinations within Australia and to adjacent islands and to ships at sea, during each of the years 1949-50 to 1953-54 respectively, numbered :—35,486,000, 34,467,000, 27,080,000, 23,407,000 and 22,536,000.

## § 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 on page 265.

During 1953-54, 64,359 telephone subscribers' lines and 93,007 telephones were added to the system, compared with 58,110 lines and 82,912 telephones in 1952-53. With an average at 30th June, 1954 of one telephone to every six persons, Australia had a telephone density exceeded by that of only six other countries. The trunk line network was increased by 81,195 channel miles and at 30th June, 1954, had reached 773,190 miles; 71,661 of these additional channel miles were obtained by the installation of carrier-wave equipment, some of which was installed on radio-telephone bearers. Carrier-wave facilities enable several speech paths to be obtained from one pair of wires or, in the case of radio-telephone systems, without wires at all, and are designed to transmit the voice with greater fidelity than the wire pairs on which they are based. An alternative aerial route between Melbourne and Sydney has been completed and work is in progress to provide a direct route for traffic from Sydney to Adelaide and Perth. Sixteen additional trunk line channels are being provided between Tasmania and the mainland.

Sixteen automatic exchanges were brought into operation in metropolitan areas during the year, together with 6 country and 153 rural automatic exchanges. At 30th June, 1954 there were 238 automatic exchanges in the metropolitan areas and 709 in country districts, to which 984,000 telephones were connected, representing 67 per cent. of the total number in use in Australia.

2. **Summary for States.**—Particulars relating to the telephone services in each State at 30th June, 1954 are shown in the following table :—

TELEPHONE SERVICES : SUMMARY, 30th JUNE, 1954.

Particulars.	N.S.W.	Vic.	Q'land.	S. Aust.	W. Aust.	Tas.	Aust.
Exchanges .. .. .	2,287	1,745	1,310	681	743	388	7,154
Telephone Offices (including Exchanges) .. .. .	3,372	2,504	1,833	1,004	972	540	10,225
Lines connected .. .. .	393	332	141	93	60	31	1,050
Instruments connected .. .. .	563	471	189	128	83	42	1,476
(i) Subscribers' instruments .. .. .	551	461	185	124	80	40	1,439
(ii) Public telephones .. .. .	6.8	4.6	3.0	1.6	1.2	0.8	18.0
(iii) Other local instruments .. .. .	5.9	5.6	2.9	2.2	1.6	0.8	19.0
Instruments per 1,000 of population	163	193	143	157	130	135	164

Of the total telephones (1,476,000) in service at 30th June, 1954, 545,000 or 37 per cent. were connected to exchanges situated beyond the limits of the metropolitan telephone networks.

3. **Subscribers' Lines and Calling Rates.**—The next table shows the number of subscribers' lines and the daily calling rates at central, suburban and country telephone exchanges in the several States for 1953-54 :—

TELEPHONES : SUBSCRIBERS' LINES AND DAILY CALLING RATES, 1953-54.

State.	Central Exchanges.		Suburban Exchanges.		Country Exchanges.	
	Subscribers' Lines Connected.	Average Outward Calls Daily per Line.	Subscribers' Lines Connected.	Average Outward Calls Daily per Line.	Subscribers' Lines Connected.	Average Outward Calls Daily per Line.
New South Wales .. .. .	30,944	9.72	201,726	3.45	137,719	1.81
Victoria .. .. .	20,768	8.28	185,525	3.29	114,148	1.23
Queensland .. .. .	9,861	10.07	55,669	2.49	66,154	1.79
South Australia .. .. .	8,349	8.49	45,246	2.52	33,333	1.20
Western Australia .. .. .	9,465	6.90	26,685	2.90	19,491	1.25
Tasmania .. .. .	5,595	4.42	5,190	2.32	17,969	1.66

A comparison of the average daily calling rates for each class of exchange shows that Queensland registered the greatest number of calls per line at central exchanges, and New South Wales at both suburban and country exchanges.

4. **Effective Paid Local Calls.**—The numbers of effective paid local calls from subscribers' and public telephones in the various States during the year ended 30th June, 1954 appear hereunder.

TELEPHONES : NUMBER OF EFFECTIVE PAID LOCAL CALLS, 1953-54.  
(Million.)

Calls.	N.S.W.	Vic.	Q'land.	S. Aust.	W. Aust.	Tas.	Aust.
Subscribers' .. .. .	382	283	109	69	51	21	915
From public telephones .. .. .	53	32	13	10	7	2	117
<b>Total</b> .. .. .	<b>435</b>	<b>315</b>	<b>122</b>	<b>79</b>	<b>58</b>	<b>23</b>	<b>1,032</b>

5. **Trunk Line Calls and Revenue.**—In the next table the number of telephone trunk line calls recorded, the amount of revenue received, and the average revenue per call are shown for each State and Australia for the year 1953-54.

## TELEPHONES : TRUNK LINE CALLS AND REVENUE, 1953-54.

Particulars.	N.S.W.	Vic.	Q'land.	S. Aust.	W. Aust.	Tas.	Australia.
Total calls '000	27,607	23,854	13,673	8,048	4,670	3,921	81,773
Total revenue £'000	4,389	3,227	2,106	1,250	706	424	12,102
Average revenue per call pence	38.16	32.47	36.97	37.27	36.27	25.96	35.52

The number of trunk line calls during 1953-54 increased by 6.8 million, or 9 per cent., compared with the figure for the previous year, whilst the average revenue per call increased by 2.5 per cent.

6. *Oversea Telephone Services.*—During the year 1953-54 radio-telephone services were established between Australia and Japan, Greece, Taiwan and North Borneo, bringing the number of countries with which radio-telephone communication is available to 72. Service is also provided to certain trans-Atlantic liners, ships off the Australian coast, H.M.A. ships, and H.M.N.Z. ships when cruising in Australian waters.

The amount of traffic handled over the radio-telephone services increased by 10 per cent. over that handled in 1952-53. During 1953-54 the number of calls connected was 42,632, comprising 21,599 originating in Australia and 21,033 incoming calls.

7. *Revenue from Telephones.*—Particulars regarding the revenue from telephone services are included in tables in § 1 (*see pp. 256-9*).

8. *World Telephone Statistics, 1954.*—Information derived, in the main, from statistics compiled by the American Telephone and Telegraph Company shows that at 1st January, 1954 there were more than 89 million telephones in use throughout the world. The United States of America, with over 50 million, possessed by far the greatest proportion of these (56.5 per cent.). The United States of America also had the highest recorded number of instruments per 100 of population (*viz.*, 31). Figures for other leading countries were as follows :—Sweden 28, Canada 24, Switzerland 22, New Zealand 22, Denmark 19. At June, 1954 the number of telephones in Australia per 100 persons was 16.

## § 5. Cable and Radio Communication.

1. *General.*—Descriptions of the various cable services between Australia and other countries were given in Official Year Book No. 22, pp. 335-6 and earlier issues.

2. *Merging of Cable and Wireless Interests.*—Following upon the recommendations of the Imperial Wireless and Cable Conference in London in 1928 which examined the situation that had arisen as the result of the competition of the beam wireless with the cable services, Imperial and International Communications Limited (since renamed Cable and Wireless Ltd.) was formed and took over the operations of the Pacific Cable Board and the control of the Eastern Extension Cable Company and the Marconi Wireless Company. For further developments, leading eventually to the establishment of the Overseas Telecommunications Commission, *see* Official Year Book No. 37, pp. 220-4.

3. *Oversea Cable and Radio Traffic.*—(i) *States.* The number of telegrams received from and dispatched overseas in each State during 1953-54 is shown hereunder :—

## INTERNATIONAL TELEGRAMS, 1953-54.

('000.)

Particulars.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tasmania.	Australia.
Number received ..	655	443	65	57	68	20	1,308
„ dispatched	602	429	79	72	81	20	1,283
Total ..	1,257	872	144	129	149	40	2,591



(ii) *Australia. (a) Number of Telegrams.* The following table shows the number of international telegrams received from and dispatched overseas during the years 1948-49 to 1953-54 :—

## INTERNATIONAL TELEGRAMS : AUSTRALIA.

('000.)

Particulars.	1948-49.	1949-50.	1950-51.	1951-52.	1952-53.	1953-54.
Number received ..	1,123	1,233	1,322	1,357	1,187	1,308
„ dispatched ..	1,123	1,242	1,396	1,329	1,207	1,283
Total ..	2,246	2,475	2,718	2,686	2,394	2,591

(b) *Number of Words, 1953-54.* The following statement shows particulars of the international business, originating and terminating in Australia, transacted over the cable and radio services during the year ended 30th June, 1954.

## INTERNATIONAL TELEGRAMS, AUSTRALIA, 1953-54.(a)

('000 Words.)

Class of Telegram.	Number of Words Transmitted to—			Number of Words Received from—		
	United Kingdom.	Other Places.	Total.	United Kingdom.	Other Places.	Total.
Ordinary ..	4,605	6,252	10,857	3,976	5,212	9,188
Letter ..	6,096	8,077	14,173	5,555	6,603	12,158
Press ..	3,531	3,224	6,755	10,113	2,863	12,976
Government ..	464	1,059	1,523	1,220	1,551	2,771
Greetings ..	1,084	718	1,802	930	767	1,697
Other ..	..	69	69	..	191	191
Total ..	15,780	19,399	35,179	21,794	17,187	38,981

(a) International business, originating and terminating in Australia, transacted over the cable and radio services.

Words transmitted to "Other places" included 2,922,000 to the United States of America and 5,411,000 to New Zealand and the Pacific Islands. Words received from "Other places" included 2,820,000 from the United States of America and 4,302,000 from New Zealand and the Pacific Islands.

4. *Coast Stations.*—At 30th June, 1955 there were 43 wireless stations established at points around the Australian coast and 11 about the coast of Papua and New Guinea. During 1954-55 these stations handled 530,718 messages (456,601 paying, 12,412 free traffic and 61,705 meteorological) with a total of 8,891,062 paying words. For further information see the *Transport and Communication Bulletin*.

5. *Radio-communication Stations Authorized.*—(i) *States and Territories, 30th June, 1955.* The following table shows particulars of the different classes of radio-communication stations authorized in Australia and Papua-New Guinea at 30th June, 1955. Figures relate to radio-communication (radio telegraph and radio telephone) stations only; particulars of broadcasting stations and of broadcast listeners' licences are shown in § 6, following.

## RADIO-COMMUNICATION STATIONS AUTHORIZED, 30th JUNE, 1955.

State or Territory for which Authorized.	Transmitting and Receiving.						Receiving Only.			Grand Total.
	Amateur.	Aero-nautical. (a)	Coast. (b)	Land. (c)	Mobile (General). (d)	Miscellaneous.	Land. (c)	Mobile (General). (d)	Total.	
N.S.W. ...	1,058	13	8	637	2,660	43	95	1	96	4,515
Vic. ...	1,007	5	7	399	2,375	28	3,821	199	30	4,050
Q'land ...	322	21	8	508	1,081	8	1,948	64	6	2,018
S. Aust. ...	361	7	5	214	899	7	1,493	3	...	1,496
W. Aust. ...	190	20	7	371	626	7	1,221	33	13	1,267
Tas. ...	126	7	7	86	203	4	433	1	...	434
Nor. Terr. ...	22	5	1	162	22	...	212	3	...	215
A.C.T. ...	8	1	...	10	61	1	81	...	...	81
Total, Aust. ...	3,094	70	43	2,387	7,927	98	13,628	398	50	14,076
Papua-New Guinea ...	50	12	11	288	60	...	421	...	...	421
Grand Total	3,144	91	54	2,675	8,070	98	14,049	398	50	14,222

(a) Ground stations (aeradio stations) for communication with aircraft stations. (b) Ground stations for communication with ship stations. (c) Stations established at fixed locations on land for the conduct of point-to-point services and for communication with mobile stations. (d) Stations installed in motor vehicles and small harbour vessels not falling within the definition of ship stations or aircraft stations, and stations comprising small portable apparatus used for various purposes. (e) Includes 261 aircraft stations, 1,059 ship stations and 412 "other" stations which cannot be classified according to States, etc.

Corresponding figures for 30th June, 1954 will be found in *Transport and Communication Bulletin* No. 45.

(ii) *Australia and Papua-New Guinea, 30th June, 1950 to 1955.* The following table shows the total number of radio-communication stations authorized in Australia and Papua-New Guinea at 30th June of the years 1950 to 1955.

## RADIO-COMMUNICATION STATIONS AUTHORIZED : AUSTRALIA AND PAPUA-NEW GUINEA.

At 30th June—	Transmitting and Receiving.								Miscellaneous.	Receiving Only.		Grand Total.
	Amateur.	Aeronautical. (a)	Coast. (b)	Land. (c)	Mobile.(d)					Land. (c)	Mobil. (General). (d)	
					General.	Ship.	Aircraft.	Other.				
1950 ..	2,826	68	29	1,517	2,011	617	226	139	49	375	311	8,168
1951 ..	2,897	70	33	1,747	2,361	656	218	146	60	371	207	8,766
1952 ..	2,937	70	39	1,835	3,063	708	230	177	66	387	181	9,693
1953 ..	2,977	84	42	2,107	4,144	755	230	247	72	390	165	11,213
1954 ..	2,980	91	49	2,359	5,327	808	232	266	83	382	73	12,650
1955 ..	3,144	91	54	2,675	7,987	1,059	261	412	98	398	50	16,220

See notes to previous table.

## § 6. Broadcasting and Television.

1. **General.**—Broadcasting services in Australia operate under the Broadcasting Act 1942-1954 and comprise the National Broadcasting Service and the Commercial Broadcasting Service. The following table shows the number of broadcasting stations in operation at 30th June, 1955 :—

## BROADCASTING STATIONS, 30th JUNE, 1955.

Type of Station.	N.S.W.	Vic.	Qld.	S.A.	W.A.	Tas.	N.T.	A.C.T.	Papua-New Guinea.	Total.
National—										
Medium Frequency ..	14	5	12	5	5	4	2	2	1	50
Short-wave ..	1	3	2	...	2	...	...	...	1	9
Commercial ..	36	20	20	8	13	8	...	1	...	106

2. The Australian Broadcasting Control Board.—The Board, which was constituted on 15th March, 1949 under the above Act, operates under the Ministerial jurisdiction of the Postmaster-General, and its principal functions, as set out in Section 6K of the Act, are to ensure :—(a) the provision of services by broadcasting stations, television stations and facsimile stations, and services of a like kind, in accordance with plans from time to time prepared by the Board and approved by the Minister ; (b) that the technical equipment and operation of such stations are in accordance with such standards and practices as the Board considers to be appropriate ; and (c) that adequate and comprehensive programmes are provided by such stations to serve the best interests of the general public.

In addition, the Board may exercise such other functions as are prescribed by regulation in relation to broadcasting stations, television stations and facsimile stations.

In the exercise of its functions in respect of programmes, the Board is required—(a) to consult the Australian Broadcasting Commission and representatives of licensees of commercial broadcasting stations in relation respectively to the programmes of the national and commercial broadcasting services ; and (b) in particular to—(i) ensure reasonable variety of programmes ; (ii) ensure that divine worship or other matter of a religious nature is broadcast for adequate periods and at appropriate times, and that no matter which is not of a religious nature is broadcast by a station during any period during which divine worship or other matter of a religious nature is broadcast by that station ; (iii) ensure that facilities are provided on an equitable basis for the broadcasting of political or controversial matter ; (iv) determine the extent to which advertisements may be broadcast in the programme of any commercial broadcasting station ; and (v) fix the hours of service of broadcasting stations, television stations and facsimile stations.

The Board is empowered to make recommendations to the Minister as to the exercise by him of any power under Division 1 of Part III. of the Act, which prescribes the conditions under which licences are granted to commercial broadcasting stations.

The Board also has power, subject to the directions of the Minister—(a) to determine the situation and operating power of any broadcasting station, television station or facsimile station ; (b) to determine the frequency of each broadcasting station, television station or facsimile station, within bands of frequencies notified to the Board by the Postmaster-General as being available for such stations ; (c) after consultation with the Commission to determine the conditions upon which a commercial broadcasting station may broadcast a programme of the National Broadcasting Service ; and (d) to regulate the establishment of networks of broadcasting stations and the making of agreements or arrangements by licensees of commercial broadcasting stations for the provision of programmes or the broadcasting of advertisements.

Subject to the approval of the Minister and of the Treasurer, the Board may provide financial and other assistance to commercial broadcasting stations for the purpose of ensuring that programmes of adequate extent, standard and variety are provided in the areas served by these stations.

The Board also has certain powers in connexion with the general control of the broadcasting service, particularly in relation to the operations and programmes of commercial stations.

Section 6B of the Act provides that the Board shall consist of five members (including two part-time members) appointed by the Governor-General, one of whom, other than a part-time member, shall be chairman. No person shall be appointed as 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, television or facsimile 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 a commercial television station ; or (c) is the licensee of, or an applicant for a licence for, a commercial broadcasting station or a commercial television station.

3. **The National Broadcasting Service.**—(i) *General.* The programmes of the National Broadcasting Service are provided by the Australian Broadcasting Commission and the technical facilities for the transmission of such programmes by the Postmaster-General's Department.

(ii) *The Australian Broadcasting Commission.* The Commission comprises seven Commissioners, one of whom is an officer of the Department of the Treasury and one an officer of the Postmaster-General's Department.

Under the provisions of the Act the Commission "shall provide and shall broadcast from the national broadcasting stations adequate and comprehensive programmes and shall take in the interests of the community all such measures as, in the opinion of the Commission, are conducive to the full development of suitable broadcasting programmes."

The Commission prepares estimates of its receipts and expenditure for each financial year and submits these estimates to the Minister. Appropriations are made by Parliament for the purposes of the Commission and these, together with all other moneys received by the Commission, are paid into an account in the Commonwealth Bank of Australia. From this account are defrayed all costs, charges, expenses, etc., incurred by the Commission in the exercise of its powers and functions under the Act. For particulars of the financial operations of the Commission see Chapter XX.—Public Finance.

(iii) *Technical Facilities.* At 30th June, 1955, the National Broadcasting Service comprised 59 transmitting stations as follows :—

*Medium-wave Stations—*

2CN and 2CY Canberra, 2BL and 2FC Sydney, 2BA Bega, 2CO Corowa, 2CR Cumnock, 2KP Smithtown, 2LG Lithgow, 2ML Murwillumbah, 2NA and 2NC Newcastle, 2NB Broken Hill, 2NR Grafton, 2NU Manilla, 2TR Taree, 3AR and 3LO Melbourne, 3WL Warrnambool, 3GI Sale, 3WV Dooen, 4QG and 4QR Brisbane, 4AT Atherton, 4GM Gympie, 4QA Mackay, 4QB Pinalba, 4QL Longreach, 4QN Townsville, 4QS Dalby, 4QY Cairns, 4RK Rockhampton, 4SO Southport, 5AN and 5CL Adelaide, 5CK Crystal Brook, 5LN Port Lincoln, 5WM Woomera, 5AL Alice Springs, 5DR Darwin, 6WF and 6WN Perth, 6GF Kalgoorlie, 6GN Geraldton 6WA Wagin, 7ZL and 7ZR Hobart, 7NT Kelso, 7QN Queenstown, 9PA Port Moresby, Papua.

*Short-wave Stations—*

VLI Sydney, New South Wales, VLG, VLH and VLR Lyndhurst, Victoria, VLQ and VLM Brisbane, Queensland, VLV and VLX Perth, Western Australia, VLT Port Moresby, Papua.

The medium-wave transmitters operate in the medium frequency broadcast band 540 to 1,600 kilocycles per second. From the short-wave stations, using frequencies within the band 3 to 30 megacycles per second, service is given 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.

Programmes for country stations are normally relayed from the control studio of the nearest capital city, 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 frequently this system is extended to connect both the national and commercial broadcasting stations.

In June, 1955, 36 of the medium-wave stations were situated outside the capital cities and additional country stations are to be constructed. When these additions have been made the medium-wave and short-wave stations together will provide for clear reception of the programmes of the National Broadcasting Service in practically every part of Australia.

(iv) *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 1954-55 was as follows :—Classical Music, 23.4

per cent. ; Light Music, 14.7 per cent. ; Variety, 17.8 per cent. ; Drama and Features, 3.9 per cent. ; Youth Education, 3.6 per cent. ; Children's Session, 2.3 per cent. ; Talks, 7.0 per cent. ; Parliament, 3.8 per cent. ; Religion, 3.6 per cent. ; News, 7.7 per cent. ; Sport, 5.4 per cent. ; Rural Broadcasts, 1.7 per cent. ; Non-departmental, 5.1 per cent.

(b) *Music.* The A.B.C. is to-day the biggest concert-giving organization in the Commonwealth, and the immense growth of interest in music in this country is illustrated by the fact that Australian listeners in increasing numbers now welcome the opportunity of hearing fine music on the air and in the concert hall and have magnificently supported the presentation of orchestral concerts and of recitals by the best musicians from their own country and from overseas. In 1936 small regular orchestras were formed by the A.B.C. in Sydney, Melbourne, Brisbane, Adelaide, Perth and Hobart, and from these foundations have grown our present orchestras. Those in Sydney and Melbourne measure up to first-class orchestras overseas, whilst those in the other capital cities are showing rapid improvement and are now the equal of those in many places of comparable size in Europe or America. Until 1946 the cost of these orchestras was met solely by the A.B.C., but since then State Governments and major municipal bodies in all States have agreed to contribute towards the expense.

The close co-operation between a broadcasting organization, city authorities and State Governments to establish and maintain symphony orchestras is unique in the world.

In 1954-55, the A.B.C. organized 539 public orchestral concerts (including 153 free concerts for school children and 40 free concerts for adults) and 244 public recitals by famous artists throughout the Commonwealth. Of these concerts, 256 were given outside the capital cities, including 78 free orchestral concerts for school children.

The policy of the A.B.C. so far as individual artists are concerned has always been to develop local talent and at the same time give its audiences the opportunity of hearing famous international musicians.

(c) *Drama and Features.* Drama programmes are designed to give listeners opportunities, which they might not otherwise have, of hearing the great plays of all nations as well as adaptations of the best modern stage plays and also those written specially for broadcasting. The main regular drama programmes are broadcast on Saturday and Monday evenings, and special series of longer plays are also given at various times during the year.

In recent years the technique of the feature programme has also been developed in this country. 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, and it may deal with a very wide variety of subjects ranging from history and current events to science and the arts. A number of Australian writers have become interested in this form of entertainment and about 97 per cent. of the features broadcast are written by Australians. Local writers also contribute a large proportion of the plays broadcast and every effort is made to assist and encourage their work.

(d) *Youth Education.* The A.B.C. provides a regular series of broadcasts to schools as an addition to normal class-room education. The total number of listening schools at the end of June, 1955 was 8,308 or about 84 per cent. of all schools, State and private, throughout the Commonwealth. Many of the school broadcasts are presented in dramatized form, as this method makes the material more vivid and interesting to the young listener. For the very young children, the Commission broadcasts every week-day the "Kindergarten of the Air", a type of broadcast which originated in Australia. (See also Chapter XII.—Education, 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 and on 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. The most complete of these built-up programmes is the documentary, in which radio goes into the field to analyse or to describe, using the actual sounds and voices recorded on location.

Controversial topics are covered in two sessions—the weekly discussion broadcast, in which the main conflicting points of view on a current topic are discussed by competent authorities, and the "Nation's Forum of the Air", using the debating technique with

questions in person from the studio audience and telephoned from listeners. Another outstanding session is "News Review", containing at least five comments on the news of the day recorded over landline from all States of the Commonwealth and, in the case of significant world events, from overseas by radio-telephone.

(f) *Rural Broadcasts.* The Rural Broadcasts Department was commenced in 1945 to serve the needs of country listeners. It has proved to be of great value to men and women on the land throughout Australia, by giving them the latest market reports and information on general conditions, and by keeping them informed on rural development overseas. The interstate market report is the only Australia-wide market service available to the Australian rural population. Programmes are exchanged with radio organizations in England, Canada, the United States of America and elsewhere, and several visits to Australia by well-known farm radio personalities have also been arranged. The department has encouraged the work of Junior Farmers' Clubs in Australia, and has sponsored competitions for members in connexion with the Royal Agricultural Shows in Sydney and Melbourne.

(g) *News.* On 1st June, 1947, the Australian Broadcasting Commission's independent News Service came into full operation. Since that date the Commission has collected the news for its bulletins independently of the press and it now has, in addition to a large staff throughout Australia, a London news room for the selection and transmission of overseas news secured from the great news agencies. Nine national news bulletins are broadcast daily, and are followed by State bulletins of news of State interest. In addition, two or more regional bulletins are broadcast by local stations in country areas on most days of the week, and for remote country districts special bulletins are broadcast on short-wave. For overseas listeners 19 bulletins daily are broadcast through the Radio Australia transmitters. These bulletins, which are given in English, French, Malay and Thai, are directed to every continent, but concentrate on the Pacific and Asian areas. The A.B.C. also rebroadcasts for Australian listeners, by arrangement with the British Broadcasting Corporation, two B.B.C. news bulletins each day.

(h) *Other Activities.* The broadcasting of the proceedings of Federal Parliament commenced as a regular service in July, 1946, and Australian listeners are now able to hear debates from the House of Representatives and from the Senate. At present these broadcasts are confined to one of the two transmitters in each capital city, but it is hoped that eventually country listeners will also be able to hear them.

The National Children's Hour, presented seven days a week, is composed of over 40 programme items, including stories, music, games, and items about art, literature, natural history and sport. There is a children's newsreel and a Brain's Trust, discussing, through children, topics of wide general interest. The Argonauts' Club is an important part of the session and encourages children between the ages of 7 and 17 in self-expression and the appreciation of cultural subjects, but the provision of entertainment suitable for children is the main purpose of the session.

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. In its variety sessions the A.B.C. does everything possible 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. The A.B.C. dance bands in Sydney and Melbourne are regarded as being two of the most outstanding bands in Australia.

The coverage of sport at home and abroad by the A.B.C. is comprehensive. On Saturday afternoons the sporting panel provides listeners with progress results, scores and descriptions from half a dozen or more fields of sport. Events of international interest such as Test Matches, the Davis Cup, etc., are covered by simultaneous descriptions from A.B.C. commentators. In covering events overseas, the A.B.C. is indebted to the British Broadcasting Corporation for its collaboration in Great Britain, and to the New Zealand Broadcasting Service for events in New Zealand.

4. **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 Australian Broadcasting Control Board. The maximum initial period of a licence is three years, and renewals are granted for a period of one year. Licences are granted on conditions which ensure satisfactory alternative programmes for listeners. The fee for a broadcasting station licence is £25 per annum in respect of the first period for which the licence is granted and, in the case of a renewal, £25 plus one-half of one per cent. of the gross earnings from the operations of the station if it has made a profit in the preceding year. Licensees of these stations rely for their income on revenue received from the broadcasting of advertisements and other publicity. At 30th June, 1955, there were 106 commercial broadcasting stations in operation. A table showing the call sign, location, frequency and aerial power of each of these stations may be found in *Transport and Communication Bulletin* No. 45.

5. **Overseas Broadcasting Service.**—There are three short-wave stations at Shepparton, Victoria (VLA, VLB, VLC) for use only in the overseas service known as "Radio Australia". As in the case of the National Broadcasting Service, these stations are maintained by the Postmaster-General's Department and their programmes are arranged by the A.B.C. During certain periods station VLG Lyndhurst, a unit of the National Broadcasting Service, is also used for the purpose of overseas transmissions. 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. Twenty-two of the regular transmissions are in foreign languages. The overseas audience has grown very substantially in recent years, as evidenced by a large and increasing number of letters from listeners abroad.

6. **Television.**—(i) *General.* Under the Television Act 1953, the Postmaster-General may establish National television stations or may grant licences for commercial television stations after taking into consideration any recommendations which have been made by the Australian Broadcasting Control Board.

(ii) *Royal Commission on Television, 1953.* The question of the introduction of television services in Australia was the subject of an investigation during 1953 by a Royal Commission. The principal recommendations of the Royal Commission were that—

- (a) Television should be introduced on a gradual basis.
- (b) The first national television station should be erected in Sydney and the second in Melbourne, and expansion to other State capital cities and to other centres of population should proceed as soon as finances become available.
- (c) The authority for providing the programmes for the National Television Service should be the Australian Broadcasting Commission.
- (d) Initially, licences should be issued for two commercial television stations in both Sydney and Melbourne.
- (e) Before any licence is granted a public hearing should be conducted by the Australian Broadcasting Control Board.

(iii) *Establishment of Services.* Following the Royal Commission on Television, the Government adopted the recommendations set out in (ii) above and the Postmaster-General invited applications for the grant of licences for four commercial television stations—two in Sydney and two in Melbourne. Following public hearings held by the Board, the Government approved of the grant of licences to—

- (a) Amalgamated Television Services Pty. Ltd. for a station in Sydney.
- (b) Television Corporation Ltd. for a station in Sydney.
- (c) General Television Corporation Pty. Ltd. for a station in Melbourne.
- (d) Herald and Weekly Times Ltd., on behalf of a company to be formed, for a station in Melbourne.

Contracts have been placed for the supply of equipment for the national television stations in Sydney and Melbourne, and the stations are in the course of being established.

7. **Broadcast Listeners' Licences.**—(i) *General.* Broadcast listeners' licences are issued at Post Offices in accordance with Section 96 of the Broadcasting Act 1942–1954. A single licence authorizes every broadcast 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 of 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; 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.

A licence may be granted at one-quarter of the ordinary fee to any person who (a) is in receipt of a pension under Part III. or Part IV. of the Social Services Act 1947–1955 or a service pension, or a pension in respect of total and permanent incapacity, under the Repatriation Act 1920–1955; and (b) lives alone or with any person whose income does not exceed the maximum amount of income and pension allowed under Part III. or Part IV. of the Social Services Act 1947–1955 or Section 87 of the Repatriation Act 1920–1955.

Licences are granted free of charge to blind persons over 16 years of age and also to schools.

(ii) *Licences in Force.* The following table shows the number of broadcast listeners' licences in force at 30th June, 1925, 1930, 1935, 1940, 1945 and 1950 to 1955 :—

**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
1951(c) .. ..	679,232	522,502	270,587	204,695	139,669	68,149	1,884,834
1952 .. ..	741,355	520,364	279,852	208,691	141,950	68,832	1,961,044
1953 .. ..	742,002	533,329	282,338	212,104	145,141	70,741	1,985,655
1954 .. ..	769,478	545,148	287,683	220,065	148,192	71,047	2,041,613
1955 .. ..	746,050	549,690	293,512	223,593	150,199	71,602	2,034,676

(a) Includes Australian Capital Territory. (b) Includes 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 2,034,676 broadcast listeners' licences in force at 30th June, 1955, 1,181,601 or 58.1 per cent. were held by persons situated in metropolitan areas and 853,075 or 41.9 per cent. by persons in country areas. Of the latter, only 12,247 were in respect of Zone 2.

8. **Radio-inductive Interference.**—In each State of the Commonwealth, the Postmaster-General's Department maintains a staff of experts with suitable equipment and transport, for the purpose of investigating complaints of radio-inductive interference to the reception of broadcast programmes and to defence and civil radio-communication services.

During the year 1954–55, 10,381 sources of trouble were eliminated as a result of Departmental efforts or by other action. More than 3,700 suppressors were fitted to offending appliances as recommended by investigating officers, who carried out 30,093 inspections in metropolitan and country areas.

9. **Prosecutions under the Broadcasting Act.**—Persons convicted during the year ended 30th June, 1955 for operating unlicensed broadcast receivers numbered 3,810. Fines and costs amounting to £15,871 were imposed.



## CHAPTER VIII.

### TRADE.

#### § 1. Introductory.

**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 was 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. 19-21*).

#### § 2. Commonwealth Legislation affecting Oversea Trade.

1. **General.**—The Acts affecting overseas trade at present in force are:—The Customs Act 1901-1954; Customs Tariff 1933-1954; Customs Tariff (Canadian Preference) 1931 and Customs Tariff (Canadian Preference) 1934-1954; Customs Tariff (Industries Preservation) Act 1921-1936; Customs Tariff (New Zealand Preference) 1933-1954; Customs Tariff (Papua and New Guinea Preference) 1936-1950; Customs Tariff (Southern Rhodesian Preference) 1941-1948; Customs Tariff (Primage Duties) 1934-1950; Trading with the Enemy Act 1939-1952.

The Customs Act represents 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 duties operative from time to time.

2. **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 1933-1954.

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 imports from certain countries of the British Commonwealth. 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 for the time being in force 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 1901-1954 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 seventy-five 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 twenty-five per cent. (or fifty 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.

With the exception of a relatively small number of commodities which carry special rates of duty, the British Preferential Tariff has also been extended, as a result of separate trade agreements, to Canada and New Zealand and by tariff legislation to 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 or United Kingdom labour and materials. In relation to specified goods, the British Preferential Tariff also applies to Ceylon 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). The Intermediate Tariff has also been extended to some countries to which Australia has no formal obligation to accord most-favoured-nation tariff treatment. The countries to which the Intermediate Tariff applies are specified by Customs Proclamation.

(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.

3. *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 specified goods under the Customs Tariff (Primage Duties) 1934-1950. Goods the produce or manufacture of New Zealand, Norfolk Island, Fiji and the Territory of Papua and New Guinea are exempt from primage duty.

4. *Tariff Board.*—The Tariff Board Act 1921-1953 provides for the appointment of a Tariff Board consisting of seven members, two of whom shall be administrative officers of the Department of Trade. Members of the Board are appointed for terms of not less than one year nor more than five years. The purpose of the Tariff

Board is to assist the Minister in the administration of matters relating to trade and customs. The more important matters which the Minister shall refer to the Board for inquiry and report include disputes arising out of the interpretation of any Customs or Excise Tariff; the necessity for new, increased or reduced duties; the necessity for granting bounties; any proposal for the application of the British Preferential Tariff to any part of the British Commonwealth or any foreign country; and any complaint that a manufacturer is taking undue advantage of the protection afforded him by the Tariff by charging unnecessarily high prices for his goods or acting in restraint of trade. The Minister may refer to the Board for inquiry and report the following matters:— the classification of goods under items of the Tariff that provide for admission under by-laws; the determination of the value of goods for duty; the general effect of the working of the Customs Tariff and the Excise Tariff; the fiscal and industrial effects of the Customs laws of the Commonwealth; the incidence between the rates of duty on raw materials and on finished or partly finished products; and any other matter affecting the encouragement of primary and secondary industries in relation to the Tariff.

Inquiries conducted by the Board relating to any revision of the Tariff, any proposal for a bounty, or any complaint that a manufacturer is taking undue advantage of the protection afforded him by the Tariff shall be held in public, and evidence in such inquiries shall be taken in public on oath, unless any witness objects to giving any evidence in public which the Board is satisfied is of a confidential nature, when the Board may take such evidence in private. Evidence taken by the Board in connexion with any inquiry under the Customs Tariff (Industries Preservation) Act 1921–1936 shall be taken in public on oath.

5. *Industries Preservation.*—The Customs Tariff (Industries Preservation) Act 1921–1936 provides that, after inquiry and report by the Tariff Board, special duties shall be collected in the following cases when the importation of the goods referred to might be detrimental to an Australian industry. In the case of goods sold for export to Australia at a price less than the fair market value for home consumption or at a price which is less than a reasonable price, a special dumping duty shall be collected equal to the difference between the price at which the goods were sold and the fair market value, or the difference between the price at which the goods were sold and a reasonable price. Similar provision is made for goods consigned to Australia for sale. With regard to goods exported to Australia at rates of freight less than the normal rate of freight the dumping freight duty shall be—on goods carried free—the amount payable as freight at the normal rate; and in the case of any other goods—an amount equal to the difference between the freight paid and the freight which would have been payable at the normal rate.

The Act provides that the Minister for Trade and Customs, after inquiry and report by the Tariff Board, may publish a notice in the *Commonwealth Gazette* specifying the goods upon which the special rates of duty under this Act shall thereupon be charged and collected.

6. *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 the Commonwealth. 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.

7. *Import Controls.*—(i) *Customs (Import Licensing) Regulations.* The Customs (Import Licensing) Regulations were first promulgated in December, 1939, and were made pursuant to the Customs Act 1901–1936, Sections 52 (g) and 56. These regulations provide, *inter alia*, that the importation into the Commonwealth of any goods shall be prohibited, unless:—

- (a) a licence to import the goods is in force and the terms and conditions (if any) to which the licence is subject are complied with; or
- (b) the goods are excepted from the application of the regulations.

The regulations were at first applied only to imports from non-sterling sources with the object of conserving non-sterling exchange and enabling priority in shipping space to be given to essential imports. However, with a subsequent decline in Australia's sterling balances in London and changes in the general war situation the restrictions were extended in December, 1941 to cover a wide range of imports from sterling countries. The position remained basically the same during the remainder of the war and in the immediate post-war period.

As Australia's external financial position improved, the restrictions were progressively relaxed until, by November, 1950, imports from most countries had been exempted from the application of the regulations and, with minor exceptions, the restrictions applied only to imports from the dollar area and Japan. This position obtained until March, 1952.

During the financial year 1951-52, following a fall in the price of wool and a large increase in the volume of imports (the product, in turn, of the wool boom of 1950-51), Australia incurred a substantial deficit on current account. Oversea reserves fell rapidly in the latter part of 1951 and early 1952, endangering Australia's external financial position to such a degree that it became necessary on 8th March, 1952 to apply the Customs (Import Licensing) Regulations to imports from all sources, with the exception of goods originating in Papua, New Guinea and Norfolk Island.

During 1953 and the first half of 1954, Australia's balance of payments showed sufficient improvement to justify a gradual general relaxation of the import controls applying to goods from sources other than the dollar area and Japan. By April, 1954, a wide range of commodities was licensed virtually without restriction.

Towards the latter half of 1954 Australia's balance of payments prospects for 1954-55 were such that the Government was forced to review import licensing policy and a general tightening of the controls was announced on 1st October, 1954. A still further reduction in overall import expenditure has operated since 1st April, 1955.

Goods of Japanese origin have been subject to import licensing control since the resumption of private trading with Japan early in 1948. With the introduction of licensing controls on all imports as from March, 1952, the restrictions on Japanese goods were intensified and the issue of licences was restricted within given values to essential goods not available from other non-dollar sources. A gradual relaxation occurred in line with the controls operating on non-dollar, non-Japanese goods but all applications for Japanese goods continued to be dealt with on an individual basis. In November, 1954, effect was given to a policy of assimilating Japan with other non-dollar countries for import licensing purposes. The net result of this assimilation is that import controls are now administered in relation to two currency areas only, namely, the dollar area and all other countries.

Restrictions on imports from the dollar area have been maintained in varying degrees since their imposition in December, 1939 and, in general, the issue of licences for the importation of goods from the dollar area is restricted to goods of a high degree of essentiality, unavailable in adequate quantities from other countries. The goods imported from the dollar area are mainly capital goods, raw materials, semi-manufactures and other producer goods. All applications for licences are treated on the merits of each individual case.

(ii) *Customs (Prohibited Imports) Regulations.* In addition to the Import Licensing Regulations which are imposed for balance of payments reasons, Section 52 of the Customs Act provides for the prohibition of the importation of specified types of commodities and also provides for the making of regulations prohibiting the importation of other types of commodities.

Prohibition by regulation may be exercised by—(a) prohibiting the importation of goods completely; (b) prohibiting the importation of goods except with the consent of the Minister; (c) prohibiting the importation of goods except subject to conditions. Lists of products subject to prohibition are set out in the Customs (Prohibited Imports) Regulations. Commodities the importation of which has been prohibited under the regulations include dangerous drugs, firearms, undesirable publications and articles deleterious to public health.

8. *Export Control.*—(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 export control are listed in the Customs (Prohibited Exports) Regulations.

(ii) *Monetary Control—Banking Act 1945–1953.* 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 Commonwealth Bank of Australia. This action is complementary to that taken under other parts of the Banking (Foreign Exchange) Regulations to control the movement out of Australia of capital in the form of securities, gold and currency.

Provision is made in the regulations for the grant of export licences subject to such terms and conditions as are imposed. On the receipt in Australia by the Commonwealth Bank, or by a bank acting as agent for that Bank, of advice that the foreign currency has been paid to the Commonwealth 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, exports by private individuals are 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 £A50, or where jewellery and other articles of high intrinsic worth either exceed £A1,000 in value or have not been the personal property of the passenger for at least twelve months.

9. *Trade Agreements.*—(i) *The United Kingdom.* The United Kingdom and Australia Trade Agreement (Ottawa Agreement) was signed on and had effect from 20th August, 1932, although the Australian tariff changes which were necessary in order to implement the preference formula in the agreement did not operate until 14th October, 1932. Broadly speaking, Australia secured preferences in the United Kingdom market for a wide range of Australian export commodities and in return Australia incurred obligations in respect of tariff levels and the grant of preference to United Kingdom goods.

(ii) *Canada.* The existing trade agreement between Canada and Australia came into force on 3rd August, 1931. The basis of the agreement is, generally, the mutual accord of British Preferential Tariff treatment. Exceptions to this general rule are specified in the schedules to the agreement.

The Customs Tariff (Canadian Preference) 1931 and the Customs Tariff (Canadian Preference) 1934–1954 give effect to the agreement so far as Australia is concerned.

(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.

The Customs Tariff (New Zealand Preference) 1933–1954 gives legislative effect to the provisions of the agreement.

(iv) *Federation of Rhodesia and Nyasaland.* During June, 1955 a trade agreement was negotiated with the Federation. Australia's principal undertaking was to grant an exclusive tariff preference to the Federation on unmanufactured tobacco, a concession formerly accorded to Southern Rhodesia only, under a trade agreement now terminated. The Federation accorded preferential tariff treatment on a wide range of Australian export products including wheat and powdered and condensed milk.

(v) *Other Countries.* Australia has entered into bilateral trade agreements with the Union of South Africa, Belgium, 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 tariff treatment to imports from the other. A similar agreement with Iceland was concluded in 1952.

(vi) *The General Agreement on Tariffs and Trade (G.A.T.T.).* The General Agreement on Tariffs and Trade is an international trade agreement which has been in operation since 1st January, 1948. Australia was an original signatory of the Protocol of Provisional Application, by which Parts I. and III. of the Agreement are being provisionally applied. Part II. is being applied to the fullest extent not inconsistent with existing legislation at the date of signature of the Protocol.

In May, 1956 there were 35 contracting parties to the Agreement, comprising most of the world's larger trading nations.

Many of the Articles in Part II. of the General Agreement are similar to articles which were included in the Havana Charter for an International Trade Organization. Had the Charter come into force, Part II. of the General Agreement, containing general commercial policy provisions to prevent the circumvention of tariff concessions by other measures, would have been suspended.

Four series of tariff negotiations have been conducted under the provisions of the General Agreement. As a result of these negotiations, Australia has obtained tariff concessions on almost all the principal products of which she is an actual or potential exporter to the individual countries concerned. These concessions were a result both of direct negotiation by Australia and of negotiation by other countries—in the latter case, the benefits occur through the operation under the Agreement of the most-favoured-nation principle.

The contracting parties periodically hold plenary sessions to deal with questions arising out of the administration of the Agreement. The tenth session was held at Geneva in October, 1955.

### § 3. Imperial Preference in the United Kingdom.

1. *Preferential Tariff of the United Kingdom.*—Prior to 1919 the United Kingdom levied duties on a limited number of items for revenue purposes and did not extend preferential treatment to any of the Empire countries. The majority of imported goods entered the United Kingdom free of duty and, in fact, there was no scope for preferential treatment. In 1919, however, the range of revenue duties was extended and preferential rates of duty were established on eighteen items. Of these, the preferential rate on twelve items was to be equivalent to five-sixths of the full rate, on four to two-thirds of the full rate and on another (wine) to 50–70 per cent. of the full rate. The items so affected of interest to Australia at that time were currants, dried and preserved fruit, sugar, molasses and wine.

The extension of preferential treatment was conditional on the goods being consigned from, and grown, produced or manufactured in, the British Empire. In the case of manufactured articles, preference applied only where a prescribed proportion of their value was the result of labour within the British Empire. The conditions have been embodied in all subsequent preference arrangements in substantially the same form.

During the period from 1919 to 1932 it became increasingly obvious that the United Kingdom, for economic reasons, was being forced to depart from the free trade principles which had conditioned trade during the years preceding the 1914–18 War. Every time a new duty was introduced, provision was made for further preferential treatment to Empire products, although, in a great many cases, the preferences were of little or no significance to Australia, because the new duties were on products which were neither grown nor manufactured in Australia. The Safeguarding of Industries Act 1921 provided for the imposition of duties on imports of key industry goods from foreign countries with

free entry or preferential rates on similar goods from Empire countries. The purpose of these duties was to provide protection to vital United Kingdom industries in order to encourage their growth without fear of foreign competition. Similarly the Dyestuff Import Regulation of the previous year allowed the unrestricted import of dyestuffs of Empire origin, whereas imports of foreign dyestuffs were subjected to licensing restrictions. In 1925 preferences were accorded or increased on sugar (for ten years), tobacco, dried fruit, wine and several other items. In succeeding years Key Industries Duties were imposed on a further range of industrial goods and in 1927 screening quotas for British films and in 1928 further sugar concessions were introduced.

By 1931, therefore, the United Kingdom imposed duties on a fairly wide range of goods, provision being made in all cases for preferential treatment to Empire goods. The important preferences for Australia which emerged from these enactments were those on sugar, dried fruits, wine and jams and jellies. Even at this time, however, the United Kingdom adhered to the principles of free trade and by far the greater part of imports was free of duty.

In order to counteract the flood of dumping which followed the collapse of world trade in 1929-30 the United Kingdom introduced emergency tariff legislation in 1931. *Ad valorem* duties were imposed on almost all goods imported into the United Kingdom with the exception of certain raw materials, goods from Empire countries being exempt from these duties. These temporary measures were embodied in the Import Duties Act of March, 1932, by the enactment of which the United Kingdom finally abandoned free trade as a policy. This Act provided for the free entry for Empire goods pending the conclusion of some permanent agreement. The Ottawa Agreements Act of November, 1932 emerged from the Imperial Economic Conference held in Ottawa and embodied agreements concluded between the United Kingdom and the Dominions, Newfoundland and Southern Rhodesia. For the purpose of considering the present preferences enjoyed by Australia in the United Kingdom, it is expedient to regard the Import Duties Act and the Ottawa Agreements Act as complementary.

The Import Duties Act provided for the imposition of a general *ad valorem* duty of 10 per cent. on all imports with certain exceptions (i.e., those on the Free List and those already dutiable under previous enactments). Additional duties could be imposed and items on the Free List subjected to duty, and in fact the range of items subject to duties under this Act has been extended from time to time since its enactment.

The freedom of Empire goods from these duties was guaranteed under the Ottawa Agreements Act, which also provided for the imposition of new duties on imports from foreign, but not Empire, countries of a number of products of special interest to the Empire countries concerned. Whilst free entry was guaranteed to Empire producers on a wide range of products, the margins of preference thereby applicable were not bound, and the duties could be varied up or down by the United Kingdom Government without the consent of Empire countries. On a selected range of items, however, which are specified in the schedules to the Ottawa Agreements Act, the duties may not be varied by the United Kingdom without the consent of the other party to the respective agreement.

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.

**2. The Australia-United Kingdom Trade Agreement.**—This Agreement is a unit of the Ottawa Agreements and through it preferences in the United Kingdom were established on a number of export items of considerable importance to Australia. The preferences accorded are summarized as follows, the rates being shown in sterling currency:—

- (a) Continued free entry was guaranteed for three years for Australian eggs, poultry, butter, cheese and other milk products. (This freedom of entry still continues.) Similar foreign goods were subjected to duty, thus giving Australia a preference of 1s. to 1s. 9d. per 120 eggs; 10 per cent. *ad val.* on poultry; 15s. per cwt. on butter; 15 per cent. *ad val.* on cheese; 5s. per cwt. on sweetened whole condensed milk; and 6s. per cwt. on unsweetened whole condensed milk and milk powder and other unsweetened preserved milk.

- (b) Preferences were created on the following products by imposing a duty on like foreign articles whilst guaranteeing free entry to Australian produce : wheat (2s. per quarter); apples and pears (4s. 6d. per cwt.); canned apples (3s. 6d. per cwt.); other canned fruit (15 per cent. *ad val.*); certain dried fruit, raisins, etc. (10s. 6d. per cwt.); honey (7s. per cwt.); oranges (3s. 6d. per cwt. in season); raw grapefruit (5s. per cwt. in season); and grapes (1½d. per lb. in season).
- (c) The preferential margins on the commodities mentioned in (a) and (b) above were not to be reduced without the consent of the Australian Government and this provision also applied to the 10 per cent. preference on leather, tallow, canned meats, barley, wheat flour, macaroni, dried peas, casein, eucalyptus oil, meat extracts and essences, copra, sugar of milk, sausage casings, wattle bark, asbestos and certain dried fruits.
- (d) The Agreement also provided for a preference of 2d. per lb. on unwrought copper, but this was never implemented as Empire producers could not demonstrate their ability to continue offering their copper on first sale to the United Kingdom at prices not exceeding the world price, which was a condition of the preference. A similar condition applied to wheat, zinc and lead. In the case of zinc and lead the duty was changed at an early stage in the life of the Agreement from an *ad valorem* rate of 10 per cent. to a specific rate.
- (e) Australia, although not securing in the Agreement with the United Kingdom a commitment on the amount and duration of the preference margin applying to a number of commodities of some importance to Australia (e.g., rice), had its interests safeguarded by the fact that such items were usually covered by the United Kingdom's agreement with another Empire country. Such benefits were generalized to Australia.
- (f) The United Kingdom agreed to regulate meat imports and stated that its policy was to give the Dominions an expanding share of United Kingdom meat imports.
- (g) Preferential tariff advantages were also obtained in the British non-self-governing colonies and protectorates.

The preferences operating before, and not increased by, the Ottawa Agreement were continued. Thus the preferential margins on heavy wines, sugar, the sugar content of goods containing added sweetening matter, currants, etc., remained in operation.

3. Developments since the Ottawa Agreement.—The Australia-United Kingdom Agreement operated with virtually no alteration until the beginning of 1939. Since then three major factors have been responsible for altering its terms or significance :—

- (a) *The United Kingdom-United States of America Trade Agreement*, 1938. This Agreement became effective from 1st January, 1939, and, to enable the United Kingdom to secure concessions from the United States of America, Australia agreed to the following reductions in the preferences which her products were enjoying in the United Kingdom :—

Wheat (preference eliminated); apples and pears (1s. 6d. per cwt. in Northern Hemisphere season); honey (2s. per cwt.); canned apples (1s. 3d. per cwt.); canned grapefruit (preference eliminated). The *ad valorem* duty of 15 per cent. was replaced by specific duties of 5s. 6d. per cwt. on canned fruit salad, 5s. per cwt. on canned pineapples and 4s. per cwt. on canned loganberries.



- (b) *Long-term Contracts with the United Kingdom.* During the war and in the post-war period Australia negotiated contracts with the United Kingdom under which the Ministry of Food undertook to purchase the whole or a substantial part of the exportable surplus of several important Australian products normally entitled to preferential treatment. The commodities concerned were meat, sugar, flour, dried fruit, apples, canned fruit, butter, cheese, eggs, tallow and copra.

While bulk purchasing was in operation the preferential system was by-passed in respect of the commodities affected, but as the United Kingdom has returned the marketing of foodstuffs to private traders, United Kingdom importers of these goods from foreign sources are again obliged to pay duties.

The only Australian commodity still purchased by the United Kingdom Government under bulk contract is copra. In the case of sugar, the British Commonwealth Sugar Agreement sets an upper limit to the quantity of Australian sugar that may be sold in any year but the Agreement provides for sales at prices above world price levels. Exports of meat to the United Kingdom are protected by the Australia-United Kingdom 15 Year Meat Agreement, which sets minimum prices for Australian meat sold in the United Kingdom.

- (c) *The General Agreement on Tariffs and Trade.* Australia has participated in the four rounds of tariff negotiations under this agreement held at Geneva, 1947, Annecy, 1949, Torquay, 1950-51 and Geneva, 1955-56. In order to reach agreement with the various countries participating in these tariff negotiations, Australia consented to a number of reductions in preference margins guaranteed to her under the Ottawa Agreements, in return for more favourable tariff treatment in some twenty-seven countries with which agreements have been made. The reductions are summarized below :—

Apples (margin eliminated during Northern Hemisphere season); raisins (2s. per cwt.); canned peaches, pears and apricots (3 per cent. *ad val.*); non-tropical canned fruit salad (margin eliminated); dried apricots (2s. 6d. per cwt.); dried prunes, apples, peaches and nectarines (margin eliminated); honey (nil to 1s. 6d. per cwt. according to value for duty). The preference margin was also modified on a number of items in which Australia was interested but on which her consent to reduction was not required under the Ottawa Agreement. Examples are fruit pulp, pig iron, rice, hard soap, glue, gelatine and size.

The preference on heavy wine was increased from 4s. per gallon to 10s. per gallon.

- (d) *Increases in Commodity Prices.* The effective value of margins of preference which were expressed in the Australia-United Kingdom Agreement in terms of British currency ("specific margins") has been reduced in the post-war period by rises in the prices of commodities on which they were granted. The commodities affected are beef, dairy products, eggs, fresh, dried and canned fruits, honey, sugar, wine, lead and zinc, which made up about 29 per cent. of Australia's exports to the United Kingdom in 1954-55.

The following table shows, for selected items, how the *ad valorem* incidence of specific preference margins has been reduced by increases in the average value of the commodities on which they were granted.

## IMPERIAL PREFERENCE : CHANGES IN VALUE OF PREFERENCES.

*Ad Valorem Incidence of Specific Preferences Received by Australia in the United Kingdom.*

Commodity.	Preference Margin.	<i>Ad Valorem Incidence.(a) (Per cent.)</i>			
		1938.	1947.	1953.	1954.
Sugar, raw .. ..	£3 14s. 8d. per ton	35.8	12.2	9.5	9.4
Butter .. ..	15s. per cwt.	13.3	7.6	4.5	4.3
Beef (frozen) .. ..	2s. 3d. per lb. $\frac{2}{3}$ d	17.3	10.3	4.6	4.3
Canned pineapple .. ..	5s. per cwt.	21.4	5.5	3.3	2.9
Currants .. ..	2s. per cwt.	7.2	2.8	2.4	2.4
Raisins .. ..	10s. 6d. per cwt. to 1947; 8s. 6d. per cwt. from 1948	31.2	13.1	9.6	9.7
Honey .. ..	7s. per cwt. to 1938; 5s. per cwt. from 1939	19.0	6.8	5.1	5.4
Milk, condensed, sweetened	5s. per cwt.	13.1	4.8	3.9	3.9
Milk, dried whole .. ..	6s. per cwt.	8.7	4.7	2.9	2.9
Milk, dried skim .. ..	6s. per cwt.	20.1	7.4	5.8	7.0
Apples .. ..	4s. 6d. per cwt.	26.4	9.9	5.6	5.9
Pears .. ..	4s. 6d. per cwt.	19.5	6.7	5.5	5.3

(a) The *ad valorem* incidence of a preference is calculated by expressing the specific margin of preference (in £ sterling per cwt., per ton, etc.) on a particular commodity as a percentage of the average unit value (in £ sterling per cwt., per ton, etc.) of United Kingdom imports of that commodity from all sources in the year concerned.

## § 4. Trade Commissioner Service.

In the interest of building and maintaining a high level of trade, Governments nowadays generally appoint commercial representatives in their main export markets, their duties including the collection of information about trade conditions, assisting exporters in their difficulties and promotion of trade generally.

Prior to 1929, Australian representation abroad was limited to the High Commissioner's Office in London, with a subsidiary agent in Paris, and the Office of the Commissioner-General for Australia in New York. Apart from the facilities afforded by those offices, the only form of overseas trade representation available to Australia was that of the United Kingdom Department of Overseas Trade, whose activities were naturally concerned with the development of United Kingdom rather than Dominion trade.

The growing importance of Australia's trade with Canada led to the appointment in 1929 of an Australian Trade Commissioner in that country. The part played by that official in the subsequent negotiations of the Trade Agreement with Canada, in the cultivation of close and cordial relations with the Canadian authorities, and in general in focussing interest on Australia and Australian products, amply demonstrated the value of such appointments to both the Commonwealth Government and the Australian trading community.

The Trade Commissioners Act 1933 provided for the establishment of an Australian Government Trade Commissioner Service and by the beginning of the 1939-45 War posts had been established at Wellington, Batavia (now Djakarta), Shanghai, Tokyo, Cairo, Bombay, New York and Calcutta. The Trade Commissioner Service was further expanded in 1946 and there are now 24 Trade Commissioner posts in 19 countries.

The general advantages to be derived from the appointment of Trade Commissioners may be briefly stated as follows :—(a) fostering of goodwill, (b) correction and avoidance of misunderstandings, and (c) dissemination of knowledge concerning the respective countries. Particular facilities which they are able to afford to the trading community are (a) information as to present and prospective demand for goods, (b) information as

to foreign and local competition, (c) advice as to best selling methods, (d) reports as to the standing of foreign buyers, (e) specification of articles in demand, (f) dealing with trade inquiries, (g) advice and assistance to commercial visitors regarding trade matters, (h) settlement of difficulties between exporters in Australia and buyers abroad, and (i) furnishing of information as to foreign import requirements, customs duties, trade regulations, etc.

In addition to the foregoing trade functions, it is the duty of a Trade Commissioner to watch and advise the Government of any developments in his territory (which may include several countries) likely to affect trade and commerce with Australia, and other matters of economic interest to the home Government. He may be called upon to represent his Government at oversea conferences, and in certain countries where there is no diplomatic or consular mission (e.g., British West Indies, Hong Kong and the Federation of Rhodesia and Nyasaland), he is called upon to act as the Australian representative on official occasions.

Trade Commissioners usually enter the Service from either the commercial world or the Public Service, and applications for entry into the Service are called for periodically by public advertisement. In the more important posts it is the practice for the Trade Commissioner to share his duties with an Assistant Trade Commissioner, who is selected to be trained in the Service and qualify at a later stage for appointment as a Trade Commissioner. These staffing arrangements are designed to enable the Government to draw upon experienced and able executives in both private enterprise and the Public Service, and at the same time to build up a body of competent personnel to carry out a policy of vigorous expansion in the field of oversea trade.

The Trade Commissioner Service is administered by the Commonwealth Department of Trade (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.—Miscellaneous.

## § 5. Method of Recording Imports and Exports.

1. **Source of Statistics.**—Oversea trade statistics are compiled from documents obtained under the Customs Act and supplied to this Bureau by the Department of Customs and Excise.

2. **Customs Area.**—The Customs Area, to which all oversea trade statistics issued by this Bureau apply, is the whole area of the Commonwealth of Australia, comprising the States of New South Wales (including the Australian Capital Territory), Victoria, Queensland, South Australia, Western Australia and Tasmania, and the Northern Territory. Non-contiguous territories are treated as outside countries, and trade transactions between Australia and these non-contiguous territories are part of the oversea 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 oversea trade statistics, namely, (a) special trade and (b) general trade, and statistics of both are published by the Bureau, although greater emphasis is placed on general trade. The United Nations Statistical Office defines the two systems as follows :—

(a) *Special Trade.* Special imports are the combined total of imports directly for domestic consumption and withdrawals from bonded warehouses or free zones for domestic consumption, transformation or repair. 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.)

- (b) *General Trade.* General imports are the combined total of imports directly for domestic consumption and imports into bonded warehouse or free zone. Direct transit trade and trans-shipment under bond are excluded. General exports are the combined total of national exports and re-exports of imported merchandise including withdrawals from bonded warehouse or free zone for re-export.

The tables which follow refer to general trade, except for those appearing in § 16, para. 2, which refer to imports cleared for home consumption.

4. *Statistical Classification of Imports and Exports.*—Statistics of overseas 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 1954–55 provided for 2,123 separate import items and 1,089 export items.

5. *The Trade Year.*—From 1st July, 1914 the statistics relating to overseas 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 § 17 showing the total value of imports and exports in the calendar years 1951 to 1955 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*. By Act No. 54 of 1947, which operated from 15th November, 1947, the Customs Act was amended to provide that the value for duty of goods imported into Australia should be the f.o.b. value in Australian currency instead of the British currency f.o.b. value plus 10 per cent.

Section 154 (1) of the Customs Act 1901–1954 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.” All import values shown throughout this and other chapters of this issue of the Official Year Book are therefore uniform f.o.b. values at port of shipment in 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 overseas buyers before export—the 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 overseas 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) *Ships' Stores.* Prior to 1906, goods shipped in Australian ports on oversea vessels as ships' stores were included as exports. From 1906, ships' stores have been specially recorded as such, and omitted from the tabulation of exports. A table showing the value of these stores (including bunker coal and oil) shipped each year since 1950-51 is shown in § 12, page 306.

(ii) *Outside Packages.* Outside packages (containers, crates, etc.) have always been included as a separate item in the tabulation of imports, but apart from 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 of base metal 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) *Personal Effects.* Migrants' effects are included in imports and exports.

8. *Countries to which Trade is Credited.*—(i) *Imports.* From 1st January, 1905, in addition to the record of the countries whence goods directly arrived 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.

(ii) *Exports.* In the export sections of tables in this chapter, "country" refers to country of consignment.

9. *Pre-Federation Records.*—In the years preceding Federation, each State independently recorded its trade, and in so doing did not distinguish other Australian States from foreign countries. As 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, it is unfortunate that 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.

## § 6. Total Oversea Trade.

1. *Including Gold.*—The following table shows the total trade (including gold) of Australia with oversea countries from 1901 to 1954-55. To save space, the period 1901 to 1950-51 has been divided into five-year periods, and the figures shown represent the annual averages for the periods specified. Figures for individual years were published in earlier issues of the Official Year Book, but it should be borne in mind that the figures for imports in issues prior to No. 37 are in British currency.

In this chapter the values in all tables of imports and exports are shown in Australian currency f.o.b. at port of shipment.

### TOTAL OVERSEA TRADE : AUSTRALIA.

(INCLUDING GOLD.)

Period.(a)	Value. (£'000.)			Excess of Exports (+) or Imports (-). (£'000.)	Value per Head of Population. (£.)		
	Imports.	Exports.	Total.		Imports.	Exports.	Total.
1901 to 1905 ..	35,689	51,237	86,926	+ 15,548	9.1	13.1	22.2
1906 „ 1910 ..	46,825	(b) 69,336	116,161	+ 22,511	11.0	16.3	27.3
1911 „ 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	+ 610,784	57.2	72.7	129.9
1951-52.. ..	1,053,423	675,008	1,728,431	- 378,415	123.5	79.1	202.6
1952-53.. ..	514,109	871,272	1,385,381	+ 357,163	58.9	99.7	158.6
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

(a) The figures shown for the years 1901 to 1950-51 represent the annual averages for the periods covered. The trade for the individual years will be found in Official Year Book No. 40 and earlier issues, but it should be noted that in issues prior to No. 37 imports are shown in British currency. From 1914-15 onwards the particulars relate to financial years. (b) Prior to 1906, ships' stores were included in exports. For value of such goods shipped on overseas vessels during each of the years 1950-51 to 1954-55 see later table, § 12.

In issues of the Official Year Book prior to No. 23 fluctuations in the value of the overseas trade of Australia for earlier years were treated in some detail. The enhanced prices ruling for commodities and the peculiar conditions affecting Australian trade were responsible for the high value of imports in the years following the 1914-18 War and these factors should be taken into consideration in making comparisons with earlier years. In the three years ended 1928-29 imports fell while exports were well maintained, but in 1929-30 both imports and exports declined substantially. The full effects of the economic depression are reflected in the greatly diminished trade figures for the period 1931-32 to 1935-36 and some years thereafter. The lowest level was recorded in 1931-32 when the total trade amounted to £137,538,000.

The outbreak of war in the Pacific in 1941 resulted in a substantial increase in the value of imports during the years 1941-42 to 1945-46. Since the end of the war the annual values of imports and exports have increased considerably, largely because of higher prices.

2. **Excluding Gold.**—The fluctuations in recent years in merchandise trade (including silver as merchandise) are shown more clearly in the following table, from which all gold movements have been excluded.

**TOTAL OVERSEA TRADE : AUSTRALIA.**  
(EXCLUDING GOLD.)

Year.	Value. (£'000.)			Value per Head of Population. (£.)		
	Imports.	Exports.	Total Trade.	Imports.	Exports.	Total Trade.
1950-51..	741,412	981,796	1,723,208	89.3	118.2	207.5
1951-52..	1,050,164	668,019	1,718,183	123.1	78.4	201.5
1952-53..	510,513	850,874	1,361,387	58.4	97.5	155.9
1953-54..	678,650	814,563	1,493,213	76.3	91.5	167.8
1954-55..	841,018	760,446	1,601,464	92.5	83.7	176.2

**§ 7. 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 1952-53 to 1954-55, according to country of origin or consignment respectively.

**COUNTRIES OF ORIGIN OR CONSIGNMENT OF AUSTRALIAN IMPORTS AND EXPORTS : VALUES.**

(EXCLUDING GOLD.)

(£'000.)

Country.	Imports.			Exports.		
	1952-53.	1953-54.	1954-55.	1952-53.	1953-54.	1954-55.
<b>British Countries—</b>						
United Kingdom ..	214,702	331,697	378,669	347,431	295,660	285,476
Australian Territories ..	5,358	4,723	5,792	10,193	12,180	12,910
Canada ..	19,546	18,742	23,840	8,712	11,037	10,503
Ceylon ..	9,786	13,490	19,516	14,687	11,847	8,723
India ..	14,646	18,475	26,057	17,148	14,293	19,428
Malaya, Federation of ..	5,798	8,721	12,797	9,344	9,143	8,410
New Zealand ..	3,592	6,387	7,602	28,676	33,450	37,787
Singapore ..	5,858	8,599	2,492	12,794	11,288	11,600
Other British Countries ..	26,369	31,827	46,741	38,233	32,233	32,124
<b>Total, British Countries</b>	<b>305,655</b>	<b>442,661</b>	<b>523,506</b>	<b>487,218</b>	<b>431,440</b>	<b>426,961</b>
<b>Foreign Countries—</b>						
Arabian States ..	23,278	27,925	27,851	1,774	1,737	2,011
Belgium and Luxemburg ..	5,506	7,063	12,234	32,141	32,663	31,252
France ..	9,253	11,793	14,689	70,084	71,038	64,056
Germany, Federal Republic	13,582	21,365	30,838	22,366	27,076	31,823
Indonesia ..	21,544	21,972	22,529	5,064	6,585	3,702
Italy ..	5,225	11,182	11,740	44,706	51,326	35,915
Japan ..	4,692	6,545	18,422	83,958	55,680	58,573
Netherlands ..	5,954	9,618	13,081	6,356	5,578	6,857
Sweden ..	6,786	10,230	13,516	2,888	3,601	3,241
United States of America ..	85,168	73,254	10,157	57,829	55,505	52,415
Other Foreign Countries ..	23,282	34,412	49,410	36,400	72,305	43,637
<b>Total, Foreign Countries</b>	<b>204,270</b>	<b>235,359</b>	<b>316,467</b>	<b>363,656</b>	<b>383,123</b>	<b>333,482</b>
<b>Country Unknown..</b>	<b>588</b>	<b>630</b>	<b>1,045</b>	<b>..</b>	<b>..</b>	<b>3</b>
<b>Total ..</b>	<b>510,513</b>	<b>678,650</b>	<b>841,018</b>	<b>850,874</b>	<b>814,563</b>	<b>760,446</b>

(ii) *Proportions.* In view of the fluctuations in the total values of imports and exports, it is somewhat difficult to ascertain from the preceding table the relative importance of the various countries in the trade of Australia. A better idea of the

proportions of imports supplied by the various countries and of their relative importance as markets for Australian produce during the years 1952-53 to 1954-55 may be obtained from the following table of percentages.

### COUNTRIES OF ORIGIN OR CONSIGNMENT OF AUSTRALIAN IMPORTS AND EXPORTS: PROPORTIONS.

(EXCLUDING GOLD.)

(Per Cent. of Total.)

Country.	Imports.			Exports.		
	1952-53.	1953-54.	1954-55.	1952-53.	1953-54.	1954-55.
British Countries—						
United Kingdom ..	42.06	48.88	45.03	40.83	36.33	37.54
Australian Territories ..	1.05	0.69	0.69	1.20	1.50	1.70
Canada ..	3.83	2.76	2.83	1.02	1.36	1.38
Ceylon ..	1.92	1.99	2.32	1.73	1.45	1.15
India ..	2.87	2.72	3.10	2.02	1.75	2.55
Malaya, Federation of ..	1.14	1.29	1.52	1.10	1.12	1.11
New Zealand ..	0.70	0.94	0.90	3.37	4.11	4.97
Singapore ..	1.15	1.26	0.30	1.50	1.39	1.53
Other British Countries ..	5.16	4.69	5.56	4.49	3.96	4.22
Total, British Countries	59.88	65.22	62.25	57.26	52.97	56.15
Foreign Countries—						
Arabian States ..	4.56	4.11	3.31	0.21	0.21	0.26
Belgium and Luxemburg ..	1.08	1.04	1.45	3.78	4.01	4.11
France ..	1.81	1.74	1.75	8.24	8.72	8.42
Germany, Federal Republic	2.66	3.15	3.67	2.63	3.33	4.19
Indonesia ..	4.22	3.24	2.68	0.59	0.81	0.40
Italy ..	1.02	1.65	1.40	5.25	6.30	4.72
Japan ..	0.92	0.96	2.19	9.87	6.84	7.70
Netherlands ..	1.17	1.42	1.55	0.75	0.68	0.90
Sweden ..	1.33	1.51	1.60	0.34	0.44	0.43
United States of America ..	16.68	10.80	12.15	6.80	6.81	6.89
Other Foreign Countries ..	4.55	5.07	5.88	4.28	8.88	5.74
Total, Foreign Countries	40.00	34.69	37.63	42.74	47.03	43.85
Country of origin or consignment unknown ..	0.12	0.09	0.12	..	..	..
Total ..	100.00	100.00	100.00	100.00	100.00	100.00

2. According to Currency Areas.—The following table shows the trade of Australia according to currency areas during the years 1953-54 and 1954-55.

The sterling area includes the United Kingdom, its colonies and dependencies, all other countries of the British Commonwealth (except Canada and the New Hebrides Condominium) and certain non-British countries of which the most important are Burma, Bahrain Islands, other Arabian States (excluding Saudi Arabia and Yemen) and Iceland.

The dollar area is comprised of the United States of America and dependencies, Canada, Mexico, other Central American countries, Bolivia, Colombia, Ecuador, Venezuela, the Philippines and Liberia.

The O.E.E.C. area consists of non-sterling members of the Organization for European Economic Co-operation, namely, Belgium, France, Italy, Norway, the Netherlands and Portugal together with their associated States and dependencies, Austria, Denmark, the Federal Republic of Germany, Greece, Luxemburg, Sweden, Switzerland, Trieste, Turkey and the New Hebrides Condominium.



Of the remaining countries grouped under "other non-sterling", the more important as regards trade with Australia are Czechoslovakia, Finland, Poland, Spain, the Union of Soviet Socialist Republics, Egypt, Iran, Saudi Arabia, Japan, Korea, Indonesia, Thailand, Brazil and Chile.

## OVERSEA TRADE OF AUSTRALIA ACCORDING TO CURRENCY AREAS.

(£'000.)

Currency Area.	1953-54.	1954-55.
<b>STERLING.</b>		
Imports—		
From—United Kingdom .. .. .	331,701	378,669
Other Sterling Area Countries .. .. .	113,362	144,319
Total .. .. .	445,063	522,988
Exports—		
To—United Kingdom .. .. .	300,765	285,506
Other Sterling Area Countries .. .. .	129,422	144,478
Total .. .. .	430,187	429,984
Excess of Exports (+) or Imports (—) .. .. .	—14,876	—93,004
<b>DOLLAR.</b>		
Imports—		
From—United States of America .. .. .	73,254	102,157
Canada .. .. .	18,742	23,840
Other Dollar Area Countries .. .. .	1,073	1,192
Total .. .. .	93,069	127,189
Exports—		
To—United States of America .. .. .	55,534	52,440
Canada .. .. .	11,037	10,503
Other Dollar Area Countries .. .. .	4,811	6,682
Total .. .. .	71,382	69,625
Excess of Exports (+) or Imports (—) .. .. .	—21,687	—57,564
<b>OTHER NON-STERLING.</b>		
Imports—		
From—Countries of the O.E.E.C., including dependencies .. .. .	90,789	122,290
Other Countries .. .. .	52,688	71,275
Total .. .. .	143,477	193,565
Exports—		
To—Countries of the O.E.E.C., including dependencies .. .. .	213,124	187,534
Other Countries .. .. .	113,639	87,021
Total .. .. .	326,763	274,555
Excess of Exports (+) or Imports (—) .. .. .	+183,286	+80,990
<b>ALL CURRENCY AREAS.</b>		
Total Imports .. .. .	681,609	843,742
Total Exports .. .. .	828,332	774,164
Excess of Exports (+) or Imports (—) .. .. .	+146,723	—69,578

## § 8. Trade with the United Kingdom.

1. Statistical Classes.—The following table shows, according to statistical classes, the values of imports into Australia of United Kingdom origin and of exports from Australia to the United Kingdom during each of the years 1952-53 to 1954-55.

**TRADE WITH THE UNITED KINGDOM : CLASSES.**  
(£'000.)

Class.	Imports.			Exports.		
	1952-53.	1953-54.	1954-55.	1952-53.	1953-54.	1954-55.
I. Animal foodstuffs, etc. . .	512	1,257	1,606	81,630	71,109	80,362
II. Vegetable foodstuffs; non-alcoholic beverages, etc. . .	616	967	1,086	76,508	69,619	64,808
III. Alcoholic liquors, etc. . .	1,157	1,118	1,688	348	460	417
IV. Tobacco, etc. . .	2,859	4,386	2,219	2	..	4
V. Live animals . . .	135	168	154	4	14	9
VI. Animal substances, etc. . .	149	446	321	145,285	120,546	110,910
VII. Vegetable substances, etc. . .	819	757	710	79	168	462
VIII. Apparel, textiles, etc. . .	26,517	66,681	66,061	183	168	253
IX. Oils, fats and waxes . . .	2,255	6,153	6,009	1,049	1,799	633
X. Pigments, paints and varnishes . . .	889	2,407	2,783	5	3	17
XI. Rocks, minerals, etc. . .	234	332	483	10,074	3,466	3,704
XII. Metals, metal manufactures and machinery . . .	132,180	174,938	207,649	25,014	22,175	19,474
XIII. Rubber and leather, etc. . .	1,823	2,935	4,041	1,550	1,655	1,402
XIV. Wood and wicker, etc. . .	147	361	378	708	541	395
XV. Earthenware, etc. . .	3,526	8,602	10,100	5	4	5
XVI. Paper and stationery . . .	11,330	19,102	21,643	229	199	285
XVII. Jewellery, etc. . .	589	2,506	3,179	29	36	45
XVIII. Optical, surgical and scientific instruments . . .	2,767	4,926	5,720	157	257	137
XIX. Chemicals, drugs, fertilizers . .	5,130	9,816	14,485	683	514	380
XX. Miscellaneous (a) . . .	20,965	23,822	28,354	1,639	1,029	1,612
XXI. Gold and silver; bronze specie . . .	103	21	..	14,076	7,003	192
Total . . .	214,702	331,701	378,669	359,257	306,765	285,506

(a) Includes arms, ammunition and explosives.

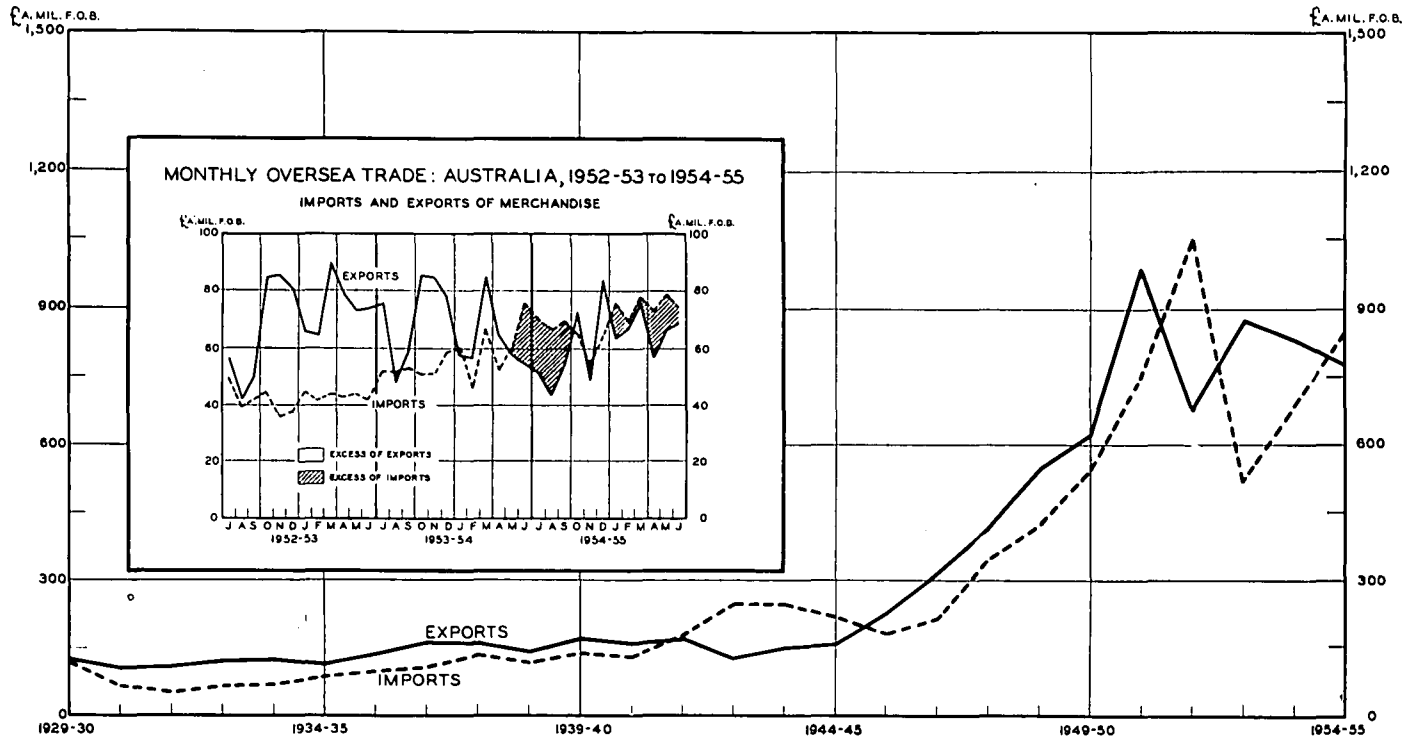
2. Imports of Principal Articles.—The following table shows the value of the principal articles imported into Australia from the United Kingdom during each of the years 1952-53 to 1954-55.

**IMPORTS OF PRINCIPAL ARTICLES OF UNITED KINGDOM ORIGIN : AUSTRALIA.**  
(£'000.)

Article.	1952-53.	1953-54.	1954-55.	Article.	1952-53.	1953-54.	1954-55.
Arms and ammunition, military, naval and air force stores . . .	3,790	3,495	6,707	Motor vehicles, chassis, bodies and parts . .	18,419	39,269	51,270
Apparel . . .	1,822	6,179	7,114	Optical, surgical and scientific instruments . .	2,011	3,590	4,012
Carpets and carpeting . .	1,067	6,823	7,710	Paper, printing . . .	3,741	8,017	8,599
Chemicals, medicinal products, essential oils and fertilizers . . .	5,130	9,816	14,485	Piece-goods—			
Cigarettes . . .	2,764	4,296	2,137	Cotton and linen . .	8,837	22,465	21,097
Crockery . . .	1,061	3,803	4,500	Silk and rayon . . .	3,407	8,157	7,038
Cutlery and platedware . .	974	2,072	2,160	All other piece-goods . .	2,313	4,381	5,048
Electrical cable and wire, covered . . .	3,407	1,868	1,826	Prefabricated houses and buildings . . .	6,620	2,067	533
Electrical machinery and appliances . . .	18,241	18,580	20,824	Rubber and rubber manufactures . . .	1,574	2,507	3,440
Glass and glassware . . .	1,010	2,497	2,928	Sewing silks, cottons, etc. . .	1,162	2,355	2,249
Iron and steel—				Stationery and paper manufactures . . .	5,325	7,459	8,422
Plate and sheet . . .	11,260	9,327	18,134	Tools of trade . . .	1,054	2,335	2,976
Other . . .	6,701	5,744	12,971	Vehicles and parts, other than motor vehicles . .	7,920	11,424	10,789
Linoleums . . .	901	3,615	3,095	Yarns—			
Machines and machinery (except dynamo electrical)—				Cotton . . .	1,400	3,098	3,198
Agricultural . . .	2,313	2,822	3,202	Rayon . . .	4,089	6,034	5,523
Metal-working . . .	5,978	5,940	5,745	Other . . .	480	604	492
Motive power . . .	18,482	25,911	23,307	All other articles(a) . .	38,747	69,758	76,352
Other . . .	22,702	28,393	30,785				
				Total Imports . . .	214,702	331,701	378,669




(a) Includes outside packages.

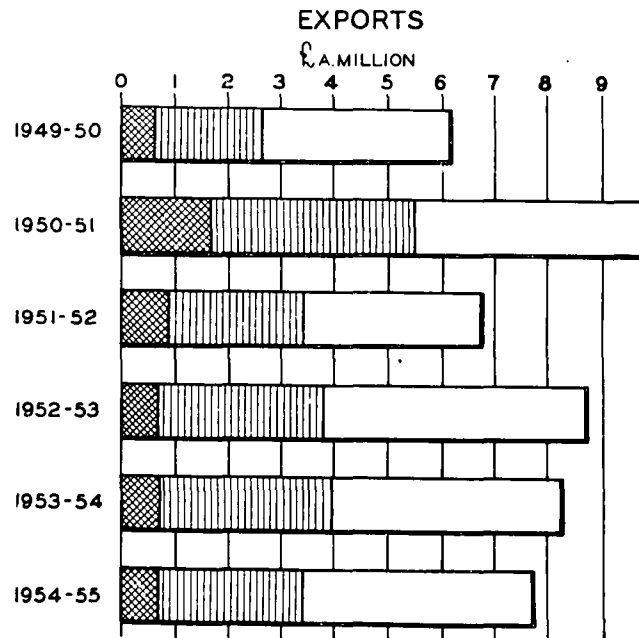
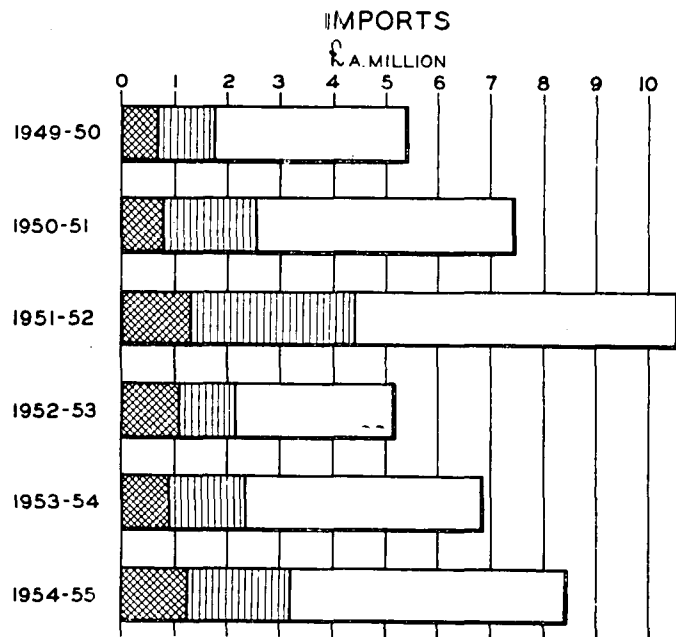
# OVERSEA TRADE : AUSTRALIA, 1929-30 to 1954-55



# OVERSEA TRADE ACCORDING TO CURRENCY AREAS

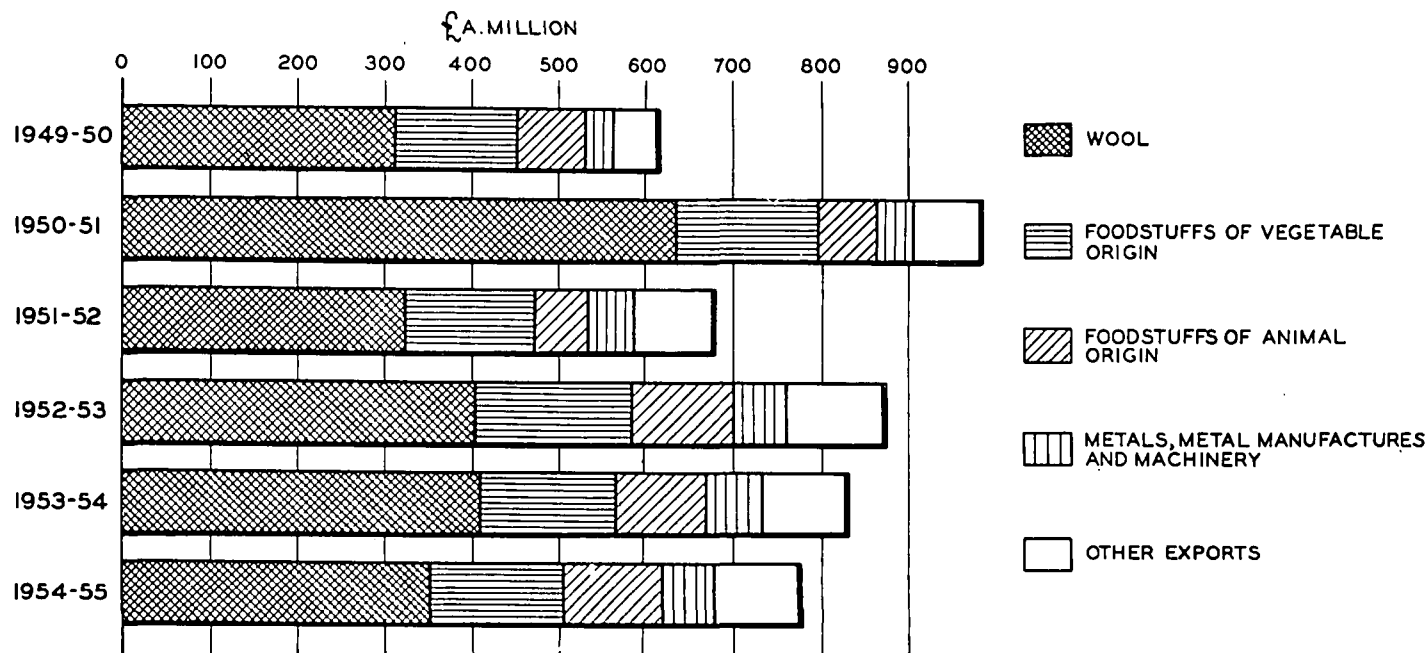
AUSTRALIA, 1949-50 TO 1954-55

 DOLLAR AREA
  OTHER NON-STERLING AREAS
  STERLING AREA



# EXPORTS OF PRINCIPAL COMMODITIES

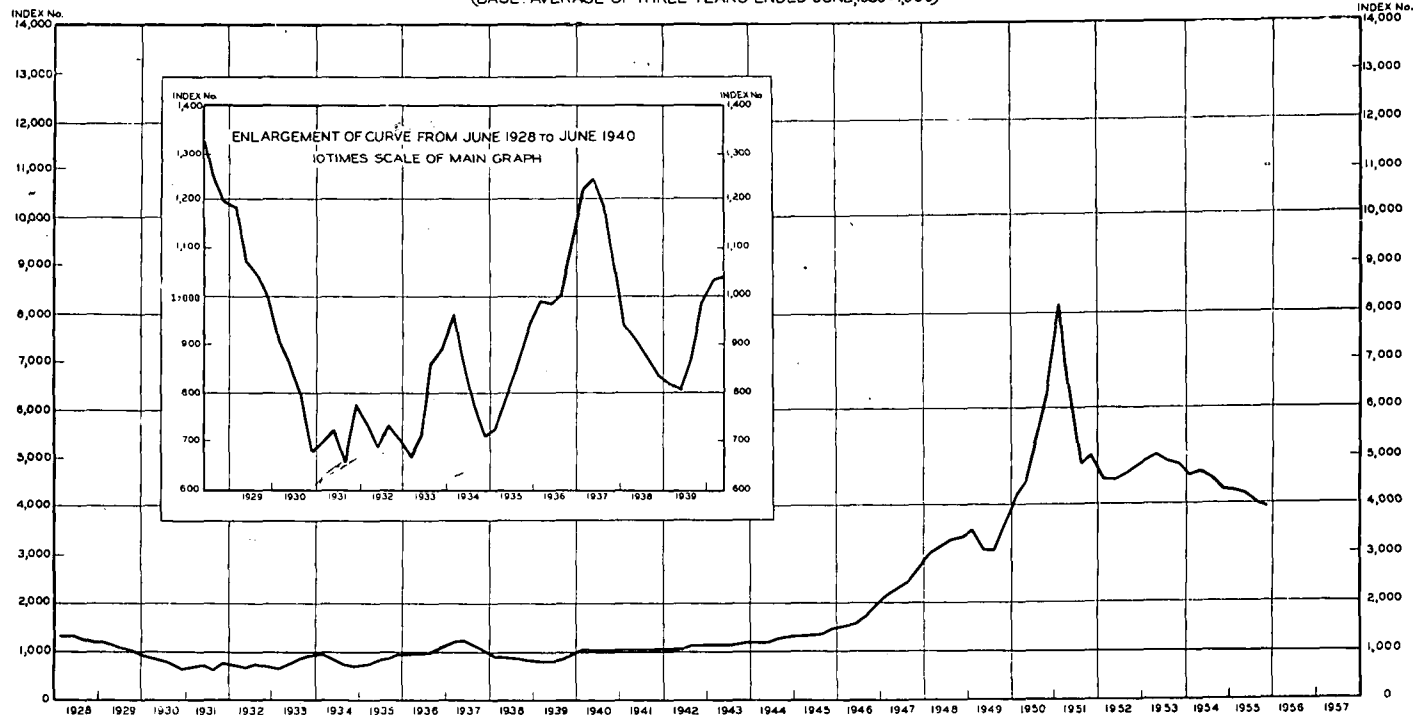
AUSTRALIA, 1949-50 TO 1954-55



# EXPORT PRICE INDEX NUMBERS : AUSTRALIA, 1928 to 1955

SIMPLE AGGREGATIVE INDEX : FIXED WEIGHTS

(BASE : AVERAGE OF THREE YEARS ENDED JUNE, 1939 = 1,000)



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 1952-53 to 1954-55.

PRINCIPAL ARTICLES EXPORTED TO THE UNITED KINGDOM : AUSTRALIA.  
(Australian Produce.)

Article.	Unit of Quantity.	Quantity.			Value. (£'000.)		
		1952-53.	1953-54.	1954-55.	1952-53.	1953-54.	1954-55.
Barley .. .. .	ton	144,316	176,066	91,349	4,886	3,904	2,322
Butter .. .. .	"	32,149	29,054	54,485	12,235	11,295	20,767
Cheese .. .. .	"	17,644	17,935	18,098	3,832	3,692	3,666
Eggs in shell .. .. .	'000 doz.	18,268	9,907	16,642	3,758	2,075	2,697
Flour .. .. .	ton(a)	139,942	65,659	80,832	5,579	2,442	2,261
Fruit, dried .. .. .	"	50,229	45,774	45,944	5,034	4,712	5,341
" fresh .. .. .	'000 bus.	4,725	4,308	3,764	6,918	5,791	5,004
" preserved in airtight containers .. .. .	ton	53,612	76,400	84,859	7,636	12,174	13,358
Gold .. .. .	'000 fine oz.	712	298	2	11,725	4,773	30
Hides and skins .. .. .	"				2,777	2,596	2,803
Lead bullion .. .. .	ton	48,887	34,124	40,818	7,955	4,393	6,133
" pig .. .. .	"	54,090	108,137	77,398	6,284	11,692	9,495
Leather .. .. .	"				1,532	1,608	1,231
Meats— <i>preserved by cold process</i> .. .. .	ton	66,264	164,388	93,139	7,639	15,756	16,708
Beef and veal .. .. .	"	33,461	15,913	39,075	4,988	2,494	9,293
Lamb .. .. .	"	31,873	17,669	8,668	2,375	1,292	927
Mutton .. .. .	"		504	90		111	26
Pork .. .. .	'000 lb.	54,221	38,225	9,519	3,949	2,102	396
Milk and cream .. .. .	'000 fine oz.	5,954	5,772	408	2,244	2,181	158
Silver bullion .. .. .	ton	358,480	534,749	435,017	16,783	23,751	18,962
Sugar (cane) .. .. .	"	1,775	11,638	3,200	116	721	263
Tallow (unrefined) .. .. .	'000 super ft.	8,289	5,424	3,280	566	353	390
Timber, undressed(b) .. .. .	ton	588,106	308,582	512,524	18,571	9,575	13,718
Wheat .. .. .	'000 gals.	689	936	505	341	453	410
Wine .. .. .	'000 lb.	387,228	315,507	327,103	142,277	117,715	107,914
Wool .. .. .	ton	32,157	15,264	9,002	4,744	1,461	951
Zinc bars, etc. .. .. .	"				60,074	34,942	38,035
All other articles .. .. .	"				7,037	6,764	
Total Exports (Australian Produce) .. .. .	"				357,483	298,949	283,479

(a) 2,000 lbs.

(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. The imports into Australia include many commodities, such as tea, rice, raw coffee, unmanufactured tobacco, petroleum products, copra, timber, etc., which the United Kingdom could not supply. These items, in addition to others not available from that country, have therefore been omitted from the computation following.

The imports into Australia have been classified under nine headings, and the trade of the United Kingdom therein is compared with that of France, 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 1952-53 to 1954-55 are shown in the following table.

**IMPORTS FROM THE UNITED KINGDOM AND ITS MAIN COMPETITORS.**  
(£'000.)

Nature of Imports.	Year.	United Kingdom.	France.	Germany. (a)	Japan.	United States of America.	All Countries.
Foodstuffs of animal origin	1952-53	511	..	85	31	451	3,100
	1953-54	1,257	7	130	358	148	5,853
	1954-55	1,607	7	357	739	91	7,303
Yarns and manufactured fibres, textiles and apparel	1952-53	26,517	1,280	1,091	771	338	48,243
	1953-54	66,681	3,963	2,882	4,735	669	113,805
	1954-55	66,061	5,073	3,875	9,026	524	126,752
Metals, metal manufactures and machinery	1952-53	132,180	3,107	8,892	1,956	53,895	225,092
	1953-54	174,938	2,977	10,590	191	39,577	252,182
	1954-55	207,649	5,404	14,333	4,044	57,949	324,140
Rubber and leather and manufactures thereof, and substitutes therefor	1952-53	1,823	76	26	..	770	9,036
	1953-54	2,935	94	87	1	565	12,390
	1954-55	4,041	283	171	22	860	17,825
Earthenware, cement, china, glass and stoneware	1952-53	3,526	115	93	399	336	6,010
	1953-54	8,602	171	275	228	410	12,095
	1954-55	10,100	341	676	671	522	15,517
Pulp, paper and board; paper manufactures and stationery	1952-53	11,330	72	156	3	1,057	22,432
	1953-54	19,102	77	528	8	1,048	34,097
	1954-55	21,643	221	816	1,464	1,528	46,410
Sporting material, toys, fancy goods, jewellery and timepieces.	1952-53	588	47	270	4	16	2,391
	1953-54	2,506	132	1,345	122	24	7,688
	1954-55	3,179	181	2,392	611	19	10,442
Optical, surgical and scientific instruments, etc.; photographic goods, n.e.i.	1952-53	2,767	66	225	23	1,344	5,155
	1953-54	4,926	112	891	42	1,386	8,522
	1954-55	5,720	153	1,722	148	1,688	10,841
Chemicals, medicinal and pharmaceutical products, essential oils and fertilizers	1952-53	5,130	415	709	67	1,248	12,222
	1953-54	9,816	851	2,133	128	1,453	19,606
	1954-55	14,485	1,032	3,333	371	2,250	27,941
Total, above-mentioned imports	1952-53	184,372	5,178	11,547	3,254	59,455	334,581
	1953-54	290,763	8,384	18,861	5,813	45,270	466,238
	1954-55	334,485	12,695	27,675	17,096	65,431	587,171
Total imports (less bullion and specie)	1952-53b	214,599	9,253	13,582	4,692	85,166	510,342
	1953-54b	331,680	11,793	21,365	6,544	73,453	678,590
	1954-55b	378,669	14,689	30,838	18,422	102,157	840,972

(a) Federal Republic.

(b) Includes outside packages.

The principal classes of competitive imports are metals, metal manufactures and machinery (value £324,140,000 in 1954-55) and manufactured fibres, textiles and apparel (value £126,752,000 in 1954-55). The value of goods included in these two groups represented 76.8 per cent. of the total value of competitive commodities during 1954-55. In 1954-55 the United Kingdom supplied 57.0 per cent. of the total value of competitive goods.

### § 9. Trade with Eastern Countries.

1. **Merchandise Trade according to Countries.**—The values of imports into Australia from Eastern countries during the years 1952-53 to 1954-55 are shown in the following table. The principal commodities imported in 1954-55 according to countries of origin were :—Borneo (British)—crude petroleum, £14,022,000; Ceylon—tea, £18,099,000; India—bags and sacks, £11,534,000, cotton and linen piece-goods, £4,247,000, hessian, £2,333,000 and cotton fibres, £835,000; Malaya—crude rubber, £9,712,000; Japan—cotton and linen piece-goods, £7,045,000; Indonesia—petroleum spirit, £10,664,000, residual and solar oil, £4,016,000, kerosene, £4,437,000.



**MERCHANDISE TRADE WITH EASTERN COUNTRIES : AUSTRALIA.**  
(£'000.)

Country.	Imports.			Exports.		
	1952-53.	1953-54.	1954-55.	1952-53.	1953-54.	1954-55.
<b>British Countries—</b>						
Borneo .. ..	5,998	8,439	15,522	778	960	927
Ceylon .. ..	9,786	13,490	19,516	14,687	11,447	6,552
Hong Kong .. ..	521	1,717	7,369	4,855	4,950	5,535
India .. ..	14,646	18,475	26,057	17,148	14,293	19,426
Malaya, Federation of .. ..	5,798	8,721	12,797	9,344	9,143	8,440
Pakistan .. ..	2,268	3,706	2,253	4,524	3,287	2,947
Singapore .. ..	5,858	8,599	2,492	12,794	11,288	11,600
<b>Foreign Countries—</b>						
Bhutan and Nepal .. ..	..	..	..	..	1	..
Burma .. ..	9	18	11	920	1,689	1,788
China .. ..	1,408	1,983	1,732	681	2,192	2,705
Formosa .. ..	54	137	100	740	444	546
<b>French Associated States and Dependencies—</b>						
Cambodia .. ..	..	..	..	..	..	3
India (French) .. ..	..	..	..	26	16	10
Laos .. ..	1	..	7	526	598	70
Vietnam .. ..	..	1	9	19	34	2
Indonesia .. ..	21,544	21,972	22,529	5,064	6,585	3,702
Japan .. ..	4,692	6,545	18,422	83,958	55,689	58,573
Korea .. ..	4	3	4	4,210	2,586	970
Philippines .. ..	53	82	115	501	1,039	1,709
<b>Portuguese Dependencies—</b>						
India (Portuguese) .. ..	..	..	..	92	212	69
Macao .. ..	..	2	..	16	2	..
Timor .. ..	18	29	58	35	34	39
Thailand .. ..	37	35	76	1,224	1,244	1,157
<b>Total .. ..</b>	<b>(a) 72,695</b>	<b>(a) 93,954</b>	<b>(a) 124,069</b>	<b>162,151</b>	<b>127,739</b>	<b>126,742</b>

(a) Includes outside packages.

The balance of trade with Eastern countries shows an excess of exports from Australia during each of the years 1952-53 to 1954-55.

2. Exports of Principal Articles.—The following table shows the value of exports of Australian produce and re-exports from Australia to Eastern countries for each of the years 1952-53 to 1954-55. The countries concerned in this trade are Borneo (British), Ceylon, Hong Kong, India, Federation of Malaya, Pakistan, Singapore, Burma, China and the Chinese dependencies of Kwantung and Manchuria, Formosa, the French Associated States (Cambodia, Laos and Vietnam) and French dependencies in India, Republic of Indonesia, Japan, Korea, Philippines Republic, the Portuguese dependencies in India, Macao and Timor, and Thailand.

**TOTAL EXPORTS FROM AUSTRALIA TO EASTERN COUNTRIES.**  
(£'000.)

Article.	1952-53.	1953-54.	1954-55.	Article.	1952-53.	1953-54.	1954-55.
Army stores .. ..	3,508	2,052	1,123	Meats .. ..	3,712	3,443	3,726
Butter .. ..	2,819	2,354	2,193	Metals and metal manufactures except zinc bars, etc.	2,202	6,597	2,729
Cheese .. ..	921	825	790	Milk and cream .. ..	6,307	6,215	6,731
<b>Fruit—</b>				Sugar (raw) .. ..	813	673	5,741
Dried or preserved .. ..	244	294	336	Tallow, inedible .. ..	1,045	1,094	1,135
Fresh .. ..	1,207	1,196	1,201	Wool .. ..	63,089	47,317	51,287
<b>Grain and cereals—</b>				Zinc bars, blocks, etc. .. ..	1,292	2,242	2,432
Flour (wheaten), plain white .. ..	25,975	22,707	13,853	Other merchandise .. ..	15,227	8,541	8,251
Wheat .. ..	15,832	8,058	15,150	<b>Total Merchandise .. ..</b>	<b>162,151</b>	<b>127,739</b>	<b>126,742</b>
Other (prepared and unprepared) .. ..	14,153	9,667	5,091	Gold and silver; bronze specie .. ..	..	5,624	15,825
Infants' and invalids' foods .. ..	1,722	1,540	1,263	<b>Total Exports .. ..</b>	<b>162,151</b>	<b>133,363</b>	<b>142,567</b>
Leather .. ..	628	657	791				
Machines and machinery .. ..	1,455	2,200	2,919				

### § 10. Oversea Trade at Principal Ports.

The following table shows the value of overseas imports and exports at the principal ports of Australia during the year 1954-55, together with the totals for each State.

#### OVERSEA TRADE AT PRINCIPAL PORTS, 1954-55.

(£'000.)

Port.	Imports.	Exports.	Port.	Imports.	Exports.
NEW SOUTH WALES.			SOUTH AUSTRALIA.		
Sydney	326,193	195,817	Port Adelaide, including		
Newcastle, including Port Stephens	9,497	21,594	Adelaide	61,635	65,341
Port Kembla	10,406	2,777	Port Pirie	1,290	22,108
Other		469	Port Lincoln	705	3,479
Total	346,096	220,657	Walleroo	558	2,762
			Other	116	1,389
			Total	64,804	91,779
VICTORIA.			WESTERN AUSTRALIA.		
Melbourne	270,334	194,857	Fremantle, including Perth	49,677	55,640
Geelong	26,508	18,423	Geraldton	165	5,977
Portland	652	3,292	Bunbury	206	2,994
Total	297,494	216,572	Other	600	3,896
			Total	50,648	68,507
QUEENSLAND.			TASMANIA.		
Brisbane	60,854	98,042	Hobart	10,413	10,560
Townsville	3,041	20,446	Devonport	628	758
Calms	2,457	8,578	Launceston	2,337	5,026
Mackay	607	8,399	Burnie	1,751	2,409
Rockhampton	641	6,190	Total	15,129	18,762
Bowen		5,796			
Gladstone	1,144	3,898	NORTHERN TERRITORY.		
Maryborough	40	3,129	Darwin	688	104
Other	8	5	Grand Total	843,742	774,164
Total	68,883	154,483			

### § 11. 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 1952-53 to 1954-55.

#### OVERSEA TRADE : CLASSES.

(£'000.)

Class.	Imports.			Exports.		
	1952-53.	1953-54.	1954-55.	1952-53.	1953-54.	1954-55.
I. Animal foodstuffs, etc.	3,100	5,853	7,304	116,478	102,684	112,546
II. Vegetable foodstuffs; non-alcoholic beverages, etc.	18,495	25,702	35,925	181,376	154,938	152,600
III. Alcoholic liquors, etc.	1,215	1,328	2,028	1,518	1,657	1,716
IV. Tobacco, etc.	15,507	17,800	17,316	264	282	348
V. Live animals	458	570	693	742	700	1,031
VI. Animal substances, etc.	1,945	4,437	4,108	424,602	431,670	374,690
VII. Vegetable substances, etc.	14,547	18,240	19,461	850	1,280	1,831
VIII. Apparel, textiles, etc.	48,243	113,805	126,752	1,752	2,268	2,758
IX. Oils, fats and waxes	74,272	83,401	96,918	5,273	5,680	6,588
X. Pigments, paints and varnishes	1,864	5,272	5,900	608	927	922
XI. Rocks, minerals, etc.	6,377	5,946	8,234	22,267	16,236	17,052
XII. Metals, metal manufactures and machinery	225,992	252,182	324,140	61,368	66,128	59,108
XIII. Rubber and leather, etc.	9,036	12,390	17,825	2,864	3,249	3,196
XIV. Wood and wicker, etc.	6,232	11,875	17,459	4,080	3,283	2,316
XV. Earthenware, etc.	6,010	12,095	15,518	710	1,008	1,161
XVI. Paper and stationery	22,431	34,097	46,410	1,938	2,169	2,560
XVII. Jewellery, etc.	2,391	7,688	10,442	497	558	570
XVIII. Optical, surgical and scientific instruments	5,155	8,522	10,841	1,234	1,592	1,253
XIX. Chemicals, drugs, fertilizers	12,222	19,606	27,941	5,150	3,999	4,505
XX. Miscellaneous (a)	34,850	37,682	45,757	14,837	11,599	11,290
XXI. Gold and silver; bronze specie	3,767	3,010	2,770	22,774	16,466	16,123
Total	514,109	681,609	813,742	871,272	828,332	774,164

(a) Includes arms, ammunition and explosives.

(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 1952-53 to 1954-55.

EXPORTS FROM AUSTRALIA : AUSTRALIAN PRODUCE AND RE-EXPORTS.  
(£'000.)

Class.	Australian Produce.			Re-exports.		
	1952-53.	1953-54.	1954-55.	1952-53.	1953-54.	1954-55.
I. Animal foodstuffs, etc. . .	116,402	102,625	112,488	76	59	58
II. Vegetable foodstuffs; non-alcoholic beverages, etc. . .	181,009	154,671	152,078	367	264	522
III. Alcoholic liquors, etc. . .	1,457	1,633	1,607	61	24	19
IV. Tobacco, etc. . .	226	260	264	38	13	84
V. Live animals . . .	703	661	958	39	39	73
VI. Animal substances, etc. . .	424,479	431,332	374,399	123	288	291
VII. Vegetable substances, etc. . .	829	1,241	1,760	21	39	62
VIII. Apparel, textiles, etc. . .	1,428	2,003	2,494	324	265	264
IX. Oils, fats and waxes . . .	4,439	5,207	6,029	834	482	559
X. Pigments, paints and varnishes . . .	690	850	891	8	77	31
XI. Rocks, minerals, etc. . .	22,077	16,174	16,861	190	62	191
XII. Metals, metal manufactures and machinery . . .	57,858	61,889	55,193	3,570	4,239	3,915
XIII. Rubber and leather, etc. . .	2,820	3,198	3,172	44	51	24
XIV. Wood and wicker, etc. . .	3,997	3,199	2,185	83	84	131
XV. Earthenware, etc. . .	676	983	1,136	34	25	25
XVI. Paper and stationery . . .	1,833	2,087	2,444	105	82	116
XVII. Jewellery, etc. . .	364	439	460	133	119	110
XVIII. Optical, surgical and scientific instruments . . .	910	1,101	870	324	491	383
XIX. Chemicals, drugs, fertilizers . . .	4,925	3,823	4,309	225	196	196
XX. Miscellaneous (a) . . .	13,512	10,267	10,068	1,375	1,332	1,222
XXI. Gold and silver; bronze specie . . .	22,657	16,422	16,118	117	44	5
Total . . .	863,291	820,057	765,883	7,981	8,275	8,281

(a) Includes arms, ammunition and explosives.

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 1952-53 to 1954-55.

PRINCIPAL ARTICLES IMPORTED : AUSTRALIA.

Article.	Unit of Quantity.	Quantity.			Value (£'000).		
		1952-53.	1953-54.	1954-55.	1952-53.	1953-54.	1954-55.
Apparel—							
Blouses, skirts, costumes, etc. . .	doz. prs.	103,239	396,031	510,301	122	556	1,178
Gloves . . .					464	1,464	1,627
Hats and caps . . .					407	973	939
Men's and boys' outer clothing . . .					171	495	722
Socks and stockings . . .					150	925	1,143
Trimmings and ornaments . . .					1,506	4,933	5,383
Other apparel and attire . . .					703	2,060	2,591
Arms and explosives, military stores, etc. . .					4,983	4,694	9,463
Bags and sacks . . .					6,730	6,086	11,643
Carpets and carpeting . . .					1,199	7,251	8,606
Crockery etc. . .					1,114	4,046	5,171
Drugs, fertilizers and chemicals . . .					12,222	19,606	27,941
Electrical machinery and appliances . . .					23,054	24,027	26,872
Fibres . . .					9,648	12,365	12,288
Glass and glassware . . .					2,116	4,726	6,105
Iron and steel—							
Pipes, tubes and fittings . . .	cwt.	509,992	493,979	685,129	2,319	2,862	2,603
Plate and sheet . . .	cwt.	3,975,080	2,909,901	6,670,808	19,035	13,486	29,583
Other . . .					9,716	5,148	17,768
Machines and machinery (except dynamo electrical)—							
Agricultural . . .					3,833	4,325	5,043
Metal-working . . .					9,060	8,204	8,635
Motive power . . .					33,585	41,062	41,221
Other . . .					42,991	46,418	53,105

## PRINCIPAL ARTICLES IMPORTED: AUSTRALIA—continued.

Article.	Unit of Quantity.	Quantity.			Value. (£'000.)		
		1952-53.	1953-54.	1954-55.	1952-53.	1953-54.	1954-55.
Motor vehicles, chassis, bodies and parts .. .. .	..	..	..	..	30,354	53,957	72,242
Oils—	..	..	..	..	..	..	..
Linseed .. .. .	'000 gal.	1,487	3,567	3,636	818	1,585	1,386
Petroleum and shale—	..	..	..	..	..	..	..
Kerosene .. .. .	'000 gal.	126,946	136,729	150,735	6,459	6,041	7,705
Lubricating (mineral) .. .. .	'000 gal.	24,746	26,094	43,885	4,096	3,436	5,509
Petroleum and shale spirit .. .. .	'000 gal.	635,451	689,104	603,715	37,033	39,938	34,052
Residual and solar .. .. .	'000 gal.	424,505	472,023	377,021	15,173	16,923	13,807
Paper, printing .. .. .	..	..	..	..	8,531	13,104	19,218
Piece-goods—	'000 sq. yds.	..	..	..	..	..	..
Canvas and duck .. .. .	..	4,379	7,631	8,211	1,294	1,263	1,398
Cotton and linen .. .. .	..	..	..	..	13,478	40,481	42,921
Silk and rayon .. .. .	..	..	..	..	6,974	15,182	16,707
Woolen and containing wool .. .. .	..	..	..	..	300	1,299	1,703
All other piece-goods .. .. .	..	..	..	..	3,389	6,412	6,926
Plastic materials .. .. .	..	..	..	..	2,034	4,984	5,851
Prefabricated houses and buildings .. .. .	..	..	..	..	11,185	4,476	880
Rubber and rubber manufactures .. .. .	..	..	..	..	8,715	11,827	17,032
Stationery and paper manufactures .. .. .	..	..	..	..	6,335	9,065	10,516
Tea .. .. .	'000 lb.	58,808	58,533	65,212	11,663	13,647	21,743
Timber, undressed, including logs <i>a</i> .. .. .	'000 sup. ft.	114,134	244,595	332,123	4,739	9,572	13,265
Yarns—	..	..	..	..	..	..	..
Cotton .. .. .	'000 lb.	2,574	6,369	6,411	1,434	3,143	3,255
Rayon .. .. .	'000 lb.	12,617	24,377	18,392	5,687	10,236	8,990
Woolen .. .. .	'000 lb.	66	119	157	105	221	207
Other .. .. .	'000 lb.	1,511	1,802	1,513	469	406	387
All other articles .. .. .	..	..	..	..	148,78	197,715	258,412
Total Imports .. .. .	..	..	..	..	514,109	681,609	843,742

(a) Excludes 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 1952-53 to 1954-55.

## EXPORTS OF PRINCIPAL ARTICLES OF AUSTRALIAN PRODUCE.

Article.	Unit of Quantity.	Quantity.			Value. (£'000.)		
		1952-53.	1953-54.	1954-55.	1952-53.	1953-54.	1954-55.
Arms, ammunition, military, naval and air force stores .. .. .	..	..	..	..	5,467	3,927	3,299
Barley .. .. .	ton	496,403	601,536	421,174	19,245	14,870	10,357
Butter .. .. .	..	49,298	39,299	62,507	20,075	16,052	24,589
Cheese .. .. .	..	23,663	22,749	22,117	5,851	5,329	5,057
Drugs, fertilizers and chemicals .. .. .	..	..	..	..	4,925	3,803	4,309
Flour .. .. .	ton	776,446	679,704	585,374	37,417	29,682	20,305
Fruit—	..	..	..	..	..	..	..
Dried .. .. .	..	72,268	65,314	71,177	8,028	7,393	8,435
Fresh .. .. .	'000 bus.	6,157	6,596	6,284	9,407	9,384	8,771
Preserved in airtight containers .. .. .	ton	63,956	88,937	96,337	9,298	14,184	15,245
Gold .. .. .	'000 fine oz.	1,244	871	864	20,297	13,737	13,717
Hides and skins .. .. .	..	..	..	..	20,118	19,422	19,674
Lead, pig .. .. .	ton	141,999	170,207	140,256	17,168	18,550	17,182
Machines and machinery (except dynamo electrical) .. .. .	..	..	..	..	5,943	6,744	8,789
Meats— <i>mainly sold frozen</i> .. .. .	..	..	..	..	..	..	..
Beef and veal .. .. .	ton	85,427	141,508	123,392	13,265	22,046	21,899
Lamb .. .. .	..	38,424	19,688	42,403	5,971	3,297	10,191
Mutton .. .. .	..	36,060	24,817	15,094	2,790	1,964	1,626
Pork .. .. .	..	1,542	1,231	2,908	472	462	781
Milk and cream .. .. .	'000 lb.	150,302	117,143	105,285	11,960	9,675	8,306
Ores and concentrates .. .. .	ton	356,978	427,683	383,457	19,605	13,017	14,292
Sugar (cane) .. .. .	..	459,354	706,796	737,150	21,654	31,592	31,146
Wheat .. .. .	..	1,593,963	965,338	1,691,063	51,970	30,957	45,222
Wool (a) .. .. .	'000 lb.	1,174,469	1,168,204	1,144,560	402,905	410,431	353,106
All other articles .. .. .	..	1,232	135,519	119,505	148,870	133,521	119,585
Total Exports (Australian Produce) .. .. .	..	..	..	..	863,291	820,057	765,883

(a) Quantity in terms of greasy wool.

4. Imports of Merchandise, Specie and Bullion.—The table hereunder shows the value of imports into Australia during each of the years 1950–51 to 1954–55, grouped under the headings—Merchandise, and Specie and Bullion. The imports of merchandise are shown under the sub-headings of “free” and “dutiable” goods.

## IMPORTS OF MERCHANDISE, SPECIE AND BULLION : AUSTRALIA.

(£'000.)

Year.	Merchandise.			Specie and Bullion.	Total Imports.
	Free Goods.	Dutiable Goods.	Total Merchandise.		
1950–51 ..	366,229	375,149	741,378	2,493	743,871
1951–52 ..	554,959	494,792	1,049,751	3,672	1,053,423
1952–53 ..	301,870	208,472	510,342	3,767	514,109
1953–54 ..	317,850	360,740	678,590	3,010	681,609
1954–55 ..	399,063	441,909	840,972	2,770	843,742

5. Exports of Merchandise, Specie and Bullion.—The next table shows the recorded value of exports from Australia during each of the years 1950–51 to 1954–55, grouped under the headings—Merchandise, and Specie and Bullion. The exports of Australian produce and re-exports are shown separately :—

## EXPORTS OF MERCHANDISE, SPECIE AND BULLION : AUSTRALIA.

(£'000.)

Year.	Merchandise.			Specie and Bullion.			Total.
	Australian Produce.	Re-exports.	Total.	Australian Produce.	Re-exports.	Total.	
1950–51 ..	972,933	6,163	979,096	2,682	18	2,700	981,796
1951–52 ..	657,344	7,896	665,240	9,716	52	9,768	675,008
1952–53 ..	840,634	7,864	848,498	22,657	117	22,774	871,272
1953–54 ..	803,635	8,231	811,866	16,422	44	16,466	828,332
1954–55 ..	749,765	8,276	758,041	16,117	6	16,123	774,164

6. Imports in Tariff Divisions.—Imports into Australia classified in accordance with the sixteen divisions of the Customs Tariff, for each of the years 1945–46 to 1954–55, will be found in *Oversea Trade Bulletin*, 1954–55, page 523.

7. Imports and Net Customs Revenue.—The percentage of net Customs revenue, omitting primage, collected to the total value of all merchandise imported in each of the years 1950–51 to 1954–55 was as follows :—1950–51, 11.3 per cent. ; 1951–52, 10.0 per cent. ; 1952–53, 12.6 per cent. ; 1953–54, 12.8 per cent. ; and 1954–55, 11.1 per cent. Primage duty was in force during these years and if this is added to net Customs revenue the percentages become :—1950–51, 12.4 per cent. ; 1951–52, 10.9 per cent. ; 1952–53, 13.8 per cent. ; 1953–54, 14.0 per cent. ; and 1954–55, 12.1 per cent. The percentages of net Customs revenue, omitting primage, on the total value of dutiable goods only were : 1950–51, 22.4 per cent. ; 1951–52, 21.1 per cent. ; 1952–53, 31.0 per cent. ; 1953–54, 24.0 per cent. ; and 1954–55, 21.1 per cent. 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.

## § 12. Ships' Stores.

Prior to 1906, goods shipped in Australian ports on board oversea vessels as ships' stores were included in the general exports. From 1906, ships' stores have been specially recorded as such, and have been omitted from the export figures. The value of these stores shipped each year during the period 1950-51 to 1954-55, with fuel oils separate, is shown in the following table :—

VALUE OF STORES SHIPPED ON OVERSEA VESSELS : AUSTRALIA.  
(£'000.)

Item.	1950-51.	1951-52.	1952-53.	1953-54.	1954-55.
Fuel Oils ..	4,635	5,532	6,460	5,674	6,925
All Stores (including Fuel Oils)	9,358	10,478	11,696	10,266	13,181

In addition to fuel oils, the principal items of ships' stores supplied to oversea vessels in 1954-55 were :—Meats, £1,536,395 ; fruit and vegetables, £551,357 ; oils, other than fuel, £402,462 ; eggs, £195,557 ; butter, £176,265 ; fish, £160,810 ; ale, porter, beer, etc., £149,254 ; coal, £111,625 ; milk and cream, £110,858 ; rice, £90,767.

## § 13. Movement of Specie and Bullion.

1. Imports and Exports.—The following table shows the values of gold and silver specie and bullion and of bronze specie imported into and exported from Australia during each of the years 1952-53 to 1954-55.

IMPORTS AND EXPORTS, SPECIE AND BULLION : AUSTRALIA.  
(£.)

Item.	Imports.			Exports.		
	1952-53.	1953-54.	1954-55.	1952-53.	1953-54.	1954-55.
Gold—Specie ..	..	3,537	2,948	..	..	1,000
Bullion	3,595,970	2,955,517	2,720,834	20,397,933	13,769,222	13,716,622
Total ..	3,595,970	2,959,054	2,723,782	20,397,933	13,769,222	13,717,622
Silver—Specie	118,205	29,353	11,814	114,429	103,416	47,763
Bullion	36,017	29,929	34,429	2,245,606	2,592,377	2,356,908
Total ..	154,222	59,282	46,243	2,360,035	2,695,793	2,404,671
Bronze—Specie	16,785	217	..	16,384	903	909
Total— Australian Pro- duce ..	..	..	..	22,657,249	16,422,354	16,117,547
Re-exports ..	..	..	..	117,103	43,564	5,655
Grand Total	3,766,977	3,018,553	2,770,025	22,774,352	16,465,918	16,123,202

2. Imports and Exports by Countries.—The next table shows the imports and exports of specie and bullion from and to various countries during the year 1954-55 :—

**IMPORTS AND EXPORTS OF SPECIE AND BULLION BY COUNTRIES : AUSTRALIA.  
1954-55.**

( £.)

Country.	Imports.			Exports.		
	Specie.	Bullion.	Total.	Specie.	Bullion.	Total.
Australia (re-imported) ..	13,111	..	13,111	..	..	..
United Kingdom ..	69	23	92	3,831	188,041	191,872
Australian Territories—						
Nauru ..	..	..	..	1,473	..	1,473
New Guinea ..	..	1,152,674	1,152,674	22,220	..	22,220
Norfolk Island ..	..	..	..	300	..	300
Papua ..	..	10,574	10,574	9,292	..	9,292
Ceylon ..	..	..	..	..	2,171,562	2,171,562
Hong Kong ..	..	..	..	..	11,780,079	11,780,079
New Zealand ..	641	448,977	449,618	4,295	34,316	38,611
Pacific Islands (British)—						
Fiji ..	..	1,142,894	1,142,894	..	661	661
Gilbert and Ellice Islands ..	..	..	..	6,075	..	6,075
New Hebrides ..	..	..	..	560	..	560
Solomon Islands ..	..	..	..	1,605	..	1,605
<b>Total, British Countries</b>	<b>13,821</b>	<b>2,755,142</b>	<b>2,768,963</b>	<b>49,651</b>	<b>14,174,659</b>	<b>14,224,310</b>
France ..	..	100	100	..	..	..
Peru ..	3	..	3	..	..	..
Macao ..	..	..	..	..	1,873,544	1,873,544
United States of America ..	938	..	938	21	25,327	25,348
<b>Total, Foreign Countries</b>	<b>941</b>	<b>100</b>	<b>1,041</b>	<b>21</b>	<b>1,898,871</b>	<b>1,898,892</b>
Origin unknown ..	..	21	21	..	..	..
<b>Grand Total</b>	<b>14,762</b>	<b>2,755,263</b>	<b>2,770,025</b>	<b>49,672</b>	<b>16,073,530</b>	<b>16,123,202</b>

**§ 14. Exports according to Industries.**

1. Classification.—The following table provides an analysis of the exports of Australian produce, according to the main classes of industry in which the goods were produced, for each of the years 1952-53 to 1954-55. The index numbers based on the year 1913 show the variations in the total recorded value only of exports in each industrial group, and have not been adjusted either for price changes or in accordance with the variation of the Australian £ in relation to sterling.

**EXPORTS OF AUSTRALIAN PRODUCE ACCORDING TO INDUSTRIAL ORIGIN :  
VALUE.**

Industrial Group.	1952-53.		1953-54.		1954-55.	
	£'000.	Index No.(a)	£'000.	Index No.(a)	£'000.	Index No.(a)
Agriculture .. ..	176,516	1,653	153,415	1,437	150,449	1,409
Pastoral .. ..	489,321	1,163	490,136	1,165	437,174	1,039
Dairy and Farmyard .. ..	50,347	1,306	43,317	1,124	46,802	1,214
Mines and Quarries(b) .. ..	69,960	319	62,880	287	58,933	269
Fisheries .. ..	2,526	594	2,690	633	3,134	737
Forestry .. ..	3,807	344	3,054	276	1,910	173
<b>Total, Primary Produce</b>	<b>792,477</b>	<b>990</b>	<b>755,402</b>	<b>944</b>	<b>698,402</b>	<b>872</b>
<b>Manufacturing .. ..</b>	<b>67,474</b>	<b>2,927</b>	<b>67,182</b>	<b>2,915</b>	<b>70,703</b>	<b>3,067</b>
<b>Total .. ..</b>	<b>859,951</b>	<b>1,044</b>	<b>822,674</b>	<b>999</b>	<b>769,105</b>	<b>934</b>

(a) Base of each group : 1913 = 100.  
of gold each year.

(b) Australian production of gold substituted for exports

2. **Relative Importance of Industrial Groups.**—In the previous table the value of commodities in each industrial group of exports of Australian produce is that recorded at the date of shipment from Australia, with the exception that the value of the production of gold in Australia in each year has been substituted in the mines and quarries group for actual shipments of gold in each year. This has been done to eliminate the exports of gold for monetary purposes. In order of importance the pastoral group occupied the highest place, representing 56.8 per cent. of the total exports in 1954-55, compared with 43.7 per cent. in 1938-39.

Exports of agricultural produce rank next in importance. In 1954-55 they represented 19.6 per cent. of total exports, compared with 19.5 per cent. in 1938-39.

According to value, exports of dairy and farmyard produce decreased from 11.6 per cent. in 1938-39 to 6.1 per cent. in 1954-55. Exports of mine and quarry products in 1938-39 represented 17.7 per cent. of the total but in 1954-55 only 7.7 per cent. The manufacturing group of exports, which represented 6.4 per cent. in 1938-39, had increased to 15.7 per cent. in 1945-46. In 1954-55 this group represented 9.2 per cent. of total exports.

### § 15. Australian Index of Export Prices.

1. **General.**—Over the past fifty years the exports of Australia have become increasingly diversified, but, although the proportion of highly manufactured exports has increased, it is still small in relation to total exports. Most of these exports still consist of basic products, such as wool, wheat, butter, etc.

2. **Historical.**—An annual index of export prices has been published by this 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 those 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 actual (recorded) value of these exports for that year. The quotient (multiplied by 1,000) thus obtained was the export price index number for that year.

The method was changed in 1918. A weight for all principal exports was calculated 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. It was published for the years 1897 to 1929-30, and particulars of this index were last published in Official Year Book No. 24, page 147.

After the 1914-18 War, however, the relative importance of different exports changed considerably. In addition, the pattern of exports had become liable to vary considerably from year to year.

3. *Present Indexes.*—For the reasons just mentioned, two new series of monthly export price indexes—one using fixed weights, the other changing weights—were published in 1937, computed back to 1928. These are the only export price indexes now published.

The data on which both series are based differ from those utilized in the old series of annual index numbers. The most important change was the use of actual (or calculated) export parities, based on actual price quotations, in place of the "unit-values" declared at the Customs.

The old index took no account of gold exports. The omission is natural and reasonable for countries which produce little or no gold. For gold-producing countries, although some exports of gold would be irrelevant (e.g., the Australian shipments of gold reserves during the depression), the exports of newly-produced gold should be taken into account. In the new series, therefore, gold is included, but the weight given to it is not the quantity exported but the quantity produced.

The two series are compiled monthly, and both relate to commodities which normally constitute about 80 per cent. of the total value of exports of merchandise and silver and gold production.

4. *Monthly Index (Fixed Weights).*—(i) *General.* This is a weighted aggregative index of price variations. It was computed back to 1928, with that year taken as base. It is now usually published on the base—average of three years ended June, 1939 = 100.

The purpose of this index is to provide comparisons, over a limited number of years, of the level of prices of those commodities normally exported from Australia, making no allowance for any benefit or disadvantage accruing from variations during the period in the relative proportions of the different kinds of exports.

(ii) *Weights.* The original weights (used for the period 1928 to 1936) were, in round figures, 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 are now based on the average annual exports (production, in the case of gold) during the three years 1933-34 to 1935-36. The break of continuity has been bridged by the usual method of splicing. Consideration is being given to adopting weights for a post-war period.

The weight adopted for wheat takes into account the wheat equivalent of flour exported, the weight allotted to greasy wool takes account of the greasy equivalent of scoured wool, tops, and wool on skins, whilst for some metals allowance is made for the metallic content of ores and concentrates exported.

The twenty items, together with the units of quantity and the weights or "quantity multipliers", are given in the following table.

**EXPORT PRICE INDEX : COMMODITIES AND WEIGHTING SYSTEM.**  
(FROM 1ST JULY, 1936.)

Item.	Unit of Quantity.	"Quantity Multipliers".	Percentage Distribution of Aggregative Value.			
			Base Period 1936-37 to 1938-39.		Year 1951-52.	
			Excluding Gold.	Including Gold.	Excluding Gold.	Including Gold.
Wool .. ..	lb.	975,000,000	49.05	45.63	55.89	54.37
Wheat (a) .. ..	bushel	101,000,000	18.34	17.06	16.16	15.72
Butter .. ..	cwt.	2,140,000	12.21	11.36	7.19	6.90
Metals—						
Silver .. ..	oz.	7,300,000	0.68	0.64	0.52	0.50
	(standard)					
Copper .. ..	ton	3,600	0.20	0.20	0.21	0.20
Tin .. ..	"	1,300	0.31	0.28	0.27	0.26
Zinc .. ..	"	99,000	2.05	1.90	3.96	3.86
Lead .. ..	"	208,500	4.10	3.81	7.07	6.88
Meats—						
Beef .. ..	lb.	182,000,000	2.56	2.38	1.74	1.69
Lamb .. ..	"	138,000,000	3.56	3.31	1.56	1.52
Mutton .. ..	"	44,000,000	0.58	0.54	0.23	0.22
Pork .. ..	"	16,000,000	0.43	0.40	0.26	0.25
Sugar .. ..	ton	305,000	2.58	2.40	2.43	2.37
Dried Fruits—						
Sultanas .. ..	"	38,200	1.45	1.35	0.86	0.84
Lexias .. ..	"	3,000	0.12	0.11	0.07	0.07
Currants .. ..	"	13,400	0.37	0.35	0.25	0.24
Tallow .. ..	cwt.	600,000	0.69	0.64	0.63	0.61
Hides—						
Cattle .. ..	lb.	28,000,000	0.64	0.59	0.63	0.62
Calf .. ..	"	1,800,000	0.08	0.07	0.07	0.07
Gold .. ..	fine oz.	937,000	..	6.98	..	2.72
			100.00	100.00	100.00	100.00

(a) Includes "wheat equivalent" of flour.

The percentage distributions of the "Aggregative Values" shown in the foregoing table are of importance, firstly, as showing their variations from time to time as the result of differential price movements as between the various commodities, and secondly, as regards the effect on the indexes as a whole of the percentage price variations in each commodity.

(iii) *Prices.* The adoption of current market prices (as distinct from the former average unit export values) in the present indexes permitted the use of standards for each commodity. All export parities are calculated from price quotations from the most reliable and representative sources available. In most cases, the prices used are those at which current sales are being effected. In recent years, however, great difficulty has been experienced in obtaining appropriate current market price data for some commodities. It has become impossible to adhere to a common principle. Actual (or calculated) export parities currently prevailing, priced at f.o.b. Australian ports, are still used whenever possible. However, since dual or multiple price systems have become operative for some exports, the prices used in the index for wheat (from July, 1945 to September, 1951) and for certain metals represent average actual realizations for current *shipments*. From October, 1951 to July, 1953, the prices used for wheat are the estimated average realizations after weighting prices of quota and non-quota wheat. Prices adopted for months since August, 1953 are derived from available information of current sales. Notes on earlier prices used for wheat were given on pages 508 and 509 of Official Year Book No. 38. Current market prices used for the main commodities are:—

(a) the price for wool is a weighted average (based on clean scoured prices) of representative types at Sydney auctions, expressed in terms of pence per lb., greasy:

(b) where contracts exist between the Australian and the United Kingdom Governments for certain commodities and when most of the exports of such items are sold at these rates, contract prices are used ; and

(c) for those metals which are at present not actually exported, Australian export parities are estimated on the basis of the prices ruling in London.

(iv) *Index Numbers.* The following table shows export price index numbers for Australia for individual commodities, groups of commodities, and all groups combined for each financial year from 1936-37 to 1954-55 and monthly for the year 1954-55.

EXPORT PRICE INDEXES : AUSTRALIA.

SIMPLE AGGREGATIVE INDEX ; FIXED WEIGHTS.

INDIVIDUAL COMMODITIES, GROUPS OF COMMODITIES AND ALL GROUPS (COMBINED).

(Base of each section : Average of three years ended June, 1939 = 100.)

Period.	Wool.	Wheat. (a)	Butter.	Metals. (b)	Meats. (c)	Sugar.	Dried Fruits. (d)	Tallow.	Hides. (e)	Gold. (f)	All Groups.	
											Ex- cluding Gold.	In- cluding Gold.
Percentage Dis- tribution of Base Aggregate— (g) (h)	45.63 49.05	17.06 18.34	11.36 12.21	6.83 7.34	6.63 7.13	2.40 2.58	1.81 1.94	0.64 0.69	0.66 0.72	6.98	100.00	100.00
1936-37	122	123	92	120	98	104	103	122	113	99	110	115
1937-38	99	111	107	96	106	92	103	100	98	102	102	102
1938-39	79	66	101	84	96	104	94	78	87	103	82	83
1939-40	98	82	108	92	102	126	94	76	120	118	96	98
1940-41	101	102	110	95	103	137	95	82	98	121	103	104
1941-42	101	105	110	101	109	137	106	114	133	120	105	106
1942-43	117	106	114	100	112	152	112	119	145	119	114	114
1943-44	117	116	114	113	113	159	121	123	151	119	117	117
1944-45	117	154	147	129	122	172	128	151	147	120	130	130
1945-46	117	213	147	196	123	213	137	161	152	122	148	146
1946-47	173	305	173	308	139	264	152	361	334	122	209	203
1947-48	287	420	193	372	146	320	157	436	364	122	296	283
1948-49	365	413	233	478	171	343	162	499	421	122	348	332
1949-50	473	400	250	421	196	369	176	400	479	164	399	383
1950-51	999	432	271	689	209	410	226	356	752	176	690	654
1951-52	564	436	291	811	263	464	302	451	486	184	495	473
1952-53	616	445	313	504	314	501	297	358	369	186	505	483
1953-54	615	411	325	450	338	479	287	321	336	179	496	474
1954-55	538	357	313	511	(i) 345	445	267	(i) 349	218	178	(i) 450	(i) 431
1954-55—												
July	(j) 622	350	313	475	340	448	278	354	264	178	490	468
August	566	358	313	475	340	448	262	350	254	178	461	442
September	566	355	313	498	340	448	261	350	224	178	462	442
October	536	356	313	524	340	468	260	350	216	178	450	431
November	513	358	313	518	340	468	261	350	204	179	439	421
December	532	359	313	512	385	468	263	350	197	178	451	432
January	520	360	313	516	(i) 371	430	266	(i) 350	200	178	(i) 444	(i) 426
February	528	356	313	522	(i) 349	430	267	(i) 350	200	178	(i) 416	(i) 427
March	528	356	313	523	(i) 329	430	270	(i) 350	212	178	(i) 445	(i) 426
April	520	354	313	525	(i) 326	434	271	(i) 350	223	178	(i) 441	(i) 422
May	520	354	313	520	(i) 334	434	268	(i) 345	216	178	(i) 441	(i) 422
June	505	353	313	528	(i) 345	434	279	(i) 342	212	178	(i) 435	(i) 417

(a) See notes above in para. 4 (iii), p. 310. (b) Non-ferrous—silver, copper, tin, zinc, lead. (c) Beef, lamb mutton, pork. (d) Sultanias, lextias, currants. (e) Cattle hides, calf skins. (f) Where Australian gold has been sold on the overseas premium markets such price has been used in the index. (g) For "All Groups (including Gold)"—applicable from 1936-37. (h) For "All Groups (excluding Gold)"—applicable from 1936-37. (i) Subject to revision. (j) Nominal.

A graph showing index numbers for All Groups (including Gold) appears on page 298.

Reference to the group indexes in the table above shows the great fluctuations and the wide dispersion of prices of export commodities in recent years. In particular, very great movements upwards and downwards have occurred in the price of wool. Since wool is a predominant export and comprises 46 per cent. of the Base Aggregate of the index, fluctuations in wool prices obscure the movements affecting the other components in the All Groups index. For purposes of comparison wool and "other groups" are shown separately below.

## RECENT TRENDS—EXPORT PRICE INDEX: WOOL AND "OTHER GROUPS".

(Base of each section: Average of three years ended June, 1939 = 100.)

Period.	1947-48.			1948-49.			1949-50.			1950-51.		
	Wool.	Other Groups.	All Groups.	Wool.	Other Groups.	All Groups.	Wool.	Other Groups.	All Groups.	Wool.	Other Groups.	All Groups.
July ..	(a) 196	255	228	(a) 351	316	332	(a) 339	277	305	(a) 592	333	451
August ..	241	258	251	(a) 351	313	330	(a) 347	284	313	864	340	579
September ..	249	261	255	355	308	329	339	292	314	890	355	599
October ..	260	262	261	328	314	320	302	305	345	890	360	602
November ..	275	268	271	366	313	337	419	305	357	965	366	639
December ..	(a) 275	274	275	400	308	350	456	307	375	973	366	643
January ..	313	286	298	400	310	351	562	310	425	1,252	368	771
February ..	328	291	308	411	305	353	536	315	416	1,339	369	811
March ..	(a) 302	296	299	(a) 411	304	353	524	316	411	1,437	377	860
April ..	313	300	306	332	294	311	(a) 554	324	429	1,094	384	708
May ..	332	305	317	336	291	311	611	328	457	973	385	653
June ..	362	309	333	339	288	311	592	331	450	717	383	535
Average of Year	287	280	283	365	305	332	473	308	383	999	365	654

Period.	1951-52.			1952-53.			1953-54.			1954-55.		
	Wool.	Other Groups.	All Groups.	Wool.	Other Groups.	All Groups.	Wool.	Other Groups.	All Groups.	Wool.	Other Groups.	All Groups.
July ..	(a) 717	400	544	(a) 566	381	465	(a) 641	360	493	(a) 622	338	468
August ..	551	400	468	(a) 566	380	465	(a) 634	367	481	566	338	442
September ..	498	400	445	551	379	457	626	365	484	566	339	442
October ..	686	403	532	588	370	469	634	363	486	536	344	431
November ..	603	398	492	588	368	469	634	366	485	513	343	421
December ..	581	403	484	618	376	486	611	358	473	532	348	432
January ..	566	402	477	618	376	486	603	354	468	520	(b) 346	(b) 426
February ..	520	402	456	626	371	487	581	350	455	528	(b) 343	(b) 427
March ..	460	400	427	656	360	500	581	351	456	528	(b) 347	(b) 426
April ..	475	397	432	671	363	503	(a) 596	348	461	520	(b) 340	(b) 422
May ..	543	385	457	701	361	516	618	346	470	520	(b) 340	(b) 422
June ..	566	376	463	641	363	490	622	346	472	505	(b) 343	(b) 417
Average of Year	564	397	473	616	371	483	615	356	474	538	(b) 342	(b) 431

(a) Nominal.

(b) Subject to revision.

5. Monthly Index (Changing Weights).—This series was designed for shorter period comparisons—from one or more months of the current year to the corresponding months of the previous year. The fixed weights index numbers indicate satisfactorily the general trend of export prices, but take no account of the relative quantities actually sold at the different prices ruling during each month. The impact of the price movements on current sales is indicated more directly by the index numbers in the following table. In computing these, the "quantity multipliers" are the quantities actually exported in the months (or periods) to which the index numbers relate.

For any given month, the procedure is to multiply the price of each commodity in that month, and its price in the corresponding month of the previous year, by the quantity exported during the given month. A comparison of the resulting aggregates gives one possible measure of the change in prices over the period; i.e., the change assuming that the proportions of the different kinds of exports whose prices are to be measured were the same as their proportions in the given month. Another possible measure is given by assuming that the proportions of the different kinds of exports in the given month had been the same as their proportions in the corresponding month of the previous year. Accordingly the first step in the procedure is repeated, substituting the quantities exported during the corresponding month of the previous year.

The index numbers so obtained have been proved over a period of years to lie very close together. As it is convenient for practical reasons to have one single figure rather than two close alternatives the two index numbers are multiplied together and the square root of the product extracted. This is taken to be the index number for the month, the prices of the corresponding month of the previous year being taken as base.

The index numbers for two or more months of one year, as compared with the corresponding period of the previous year, are computed in very much the same way. The process involves merely the cumulative addition of the aggregates computed for the individual months, and extraction of the index numbers as explained above.

Index numbers computed on this basis are shown in the following table for the years 1953-54 and 1954-55 :—

### MONTHLY EXPORT PRICE INDEX (CHANGING WEIGHTS) : AUSTRALIA.

(Base : Weighted Average Price Level in corresponding months of preceding year = 100.)

Month.	Month stated compared with same month of preceding year.				Period of trade year ending in month stated compared with same period of preceding year.			
	1953-54.		1954-55.		1953-54.		1954-55.	
	Ex-cluding Wool.	In-cluding Wool.	Ex-cluding Wool.	In-cluding Wool.	Ex-cluding Wool.	In-cluding Wool.	Ex-cluding Wool.	In-cluding Wool.
July .. .. .	98	108	92	95	98	108	92	95
August .. .	98	104	94	93	98	106	93	94
September ..	95	105	96	93	97	106	94	94
October .. .	99	105	97	88	98	106	95	92
November ..	99	105	97	86	98	106	95	90
December ..	97	98	99	91	98	104	96	90
January .. .	94	96	98	91	97	103	96	90
February ..	94	93	99	94	97	102	96	91
March .. .	94	90	100	94	97	100	97	91
April .. .	95	90	98	90	97	99	97	91
May .. .	93	90	99	89	96	98	97	91
June .. .	93	96	100	87	96	98	97	91

Monthly export price index numbers are issued in the mimeographed publication *Monthly Index of Australian Export Prices*, in the *Monthly Review of Business Statistics* and in the *Quarterly Summary of Australian Statistics*.

## § 16. 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 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 trade.

2. *"Special Trade" of Various Countries.*—In the following table the figures, which represent Australian currency values, relate as nearly as possible to imports cleared for 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.

**IMPORTS CLEARED FOR HOME CONSUMPTION, AND EXPORTS OF DOMESTIC PRODUCTS (MERCHANDISE ONLY) : VARIOUS COUNTRIES, 1953.**

Country.	Trade. (£A. Million).			Trade per Head of Population. (£A.)		
	Imports Cleared. c.i.f.	Exports. f.o.b.	Total.	Imports Cleared.	Exports.	Total.
United States of America ..	44,886.0	6,972.4	11,858.4	30.6	43.7	74.3
United Kingdom ..	64,189.5	3,234.0	7,423.5	82.8	63.9	146.7
Canada ..	21,987.8	1,892.5	3,880.3	134.5	128.0	262.5
Germany, Federal Republic of ..	1,694.5	1,966.7	3,661.2	34.6	40.1	74.7
France ..	1,789.6	1,690.7	3,480.3	41.8	39.4	81.2
Belgium-Luxemburg ..	1,074.9	1,006.0	2,080.9	122.5	114.6	237.1
Netherlands ..	1,066.8	966.4	2,033.2	101.7	92.1	193.8
Italy ..	1,073.7	667.2	1,740.9	22.5	14.0	36.5
<b>Australia ..</b>	<b>(a) 567.2</b>	<b>872.6</b>	<b>1,439.8</b>	<b>64.3</b>	<b>99.0</b>	<b>163.3</b>
Sweden ..	704.6	659.2	1,363.8	98.3	91.9	190.2
Switzerland ..	519.2	530.4	1,049.6	106.5	108.8	215.3
Denmark ..	447.4	400.1	847.5	102.4	91.6	194.0
Indonesia ..	345.8	376.4	722.2	4.3	4.7	9.0
Norway ..	408.1	227.6	635.7	121.5	67.8	189.3
Austria ..	243.2	241.7	484.9	35.0	34.8	69.8
Spain ..	266.4	216.7	483.1	9.3	7.6	16.9
Turkey ..	238.7	177.5	416.2	10.6	7.9	18.5
Egypt ..	223.8	175.2	399.0	10.2	8.0	18.2
Chile ..	149.8	184.0	333.8	24.7	30.3	55.0
Greece ..	173.4	82.5	255.9	22.2	10.6	32.8

(a) f.o.b.

(b) Covers goods imported as distinct from imports cleared for home consumption.

**§ 17. Oversea Trade in Calendar Years.**

For the purpose of comparison with countries which record overseas trade in calendar years the following table has been compiled to show Australian imports and exports for each of the calendar years 1951 to 1955 :—

**OVERSEA TRADE IN CALENDAR YEARS : AUSTRALIA.  
(£'000.)**

Year.	Merchandise.		Bullion and Specie.		Total.	
	Imports.	Exports.	Imports.	Exports.	Imports.	Exports.
1951.. ..	940,300	906,769	1,768	3,069	942,068	909,838
1952.. ..	767,846	751,099	4,916	20,920	772,762	772,019
1953.. ..	577,128	880,003	2,620	20,165	579,748	900,258
1954.. ..	751,949	736,301	3,341	12,127	755,290	748,428
1955(a) ..	863,019	779,237	2,391	20,357	865,410	799,594

(a) Subject to revision.

**§ 18. Excise.**

Although excise goods have no immediate bearing on overseas trade, the rates of excise duty are 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 XX.—Public Finance. The following table shows the quantities of spirits, beer, tobacco, etc., on which excise duty was paid in Australia during the years 1953-54 and 1954-55.

**QUANTITIES OF SPIRITS, BEER, TOBACCO, ETC., ON WHICH EXCISE DUTY  
WAS PAID : AUSTRALIA.**

Article.	1953-54.	1954-55.	Article.	1953-54.	1954-55.
<b>Spirits—</b>	proof gallons.	proof gallons.	<b>Tobacco</b> .. ..	lb. 22,546,529	lb. 21,059,763
Brandy .. ..	376,291	581,864	<b>Cigars—</b>		
Gin .. ..	327,674	363,934	Hand-made .. ..	41,099	35,907
Whisky .. ..	344,392	355,416	Machine-made .. ..	105,801	107,503
Rum .. ..	544,526	627,014	<b>Total Cigars</b> ..	146,900	143,410
Liqueurs .. ..	50,641	66,610	<b>Cigarettes (Machine-made)</b> ..	17,769,856	22,378,896
Other .. ..	53	226			
<b>Total Spirits (Potable)</b> ..	1,643,577	1,995,064	<b>Cigarette Tubes and Papers</b> .. ..	60 papers or tubes. 147,009,600	60 papers or tubes. 138,089,418
<b>Spirits for—</b>			<b>Coal</b> .. ..	tons. 17,367,524	tons. 18,011,070
Fortifying Wine ..	2,049,135	1,979,775			
Industrial or Scientific purposes ..	198,742	214,906	<b>Matches</b> .. ..	gross of boxes. 3,334,542	gross of boxes. 3,374,542
Making Vinegar ..	108,120	114,280			
Manufacture of—			<b>Petrol</b> .. ..	gallons. 156,838,024	gallons. 164,461,008
Essences .. ..	104,876	104,168			
Scents and Toilet Preparations ..	65,324	61,722	<b>Playing Cards</b> ..	doz. packs. 106,084	doz. packs. 100,970
	gallons.	gallons.			
<b>Amylic Alcohol and Fusel Oil</b> .. ..	12	..			
<b>Beer</b> .. ..	198,330,340	213,151,945			

### § 19. 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 latest 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.

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.

Interstate trade statistics are published in detail for Queensland and Western Australia by the Government Statisticians in those States. Detailed statistics are also available for Tasmania, prepared by the Deputy Commonwealth Statistician in that State. The Government Statist for South Australia publishes some figures for that State, made up from the records of Western Australia and Tasmania and from various other sources. The statistics of interstate trade for New South Wales and Victoria are very meagre. The Melbourne Harbour Trust publishes, in its annual report, the quantities of various commodities of interstate trade loaded and discharged in the Port of Melbourne. The trade with individual States is not disclosed.

### § 20. The Australian Balance of Payments.

1. General.—Estimates of the Australian balance of payments are of particular importance as an aid to the analysis of Australian economic conditions in view of the marked effect which fluctuations in international commerce tend to exercise on the level of activity in the Australian economy.

Comprehensive estimates of Australia's balance of payments will be found in *The Australian Balance of Payments 1928-29 to 1951-52*, which contains a full explanation of the principles on which the estimates are based and the techniques employed in their compilation. Full details are also given therein of the adjustments made to recorded trade statistics to arrive at statistics of exports and imports, adjusted for balance of payments purposes, as shown in tables in this section. Continuous investigations are conducted with a view to improving the methods of estimation employed, and further revisions to current estimates may be necessary as more refined techniques are adopted in the future.

The estimates used on this occasion have been revised in comparison with those presented in Official Year Book No. 41. Particulars of revisions and changes, together with more detailed estimates, will be found in the mimeographed publication "The Australian Balance of Payments, 1950-51 to 1954-55" and in the Appendix.

2. Australia's Balance of Payments on Current Account.—The table below presents estimates of Australia's balance of payments on current account for the years 1952-53 to 1954-55.

**AUSTRALIA : BALANCE OF PAYMENTS ON CURRENT ACCOUNT.**  
(£A. million.)

Particulars.	1952-53.	1953-54.	1954-55. (d)
<b>CREDITS.</b>			
1. Exports f.o.b. . . . .	846.2	811.7	763.0
2. Gold Production (b) . . . . .	16.4	16.8	16.5
3. Transportation—			
(i) Freight Earnings of Australian Ships . . . . .	2.6	2.9	3.0
(ii) Port Expenditure of Oversea Ships . . . . .	45.8	49.1	58.5
4. Foreign Travel . . . . .	18.4	52.0	61.5
5. Income from Investment . . . . .	4.3	2.5	3.2
6. Government Transactions . . . . .	15.4	18.0	18.0
7. Miscellaneous . . . . .	8.8	6.5	7.2
8. Donations and Reparations—			
(i) Immigrants' Funds and Household Effects . . . . .	6.7	9.9	10.1
(ii) Other . . . . .	12.3	11.0	12.8
	4.2	4.6	5.3
9. TOTAL CREDITS . . . . .	16.5	15.6	18.1
	962.7	933.0	897.6
<b>DEBITS.</b>			
10. Imports f.o.b. . . . .	511.1	683.0	846.0
11. Transportation and Marine Insurance—			
(i) Freight on Imports . . . . .	77.3	69.0	90.0
(ii) Other Transportation . . . . .	10.2	10.6	12.7
(iii) Marine Insurance Premiums and Claims (net) (c) . . . . .	0.7	1.4	2.0
12. Foreign Travel . . . . .	88.2	81.0	104.7
13. Income from Investment—	18.4	16.7	23.0
(i) Public Authority Interest . . . . .	18.5	18.4	18.1
(ii) I.B.R.D. and I.M.F. Interest and Charges . . . . .	1.7	2.7	3.4
(iii) Direct Investment . . . . .	23.8	31.8	33.5
(iv) Portfolio Investment . . . . .	8.1	8.3	9.0
(v) Undistributed Income . . . . .	18.2	30.0	30.0 (d)
14. Government Transactions—	70.3	91.2	94.0
(i) Defence Expenditure . . . . .	25.2	14.4	13.9
(ii) Expenditure in New Guinea and Papua . . . . .	4.2	7.0	9.5
(iii) Other . . . . .	13.1	11.7	13.6
15. Miscellaneous . . . . .	42.5	33.1	37.0
16. Donations and Reparations—	17.0	22.8	24.3
(i) Personal Remittances . . . . .	12.4	13.2	13.7
(ii) U.N.K.R.A., U.N.I.C.E.F., etc., and Colombo Plan . . . . .	3.5	2.2	2.7
(iii) Other . . . . .	8.3	8.3	8.0
17. TOTAL DEBITS . . . . .	24.2	23.7	24.4
	771.7	951.5	1153.4
BALANCE ON CURRENT ACCOUNT . . . . .	191.0	-17.0	-255.8

(a) Preliminary. (b) Includes gold sold on the premium market valued at the price obtained. (c) Total marine insurance premiums payable on Australian imports (whether payable in Australia or overseas) were £2.6 million in 1952-53, £3.4 million in 1953-54 and £4.3 million in 1954-55. (d) Provisional estimate only.

The record of the post-war years has been one of considerable balance of payments instability. The balance of payments on current account, after a deficit of £47 million in 1946-47, improved to a small favourable balance of £4 million in 1947-48 and this was increased to £32 million in 1948-49. However, a deficit of £43 million occurred in



1949-50, followed by a favourable balance of £104 million in 1950-51. A sharp adverse movement of £687 million, due almost entirely to a decrease in exports and an increase in imports (including freight charges), produced an unfavourable balance of £583 million in 1951-52. Increased exports accompanied by a large reduction in imports (import restrictions were imposed in March, 1952) produced a favourable balance of £191 million in 1952-53. A decrease of £34 million in exports and an increase in imports (plus freight) of £164 million (import restrictions were being progressively relaxed) was largely responsible for the unfavourable current balance of £18 million in 1953-54.

There was a further deterioration in 1954-55, resulting in a deficit of £256 million in the balance on current account. Exports fell by £49 million due mainly to a fall of £58 million in exports of wool and sheepskins (partially offset by a rise of £8 million in exports of foodstuffs). Imports increased by £163 million, increases occurring in all classes of commodities.

Invisible credits rose by £13 million between 1953-54 and 1954-55. This was due mainly to an increase of £9 million in expenditure of oversea ships in Australian ports and an increase of £2.5 million in donations and reparations. Invisible debits rose by £38 million between 1953-54 and 1954-55, mainly as the result of increases of £21 million in freight on imports and £6 million in foreign travel. Other items increased to a smaller extent.

The Commonwealth Statistician's Index of Export Prices (excluding gold) which stood at 505 in 1952-53 fell by 2 per cent. to 496 in 1953-54 and by a further 9 per cent. to 450 in 1954-55. The index of the price of wool fell slightly from 616 in 1952-53 to 615 in 1953-54 and fell sharply by 13 per cent. to 538 in 1954-55.

The Index of Australian Import Prices prepared by the Commonwealth Bank of Australia has been revised since the publication of Official Year Book No. 41. Details of this revision may be obtained from the Statistical Bulletin published by the Commonwealth Bank. This index recorded a steady increase in the post-war years up to 1951-52 but fell by 5 per cent. between 1951-52 and 1952-53. A further fall of 2 per cent. was recorded between 1952-53 and 1953-54 but this trend was reversed when the index rose by 1 per cent. between 1953-54 and 1954-55.

Comparison of the index of export prices with the index of import prices indicates that Australia's terms of trade moved favourably in the post-war years, reaching an extremely favourable level in 1950-51; however, the fall in the price of wool produced an adverse movement of 36 per cent. between 1950-51 and 1951-52. The terms of trade improved by 8 per cent. between 1951-52 and 1952-53 and remained constant between 1952-53 and 1953-54. There was again a deterioration from 1953-54 to 1954-55, amounting to 10 per cent.

3. Australia's Balance of Payments on Capital Account.—The table on page 318 sets out estimates of Australia's balance of payments on capital account for the years 1952-53 to 1954-55.

The balance of payments on capital account records the net changes over specified periods in Australia's international assets and liabilities. In theory, the balance of payments on current account and the balance of payments on capital account together constitute a complete system of accounts, on the double-entry principle, recording Australia's international economic transactions, and the favourable (unfavourable) balance on current account should coincide with the net increase (decrease) in assets shown in capital account.

In practice it is necessary to introduce a "balancing item" (see item 21 in the table on page 318) in the capital account in order to make that account balance at the same figure as the current account. This balancing item is to a certain extent due to errors and omissions in other sections of the estimates but it is believed to be due mainly to movements in short-term funds and to timing differences between the statistical recording of exports and imports and the crediting or debiting of the payments for these transactions against Australia's international reserves.

## AUSTRALIA : BALANCE OF PAYMENTS ON CAPITAL ACCOUNT.

(£A. million.)

Particulars.	1952-53.	1953-54.	1954-55. (a)
<b>INCREASE IN ASSETS.</b>			
1. New Zealand Public Debt Domiciled in Australia ..	..	-0.1	..
2. Direct Investment Overseas—			
(i) Branches—			
(ii) Unremitted Profits .. .. .	0.8	0.6	(a) 0.5
(ii) Other .. .. .	-0.2	-2.2	(b) ..
(ii) Subsidiaries—			
(i) Undistributed Profits .. .. .	1.7	2.2	(a) 2.5
(ii) Other .. .. .	3.0	2.3	(b) ..
3. Portfolio Investment Overseas .. .. .	-0.3	-1.1	-0.3
4. Private Investment in Foreign Government Securities ..	-0.1	..	..
5. Investment in Joint Organization, etc. .. .. .	-1.0	..	..
6. Other Official Transactions .. .. .	-5.3	3.3	-3.6
7. Monetary Gold Holdings .. .. .	-0.2	7.0	5.3
8. Foreign Exchange Holdings .. .. .	188.9	2.5	-147.7
9. TOTAL INCREASE IN ASSETS .. .. .	187.3	14.5	-143.3
<b>INCREASE IN LIABILITIES.</b>			
10. Public Authority Debt—			
(i) Commonwealth—Long-term .. .. .	-0.6	-3.3	1.3
(ii) Commonwealth—Short-term .. .. .	-0.3	-0.3	-0.3
(iii) States—Long-term .. .. .	-1.3	-6.2	-3.6
(iv) States—Short-term .. .. .	..	..	4.0
(v) Local Authorities .. .. .	-0.3	-0.3	-0.3
11. Discounts and Cash Bonuses on the Conversion of Public Debt .. .. .	-0.3	-0.1	..
12. Dollars received from I.B.R.D. .. .. .	17.9	21.5	23.6
13. Dollars received from I.M.F. (net) .. .. .	13.4	-10.7	-11.6
14. Australian Currency Holdings of Foreign Banks .. ..	-7.4	-0.5	-0.5
15. Joint Organization Investments, etc., in Australia ..	-2.2	..	..
16. Direct Investment in Australian Companies—			
(i) Branches—			
(ii) Unremitted Profits .. .. .	-0.5	3.3	(b) 3.0
(ii) Other .. .. .	4.8	12.0	(c) ..
(ii) Subsidiaries—			
(i) Undistributed Profits .. .. .	18.7	26.7	(b) 27.0
(ii) Other .. .. .	-1.5	19.5	(c) ..
17. Portfolio Investment in Australian Companies .. ..	2.9	1.4	(c) ..
18. Investment in Public Authority Securities domiciled in Australia .. ..	-5.5	-4.6	(c) ..
19. Net Oversea Remittances of Life Offices operating in Australia .. ..	-4.3	-6.4	(c) ..
20. Adjusting Item for New Guinea and Papua transactions ..	2.1	-1.0	1.0
21. Balancing Item .. .. .	-39.3	-18.6	68.9
22. TOTAL INCREASE IN LIABILITIES .. .. .	-3.7	32.4	112.5
23. NET INCREASE IN ASSETS .. .. .	191.0	-17.9	-255.8

(a) Preliminary. (b) Provisional estimate only. (c) Not available—included in balancing item.

NOTE.—Minus sign (-) denotes decrease.

The individual items in the table may be conveniently examined in groups.

Items 5 and 15 record transactions on capital account between Australia and the Joint Organization (Wool). The assets item consists of the share of Joint Organization profits on the sale of Australian wool accruing each year (less any disbursements of profits to Australia) and the liabilities item is the change in Joint Organization investments in Australia each year. Joint Organization transactions ended in 1952-53.

Item 10 records movements in public authority debt domiciled overseas between 1952-53 and 1954-55. A small repayment of this debt (due mainly to sinking fund operations) was made in 1952-53, but in 1953-54 there was a substantial net reduction

of £10.1 million. This net reduction consisted of the redemption of \$30 million (£13.4 million) of securities domiciled in New York, a reduction of £2.8 million of other debt from sinking fund operations and an increase of £6.1 million following the negotiation of a loan from Switzerland.

A net increase of £1.1 million occurred in 1954-55. Net redemptions in New York were \$15 million (£6.7 million) while a second loan of £6.1 million was received from Switzerland. After allowing for the appropriate portion of the redemption just mentioned and for other sinking fund transactions State debt domiciled overseas increased by £0.4 million (net). The movement included loans extended to South Australia by the Export-Import Bank, Washington, and by the United Kingdom Atomic Energy Commission, to assist in the development of uranium projects.

Item 12 records drawings of \$40 million in 1952-53, \$48 million in 1953-54 and \$53 million in 1954-55 under loans made to Australia by the International Bank for Reconstruction and Development.

Item 13 shows the changes in Australia's liability in respect of purchases of dollars from the International Monetary Fund. In 1949-50, \$20 million (£8.9 million) were purchased from the Fund and a second purchase of \$30 million (£13.4 million) was made in 1952-53. In 1953-54 repayment of these purchases was commenced with instalments totalling \$24 million (£10.7 million) and repayment was completed in 1954-55 with further instalments of \$26 million (£11.6 million).

Australia's international reserves (items 7 and 8) rose by £189 million during 1952-53. A small increase of £10 million was recorded in 1953-54 but reserves fell by £142 million in 1954-55 to a level of £428.3 million at the end of June, 1955.

Net direct investment (excluding undistributed income), net portfolio investment, net private investment in government securities, net remittances of life assurance offices and the balancing item\* may be conveniently grouped for examination as "private capital movements and balancing items". As mentioned above, the "balancing item" is believed to consist predominantly of various types of private capital movements which cannot be identified from available statistics.

The transactions included in this group resulted in a net outflow of funds of £45 million in 1952-53. This was the first recorded outflow in the post-war period and was to some extent due to delayed payments for part of the record total of imports which arrived in 1951-52. In 1953-54 this group of transactions resulted in a small inflow of £4 million while in 1954-55 there was an apparent inflow of £69 million.

Other items in capital account are of minor importance.

4. Australia's Balance of Payments on Current Account—Various Countries and Monetary Areas.—There was a deterioration of £209 million between 1952-53 and 1953-54 in Australia's balance on current account. This was largely accounted for by a deterioration of £186 million for the sterling area and £25 million for the "other" non-sterling area, while there was a favourable movement of £2 million in the balance for the dollar area. The balance on current account with the United Kingdom decreased by £172 million due to a 15 per cent. fall in the value of exports and a 55 per cent. rise in the value of imports. The small improvement in the balance with the dollar area was due to the reduced flow of imports from the United States of America and a rise in exports to Canada and other dollar area countries.

Between 1953-54 and 1954-55 there was a further deterioration in Australia's balance on current account. The movement affected all the countries and monetary areas shown in the table with the exception of countries included in "Other Dollar Area". Exports to countries of the Organization for European Economic Co-operation (see page 292) declined by £22.6 million, principally as a result of the fall in wool prices, while imports increased by £30.5 million. As a result Australia's current account balance with this area fell from a credit of £105.8 million in 1953-54 to a credit of £53.4 million in 1954-55. Exports to other non-dollar, non-sterling countries also fell in 1954-55, while imports increased, and whereas in 1953-54 Australia had a credit balance of £45.4 million with these countries, in 1954-55 this had changed to a debit balance of £2.4 million.

\* Items 2 (i) (ii), 2 (ii) (ii), 3, 4, 16 (i) (ii), 16 (ii) (ii), 17, 18, 19 and 21.

Exports to the sterling and dollar areas remained relatively unchanged between 1953-54 and 1954-55 but imports from the United Kingdom and "other" sterling area countries rose by £45.5 million and £31.8 million respectively. There was a similar movement in imports from the United States of America; these increased by £30.8 million in 1954-55. In addition the "invisible" deficits with the sterling and dollar areas continued to grow larger. In 1953-54 Australia's deficits on current account with the sterling and dollar areas were £111.6 million and £74.3 million respectively and in 1954-55 deficits of £207.3 million with the sterling area and £116.0 million with the dollar area were recorded. These changes in 1954-55 reflect mainly the fall in wool prices and increased imports from all sources following the progressive easing of import licensing.

**AUSTRALIA: BALANCE OF PAYMENTS ON CURRENT ACCOUNT, VARIOUS COUNTRIES AND MONETARY AREAS.(a)**  
(£A. million.)

Particulars.	Gold Production.	Sterling Area.		Dollar Area.			Other Non-Sterling.		Total.
		United Kingdom.	Other.	U.S.A.	Canada.	Other.	O.E.E.C.	Other. (b)	
1952-53.									
Exports, f.o.b.	..	347.2	130.5	57.9	8.7	2.2	191.6	108.1	846.2
Imports, f.o.b.	..	-215.1	-87.9	-85.5	-19.5	-2.2	-59.2	-41.7	-511.1
Invisibles (net)	16.4	-69.3	-30.5	-32.3	-5.6	-0.2	-7.4	-15.2	-144.1
Balance on Current Account	16.4	62.8	12.1	-59.9	-16.4	-0.2	125.0	51.2	191.0
		74.9		-76.5			176.2		
1953-54.									
Exports, f.o.b.	..	295.8	125.7	55.7	11.0	4.6	208.3	110.6	811.7
Imports, f.o.b.	..	-332.7	-110.3	-76.7	-18.7	-1.1	-90.8	-52.7	-683.0
Invisibles (net)	16.8	-71.9	-18.2	-41.0	-8.3	0.2	-11.7	-12.5	-146.6
Balance on Current Account	16.8	-108.8	-2.8	-62.0	-16.0	3.7	105.8	45.4	-17.9
		-111.6		-74.3			151.2		
1954-55.									
Exports, f.o.b.	..	289.0	132.1	52.7	10.5	6.4	185.7	86.6	763.0
Imports, f.o.b.	..	-378.2	-142.1	-107.5	-23.8	-1.3	-121.3	-71.8	-846.0
Invisibles (net)	16.5	-80.5	-27.6	-47.3	-6.8	1.1	-11.0	-17.2	-172.8
Balance on Current Account	16.5	-169.7	-37.6	-102.1	-20.1	6.2	53.4	-2.4	-225.8
		-207.3		-116.0			51.0		

(a) For a list of the countries included in each monetary area see page 292.

(b) Includes international bodies.

NOTE.—Minus sign (—) denotes debit; other items are credits.

5. Australia's Balance of Payments with the Dollar Area.—The estimates of the balance of payments with the dollar area included in the previous table are on a purely geographic basis and no attempt has been made to classify transactions according to the currency in which payment was made.

The table on page 322 gives a detailed estimate in respect of dollar currency transactions. This table includes the trade statistics and invisible items included in the former table, but in addition it includes in "Other items (net)" (see item 16 in table on

page 322) several items which make allowance for the fact that not all Australian transactions with the dollar area involve dollar receipts or payments and that some dollar receipts or payments are involved in Australian transactions with countries outside the dollar area, and with international bodies.

Principal among these transactions are receipts of dollars for exports to non-dollar countries (e.g., sales of gold on premium markets); interest payments to sterling area holders of Australian dollar bonds (included in total dollar interest payments in item 13); dollar payments to international bodies; and the difference between the estimated dollar component of Australia's imports of petroleum products from all sources and the estimated c.i.f. value of her direct imports of petroleum products from the dollar area. The statistics in the table are presented in terms of United States dollars.

In 1952-53 Australia's balance of payments on current account with the dollar area disclosed a deficit of \$125 million. In 1953-54 the deficit increased to \$164 million and in 1954-55 there was another sharp deterioration to a deficit of \$242 million.

Principally as a result of reduced imports from the United States of America there was an improvement of \$30 million in Australia's trade balance with the dollar area between 1952-53 and 1953-54. This improvement was more than offset by a deterioration in the invisible balance. Contributing factors were increases of \$23.4 million and \$10.1 million in two investment income items (remitted profits and dividends (item 11) and undistributed income (item 12)) and a fall in item 16 (other items—net) from net receipts of \$46.3 million in 1952-53 to net receipts of \$2.4 million in 1953-54. This latter movement was due principally to a decline in Australian gold sales on the premium market and to an unfavourable movement in the difference between the c.i.f. value of direct imports of petroleum from the dollar area and the estimated dollar component of all Australian petroleum imports.

On investment account, \$32 million of securities domiciled in New York were redeemed in 1953-54, compared with comparatively small sinking fund redemptions in 1952-53. Private capital inflow fell to \$9 million in 1953-54 compared with \$37 million in 1952-53.

The balance on investment account was plus \$15 million in 1953-54 and this, combined with an unfavourable current account balance of \$164 million, led to a dollar deficit of \$149 million in 1953-54—\$86 million greater than in 1952-53. In 1953-54 this deficit was financed by loans of \$24 million (net) from international institutions and drawings of \$97 million on the Sterling Area Dollar Pool.

Exports to the dollar area fell only slightly between 1953-54 and 1954-55 but there was a substantial rise in imports from the United States of America and Canada, with the result that the trade deficit with dollar countries increased to \$141 million.

The unfavourable invisible balance which had grown larger in 1953-54 fell slightly in 1954-55. Important movements in invisibles were confined to freight, which rose from \$22.8 million to \$31.5 million as a result of greatly increased imports, and receipts from "other items (net)", which rose by \$15.9 million.

The investment account shows that \$11 million of securities domiciled in New York were redeemed during 1954-55. Although this represents a high rate of redemption compared with most years it was considerably less than in 1953-54 when securities to the value of \$32 million were redeemed. Private capital inflow (including errors and omissions) was estimated at \$80 million in 1954-55 compared with \$9 million in the previous year. Together with undistributed income, provisionally estimated at \$38 million, this large inflow more than offset the deterioration of \$78 million which occurred in Australia's balance on current account in 1954-55 and Australia's dollar deficit, which was \$149 million in 1953-54, was reduced to \$135 million in 1954-55.

The final section of the table shows how Australia's dollar deficit was financed. In 1954-55 Australia received \$27 million (net) from international institutions. This was \$3 million greater than in the previous year. However, Australia's dollar balances which were run down by \$28 million in 1953-54 increased by \$11 million in 1954-55. Australia's estimated drawings from the Sterling Area Dollar Pool, which were \$97 million in 1953-54, increased by \$22 million to \$119 million in 1954-55.

## AUSTRALIA: BALANCE OF PAYMENTS WITH THE DOLLAR AREA.

(United States \$ million.)

Particulars.	1952-53.	1953-54.	1954-55. (a)
<b>CURRENT ACCOUNT.</b>			
<b>Merchandise Trade.</b>			
1. Merchandise exports, f.o.b., to United States of America and Canada .. .. .	+ 149	+ 150	+ 142
2. Merchandise imports, f.o.b., from United States of America and Canada .. .. .	- 235	- 214	- 294
3. Trade balance with United States of America and Canada ..	- 86	- 64	- 152
4. Trade balance with other American account countries ..	..	+ 8	+ 11
5. TRADE BALANCE WITH THE DOLLAR AREA .. ..	- 86	- 56	- 141
<b>Other Current Transactions.</b>			
6. Freight on imports .. .. .	-34.0	-22.8	-31.3
7. Other transportation .. .. .	- 2.0	- 2.2	- 4.2
8. Expenditure by Australian travellers .. .. .	- 3.0	- 2.8	- 3.4
9. Expenses of Australian companies in North America .. ..	- 2.2	- 3.4	- 5.3
10. Film remittances .. .. .	- 4.5	- 5.4	- 5.8
11. Profits and dividends remitted .. .. .	- 7.2	-30.6	-27.6
12. Undistributed income accruing to companies incorporated in the dollar area .. .. .	-28.2	-38.3	(b) -38.1
13. Public authority interest payments .. .. .	- 8.0	- 7.6	- 6.7
14. Other miscellaneous debits .. .. .	-10.5	-12.9	-15.2
15. Miscellaneous credits .. .. .	+14.3	+16.1	+17.1
16. Other items (net) .. .. .	+46.3	+ 2.4	+18.3
17. INVISIBLE BALANCE WITH THE DOLLAR AREA .. ..	- 39	- 108	- 101
18. BALANCE ON CURRENT ACCOUNT (5 + 17) .. ..	- 125	- 164	- 242
<b>INVESTMENT ACCOUNT.</b>			
19. Increase in debt of public authorities .. .. .	- 3	- 32	- 11
20. Undistributed income (see item 12) .. .. .	+ 28	+ 38	(b) + 38
21. Identified private capital inflow .. .. .	- 24	+ 6	+ 80
22. Balancing item .. .. .	+ 61	+ 3	..
23. BALANCE ON INVESTMENT ACCOUNT .. .. .	+ 62	+ 15	+ 107
24. DOLLAR SURPLUS OR DEFICIT (18 + 23) .. ..	- 63	- 149	- 135
<b>DOLLAR FINANCING.</b>			
25. Dollar purchases from I.M.F. (net) .. .. .	+ 30	- 24	- 26
26. Dollar loans from I.B.R.D. .. .. .	+ 40	+ 48	+ 53
27. Gold sales to United Kingdom .. .. .	..	..	..
28. Estimated dollar drawings from (+) or contributions to (-) Sterling Area Dollar Pool .. .. .	+ 12	+ 97	+ 119
29. Movement in Australian dollar balances (increase -) ..	- 19	+ 28	- 11
30. TOTAL .. .. .	+ 63	+ 149	+ 135

(a) Preliminary.

(b) Provisional estimate only.

NOTE.—Minus sign (—) denotes debit; plus sign (+) denotes credit.

## CHAPTER IX.

## MANUFACTURING INDUSTRY.

## § 1. General.

1. **Introduction.**—A complete statistical account of the growth of the manufacturing industry in Australia cannot be given owing to the fact that prior to 1906 the necessary statistics were not collected by the several States on a definite and uniform basis. A standard classification of manufacturing industries was formulated at a conference of Australian Statisticians in 1902 and adopted by all States in 1906. 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 primarily engaged in the production of goods for local use, mainly of 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 check was made in this expansion by the world-wide economic depression of 1929-33, but subsequently 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 these demands, as well as those arising locally because of interruption of oversea importations, 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 responsibilities 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 after 1945-46 there was 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 has assisted decentralization by allocating to private industry munitions and other defence buildings in decentralized areas and 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. **Commonwealth Division of Industrial Development.**—The functions of the Division of Industrial Development (formed in February, 1945 as the Secondary Industries Division of the Department of Post-war Reconstruction) were extended in August, 1948 to include the encouragement of industrial development, the exercising of Commonwealth responsibilities for the decentralization of industry, the promotion of industrial efficiency (especially the study of technical, production and managerial problems and the dissemination and application of new knowledge and methods), the encouragement of the development of technological institutes and the publication of studies of the structure and operation of Australian manufacturing industries. The Division was attached to the Ministry of National Development when formed in March, 1950 to plan the development of national resources and to promote decentralization and regional development in conjunction with the States.

At the same time the Secondary Industries Commission which was established in 1943 to investigate post-war uses for munitions factories, to plan for the transition of secondary industries from war-time to peace-time activities, and generally to seek to increase industrial efficiency and to explore opportunities for new industries was disbanded in April, 1950.

4. **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 VIII.—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.

5. **Scientific Research and Standardization.**—(i) *The Commonwealth Scientific and Industrial Research Organization.* The function of this Organization, reference to which also appears in Chapter XXIX., 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.

(ii) *The Standards Association of Australia.* This Association, which is referred to also in Chapter XXIX., acts as the national standardizing organization of Australia and issues standard specifications for materials and codes of practice. Specifications and codes are prepared and revised periodically in accordance with the needs of industry, and standards are evolved and accepted by general consent.

(iii) *The National Association of Testing Authorities.* The National Association of Testing Authorities organizes national 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. It is expected that there will be general acceptance of certificates of tests issued in the name of the Association by the registered laboratories.



6. *Definitions in Factory Statistics.*—The statistics relating to factories have been compiled from returns supplied annually by manufacturers to, and tabulated by, the several State Statisticians, in the terms of the Statistical Acts of the States. 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 smallgoods makers, laundries, furriers, photography studios, florists and seedsmen, and 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 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 or expenditure of factories nor to show the profits or losses of factories collectively or individually.

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 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.

The *value of factory output* is the value of the goods manufactured or their value after passing through the particular process of manufacture 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 materials 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.

7. **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 regard to the placement and composition of sub-classes) in accordance with decisions of the Statisticians' Conference, 1945.

Owing to limitations of space, details published in general tables in this chapter are confined either to the sixteen classes of industry or total factory activity. 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 *Secondary Industries Bulletin*, published annually.

The principal 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.  
Asbestos Cement Sheets, etc.  
Other Cement Goods.  
Other.

#### CLASS II.—BRICKS, POTTERY, GLASS, ETC.

Bricks and Tiles, Fire Bricks and Fire-clay Goods.  
Earthenware, China, Porcelain, Terra-cotta.  
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.  
White Lead, Paints, 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 and Rolling of Iron and Steel.  
Foundries—Ferrous.  
Plant, Equipment and Machinery.  
Other Engineering:  
Extracting and Refining of other Metals, Alloys.  
Electrical Machinery, Cables and Apparatus.  
Construction and Repair of Vehicles (no groups).  
Ship and Boat Building and Repairing, Marine Engineering.  
Cutlery and Small Hand Tools.  
Agricultural Machines and Implements.  
Non-Ferrous Metals—  
Rolling and Extrusion.  
Foundries, Casting, etc.  
Iron and Steel Sheets.  
Sheet Metal Working, Pressing, and Stamping.  
Pipes, Tubes and Fittings—Ferrous.  
Wire and Wire Netting (including Nails).  
Stoves, Ovens and Ranges.  
Gas Fittings and Meters.  
Lead Mills.

#### CLASS IV.—INDUSTRIAL METALS, MACHINES, CONVEYANCES—continued.

Sewing Machines.  
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).

#### 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.  
Other.

#### CLASS VII.—SKINS AND LEATHER (NOT CLOTHING OR FOOTWEAR).

Furriers and Fur Dressing.  
Woolscouring and Fellmongery.  
Tanning, Currying, and Leather Dressing.  
Saddlery, Harness, Whips.  
Machine Belting.  
Bags, Trunks, etc.

#### CLASS VIII.—CLOTHING (EXCEPT KNITTED).

Tailoring and Ready-made Clothing.  
Waterproof and Oilskin Clothing.  
Dressmaking.  
Millinery.  
Shirts, Collars, Underclothing.  
Foundation Garments.  
Handkerchiefs, Ties, 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.  
Other.

#### CLASS IX.—FOOD, DRINK AND TOBACCO.

Flour Milling.  
Cereal Foods and Starch.  
Animal and Bird Foods.  
Chaffcutting and Corn Crushing.  
Bakeries (including Cakes and Pastry).  
Biscuits.  
Sugar Mills.

CLASS IX.—FOOD, DRINK AND TOBACCO—  
*continued.*

Sugar Refining.  
Sugar Confectionery (including Chocolate).  
Jam, Fruit and Vegetable Canning.  
Pickles, Sauces, Vinegar.  
Bacon Curing.  
Butter Factories.  
Cheese Factories.  
Condensed and Dried Milk Factories.  
Margarine.  
Meat and Fish Preserving.  
Condiments, Coffee, Spices, etc.  
Ice and Refrigerating.  
Salt Refining.  
Aerated Waters, Cordials, etc.  
Breweries.  
Distilleries.  
Wine Making.  
Cider and Perry Making.  
Malting.  
Bottling.  
Tobacco, Cigars, Cigarettes, Snuff.  
Dehydrated Fruit and Vegetables.  
Ice-cream.  
Sausage Skins.  
Arrowroot.  
Other.

CLASS X.—SAWMILLS, JOINERY, BOXES, ETC.,  
WOOD TURNING AND CARVING.

Sawmills.  
Plywood and Veneer Mills.  
Bark Mills.  
Joinery.  
Cooperage.  
Boxes and Cases.  
Basketware and Wickerware (including Sea-grass and Bamboo Furniture).  
Perambulators.  
Wall and Ceiling Boards (not Plaster or Cement).  
Other.

## CLASS XI.—FURNITURE OF WOOD, BEDDING, ETC.

Billiard Tables, Cabinet and Furniture Making and Upholstery.  
Bedding and Mattresses.  
Furnishing Drapery, etc.

CLASS XII.—FURNITURE OF WOOD, BEDDING,  
ETC.—*continued.*

Picture Frames.  
Blinds.  
Other.

CLASS XIII.—PAPER, STATIONERY, PRINTING,  
BOOKBINDING, ETC.

Newspapers and Periodicals.  
Printing—  
Government.  
General, including Bookbinding.  
Manufactured Stationery.  
Sterotyping and Electrotyping.  
Process and Photo Engraving.  
Cardboard Boxes, Cartons and Containers.  
Paper Bags.  
Paper Making.  
Pencils, Penholders, Chalks, Crayons.  
Other.

## CLASS XIV.—RUBBER.

Rubber Goods and Tyres Made.  
Tyre Retreading and Repairing.

## CLASS XV.—MUSICAL INSTRUMENTS

Gramophones and Gramophone Records.  
Pianos, Piano-Players, Organs.  
Other.

## CLASS XVI.—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 Materials, including Developing and Printing.  
Toys, Games and Sports Requisites.  
Artificial Flowers.  
Other.

## CLASS XVII.—HEAT, LIGHT, AND POWER

Electric Light and Power.  
Gas Works.

8. 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- tories.	Employ- 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.
	(d)		(d)	(d)	(d)	(d)	(d)	(d)
1901 .. ..	11,143	198	11,143	81,763	133,022	51,259	32,701	31,516
1911 .. ..	14,455	312	27,528	213,579	323,993	110,434	60,831	68,655
1920-21 .. ..	17,113	367	62,932	172,489	290,799	118,310	112,211	124,498
1930-31 .. ..	21,751	339	62,455	297,003	500,420	203,417	130,920	143,662
1938-39 .. ..	26,941	565	106,743	515,324	867,648	352,324	186,039	185,545
1945-46 .. ..	31,184	745	205,819	856,609	1,425,378	568,769	232,740	246,494
1948-49 .. ..	40,070	890	339,219	983,924	1,645,456	661,532	259,549	285,602
1949-50 .. ..	41,596	917	385,797	1,306,963	2,150,835	843,872	302,785	336,615
1950-51 .. ..	43,147	960	491,718	1,609,839	2,634,706	1,024,867	359,490	410,144
1951-52 .. ..	45,844	978	611,789	1,637,142	2,720,004	1,082,862	414,446	493,534
1952-53 .. ..	47,740	933	635,245	1,868,431	3,095,476	1,227,045	484,431	580,715
1953-54 .. ..	49,576	990	705,137					

(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 of output less value of materials and fuel, etc., used. (d) Not available.

Single year tables in this issue relate to the year 1953-54 and in the immediately preceding issue to the year 1951-52. Corresponding tables for 1952-53 may be found in the *Secondary Industries Bulletin* 1952-53, No. 47.

## § 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 1938-39 and 1948-49 to 1953-54 :—

FACTORIES : NUMBER.

Year.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas.	Aust.
1938-39 ..	9,464	9,250	3,087	2,067	2,129	944	26,941
1948-49 ..	16,087	12,702	4,083	2,927	2,925	1,346	40,070
1949-50 ..	16,346	13,231	4,494	3,046	3,023	1,456	41,596
1950-51 ..	17,129	13,504	4,776	3,141	3,111	1,486	43,147
1951-52 ..	18,144	14,758	4,918	3,245	3,267	1,512	45,844
1952-53 ..	19,251	15,154	5,068	3,339	3,424	1,504	47,740
1953-54 ..	20,199	15,533	5,199	3,577	3,523	1,545	49,576

2. Number of Factories in Industrial Classes.—(i) *Australia*. The next table shows the number of factories in Australia during 1938-39 and 1949-50 to 1953-54 classified in the industrial classes agreed upon by the Conference of Statisticians in 1930. This classification, which was introduced during 1930-31, superseded the grouping which had been in use since 1902. Details of some of the principal industries included in the table will be found in § 11, page 359.

FACTORIES : NUMBER IN INDUSTRIAL CLASSES, AUSTRALIA.

Class of Industry.	1938-39.	1949-50.	1950-51.	1951-52.	1952-53.	1953-54.
I. Treatment of Non-metalliferous Mine and Quarry Products ..	564	1,126	1,235	1,316	1,276	1,280
II. Bricks, Pottery, Glass, etc. ..	471	561	583	601	623	639
III. Chemicals, Dyes, Explosives, Paints, Oils and Grease ..	666	1,006	1,020	1,049	1,090	1,099
IV. Industrial Metals, Machines, Conveyances ..	7,255	12,362	13,106	14,513	15,672	16,868
V. Precious Metals, Jewellery and Plate ..	290	619	629	662	681	720
VI. Textiles and Textile Goods (not Dress)	611	1,155	1,190	1,246	1,270	1,336
VII. Skins and Leather (not Clothing or Footwear) ..	533	751	761	785	778	783
VIII. Clothing (except Knitted) ..	4,314	6,620	6,684	6,989	7,036	7,260
IX. Food, Drink and Tobacco ..	5,202	6,796	6,865	7,033	7,248	7,379
X. Sawmills, Joinery, Boxes, etc., Wood Turning and Carving ..	2,822	4,893	5,165	5,546	5,790	5,769
XI. Furniture of Wood, Bedding, etc. ..	1,149	1,820	1,936	2,052	2,157	2,180
XII. Paper, Stationery, Printing, Book-binding, etc. ..	1,816	1,981	2,010	2,084	2,121	2,179
XIII. Rubber ..	299	404	411	430	446	465
XIV. Musical Instruments ..	34	59	66	68	69	75
XV. Miscellaneous Products ..	413	985	1,032	1,039	1,035	1,095
Total, Classes I. to XV. ..	26,439	41,138	42,693	45,413	47,292	49,127
XVI. Heat, Light and Power ..	502	458	454	431	448	449
Grand Total ..	26,941	41,596	43,147	45,844	47,740	49,576

Although not the best index of manufacturing activity, the number of factories affords some indication of the development of secondary industries. Except for the two war years 1941-42 and 1942-43, when there were decreases, the number of factories increased each year from 1931-32 to 1953-54; in the latter year the number of factories in Australia reached the record total of 49,576 or 84.0 per cent. greater than in 1938-39.

(ii) *States, 1953-54.* The following table shows the number of factories in each State classified according to the nature of the industry :—

**FACTORIES : NUMBER IN INDUSTRIAL CLASSES, 1953-54.**

Class of Industry.	N.S.W.	Vic.	Q'land.	S. Aust.	W. Aust.	Tas.	Aust.
I. Treatment of Non-metalliferous Mine and Quarry Products ..	427	427	88	168	119	51	1,280
II. Bricks, Pottery, Glass, etc. ..	308	150	54	60	50	17	639
III. Chemicals, Dyes, Explosives, Paints, Oils and Grease ..	543	340	66	74	52	24	1,099
IV. Industrial Metals, Machines, Conveyances ..	7,010	5,101	1,737	1,327	1,264	429	16,868
V. Precious Metals, Jewellery and Plate ..	317	240	41	50	66	6	720
VI. Textiles and Textile Goods (not Dress) ..	477	731	31	45	40	12	1,336
VII. Skins and Leather (not Clothing or Footwear) ..	351	294	55	42	32	9	783
VIII. Clothing (except Knitted) ..	3,304	2,560	536	381	407	72	7,260
IX. Food, Drink and Tobacco ..	2,675	2,089	1,051	675	585	304	7,379
X. Sawmills, Joinery, Boxes, etc., Wood Turning and Carving ..	2,265	1,411	873	315	440	465	7,769
XI. Furniture of Wood, Bedding, etc. ..	765	709	290	161	172	83	2,180
XII. Paper, Stationery, Printing, Book-binding, etc. ..	917	702	187	133	117	33	2,179
XIII. Rubber ..	176	133	63	46	28	19	465
XIV. Musical Instruments ..	35	24	5	6	5	..	75
XV. Miscellaneous Products ..	506	431	52	47	49	10	1,095
Total Classes I. to XV. ..	20,076	15,432	5,129	3,530	3,426	1,534	49,127
XVI. Heat, Light and Power ..	123	101	70	47	97	11	449
Grand Total ..	20,199	15,533	5,199	3,577	3,523	1,545	49,576

### § 3. Classification of Factories according to Number of Persons Employed.

1. *General.*—The size classification of factories is based on the average weekly number of persons employed during the period of operation (including working proprietors). Prior to 1945-46 there was no dissection of the "over 100 employees" group, but for that and subsequent years this group was subdivided into the seven size groups as shown in the table below.

2. *States, 1953-54.*—The following table shows, for each State, the number of factories classified according to the average number of persons employed :—

**FACTORIES : CLASSIFICATION ACCORDING TO SIZE OF FACTORY, 1953-54.**

Size of Factory (Persons employed).	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tasmania.	Aust.
NUMBER OF FACTORIES.							
Under 4 ..	7,788	5,474	1,714	1,128	1,559	640	18,303
4 ..	1,655	1,251	496	329	166	162	4,059
5 to 10 ..	5,043	3,841	1,480	960	888	391	12,603
11 to 20 ..	2,646	2,179	686	533	454	168	6,666
21 to 50 ..	1,825	1,660	495	371	279	116	4,746
51 to 100 ..	648	572	158	132	110	37	1,657
101 to 200 ..	322	307	85	63	44	15	836
201 to 300 ..	92	109	50	28	14	6	299
301 to 400 ..	44	41	13	8	6	1	113
401 to 500 ..	34	30	6	7	..	3	80
501 to 750 ..	43	39	8	7	1	2	100
751 to 1,000 ..	23	12	4	3	1	1	44
Over 1,000 ..	36	18	4	8	1	3	70
Total ..	20,199	15,533	5,199	3,577	3,523	1,545	49,576

The relative importance of large and small factories is illustrated by a classification of the average number of persons employed according to the size of factory in which they work :—

**FACTORIES : CLASSIFICATION OF PERSONS EMPLOYED ACCORDING TO SIZE OF FACTORY, 1953-54.**

Size of Factory (Persons employed).	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas.	Aust.
<b>AVERAGE NUMBER EMPLOYED DURING PERIOD WORKED.</b>							
Under 4 .. ..	14,927	10,725	3,600	2,408	3,237	1,292	36,189
4 .. ..	6,620	5,004	1,984	1,316	664	648	16,236
5 to 10 .. ..	34,850	26,824	10,258	6,667	5,856	2,594	87,149
11 to 20 .. ..	38,492	32,035	10,025	7,652	6,486	2,463	97,153
21 to 50 .. ..	57,343	52,602	15,652	11,840	8,789	3,671	149,897
51 to 100 .. ..	45,173	40,617	10,814	9,420	7,338	2,571	115,933
101 to 200 .. ..	44,734	42,525	11,765	8,478	5,879	1,960	115,341
201 to 300 .. ..	22,512	26,975	12,121	6,921	3,546	1,411	73,486
301 to 400 .. ..	15,204	14,195	4,358	2,832	2,045	350	38,984
401 to 500 .. ..	15,066	13,328	2,715	3,133	..	1,096	35,338
501 to 750 .. ..	26,192	24,003	4,966	4,391	566	1,343	61,461
751 to 1,000 .. ..	20,368	10,588	3,472	2,666	876	917	38,887
Over 1,000 .. ..	64,363	33,833	7,024	18,324	2,755	4,768	131,067
Total .. ..	405,844	333,254	98,754	86,048	48,037	25,184	997,121
Average per Factory .. ..	20.09	21.46	19.00	24.06	13.64	16.30	20.11

3. Australia, 1938-39 and 1948-49 to 1953-54.—In the following table factories in Australia are classified according to the number of persons employed in conformity with the practice prior to 1945-46.

**FACTORIES : CLASSIFICATION ACCORDING TO 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.
1938-39—								
Number .. ..	21,982	129,505	4,013	170,971	946	272,022	26,941	572,498
Average per establish- ment .. ..	..	5.89	..	42.60	..	287.55	..	21.23
1948-49—								
Number .. ..	32,394	200,889	6,226	257,204	1,450	439,595	40,070	897,688
Average per establish- ment .. ..	..	6.20	..	41.31	..	303.17	..	22.40
1949-50—								
Number .. ..	33,673	207,600	6,442	266,027	1,481	455,187	41,596	928,814
Average per establish- ment .. ..	..	6.17	..	41.37	..	307.16	..	22.33
1950-51—								
Number .. ..	34,885	214,044	6,665	274,621	1,597	488,245	43,147	976,910
Average per establish- ment .. ..	..	6.14	..	41.20	..	305.84	..	22.65
1951-52—								
Number .. ..	37,634	224,763	6,635	271,611	1,575	489,579	45,844	985,953
Average per establish- ment .. ..	..	5.97	..	40.94	..	310.84	..	21.51
1952-53—								
Number .. ..	40,066	230,549	6,234	257,099	1,440	453,657	47,740	941,305
Average per establish- ment .. ..	..	5.75	..	41.24	..	315.04	..	19.72
1953-54—								
Number .. ..	41,631	236,727	6,403	265,830	1,542	494,564	49,576	997,121
Average per establish- ment .. ..	..	5.69	..	41.52	..	320.73	..	20.11

### § 4. Power Equipment in Factories.

1. General.—In 1936-37 statistics of power equipment in factories were collected on a basis different from that previously in use. Information now obtained relates to the "rated horse-power" of engines ordinarily in use and of 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.

In para. 2 below, 555 factories are shown in 1953-54 as using no power other than hand-power, the distribution of these factories among the various industries being as follows:—Fibrous Plaster and Products, 33; Galvanized Ironworking, Tinsmithing, 23; Tailoring and Ready-made Clothing, 128; Dressmaking, 26; Millinery, 13; Bakeries, 56; Cabinet and Furniture Making, 12; all other industries, 264.

2. Rated Horse-power of Engines in Factories other than Central Electric Stations.—The following table shows the number of factories using power-driven machinery, those using manual labour only, and the total rated horse-power of engines and electric motors ordinarily in use and in reserve or idle during 1953-54:—

**FACTORIES(a): TOTAL RATED HORSE-POWER OF ENGINES AND ELECTRIC MOTORS, 1953-54.**

State.	Number of Establishments.(a)			Rated Horse-power of Engines and Motors.(a)	
	Using Power.	Others.	Total.	Ordinarily in use.(b)	In Reserve or Idle (omitting obsolete).
New South Wales .. ..	20,089	26	20,115	1,598,121	290,824
Victoria .. ..	15,362	104	15,466	1,089,697	155,315
Queensland .. ..	4,976	169	5,145	426,868	55,672
South Australia .. ..	3,444	89	3,533	295,291	39,843
Western Australia .. ..	3,293	137	3,430	169,694	24,566
Tasmania .. ..	1,506	30	1,536	193,611	25,118
Australia .. ..	48,670	555	49,225	3,773,282	591,338

(a) Includes Gas Works but excludes Central Electric Stations.

(b) Excludes motors driven by electricity generated by factories.

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, 1953-54.**

State.	Steam.		Internal Combustion.			Water.	Motors driven by electricity.		Total. (b)
	Reciprocating.	Turbine.	Gas.	Light Oils.	Heavy Oils.		Purchased.	Own Generation. (c)	
N.S.W. .. ..	100,496	85,536	1,300	48,097	47,809	202	1,314,681	75,737	1,598,121
Victoria .. ..	24,516	42,467	1,680	23,950	19,629	1,317	976,138	75,070	1,089,697
Queensland .. ..	92,402	33,620	3,584	14,921	15,879	..	266,462	75,476	426,868
S. Australia .. ..	6,984	9,150	1,537	4,636	11,157	10	261,817	22,069	295,291
W. Australia .. ..	11,002	130	355	9,482	13,786	..	134,939	7,480	169,694
Tasmania .. ..	2,133	11	1	8,833	1,033	242	181,358	85	193,611
Australia .. ..	237,533	170,914	8,157	109,919	109,293	1,771	3,135,395	255,917	3,773,282

(a) Includes Gas Works but excludes Central Electric Stations.

(b) Excludes Particulars in column (c).

(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 1938-39, and 1948-49 to 1953-54.

**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)
	Reciprocating.	Turbine.	Gas.	Light Oils.	Heavy Oils.		Purchased.	Own Generation. (c)	
1938-39 ..	268,409	84,149	32,916	17,971	55,799	1,616	1,017,912	179,890	1,478,772
1948-49 ..	229,953	120,289	16,024	55,158	72,165	1,515	2,249,360	177,296	2,744,464
1949-50 ..	232,047	135,217	15,035	67,986	92,151	1,703	2,421,174	186,566	2,965,313
1950-51 ..	230,664	140,145	15,879	91,415	135,260	1,882	2,635,713	181,788	3,250,958
1951-52 ..	232,512	149,435	13,684	122,704	160,142	1,826	2,764,321	205,729	3,444,624
1952-53 ..	232,570	171,824	10,268	109,172	150,342	1,666	2,913,521	214,617	3,589,363
1953-54 ..	237,533	170,914	8,457	109,919	109,293	1,771	3,135,395	255,917	3,773,282

(a) Includes Gas Works but excludes Central Electric Stations.

(b) Excludes particulars in column (c).

(iii) *In Classes of Industry, 1953-54.* 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, 1953-54.**

Class of Industry.	N.S.W.	Vic.	Q'land.	S. Aust.	W. Aust.	Tas.	Aust.
I. Treatment of Non-metallic ferous Mine and Quarry Products ..	70,849	45,234	13,324	16,711	10,809	13,581	170,508
II. Bricks, Pottery, Glass, etc...	45,415	29,481	8,378	7,137	9,838	1,776	102,025
III. Chemicals, Dyes, Explosives, Paints, Oils and Grease ..	96,179	88,470	8,744	15,885	12,178	3,571	225,027
IV. Industrial Metals, Machines, Conveyances ..	760,284	327,908	88,819	132,646	45,617	44,432	1,399,706
V. Precious Metals, Jewellery and Plate ..	4,527	5,932	453	1,020	614	68	12,614
VI. Textiles and Textile Goods (not Dress) ..	52,151	90,358	5,454	7,491	2,601	5,311	163,366
VII. Skins and Leather (not Cloth- ing or Footwear) ..	18,585	20,179	5,297	5,198	2,486	484	52,229
VIII. Clothing (except Knitted) ..	24,496	27,640	3,825	3,175	2,129	716	61,981
IX. Food, Drink and Tobacco ..	199,795	173,700	180,430	51,639	32,644	17,269	655,477
X. Sawmills, Joinery, Boxes, etc., Wood Turning and Carving ..	166,584	111,701	86,841	27,900	39,819	32,576	465,421
XI. Furniture of Wood, Bedding, etc. ....	17,616	17,713	7,726	6,647	4,121	1,832	55,655
XII. Paper, Stationery, Printing, Bookbinding, etc. ....	58,096	78,690	8,027	13,488	4,569	71,166	234,036
XIII. Rubber ..	46,749	42,608	6,922	2,965	535	381	100,160
XIV. Musical Instruments ..	2,279	595	44	13	7	..	2,938
XV. Miscellaneous Products ..	19,174	19,748	450	1,850	525	337	42,084
<b>Total, Classes I. to XV. ..</b>	<b>1,582,779</b>	<b>1,079,957</b>	<b>424,734</b>	<b>293,765</b>	<b>168,492</b>	<b>193,500</b>	<b>3,743,227</b>
<b>XVI. Gas Works ..</b>	<b>15,342</b>	<b>9,740</b>	<b>2,134</b>	<b>1,526</b>	<b>1,202</b>	<b>111</b>	<b>30,055</b>
<b>Grand Total ..</b>	<b>1,598,121</b>	<b>1,089,697</b>	<b>426,868</b>	<b>295,291</b>	<b>169,694</b>	<b>193,611</b>	<b>3,773,282</b>

(a) Excludes 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 1953-54 are given in the following table :—

CENTRAL ELECTRIC STATIONS : POWER EQUIPMENT, AUSTRALIA, 1953-54.

Particulars.	Capacity of Engines and Generators.						
	Steam.		Internal Combustion.			Water.	Total.
	Reciprocating.	Turbine.	Gas.	Light Oils.	Heavy Oils.		
Engines installed.. Rated H.P.	10,313	3,841,909	16,597	9,916	324,183	531,156	4,734,074
Generators installed—							
Kilowatt capacity—							
Total installed .. K.W.	7,281	2,794,973	11,425	7,378	214,843	380,709	3,416,609
Effective capacity .. „	6,921	2,527,587	8,775	5,837	195,781	376,334	3,121,235
Horse-power equivalent—							
Total installed .. H.P.	9,759	3,746,606	15,314	9,889	287,993	510,333	4,579,894
Effective capacity .. „	9,277	3,388,180	11,762	7,823	262,441	504,469	4,183,952

NOTE.—The number of establishments classified as Central Electric Stations in 1953-54 was 351.

(ii) *States.* Details of the capacity of engines and generators installed in Central Electric Stations in each State in 1953-54 are given in the next table.

CENTRAL ELECTRIC STATIONS : NUMBER AND POWER EQUIPMENT, 1953-54.

Particulars.	N.S.W.	Vic.	Q'land.	S. Aust.	W. Aust.	Tas.	Aust.
Central Electric Stations No.	84	67	54	44	93	9	351
Engines installed... Rated H.P.	1,970,787	1,169,152	537,014	(a)	278,017	(a)	4,734,074
Generators installed— Kilowatt capacity—							
Total installed... K.W.	1,421,951	829,405	398,625	(a)	198,982	(a)	3,416,609
Effective capacity... „	1,271,871	805,937	292,211	(a)	187,799	(a)	3,121,235
Horse-power equivalent—							
Total installed... H.P.	1,906,097	1,111,799	534,349	(a)	266,732	(a)	4,579,894
Effective capacity... „	1,704,918	1,080,342	391,703	(a)	251,740	(a)	4,183,952

(a) Not available for publication.

## § 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 “outworkers” (see para. 4 (ii), page 337), 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. Prior to 1945-46 the occupational grouping collected was (i) working proprietors; (ii) managers and overseers; (iii) accountants and clerks; (iv) enginedrivers and firemen; (v) workers in factory, skilled and unskilled; (vi) carters and messengers; and (vii) persons working regularly at home for the establishment. This grouping did not record separate details for technical staff (e.g., chemists, draftsmen, etc.) and supervisory staff and in 1945-46 the set-up on the collection form was amended to obtain the following groupings :—(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.

Prior to the year 1928–29 average employment in factories was computed by dividing the sum of the number employed each week by the number of weeks worked. The figures therefore represented the average number employed over the period worked, which, for many factories, was less than a full year. Commencing with the year 1928–29 the figures represent the equivalent average number employed over a full year of fifty-two weeks. The classification of factories according to the number of persons employed (*see* § 3, page 329), however, is still based on the old method, but for all other purposes the average number engaged over the full year is used.

(ii) *Australia.* Particulars of the numbers employed, the increase in employment and the rate per cent. of such increase are given for the years 1938–39 and 1948–49 to 1953–54 in the following table:—

#### FACTORIES : EMPLOYMENT, AUSTRALIA.

Year.	Males.			Females.			Persons.		
	Number Em- ployed.	Increase on Preceding Year.		Number Em- ployed.	Increase on Preceding Year.		Number Em- ployed.	Increase on Preceding Year.	
		Number.	Per Cent.		Number.	Per Cent.		Number.	Per Cent.
1938–39 ..	412,591	3,089	0.98	152,515	1,957	1.30	565,106	5,946	1.06
1948–49 ..	669,961	29,036	4.53	220,156	12,205	5.87	890,117	41,241	4.86
1949–50 ..	689,347	19,386	2.90	228,152	7,996	3.63	917,499	27,382	3.08
1950–51 ..	726,051	36,704	5.33	242,867	14,715	6.45	968,918	51,419	5.60
1951–52 ..	741,971	15,920	2.19	235,546	— 7,321	— 3.02	977,517	8,599	0.89
1952–53 ..	723,404	— 18,567	— 2.50	209,857	— 25,689	— 10.91	933,261	— 44,256	— 4.53
1953–54 ..	758,508	35,104	4.85	231,034	21,177	10.09	989,542	56,281	6.03

NOTE.—Minus sign (—) indicates decrease.

(iii) *States.* The following table shows, for the same years, (a) the average number of persons employed in manufacturing industries in each State; (b) for each State, the percentage of the total number employed in factories in Australia; and (c) the number so employed per ten thousand of the mean population in each State and Australia.

#### FACTORIES : EMPLOYMENT.

Year.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas.	Aust.
AVERAGE NUMBER EMPLOYED DURING FULL YEAR (52 WEEKS).							
1938–39 ..	228,781	201,831	54,110	43,371	23,211	13,802	565,106
1948–49 ..	378,380	292,006	82,945	75,830	38,354	22,602	890,117
1949–50 ..	382,385	303,476	88,993	78,436	40,733	23,506	917,499
1950–51 ..	406,965	316,792	94,579	82,994	43,761	23,827	968,918
1951–52 ..	405,994	324,143	94,349	83,907	45,097	24,027	977,517
1952–53 ..	380,213	310,759	93,123	80,483	45,188	23,495	933,261
1953–54 ..	402,595	331,277	98,119	85,503	47,459	24,589	989,542
PERCENTAGE OF AUSTRALIAN TOTAL							
1938–39 ..	40.48	35.72	9.58	7.67	4.11	2.44	100.00
1948–49 ..	42.51	32.80	9.32	8.52	4.31	2.54	100.00
1949–50 ..	41.68	33.08	9.70	8.55	4.44	2.56	100.00
1950–51 ..	42.00	32.69	9.76	8.57	4.52	2.46	100.00
1951–52 ..	41.53	33.16	9.65	8.58	4.62	2.46	100.00
1952–53 ..	40.74	33.30	9.98	8.62	4.84	2.52	100.00
1953–54 ..	40.68	33.48	9.92	8.64	4.80	2.48	100.00

FACTORIES: EMPLOYMENT—*continued*.

Year.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas.	Aust.
PER 10,000 OF POPULATION.							
1938-39 .. ..	836	1,078	537	729	497	581	815
1948-49 .. ..	1,235	1,382	731	1,140	734	843	1,141
1949-50 .. ..	1,206	1,398	765	1,129	746	847	1,140
1950-51 .. ..	1,243	1,416	793	1,167	766	829	1,166
1951-52 .. ..	1,208	1,409	773	1,150	763	801	1,145
1952-53 .. ..	1,112	1,315	746	1,074	737	761	1,067
1953-54 .. ..	1,182	1,367	754	1,088	753	795	1,112

2. Rates of Increase, 1938-39 and 1948-49 to 1953-54.—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.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas.	Aust.
1938-39 .. ..	1.74	0.02	3.82	-1.62	0.34	4.80	1.06
1948-49 .. ..	4.13	4.94	8.07	3.38	6.64	6.75	4.86
1949-50 .. ..	1.06	3.93	7.26	3.44	6.20	4.00	3.08
1950-51 .. ..	6.43	4.39	6.31	5.81	7.43	1.37	5.60
1951-52 .. ..	-0.24	2.32	-0.24	1.10	2.99	0.84	0.89
1952-53 .. ..	-6.35	-4.13	-1.30	-4.08	0.20	-2.21	-4.53
1953-54 .. ..	5.89	6.60	5.36	6.24	5.03	4.66	6.03

NOTE.—Minus sign (—) Indicates decrease.

3. Persons Employed in Classes of Industry.—(i) *Australia*. The following table shows the average number of persons employed in factories in each industrial class in Australia for the years 1938-39 and 1949-50 to 1953-54:—

## FACTORIES: PERSONS EMPLOYED IN INDUSTRIAL CLASSES, AUSTRALIA.

Class of Industry.	1938-39.	1949-50.	1950-51.	1951-52.	1952-53.	1953-54.
I. Treatment of Non-metalliferous Mine and Quarry Products .. ..	10,343	16,598	18,436	19,365	18,752	18,748
II. Bricks, Pottery, Glass, etc. ..	15,709	19,241	20,449	20,912	19,571	21,708
III. Chemicals, Dyes, Explosives, Paints, Oils and Grease .. ..	19,816	34,525	36,323	38,248	36,139	37,988
IV. Industrial Metals, Machines, Conveyances .. ..	177,677	344,313	373,798	389,252	376,398	397,713
V. Precious Metals, Jewellery and Plate ..	3,726	6,638	6,344	5,953	5,398	5,970
VI. Textiles and Textile Goods (not Dress)	46,082	65,528	68,280	63,548	60,087	60,482
VII. Skins and Leather (not Clothing or Footwear) .. ..	10,767	16,277	15,801	14,324	14,126	14,676
VIII. Clothing (except Knitted) .. ..	86,092	118,757	122,464	116,705	105,681	112,520
IX. Food, Drink and Tobacco .. ..	83,846	122,783	124,350	122,734	120,668	123,073
X. Sawmills, Joinery, Boxes, etc., Wood Turning and Carving .. ..	30,739	53,169	56,300	59,664	56,094	58,932
XI. Furniture of Wood, Bedding, etc. ..	15,287	21,021	22,818	22,156	20,353	20,975
XII. Paper, Stationery, Printing, Book-binding, etc. .. ..	39,913	53,002	55,328	56,455	53,219	56,119
XIII. Rubber .. ..	7,502	12,382	13,526	14,021	12,288	14,962
XIV. Musical Instruments .. ..	451	1,456	1,614	1,581	1,267	1,575
XV. Miscellaneous Products .. ..	7,727	18,561	19,401	18,176	17,240	19,565
Total, Classes I. to XV. .. ..	555,677	904,251	955,232	963,094	918,171	974,006
XVI. Heat, Light and Power .. ..	9,429	13,248	13,686	14,423	15,000	15,536
Grand Total .. ..	565,106	917,499	968,918	977,517	933,261	989,542

(ii) *States.* Particulars of the numbers employed in each industrial class are shown in the following table for each State :—

**FACTORIES : PERSONS EMPLOYED IN INDUSTRIAL CLASSES, 1953-54.**

Class of Industry.	N.S.W.	Vic.	Q'land.	S. Aust.	W. Aust.	Tas.	Aust.
I. Treatment of Non-metalliferous Mine and Quarry Products	7,520	5,629	1,535	1,524	1,737	703	18,748
II. Bricks, Pottery, Glass, etc.	11,049	5,532	1,216	2,046	1,539	326	21,708
III. Chemicals, Dyes, Explosives, Paints, Oils and Grease	17,157	14,104	1,525	2,968	1,846	388	37,988
IV. Industrial Metals, Machines, Conveyances	176,527	116,812	32,690	45,209	18,241	8,234	397,713
V. Precious Metals, Jewellery and Plate	2,214	2,777	336	365	260	18	5,970
VI. Textiles and Textile Goods (not Dress)	24,288	37,753	2,098	2,082	863	2,398	69,482
VII. Skins and Leather (not Clothing or Footwear)	5,741	5,436	1,299	1,400	684	116	14,676
VIII. Clothing (except Knitted)	44,892	47,196	9,125	5,920	4,453	934	112,520
IX. Food, Drink and Tobacco	38,614	37,740	25,914	10,598	6,073	4,134	123,073
X. Sawmills, Joinery, Boxes, etc., Wood Turning and Carving	19,902	14,595	10,672	4,353	6,342	3,068	58,932
XI. Furniture of Wood, Bedding, etc.	7,870	6,048	3,028	2,068	1,460	501	20,975
XII. Paper, Stationery, Printing, Bookbinding, etc.	23,457	18,898	4,822	3,495	2,216	3,231	56,119
XIII. Rubber	6,856	5,371	1,485	902	187	161	14,962
XIV. Musical Instruments	1,176	298	44	41	16	..	1,575
XV. Miscellaneous Products	8,659	8,937	607	797	380	185	19,565
Total. Classes I. to XV.	395,022	327,120	96,396	83,868	46,297	197	974,006
XVI. Heat, Light and Power	6,673	4,151	1,723	1,635	1,162	102	15,536
Grand Total	402,595	331,277	98,119	85,503	47,459	24,589	989,542

4. *Persons Employed According to Occupational Grouping.*—(i) *General.* In the following table the average number of persons employed in each State during 1953-54 are classified according to their occupational grouping. As mentioned previously, persons employed in factories are now classified on a basis different from that adopted prior to 1945-46. The nature of this change is indicated in § 5, para. 1, above.

**FACTORIES : PERSONS EMPLOYED—OCCUPATIONAL GROUPING, 1953-54.**

State.	Average Number of Persons Employed.						Total.
	Working Proprietors.	Managerial and Clerical Staff, etc.(a)	Chemists, Draftsmen, etc.	Foremen and Overseers.	Workers in Factory (Skilled and Unskilled).	Carters (excluding Delivery only) and Messengers, etc. (b)	
New South Wales ..	15,611	44,663	5,353	16,816	317,532	2,620	402,595
Victoria ..	13,722	33,789	4,299	14,193	262,916	2,358	331,277
Queensland ..	4,609	8,981	834	3,454	79,585	656	98,119
South Australia ..	2,602	9,491	1,236	3,639	68,156	379	85,503
Western Australia	2,539	3,647	308	1,855	38,993	117	47,459
Tasmania ..	928	2,389	373	1,036	19,740	123	24,589
Total Males ..	35,914	63,866	11,475	37,948	604,250	5,055	758,508
Total Females ..	4,097	39,094	928	3,045	182,672	1,198	231,034
Total Persons ..	40,011	102,960	12,403	40,993	786,922	6,253	989,542

(a) Includes salaried managers and working directors. at home.

(b) Includes persons working regularly

(ii) *Outworkers.* The term "outworker" or "homeworker" has acquired a special meaning in connexion with manufacturing industries, and embraces only persons to whom work is given out by factories to be done at home. Owing to the amended employment groupings adopted in 1945-46 (see § 5. 1.) persons working regularly at home for factories are now included with carters, messengers and others and separate details are no longer available. The number of "outworkers" employed by factories in 1944-45 was 1,049.

5. *Monthly Employment, 1938-39 and 1949-50 to 1953-54.*—(i) *Australia.* The following table shows the number of persons (excluding working proprietors) employed in factories on the pay-day nearest to the 15th of each month for years up to 1949-50 and on the last pay-day of the month thereafter.

**FACTORIES: MONTHLY EMPLOYMENT, AUSTRALIA.**  
(EXCLUDING WORKING PROPRIETORS.)

Month.	1938-39.	1949-50.	1950-51.	1951-52.	1952-53.	1953-54.
<b>MALES.</b>						
July .. .. .	387,693	584,186	682,797	710,373	688,679	704,109
August .. .. .	389,979	622,085	685,454	711,656	682,882	707,438
September .. .. .	391,576	646,928	685,873	712,284	680,026	710,246
October .. .. .	393,977	652,463	687,498	714,424	679,901	715,338
November .. .. .	395,192	655,097	692,615	716,300	680,398	719,230
December .. .. .	394,438	655,306	690,565	708,848	678,174	716,202
January .. .. .	385,742	658,082	692,678	710,357	680,298	722,277
February .. .. .	392,056	664,547	694,602	709,453	689,012	727,754
March .. .. .	395,146	669,336	696,262	707,701	694,516	732,000
April .. .. .	391,005	669,389	700,154	702,571	697,202	731,923
May .. .. .	393,609	674,263	702,628	696,475	698,711	734,340
June .. .. .	390,973	677,513	704,515	694,871	701,500	738,002
<b>FEMALES.</b>						
July .. .. .	147,282	195,016	229,987	243,646	201,464	212,322
August .. .. .	149,294	211,519	232,090	244,629	200,393	214,644
September .. .. .	151,159	219,867	233,914	244,712	199,910	218,078
October .. .. .	152,473	222,680	236,282	245,285	201,107	222,255
November .. .. .	152,806	225,063	238,740	242,831	201,346	224,672
December .. .. .	151,165	223,894	237,141	237,174	199,707	224,100
January .. .. .	141,853	223,213	236,018	231,186	201,596	228,838
February .. .. .	151,883	228,232	242,902	229,047	209,939	232,678
March .. .. .	154,854	231,238	243,181	225,487	213,470	236,354
April .. .. .	152,614	230,354	243,011	216,845	211,725	234,175
May .. .. .	150,693	231,345	243,768	212,036	211,392	232,333
June .. .. .	148,601	231,206	244,268	207,163	211,551	232,009
<b>PERSONS.</b>						
July .. .. .	534,975	779,202	912,784	954,019	890,143	916,431
August .. .. .	539,273	833,604	917,544	956,285	883,275	922,082
September .. .. .	542,735	866,795	919,787	956,996	879,936	928,324
October .. .. .	540,450	875,143	923,780	959,709	881,008	937,593
November .. .. .	547,998	880,160	931,355	959,131	881,744	943,902
December .. .. .	545,603	879,200	927,706	946,022	877,881	940,302
January .. .. .	527,595	881,295	928,696	941,543	881,894	951,115
February .. .. .	543,939	892,779	937,504	938,500	898,951	960,432
March .. .. .	550,000	900,574	939,443	933,188	907,986	968,354
April .. .. .	543,619	899,743	943,165	919,416	908,927	966,098
May .. .. .	544,302	905,608	946,396	908,511	910,103	966,673
June .. .. .	539,574	908,719	948,783	902,034	913,051	970,011

(ii) *States.* Particulars of the numbers employed in each State on the last pay-day of each month in 1953-54 are shown in the following table:—

### FACTORIES: MONTHLY EMPLOYMENT, 1953-54.

(EXCLUDING WORKING PROPRIETORS.)

Month.	N.S.W.	Vic.	Qld.	S. Aust.	W. Aust.	Tas.	Aust.
MALES.							
July .. ..	283,739	221,333	77,888	65,666	37,288	18,195	704,109
August .. ..	284,407	222,799	78,920	65,870	37,237	18,205	707,438
September ..	286,102	223,637	78,157	66,372	37,566	18,412	710,246
October .. ..	288,626	225,798	77,267	67,212	37,685	18,750	715,338
November ..	290,357	227,090	76,995	67,723	38,060	19,005	719,230
December ..	289,630	227,419	73,786	68,061	38,062	19,244	716,202
January .. ..	291,795	230,002	73,449	69,277	38,053	19,701	722,277
February ..	294,410	231,210	75,134	69,360	38,208	19,432	727,754
March .. ..	295,300	233,108	75,793	69,604	38,521	19,674	732,000
April .. ..	295,443	232,739	75,962	69,713	38,314	19,752	731,923
May .. ..	296,112	232,348	77,925	69,695	38,511	19,749	734,340
June .. ..	297,064	233,182	79,894	69,847	38,434	19,581	738,002

### FEMALES.

July .. ..	89,826	83,294	15,750	13,087	6,494	3,871	212,322
August .. ..	91,063	84,149	15,791	13,210	6,568	3,863	214,644
September ..	92,648	85,488	15,878	13,534	6,681	3,849	218,078
October .. ..	94,609	87,318	15,995	13,716	6,753	3,864	222,255
November ..	95,806	88,223	15,893	14,025	6,833	3,892	224,672
December ..	94,621	87,883	15,751	14,980	6,794	4,071	224,100
January .. ..	95,305	90,012	16,199	16,002	6,791	4,529	228,838
February ..	97,146	91,988	16,863	15,413	7,030	4,238	232,678
March .. ..	98,590	93,735	16,748	15,419	7,262	4,600	236,354
April .. ..	97,537	92,829	16,332	15,444	7,265	4,768	234,175
May .. ..	97,675	91,174	16,458	15,011	7,206	4,809	232,333
June .. ..	97,645	90,967	16,613	14,961	7,073	4,750	232,009

### PERSONS.

July .. ..	373,565	304,627	93,638	78,753	43,782	22,066	916,431
August .. ..	375,470	306,948	94,711	79,080	43,805	22,068	922,082
September ..	378,750	309,125	94,035	79,906	44,247	22,261	928,324
October .. ..	383,235	313,116	93,262	80,928	44,438	22,614	937,593
November ..	386,163	315,313	92,888	81,748	44,893	22,897	943,902
December ..	384,251	315,302	89,537	83,041	44,856	23,315	940,302
January .. ..	387,100	320,014	89,648	85,279	44,844	24,230	951,115
February ..	391,556	323,198	91,997	84,773	45,238	23,670	960,432
March .. ..	393,890	326,843	92,541	85,023	45,783	24,274	968,354
April .. ..	392,980	325,568	92,294	85,157	45,579	24,520	966,098
May .. ..	393,787	323,522	94,383	84,706	45,717	24,558	966,673
June .. ..	394,709	324,149	96,507	84,808	45,507	24,331	970,011

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, permits of a distribution of employees (excluding working proprietors) into seven age-groups from 1945-46 onwards, instead of three as in previous years. The particulars are collected as at June. The numbers employed in each age-group on the last pay-day in June, 1953 and 1954 are given below :—

FACTORIES : DISTRIBUTION OF EMPLOYEES ACCORDING TO AGE, JUNE, 1953  
AND 1954.

(EXCLUDING WORKING PROPRIETORS.)

Age Group.	June, 1953.			June, 1954.		
	Males.	Females.	Persons.	Males.	Females.	Persons.
Under 16 years .. ..	9,011	6,874	15,885	9,294	7,228	16,522
16 years .. ..	12,451	8,303	20,754	12,874	8,945	21,819
17 " .. ..	13,893	9,072	22,965	14,947	9,899	24,846
18 " .. ..	13,655	9,237	22,892	14,591	9,702	24,293
19 " .. ..	12,383	8,623	21,006	12,971	8,719	21,690
20 " .. ..	12,293	7,945	20,238	12,426	7,807	20,233
21 " and over .. ..	627,814	161,497	789,311	660,899	179,709	840,608
Total .. ..	701,500	211,551	913,051	738,002	232,009	970,011

As comparative details based on the new age grouping are not available for the years prior to 1945-46, the following table shows the age distribution in sexes for Australia in June, 1939, and 1949 to 1954 on the old basis.

FACTORIES : DISTRIBUTION OF EMPLOYEES IN JUNE, ACCORDING TO AGE,  
AUSTRALIA.

(EXCLUDING WORKING PROPRIETORS.)

In June—	Under 16 Years.		16 and under 21 Years.		21 Years and Over.		Total.	
	No.	Per Cent.	No.	Per Cent.	No.	Per Cent.	No.	Per Cent.
MALES.								
1939 ..	16,109	4.12	76,418	19.55	298,436	76.33	390,963	100
1949 ..	7,791	1.21	66,030	10.23	572,440	88.56	646,261	100
1950 ..	7,812	1.15	63,310	9.35	606,391	89.50	677,513	100
1951 ..	8,219	1.17	60,913	8.64	635,383	90.19	704,515	100
1952 ..	9,079	1.31	59,616	8.58	626,176	90.11	694,871	100
1953 ..	9,011	1.28	64,675	9.22	627,814	89.50	701,500	100
1954 ..	9,294	1.26	67,809	9.19	660,899	87.55	738,002	100
FEMALES.								
1939 ..	15,497	10.43	56,273	37.87	76,831	51.70	148,601	100
1949 ..	6,326	2.88	51,563	23.47	161,763	73.65	219,652	100
1950 ..	6,055	2.62	48,021	20.77	177,130	76.61	231,206	100
1951 ..	6,236	2.55	46,848	19.18	191,184	78.27	244,268	100
1952 ..	5,669	2.74	40,431	19.52	161,063	77.74	207,163	100
1953 ..	6,874	3.25	43,180	20.41	161,497	76.34	211,551	100
1954 ..	7,228	3.11	45,072	19.43	179,709	77.46	232,009	100
PERSONS.								
1939 ..	31,606	5.86	132,691	24.59	375,267	69.55	539,564	100
1949 ..	14,117	1.63	117,593	13.58	734,203	84.79	865,913	100
1950 ..	13,867	1.53	111,331	12.25	783,521	86.22	908,719	100
1951 ..	14,455	1.52	107,761	11.36	826,567	87.12	948,783	100
1952 ..	14,748	1.64	100,047	11.09	787,239	87.27	902,034	100
1953 ..	15,885	1.74	107,855	11.81	789,311	86.45	913,051	100
1954 ..	16,522	1.70	112,881	11.64	840,608	86.66	970,011	100

### § 6. Sex Distribution in Factories.

1. *Distribution According to Sex of Persons Employed.*—(i) *General.* In New South Wales the ratio of the number of females engaged in factories to the number of males during 1886 was about one to seven; in 1891 one to six; in 1903 it became about one to four; and in 1951-52 was one to three. In Victoria the ratio of females to males during the year 1886 was about one to five. Five years later (1891) it was somewhat less, but in 1896 had increased to about one to three, and in 1951-52 was about two to five. For Australia as a whole the ratio of females employed in factories was highest in 1943-44 at about two females to five males but by 1946-47 the ratio had declined to the level of one female to three males, where it has since remained.

(ii) *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 1938-39 and 1949-50 to 1953-54 :—

**FACTORIES: MALES AND FEMALES EMPLOYED.**

State.	1938-39.	1949-50.	1950-51.	1951-52.	1952-53.	1953-54.
<b>MALES.</b>						
New South Wales ..	167,172	284,055	301,307	304,808	291,704	305,040
Victoria ..	136,218	216,198	224,919	233,699	228,724	240,698
Queensland..	43,941	72,948	77,182	77,673	77,627	81,425
South Australia ..	35,406	63,133	66,840	68,045	67,114	70,657
Western Australia ..	18,704	33,711	36,349	37,812	38,614	40,439
Tasmania ..	11,150	19,302	19,454	19,934	19,621	20,249
Australia ..	412,591	689,347	726,051	741,971	723,404	758,508
<b>FEMALES.</b>						
New South Wales ..	61,609	98,330	105,658	101,186	88,509	97,555
Victoria ..	65,613	87,278	91,873	90,444	82,035	90,579
Queensland..	10,169	16,015	17,397	16,676	15,496	16,694
South Australia ..	7,965	15,303	16,154	15,862	13,369	14,846
Western Australia ..	4,507	7,022	7,412	7,285	6,574	7,020
Tasmania ..	2,652	4,204	4,373	4,093	3,874	4,340
Australia ..	152,515	228,152	242,867	235,546	209,857	231,034

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 1938-39 and 1949-50 to 1953-54 :—

**FACTORIES: ANNUAL PERCENTAGE INCREASES OF MALES AND FEMALES EMPLOYED.**

State.	1938-39.	1949-50.	1950-51.	1951-52.	1952-53.	1953-54.
<b>MALES.</b>						
New South Wales ..	1.69	0.62	6.07	1.16	-4.30	4.57
Victoria ..	0.04	3.85	4.03	3.90	-2.13	5.24
Queensland..	3.79	6.67	5.80	0.64	-0.06	4.89
South Australia ..	-2.39	3.68	5.87	1.80	-1.37	5.28
Western Australia ..	-0.30	6.40	7.83	4.02	2.12	4.73
Tasmania ..	4.40	4.29	0.79	2.47	-1.57	3.20
Total ..	0.98	2.89	5.32	2.19	-2.50	4.85
<b>FEMALES.</b>						
New South Wales ..	1.88	2.35	7.45	-4.23	-12.44	10.22
Victoria ..	-0.03	4.12	5.26	-1.56	-9.30	10.42
Queensland..	3.96	9.99	8.63	-4.14	-7.08	7.73
South Australia ..	1.98	2.43	5.56	-1.81	-15.72	11.05
Western Australia ..	3.06	5.25	5.55	-1.71	-9.76	6.78
Tasmania ..	6.51	2.60	4.02	-6.40	-5.35	12.03
Total ..	1.30	3.63	6.45	-3.01	-10.91	10.09

NOTE.—Minus sign (—) indicates decrease.



3. **Masculinity of Persons Employed in Factories.**—The extent to which females are employed in the factories of Australia may perhaps be more clearly shown by giving the masculinity of persons employed in each State. The following table shows particulars for the years 1938-39 and 1948-49 to 1953-54 :—

FACTORIES : MASCULINITY(a) OF PERSONS EMPLOYED.

Year.	N.S.W.	Vic.	Q'land.	S. Aust.	W. Aust.	Tas.	Aust.
1938-39 .. ..	271	208	432	445	415	420	271
1948-49 .. ..	294	248	470	408	475	452	304
1949-50 .. ..	289	248	455	413	480	459	302
1950-51 .. ..	285	245	444	414	490	445	299
1951-52 .. ..	301	258	466	429	519	487	315
1952-53 .. ..	330	279	501	502	587	506	345
1953-54 .. ..	313	266	488	476	576	467	328

(a) Number of males per 100 females.

For a number of years prior to 1926-27 there were on the average 300 males employed in factories for every 100 females, but by 1932-33, as a result of the particularly severe effect of the depression on the heavier industries where males predominate in number, there were only 239 males employed to every 100 females. With the subsequent recovery of employment in the heavier industries the proportion of males per 100 females increased to 271 in 1937-38 and 1938-39. The enlistment of men in the armed services and the expansion of industry and the consequential absorption of women brought about by the 1939-45 War caused a decrease in masculinity from 1938-39 to 1943-44. However, following the cessation of hostilities in 1945 and the return of servicemen to civilian life, the number of females employed in factories declined and masculinity increased, and in 1953-54 there were 328 males to every 100 females employed in factories.

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 1953-54 these industries accounted for 79.68 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 129 females to every 100 males and in Class VIII., Clothing, with 230 females per 100 males. The following tables show the average number of males and females employed in each of these classes in 1953-54 :—

MALES AND FEMALES EMPLOYED IN PARTICULAR INDUSTRIES, 1953-54.

Class.	N.S.W.	Vic.	Q'land.	S. Aust.	W. Aust.	Tas.	Aust.
MALES.							
IV. Industrial Metals, etc. ..	158,529	105,395	30,945	41,094	17,478	7,885	361,326
VI. Textiles and Textile Goods (not Dress) ..	10,206	17,015	709	1,048	469	929	30,376
VIII. Clothing (except Knitted) ..	12,062	14,836	2,623	1,897	1,362	366	34,046
IX. Food, Drink and Tobacco ..	27,272	27,927	22,261	7,862	4,705	2,928	92,955
All Other Classes ..	90,071	75,325	24,887	18,756	16,425	8,141	239,805
Total ..	305,040	240,695	81,425	70,657	40,439	20,249	758,508
FEMALES.							
IV. Industrial Metals, etc. ..	17,998	11,417	1,745	4,115	763	349	36,387
VI. Textiles and Textile Goods (not Dress) ..	14,082	20,738	1,389	1,034	394	1,469	39,106
VIII. Clothing (except Knitted) ..	31,930	32,360	6,502	4,023	3,091	568	78,474
IX. Food, Drink and Tobacco ..	11,342	9,813	3,653	2,736	1,368	1,206	30,118
All Other Classes ..	22,203	16,251	3,405	2,938	1,404	748	46,949
Total ..	97,555	90,579	16,604	14,846	7,020	4,340	231,034

(ii) *Females Employed in Clothing Manufacture.* The employment of females in the several industries of Class VIII., Clothing—in which class 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.

## MALES AND FEMALES EMPLOYED IN CLOTHING INDUSTRIES, 1953-54.

Industry.	New South Wales.			Victoria.			Other States.		
	Males.	Females.	Femininity. (a)	Males.	Females.	Femininity. (a)	Males.	Females.	Femininity. (a)
Tailoring and Ready-made Clothing ..	3,109	13,977	450	3,139	7,454	237	1,313	4,272	325
Waterproof and Oilskin Clothing ..	104	593	570	123	320	260	15	95	633
Dressmaking, Hemstitching ..	217	2,235	1,030	1,459	8,738	599	169	2,990	1,769
Millinery ..	265	1,445	545	240	863	347	43	524	1,219
Shirts, Collars and Under-clothing ..	374	3,371	901	599	4,676	781	154	1,982	1,287
Foundation Garments ..	118	1,427	1,209	193	1,264	655	20	168	840
Handkerchiefs, Ties and Scarves ..	179	1,044	583	83	377	454	13	127	977
Hats and Caps ..	650	787	121	305	246	81	31	138	445
Gloves ..	126	369	293	68	362	533	35	174	497
Boots and Shoes ..	3,738	3,806	102	5,710	5,692	100	2,162	1,789	83
Boot and Shoe Repairing ..	1,482	71	5	669	30	4	665	36	5
Boot and Shoe Accessories ..	228	134	59	376	219	58	32	4	13
Umbrellas and Walking Sticks ..	54	112	207	23	65	283	16	41	256
Dyeworks and Cleaning (including Renovating and Repairing) ..	2,259	2,149	95	1,728	1,681	97	1,580	1,844	117
Other ..	59	410	695	112	373	333	..	..	..
Total ..	12,962	31,930	247	14,836	32,360	218	6,248	17,184	227

(a) Number of females per 100 males.

## § 7. Child Labour in Factories.

1. Conditions of Child Labour.—The employment of young persons in factories in the States is regulated by Acts of Parliament, as is the case with the employment of female labour. The object of the restrictions imposed is to ensure, amongst other things, that a proper period shall be devoted to primary education, and that the early years of labour shall not exhaust the worker before the attainment of full growth.

2. Number of Children Employed, 1939, 1953 and 1954.—In the returns for the various States, the term "child" denotes any person under sixteen years of age. The decline in the number of children employed from the peak of 33,553 reached in June, 1940 to 16,522 in June, 1954 which is most marked in all States excepting Western Australia, was probably caused by several factors, including (i) the raising of the school leaving age in New South Wales and Tasmania, (ii) fewer children available for employment owing to the decline in the birth rate which occurred about 1929, and (iii) the high level of employment which enabled parents to keep their children at school beyond the statutory leaving age.

The following table shows the number of children of each sex employed in manufacturing industries in June of the years mentioned.

## FACTORIES : CHILDREN(a) EMPLOYED, JUNE.

State.	1939.			1953.			1954.		
	Males.	Females.	Persons.	Males.	Females.	Persons.	Males.	Females.	Persons.
New Sth. Wales ..	5,759	7,084	12,843	2,563	2,221	4,784	2,671	2,257	4,928
Victoria ..	6,167	5,005	11,172	2,972	2,432	5,404	3,093	2,527	5,620
Queensland ..	1,790	1,334	3,124	1,712	1,106	2,818	1,768	1,198	2,966
South Australia ..	1,296	1,053	2,349	797	701	1,498	819	750	1,569
Western Aust. ..	705	521	1,226	846	344	1,190	835	430	1,265
Tasmania ..	392	500	892	121	70	191	108	66	174
Australia ..	16,109	15,497	31,606	9,011	6,874	15,885	9,294	7,228	16,522

(a) Under sixteen years of age.

3. Industries Employing Child Labour.—The distribution of children employed in factories in June, 1954 and the proportion of children employed to total employees are given in the following table according to the class of industry :—

**FACTORIES : CHILDREN EMPLOYED, BY CLASSES, AUSTRALIA, JUNE, 1954.**

Class of Industry.	Children Employed.		Total Employees. (a)		Proportion (per cent.) of Children Employed to Total Employees. (a)	
	Males.	Females.	Males.	Females.	Males.	Females.
Industrial Metals, Machines, Conveyances	4,157	724	357,880	38,336	1.16	1.89
Textiles and Textile Goods (not Dress)	581	1,366	29,656	39,492	1.96	3.46
Clothing (except Knitted) ..	613	3,086	28,489	77,850	2.15	3.96
Food, Drink and Tobacco ..	1,019	786	88,285	28,367	1.15	2.77
Sawmills, Joinery, Boxes, etc.	1,712	77	52,267	2,556	3.28	3.01
Furniture of Wood, Bedding, etc.	520	69	15,909	3,225	3.27	2.14
Paper, Stationery, Printing, Bookbinding	667	546	41,250	15,274	1.62	3.57
All other Industries ..	25	574	124,266	26,909	0.02	2.13
Total ..	9,294	7,228	738,002	232,009	1.26	3.16

(a) Excludes working proprietors.

4. Apprenticeship.—In all the States, Acts are in force 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. Salaries and Wages Paid and Value of Production.

*Note.*—In all tables relating to salaries and wages paid in factories the amounts drawn by working proprietors are excluded.

1. General.—The importance of the manufacturing industries of Australia is indicated by the fact that the total value of the output for 1953–54 was £3,095,476,000, of which amount £1,747,973,000 represented the value of the materials used, including containers, etc., tools replaced and repairs to plant and buildings, and £120,458,000 the value of the power, fuel and light used. The difference between the sum of the last two amounts and the value of the output, namely, £1,227,045,000, represents the value of production as defined by the Conference of Statisticians at Sydney in 1925, i.e., “the value of consumable commodities produced during the year, deducting, so far as possible, the value of goods consumed in process of production.” The total amount of salaries and wages paid in factories in 1953–54 was £705,136,920. This figure, which excludes amounts drawn by working proprietors, was the highest ever recorded and shows an increase of £69,892,000 or 11 per cent. on that for the previous year.

2. Salaries and Wages Paid.—(i) *In Classes of Industry, 1953–54.* 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, 1953-54.**  
(£'000.)

Class of Industry.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas.	Aust.
I. Treatment of Non-metalliferous Mine and Quarry Products ..	6,345	4,275	1,108	1,230	1,304	516	14,778
II. Bricks, Pottery, Glass, etc. ..	8,757	4,171	842	1,600	1,138	280	16,788
III. Chemicals, Dyes, Explosives, Paints, Oils and Grease ..	13,705	11,248	1,089	2,335	1,529	343	30,249
IV. Industrial Metals, Machines, Conveyances ..	137,660	89,637	20,969	35,538	12,408	5,951	302,163
V. Precious Metals, Jewellery and Plate ..	1,371	1,960	173	224	144	10	3,882
VI. Textiles and Textile Goods (not Dress) ..	15,776	24,546	1,071	1,342	544	1,459	44,738
VII. Skins and Leather (not Clothing or Footwear) ..	4,192	3,949	864	1,061	474	88	10,628
VIII. Clothing (except Knitted) ..	23,824	26,556	4,218	3,008	2,022	463	60,091
IX. Food, Drink and Tobacco ..	27,117	27,395	19,185	7,159	4,142	2,783	87,781
X. Sawmills, Joinery, Boxes, etc., Wood Turning and Carving ..	13,381	9,641	6,447	3,135	4,192	2,082	38,878
XI. Furniture of Wood, Bedding, etc. ..	5,137	3,702	1,612	1,245	816	286	12,798
XII. Paper, Stationery, Printing, Bookbinding, etc. ..	17,455	14,359	3,131	2,556	1,500	2,699	41,709
XIII. Rubber ..	5,776	4,533	952	716	119	117	12,213
XIV. Musical Instruments ..	841	206	24	25	9	..	1,105
XV. Miscellaneous Products ..	6,062	6,034	247	408	216	112	12,060
Total, Classes I. to XV. ..	287,300	232,212	62,028	61,672	30,560	17,100	601,061
XVI. Heat, Light and Power ..	6,187	3,825	1,405	1,438	1,020	101	11,076
Grand Total ..	293,487	236,037	63,433	63,110	31,580	17,381	705,137

(ii) *Totals and Averages, 1938-39 and 1948-49 to 1953-54.*—The following statement shows the total amount of salaries and wages paid, and the average amount paid per employee in each State, for each of the years indicated. The figures exclude working proprietors and the amounts drawn by them :—

**FACTORIES : TOTAL AND AVERAGE SALARIES AND WAGES PAID.**

Year.	N.S.W.	Vic.	Qld.	S. Aust.	W. Aust.	Tas.	Aust.
<b>TOTAL AMOUNT PAID (£'000).</b>							
1938-39.. ..	44,606	36,027	10,887	8,169	4,574	2,480	106,743
1948-49.. ..	146,536	112,410	29,447	29,442	12,928	8,456	339,219
1949-50.. ..	162,147	130,255	34,748	33,708	15,293	9,646	385,797
1950-51.. ..	211,339	163,207	42,837	42,940	19,658	11,737	497,718
1951-52.. ..	263,652	202,586	51,906	53,558	25,384	14,703	611,789
1952-53.. ..	265,910	210,878	57,591	56,546	28,344	15,976	635,245
1953-54.. ..	293,586	236,037	63,433	63,110	31,590	17,381	705,137
<b>AVERAGE PER EMPLOYEE (£).</b>							
1938-39.. ..	201.77	185.64	210.78	195.57	207.90	188.31	196.31
1948-49.. ..	401.06	399.86	371.11	398.93	357.18	389.57	395.57
1949-50.. ..	439.04	429.21	408.67	441.70	397.13	428.29	436.56
1950-51.. ..	537.13	534.64	473.80	531.59	474.15	513.74	526.34
1951-52.. ..	673.13	650.79	576.57	656.54	594.67	637.29	650.61
1952-53.. ..	728.11	709.15	640.94	724.52	664.59	707.89	710.21
1953-54.. ..	758.65	743.29	678.35	761.27	703.26	734.60	742.62

In comparing the figures in the preceding 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, there is a large number of hands employed in Class VIII., Clothing, comprising a relatively high percentage of women and children. The highest average wages per employee in 1953-54 were paid in South Australia, New South Wales and Victoria, in that order.

The average earnings per employee rose annually from 1938-39 to 1943-44 when a record high level of £291 was attained as a result of war-time conditions. In 1944-45 the average dropped to £285 and remained at this level in 1945-46. From 1945-46 average earnings rose each year and in 1953-54 reached a new record level of over £742.

(iii) *Total and Average Earnings of Males and Females, 1938-39 and 1948-49 to 1953-54.* Particulars for these years are given in the table on the following page.

### FACTORIES : TOTAL AND AVERAGE SALARIES AND WAGES—MALES AND FEMALES.

Year.	N.S.W.	Vic.	Q'land.	S. Aust.	W. Aust.	Tas.	Aust.
MALES.							
TOTAL AMOUNT PAID (£'000).							
1938-39 ..	38,272	29,006	9,920	7,488	4,129	2,234	91,049
1948-49 ..	123,263	90,765	26,331	26,072	11,555	7,503	285,189
1949-50 ..	135,875	105,135	30,948	29,809	13,692	8,538	323,997
1950-51 ..	176,031	130,923	37,870	37,786	17,620	10,336	410,566
1951-52 ..	220,885	163,688	46,087	47,194	22,870	13,056	513,780
1952-53 ..	224,745	171,897	51,519	50,594	25,756	11,249	538,760
1953-54 ..	245,749	190,573	56,608	56,299	28,684	15,320	593,233
AVERAGE PER EMPLOYEE (£).							
1938-39 ..	239.24	224.47	238.59	220.95	235.49	212.09	231.84
1948-49 ..	455.88	457.85	405.20	441.83	390.29	425.40	446.17
1949-50 ..	499.33	510.86	446.87	487.39	433.41	465.46	492.20
1950-51 ..	609.05	610.44	516.83	583.37	515.67	558.67	591.41
1951-52 ..	756.84	736.68	625.91	716.25	643.68	687.09	725.57
1952-53 ..	807.77	793.11	701.45	779.90	711.80	761.21	782.87
1953-54 ..	844.05	833.71	733.34	824.49	754.20	791.86	820.08
FEMALES.							
TOTAL AMOUNT PAID (£'000).							
1938-39 ..	6,334	7,021	967	681	445	246	15,694
1948-49 ..	23,273	21,645	3,116	3,370	1,373	953	53,730
1949-50 ..	26,272	25,120	3,800	3,899	1,601	1,108	61,800
1950-51 ..	35,308	32,284	4,967	5,154	2,038	1,401	81,152
1951-52 ..	42,767	38,998	5,819	6,364	2,514	1,647	98,009
1952-53 ..	41,165	38,981	6,072	5,952	2,588	1,727	96,485
1953-54 ..	47,837	45,464	6,825	6,811	2,906	2,061	111,904
AVERAGE PER EMPLOYEE (£).							
1938-39 ..	103.66	108.25	96.00	86.44	99.58	93.19	103.92
1948-49 ..	245.02	261.17	216.90	227.81	208.35	234.25	246.83
1949-50 ..	270.27	291.34	240.93	257.31	231.57	265.37	274.12
1950-51 ..	338.08	355.57	289.82	322.03	279.55	322.46	338.12
1951-52 ..	428.40	436.60	354.96	405.70	351.30	404.71	422.04
1952-53 ..	473.28	483.46	400.48	451.80	400.32	448.58	467.79
1953-54 ..	499.19	510.96	418.23	465.95	421.93	477.84	493.10

(iv) *Managers, Clerical Staff and Other Employees.* A further analysis of salaries and wages paid is given in the following table for 1953-54 and shows 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. As previously mentioned, amounts drawn by working proprietors are excluded in all cases:—

### FACTORIES : SALARIES AND WAGES PAID TO MANAGERS, CLERICAL STAFF, ETC., AND OTHER EMPLOYEES, AUSTRALIA, 1953-54.

Class of Industry.	Managers, Clerical Staff, Chemists, Draftsmen, etc.		All Other Employees.	
	Males.	Females.	Males.	Females.
	£'000.	£'000.	£'000.	£'000.
I. Treatment of Non-metaliferous Mine and Quarry Products .. .. .	1,649	257	12,790	82
II. Bricks, Pottery, Glass, etc. .. .. .	1,270	323	14,676	519
III. Chemicals, Dyes, Explosives, Paints, Oils and Grease .. .. .	5,860	1,344	19,838	3,207
IV. Industrial Metals, Machines, Conveyances .. .. .	39,147	8,326	244,796	9,894
V. Precious Metals, Jewellery and Plate .. .. .	384	148	2,942	408
VI. Textiles and Textile Goods (not Dress) .. .. .	3,570	1,401	21,876	17,891
VII. Skins and Leather (not Clothing or Footwear) .. .. .	1,085	211	7,990	1,342
VIII. Clothing (except Knitted) .. .. .	3,444	1,828	19,439	35,380
IX. Food, Drink and Tobacco .. .. .	10,474	2,870	62,787	11,650
X. Sawmills, Joinery, Boxes, etc., Wood Turning and Carving .. .. .	3,702	751	34,055	370
XI. Furniture of Wood, Bedding, etc. .. .. .	1,102	346	10,210	1,140
XII. Paper, Stationery, Printing, Bookbinding, etc. .. .. .	5,142	1,758	29,472	5,337
XIII. Rubber .. .. .	1,594	358	8,905	1,356
XIV. Musical Instruments .. .. .	116	48	834	107
XV. Miscellaneous Products .. .. .	1,616	528	8,448	2,668
Total, Classes I. to XV. .. .. .	80,155	20,497	499,058	91,351
XVI. Heat, Light and Power .. .. .	1,241	45	12,779	11
Grand Total .. .. .	81,396	20,542	511,837	91,362
Average paid per employee .. .. .	£ 1,080	£ 513	£ 791	£ 489

3. Power, Fuel and Light Used.—(i) *In Classes of Industry, 1953-54.* The expenditure by factories on power, fuel and light, including the value of lubricants and water, is of considerable importance; in 1953-54 it amounted to a new high level of £120,458,000, an increase of £11,121,000 as compared with the previous year and nearly eight times the corresponding value in 1938-39. The following table shows the value of power, fuel and light, etc., used in the different classes of industry :—

FACTORIES : VALUE OF POWER, FUEL AND LIGHT USED(a), 1953-54.  
(£'000.)

Class of Industry.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas.	Aust.
I. Treatment of Non-metalliferous Mine and Quarry Products ..	1,889	1,431	450	674	664	254	5,362
II. Bricks, Pottery, Glass, etc. ..	3,234	1,839	287	499	545	138	6,542
III. Chemicals, Dyes, Explosives, Paints, Oils and Grease ..	3,315	1,961	208	760	363	102	6,709
IV. Industrial Metals, Machines, Conveyances ..	21,551	4,288	1,327	4,807	720	785	33,478
V. Precious Metals, Jewellery and Plate ..	102	103	9	23	11	1	249
VI. Textiles and Textile Goods (not Dress) ..	1,423	1,786	51	148	48	116	3,572
VII. Skins and Leather (not Clothing or Footwear) ..	420	419	63	134	53	6	1,095
VIII. Clothing (except Knitted) ..	790	707	141	117	80	27	1,862
IX. Food, Drink and Tobacco ..	5,544	4,684	2,488	1,198	993	366	15,183
X. Sawmills, Joinery, Boxes, etc., Wood Turning and Carving ..	1,226	533	333	124	289	174	2,679
XI. Furniture of Wood, Bedding, etc. ..	143	76	34	35	22	6	316
XII. Paper, Stationery, Printing, Bookbinding, etc. ..	1,032	1,097	110	230	71	806	3,346
XIII. Rubber ..	871	774	110	80	15	15	1,865
XIV. Musical Instruments ..	58	12	(b)	(b)	(b)	..	70
XV. Miscellaneous Products ..	395	338	16	42	9	3	803
Total, Classes I. to XV.	41,993	20,048	5,627	8,871	3,793	2,799	83,131
XVI. Heat, Light and Power ..	16,454	9,032	5,028	3,629	3,179	5	37,327
Grand Total ..	58,447	29,080	10,655	12,500	6,972	2,804	120,458

(a) Includes value of lubricants and water.

(b) Less than £500.

(ii) *Values of Items, 1953-54.* 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), 1953-54.  
(£'000.)

Particulars.	N.S.W.	Victoria	Q'land.	S. Aust.	W. Aust.	Tas.	Australia.
Coal, Black ..	21,171	4,212	6,030	(b) 4,507	2,892	866	39,678
" Brown ..	..	5,528	..	..	..	..	5,528
Brown Coal Briquettes ..	..	2,527	..	..	..	..	2,527
Coke ..	11,581	842	315	2,692	147	251	15,828
Wood ..	423	747	406	390	462	190	2,618
Fuel Oil ..	4,383	4,986	1,047	1,335	1,392	365	13,508
Tar (Fuel) ..	746	427	3	82	14	18	1,290
Electricity ..	14,709	7,186	2,059	2,629	1,535	904	29,022
Gas ..	2,245	734	155	205	72	34	3,445
Other (Charcoal, etc.) ..	673	352	38	253	121	60	1,497
Water ..	1,586	890	267	202	152	52	3,149
Lubricating Oils ..	930	649	335	205	185	64	2,368
Total ..	58,447	29,080	10,655	12,500	6,972	2,804	120,458

(a) Includes value of lubricants and water.  
Leigh Creek coal.

(b) Includes £1,223,000, the value of 434,000 tons of

(iii) *Quantities of Fuel Used, 1953-54.* The following table shows the quantities of fuel used in factories in each State during the year :—

**FACTORIES : QUANTITIES OF FUEL USED, 1953-54.**

Particulars.	Unit.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas.	Aust.
Coal, Black .. ..	'ooo tons	5,457	590	1,456	(a) 926	568	206	9,203
"    Brown .. ..	"	"	7,007	"	"	"	"	7,007
Brown Coal Briquettes .. ..	"	"	557	"	"	"	"	557
Coke .. ..	"	1,986	106	31	307	18	16	2,404
Wood .. ..	"	198	450	263	163	359	100	1,533
Fuel Oil .. ..	'ooo gals.	58,224	71,474	12,193	18,293	15,518	3,851	179,553
Tar (Fuel) .. ..	"	29,609	7,735	122	2,100	431	432	40,429

(a) Includes 434,000 tons of Leigh Creek coal.

(iv) *Total Value, 1938-39 and 1948-49 to 1953-54.* 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.
1938-39 .. ..	7,652	4,000	1,423	1,018	1,169	438	15,700
1948-49 .. ..	21,611	11,337	4,086	5,123	2,745	1,160	46,062
1949-50 .. ..	25,536	13,695	5,119	5,942	3,184	1,354	54,830
1950-51 .. ..	35,381	17,371	6,295	7,267	3,759	1,609	71,682
1951-52 .. ..	48,664	21,990	8,286	10,409	5,173	2,107	96,629
1952-53 .. ..	53,630	25,626	9,624	11,806	6,175	2,476	109,337
1953-54 .. ..	58,447	29,080	10,655	12,500	6,972	2,804	120,458

(a) Includes value of lubricants and water.

4. *Value of Materials Used.*—(i) *In Classes of Industry, 1953-54.* 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 1953-54 reached £1,747,973,000, representing 56.5 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, 1953-54.**  
(£'000.)

Class of Industry.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas.	Aust.
I. Treatment of Non-metalliferous Mine and Quarry Products .. ..	20,849	8,434	2,541	2,685	2,299	924	37,732
II. Bricks, Pottery, Glass, etc. .. ..	7,120	3,648	496	1,446	691	181	13,582
III. Chemicals, Dyes, Explosives, Paints, Oils and Grease .. ..	62,749	41,531	5,675	9,314	6,745	1,104	127,115
IV. Industrial Metals, Machines, Conveyances .. ..	279,971	138,305	35,024	73,898	17,192	12,052	556,442
V. Precious Metals, Jewellery and Plate .. ..	1,296	2,339	83	157	85	3	3,963
VI. Textiles and Textile Goods (not Dress) .. ..	42,275	62,602	4,295	3,412	3,025	5,139	120,748
VII. Skins and Leather (not Clothing or Footwear) .. ..	13,869	12,712	2,877	7,525	1,373	213	38,569
VIII. Clothing (except Knitted) .. ..	39,611	44,038	5,703	3,184	2,450	338	95,324
IX. Food, Drink and Tobacco .. ..	143,312	146,320	128,855	33,341	26,892	12,814	491,534
X. Sawmills, Joinery, Boxes, etc., Wood Turning and Carving .. ..	31,990	19,879	13,067	7,371	6,459	3,956	82,722
XI. Furniture of Wood, Bedding, etc. .. ..	9,634	7,064	3,090	2,513	1,688	357	24,346
XII. Paper, Stationery, Printing, Bookbinding, etc. .. ..	35,502	31,369	4,917	4,033	2,245	4,513	82,579
XIII. Rubber .. ..	13,377	11,551	2,496	1,294	196	170	29,084
XIV. Musical Instruments .. ..	1,236	242	8	4	1	"	1,491
XV. Miscellaneous Products .. ..	9,564	11,681	420	787	173	65	22,690
<b>Total, Classes I. to XV.</b> .. ..	<b>712,355</b>	<b>541,715</b>	<b>209,547</b>	<b>150,964</b>	<b>71,514</b>	<b>41,829</b>	<b>1,727,924</b>
<b>XVI. Heat, Light and Power</b> .. ..	<b>8,956</b>	<b>6,396</b>	<b>1,904</b>	<b>1,626</b>	<b>954</b>	<b>213</b>	<b>20,049</b>
<b>Grand Total</b> .. ..	<b>721,311</b>	<b>548,111</b>	<b>211,451</b>	<b>152,590</b>	<b>72,468</b>	<b>42,042</b>	<b>1,747,973</b>

(ii) *Total Amount, 1938-39 and 1948-49 to 1953-54.* The following table shows the values of materials used in factories for these years :—

**FACTORIES : VALUE OF MATERIALS USED.**

(£'000.)

Year.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tasmania.	Australia.
1938-39 .. ..	120,502	82,971	42,596	20,309	9,604	5,321	281,303
1948-49 .. ..	336,914	253,741	97,045	75,227	29,199	19,422	810,548
1949-50 .. ..	384,467	293,528	108,682	83,277	34,750	24,390	929,094
1950-51 .. ..	522,422	382,002	134,457	117,547	46,452	32,401	1,235,281
1951-52 .. ..	647,291	477,617	150,427	139,198	58,652	40,025	1,513,210
1952-53 .. ..	627,954	476,439	187,572	133,818	63,913	38,029	1,527,805
1953-54 .. ..	721,311	548,111	211,451	152,590	72,468	42,042	1,747,973

5. *Value of Output.*—(i) *In Classes of Industry, 1953-54.* The value of the output of factories in the various classes in each State in 1953-54 is shown in the following table. It represents the selling value at the factory 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 real value of factory production (*see para. 6*).

**FACTORIES : VALUE OF OUTPUT, 1953-54.**

(£'000.)

Class of Industry.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas.	Aust.
I. Treatment of Non-metalliferous Mine and Quarry Products .. ..	33,660	17,595	4,928	6,006	5,296	2,176	69,661
II. Bricks, Pottery, Glass, etc. ..	24,074	11,692	2,090	4,550	3,244	704	46,354
III. Chemicals, Dyes, Explosives, Paints, Oils and Grease ..	108,089	70,837	8,919	15,603	10,616	2,080	216,144
IV. Industrial Metals, Machines, Conveyances .. ..	514,534	281,162	69,987	132,283	36,909	23,343	1,058,218
V. Precious Metals, Jewellery and Plate .. ..	3,766	5,546	375	554	359	18	10,618
VI. Textiles and Textile Goods (not Dress) .. ..	70,974	108,248	6,179	5,510	4,144	7,823	202,878
VII. Skins and Leather (not Clothing or Footwear) .. ..	20,686	19,596	4,380	9,113	2,165	337	56,277
VIII. Clothing (except Knitted) ..	78,247	86,031	12,291	7,521	5,618	1,040	190,748
IX. Food, Drink and Tobacco ..	210,784	206,235	166,325	46,315	36,438	18,500	684,597
X. Sawmills, Joinery, Boxes, etc., Wood Turning and Carving ..	56,934	36,796	24,043	11,994	13,745	7,619	151,131
XI. Furniture of Wood, Bedding, etc. .. ..	18,360	13,441	5,735	4,522	3,151	821	46,030
XII. Paper, Stationery, Printing, Bookbinding, etc. .. ..	69,586	59,839	10,402	9,109	5,281	11,020	165,237
XIII. Rubber .. ..	22,271	21,621	4,768	2,566	439	386	52,051
XIV. Musical Instruments .. ..	2,705	549	45	34	14	..	3,407
XV. Miscellaneous Products .. ..	20,780	22,376	972	1,674	501	227	46,530
Total, Classes I. to XV.	1,255,510	961,564	321,439	257,354	127,920	76,094	2,999,881
XVI. Heat, Light and Power .. ..	44,291	23,941	10,922	7,957	6,667	1,817	95,595
Grand Total .. ..	1,299,801	985,505	332,361	265,311	134,587	77,911	3,095,476



(ii) *Total, 1938-39 and 1948-49 to 1953-54.* The following table shows the value of output in each State during these years :—

### FACTORIES : VALUE OF OUTPUT.

( £'000.)

Year.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tasmania.	Australia.
1938-39 .. ..	218,420	152,967	63,321	35,005	19,549	11,158	500,420
1948-49 .. ..	609,724	446,838	154,670	124,072	53,417	36,657	1,425,378
1949-50 .. ..	693,203	526,466	175,156	141,573	63,978	45,080	1,645,456
1950-51 .. ..	923,912	675,033	216,212	192,623	84,431	58,624	2,150,835
1951-52 .. ..	1,139,346	833,967	250,043	232,853	106,571	71,926	2,634,706
1952-53 .. ..	1,139,326	860,147	295,405	234,813	119,310	71,003	2,720,004
1953-54 .. ..	1,299,801	985,505	332,361	265,311	134,587	77,911	3,095,476

6. Value of Production.—(i) *In Classes of Industry, 1953-54.* 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”. All these deductions with the exception of depreciation are included in the items “value of materials used” and “value of fuel used” as defined above. On account of the difficulty experienced in securing accurate figures for depreciation, it was agreed that no deduction should be made on this account for the present. The value of production as given in the following tables is obtained, therefore, by deducting “value of materials used” and “value of fuel used” from the “value of the output”.

The figure thus calculated is, however, not the net value of production. The deduction for depreciation, particulars of which are shown in § 9, para. 4, was recorded as £47,197,000 for 1953-54. Many miscellaneous expenses, such as taxation, insurance, advertising and other sundry charges, have not been taken into account. Therefore, it must not 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.

The value of factory production therefore approximates “net value added” in the manufacturing process. It amounted in 1953-54 to £1,227 million to which Class IV., Industrial Metals, etc., with £468 million or nearly eight times the value of production of this class in 1938-39, made the greatest contribution. This total value of production in 1953-54 represented an increase of £144 million over the figure for 1952-53 and £1,024 million (503 per cent.) over the value of production recorded in 1938-39.

The following table shows the value of production in 1953-54 in each State for the various classes of industry.

## FACTORIES : VALUE OF PRODUCTION, 1953-54.

(£'000.)

Class of Industry.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas.	Aust.
I. Treatment of Non-metalliferous Mine and Quarry Products ..	10,921	7,730	1,937	2,646	2,334	999	26,507
II. Bricks, Pottery, Glass, etc. ..	13,720	6,205	1,307	2,605	2,008	384	26,229
III. Chemicals, Dyes, Explosives, Paints, Oils and Grease ..	42,025	27,346	3,036	5,529	3,508	873	82,317
IV. Industrial Metals, Machines, Conveyances ..	213,012	138,569	33,636	53,578	18,997	10,506	468,298
V. Precious Metals, Jewellery and Plate ..	2,367	3,103	284	374	263	15	6,406
VI. Textiles and Textile Goods (not Dress) ..	27,276	43,860	1,833	1,950	1,071	2,568	78,558
VII. Skins and Leather (not Clothing or Footwear) ..	6,397	6,464	1,440	1,454	740	118	16,613
VIII. Clothing (except Knitted) ..	37,846	41,286	6,447	4,221	3,087	676	93,563
IX. Food, Drink and Tobacco ..	61,929	55,231	34,982	11,776	8,643	5,320	177,881
X. Sawmills, Joinery, Boxes, etc.; Wood Turning and Carving ..	23,719	16,383	10,643	4,500	6,997	3,489	65,731
XI. Furniture of Wood, Bedding, etc. ..	8,584	6,301	2,610	1,974	1,441	457	21,367
XII. Paper, Stationery, Printing, Bookbinding, etc. ..	33,052	27,373	5,375	4,846	2,965	5,701	79,312
XIII. Rubber ..	8,022	9,296	2,162	1,193	227	202	21,102
XIV. Musical Instruments ..	1,471	296	37	29	12	..	1,845
XV. Miscellaneous Products ..	10,821	10,357	536	844	320	159	23,037
Total, Classes I. to XV. ..	501,162	399,800	106,265	97,519	52,613	31,467	1,188,826
XVI. Heat, Light and Power ..	18,881	8,514	3,990	2,702	2,534	1,598	38,219
Grand Total ..	520,043	408,314	110,255	100,221	55,147	33,065	1,227,045

(ii) *Total and Averages, 1938-39 and 1948-49 to 1953-54.* The value of production and the amount per person employed and per head of population are shown in the following table. For Australia as a whole the value of production per head of population increased from £29.34 per head in 1938-39 to £137.86 per head in 1953-54. For value per person employed, the increase was not quite so pronounced (from £360 per head in 1938-39 to £1,240 in 1953-54) owing to the considerable increase in the number of persons employed in 1953-54 as compared with 1938-39.

## FACTORIES : VALUE OF PRODUCTION.

Year.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tasmania.	Australia.
VALUE. (£'000.)							
1938-39 ..	90,266	65,996	19,302	13,678	8,776	5,399	203,417
1948-49 ..	251,199	182,700	53,540	43,722	21,474	16,074	568,769
1949-50 ..	283,201	219,244	61,354	52,353	26,044	19,336	661,532
1950-51 ..	366,109	275,660	75,460	67,809	34,220	24,614	843,872
1951-52 ..	443,391	334,360	91,330	83,246	42,746	29,794	1,024,867
1952-53 ..	457,742	358,032	98,209	89,189	49,192	30,498	1,082,862
1953-54 ..	520,043	408,314	110,255	100,221	55,147	33,065	1,227,045
PER PERSON EMPLOYED. (£.)							
1938-39 ..	395	327	357	315	378	391	360
1948-49 ..	664	626	645	577	560	711	639
1949-50 ..	741	722	690	667	639	823	721
1950-51 ..	900	870	798	817	782	1,033	871
1951-52 ..	1,092	1,032	968	992	947	1,249	1,045
1952-53 ..	1,204	1,152	1,055	1,108	1,089	1,208	1,160
1953-54 ..	1,292	1,233	1,124	1,172	1,162	1,345	1,240
PER HEAD OF POPULATION. (£.)							
1938-39 ..	33.00	35.25	19.14	22.98	18.80	22.72	29.34
1948-49 ..	81.98	86.49	47.18	65.73	41.12	59.92	72.93
1949-50 ..	89.28	101.02	52.75	76.22	47.72	69.71	82.18
1950-51 ..	111.82	123.24	63.26	95.37	59.89	85.59	101.53
1951-52 ..	132.12	145.28	74.79	114.14	72.31	91.79	120.02
1952-53 ..	133.84	151.55	78.64	119.00	80.28	98.72	123.79
1953-54 ..	152.70	168.53	84.78	127.50	87.44	106.85	137.86

7. Value of Output and Cost of Production.—As the total value of the output for Australia for 1953-54 was recorded as £3,095,476,000 there remained, after payment of £1,747,973,000 for the value of the materials used, £705,137,000 for salaries and wages and £120,458,000 for power, fuel and light, a balance of £521,908,000 to provide for all other costs and overhead expenses such as rent, interest, insurance, pay-roll tax, income tax, depreciation, etc., as well as drawings by working proprietors and profit. The following table gives corresponding particulars for each State for the year 1953-54:—

**FACTORIES : VALUE OF OUTPUT AND COST OF PRODUCTION, 1953-54.**

State.	Materials Used. (a)	Power, Fuel and Light. (b)	Salaries and Wages.	Balance. (Output less Materials, Fuel and Wages.)(c)	Total Value of Output.
VALUE AND COST, ETC. (£'000.)					
New South Wales ..	721,311	58,447	293,586	226,457	1,299,801
Victoria ..	548,111	29,080	236,037	172,277	985,505
Queensland ..	211,451	10,655	63,433	46,822	332,361
South Australia ..	152,590	12,500	63,110	37,111	265,311
Western Australia ..	72,468	6,972	31,590	23,557	134,587
Tasmania ..	42,042	2,804	17,381	15,684	77,911
Australia ..	1,747,973	120,458	705,137	521,908	3,095,476

(a) Includes the value of containers, packing, etc., also the cost of tools replaced and repairs to plant.  
(b) Includes lubricants and water. (c) See paragraph preceding this table.

**§ 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 1953-54 :—

**FACTORIES : VALUE OF LAND, BUILDINGS, PLANT AND MACHINERY(a), 1953-54.**

(£'000.)

Value of—	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tasmania.	Australia
Land and buildings	196,724	158,389	40,003	36,579	21,739	26,997	483,431
Plant and machinery	233,022	181,058	64,160	46,788	28,195	27,492	580,715
Total ..	429,746	339,447	104,163	83,367	52,934	54,489	1,064,146

(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. The totals shown in the table consequently do not represent the actual amount of capital invested in the items specified.

2. Value of Land and Buildings.—(i) *Total 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 1938-39, and 1949-50 to 1953-54.

**FACTORIES: VALUE OF LAND AND BUILDINGS(a), AUSTRALIA.**  
(£'000.)

Class of Industry.	1938-39.	1949-50.	1950-51.	1951-52.	1952-53.	1953-54.
<b>I. Treatment of Non-metalliferous Mine and Quarry Products ..</b>	2,779	4,851	6,281	6,905	7,431	8,091
<b>II. Bricks, Pottery, Glass, etc. . .</b>	2,953	4,719	5,883	6,761	7,723	8,535
<b>III. Chemicals, Dyes, Explosives, Paints, Oils and Grease . .</b>	7,377	22,076	20,920	25,262	30,996	36,931
<b>IV. Industrial Metals, Machines, Conveyances . .</b>	34,841	81,682	97,021	117,513	137,724	159,325
<b>V. Precious Metals, Jewellery and Plate . .</b>	633	1,674	1,688	2,037	2,311	2,523
<b>VI. Textiles and Textile Goods (not Dress) . .</b>	6,000	14,838	18,004	20,845	22,482	25,443
<b>VII. Skins and Leather (not Clothing or Footwear) . .</b>	2,096	4,158	4,764	5,382	5,734	6,072
<b>VIII. Clothing (except Knitted) . .</b>	10,624	19,763	22,128	24,768	26,359	28,584
<b>IX. Food, Drink and Tobacco . .</b>	33,273	52,197	60,217	68,916	78,278	86,625
<b>X. Sawmills, Joinery, Boxes, etc., Wood Turning and Carving . .</b>	4,107	9,442	11,680	14,505	16,361	18,297
<b>XI. Furniture of Wood, Bedding, etc. . .</b>	2,533	4,828	5,776	6,812	7,256	8,069
<b>XII. Paper, Stationery, Printing, Bookbinding, etc. . .</b>	10,639	16,234	20,207	24,691	27,284	30,444
<b>XIII. Rubber . .</b>	1,676	3,038	3,792	4,620	5,530	6,668
<b>XIV. Musical Instruments . .</b>	105	325	387	380	398	468
<b>XV. Miscellaneous Products . .</b>	1,433	4,360	5,035	6,266	6,705	7,570
<b>Total, Classes I. to XV. . .</b>	121,069	244,125	283,783	355,663	382,572	433,645
<b>XVI. Heat, Light and Power . .</b>	9,851	15,424	19,002	23,827	31,874	49,786
<b>Grand Total . .</b>	130,920	259,549	302,785	359,490	414,446	483,431

(a) Includes estimated value of rented premises.

(ii) *In Classes of Industry in States, 1953-54.* The following table gives particulars of the various classes of industry in each State.

**FACTORIES: VALUE OF LAND AND BUILDINGS(a), 1953-54.**  
(£'000.)

Class of Industry.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas.	Aust.
<b>I. Treatment of Non-metalliferous Mine and Quarry Products ..</b>	3,517	2,467	499	549	492	567	8,091
<b>II. Bricks, Pottery, Glass, etc. . .</b>	4,182	1,861	611	705	993	183	8,535
<b>III. Chemicals, Dyes, Explosives, Paints, Oils and Grease . .</b>	17,029	13,229	1,092	2,233	2,514	834	36,931
<b>IV. Industrial Metals, Machines, Conveyances . .</b>	73,126	50,913	10,431	13,762	7,268	3,825	159,325
<b>V. Precious Metals, Jewellery and Plate . .</b>	896	1,237	110	135	133	12	2,523
<b>VI. Textiles and Textile Goods (not Dress) . .</b>	9,421	13,002	573	635	436	476	25,443
<b>VII. Skins and Leather (not Clothing or Footwear) . .</b>	2,376	2,445	312	576	184	172	6,072
<b>VIII. Clothing (except Knitted) . .</b>	12,753	10,687	2,138	1,440	1,210	351	28,584
<b>IX. Food, Drink and Tobacco . .</b>	29,518	27,163	14,171	7,335	4,991	3,447	86,625
<b>X. Sawmills, Joinery, Boxes, etc., Wood Turning and Carving . .</b>	7,638	4,829	1,875	1,658	1,559	798	18,297
<b>XI. Furniture of Wood, Bedding, etc. . .</b>	3,150	2,582	991	614	577	155	8,069
<b>XII. Paper, Stationery, Printing, Bookbinding, etc. . .</b>	11,882	10,905	1,939	1,383	837	3,408	30,444
<b>XIII. Rubber . .</b>	2,819	2,633	535	378	188	115	6,668
<b>XIV. Musical Instruments . .</b>	338	104	4	12	10	..	468
<b>XV. Miscellaneous Products . .</b>	3,093	3,809	194	267	158	49	7,570
<b>Total, Classes I. to XV. . .</b>	181,743	148,856	35,422	31,682	21,550	14,392	433,645
<b>XVI. Heat, Light and Power . .</b>	14,981	9,533	4,581	4,897	3,139	12,605	49,786
<b>Grand Total . .</b>	196,724	158,389	40,003	36,579	24,740	26,997	483,431

(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 1938-39 and 1948-49 to 1953-54 :—

FACTORIES : VALUE OF LAND AND BUILDINGS.(a)  
(£'000.)

Year.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tasmania.	Australia.
1938-39..	57,353	42,026	12,299	8,711	6,814	3,717	130,920
1948-49..	101,241	73,384	18,508	22,218	10,054	7,335	232,740
1949-50..	110,597	84,124	20,806	24,317	11,055	8,650	259,549
1950-51..	130,468	101,326	23,958	23,303	13,380	10,350	302,785
1951-52..	153,662	119,465	28,610	28,507	16,747	12,499	359,490
1952-53..	176,576	135,324	34,720	31,904	20,960	14,962	414,446
1953-54..	196,724	158,389	40,003	36,579	24,739	26,997	483,431

(a) Includes estimated value of rented premises.

Prior to 1929-30 the increase in the value of land and buildings was uninterrupted, rising from £23 million in 1903 to £118 million in 1929-30, a growth of £95 million in 27 years. During the three years ended 1932-33, there was a decline of £12 million to £105.8 million, but since that year the value has risen annually and stood at £483.4 million in 1953-54.

3. Value of Plant and Machinery.—(i) *Total for Australia, 1938-39 and 1949-50 to 1953-54.* 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.	1938-39.	1949-50.	1950-51.	1951-52.	1952-53.	1953-54.
I. Treatment of Non-metalliferous Mine and Quarry Products..	7,028	8,055	9,239	11,911	16,155	17,829
II. Bricks, Pottery, Glass, etc..	3,145	4,991	6,057	7,461	8,811	9,741
III. Chemicals, Dyes, Explosives, Paints, Oils and Grease..	6,754	23,518	26,247	30,559	39,024	53,528
IV. Industrial Metals, Machines, Conveyances..	33,038	77,597	90,801	112,940	131,857	148,178
V. Precious Metals, Jewellery and Plate..	197	770	808	955	1,012	1,002
VI. Textiles and Textile Goods (not Dress)..	6,657	17,485	21,218	23,973	25,030	27,567
VII. Skins and Leather (not Clothing or Footwear)..	973	2,535	2,994	3,647	3,894	4,031
VIII. Clothing (except Knitted)..	2,557	7,792	9,294	10,403	11,181	12,363
IX. Food, Drink and Tobacco..	32,101	48,318	56,489	66,712	77,512	90,624
X. Sawmills, Joinery, Boxes, etc., Wood Turning and Carving..	3,908	10,377	12,614	15,869	17,851	19,002
XI. Furniture of Wood, Bedding, etc..	728	1,679	2,035	2,483	2,692	2,871
XII. Paper, Stationery, Printing, Bookbinding, etc..	9,188	19,193	25,301	33,613	38,129	41,866
XIII. Rubber..	1,368	2,754	3,456	4,171	4,875	5,677
XIV. Musical Instruments..	12	154	227	302	305	458
XV. Miscellaneous Products..	758	3,275	4,008	4,674	5,075	5,966
Total Classes I. to XV..	108,412	228,493	270,788	329,668	383,403	440,707
XVI. Heat, Light and Power..	35,250	57,109	65,827	80,476	110,131	140,008
Grand Total..	143,662	285,602	336,615	410,144	493,534	580,715

(a) Includes estimated value of rented plant and machinery.

Except for the years 1930-31 to 1933-34, when decreases were recorded, there has been a continuous increase in the value of plant and machinery in factories in Australia. The increase in 1953-54 of £87.2 million over 1952-53 extended over all industrial classes except Class V. The greatest increase occurred in Class XVI., Heat, Light and Power.

(ii) *Totals in each State.* The following table shows the value of plant and machinery in each State during the years 1938-39 and 1948-49 to 1953-54. During 1953-54 increases occurred in all States, Victoria showing the largest increase, £33.7 million.

FACTORIES : VALUE OF PLANT AND MACHINERY.(a)  
(£'000.)

Year.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tasmania.	Australia.
1938-39..	62,693	38,627	18,095	9,750	8,095	6,402	143,662
1948-49..	99,812	76,080	25,757	22,792	9,800	12,253	246,494
1949-50..	113,864	92,748	28,904	24,901	11,457	13,728	285,602
1950-51..	136,491	107,261	34,235	26,759	14,713	17,156	336,615
1951-52..	166,437	128,934	41,290	32,177	20,716	20,590	410,144
1952-53..	207,733	147,305	51,670	40,111	24,035	22,620	493,534
1953-54..	233,022	181,058	64,160	46,788	28,195	27,492	580,715

(a) Includes estimated value of rented plant and machinery.

(iii) *Value according to Class of Industry, 1953-54.* The following table shows the value of plant and machinery used in factories in each State during 1953-54 according to class of industry.

FACTORIES : VALUE OF PLANT AND MACHINERY(a), 1953-54.  
(£'000.)

Class of Industry.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas.	Aust.
I. Treatment of Non-metalliferous Mine and Quarry Products ..	10,034	2,962	1,292	2,489	705	347	17,829
II. Bricks, Pottery, Glass, etc. ..	4,889	2,085	910	594	1,032	231	9,741
III. Chemicals, Dyes, Explosives, Paints, Oils and Grease ..	23,110	21,036	1,105	3,291	2,947	2,039	53,528
IV. Industrial Metals, Machines, Conveyances ..	78,589	39,687	7,868	14,870	4,642	2,522	148,178
V. Precious Metals, Jewellery and Plate ..	382	479	36	57	42	6	1,002
VI. Textiles and Textile Goods (not Dress) ..	9,835	15,469	866	434	333	630	27,567
VII. Skins and Leather (not Clothing or Footwear) ..	1,674	1,393	353	381	186	47	4,034
VIII. Clothing (except Knitted) ..	4,703	5,292	983	709	518	158	12,363
IX. Food, Drink and Tobacco ..	26,046	23,980	26,284	6,666	4,229	2,519	90,624
X. Sawmills, Joinery, Boxes, etc. Wood Turning and Carving ..	6,947	4,462	3,068	1,284	1,768	1,473	19,002
XI. Furniture of Wood, Bedding, etc. ..	1,018	875	382	293	239	63	2,870
XII. Paper, Stationery, Printing, Bookbinding, etc. ..	11,573	16,633	2,142	1,808	1,326	8,384	41,866
XIII. Rubber ..	2,369	2,287	501	340	104	76	5,677
XIV. Musical Instruments ..	368	85	3	1	1	..	458
XV. Miscellaneous Products ..	2,384	3,153	94	253	63	21	5,968
Total, Classes I. to XV.	184,821	139,878	45,887	33,470	18,135	18,516	440,707
XVI. Heat, Light and Power ..	48,201	41,180	18,273	13,318	10,060	8,976	140,008
Grand Total ..	233,022	181,058	64,160	46,788	28,195	27,492	580,715

(a) Includes estimated value of rented plant and machinery.

4. *Depreciation of Land and Buildings and Plant and Machinery, 1953-54.*—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, 1953-54.**

( £'000.)

Class of Industry.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas.	Aust
I. Treatment of Non-metalliferous Mine and Quarry Products ..	1,099	267	101	262	116	24	1,869
II. Bricks, Pottery, Glass, etc. ..	557	262	145	57	113	31	1,165
III. Chemicals, Dyes, Explosives, Paints, Oils and Grease ..	2,112	1,431	165	357	338	427	4,830
IV. Industrial Metals, Machines, Conveyances ..	6,687	5,843	976	1,525	435	420	13,886
V. Precious Metals, Jewellery and Plate ..	26	40	2	4	2	..	74
VI. Textiles and Textile Goods (not Dress) ..	1,051	1,801	72	76	41	76	3,117
VII. Skins and Leather (not Clothing or Footwear) ..	105	113	22	29	17	3	289
VIII. Clothing (except Knitted) ..	430	404	61	43	40	17	995
IX. Food, Drink and Tobacco ..	2,358	2,545	2,095	555	357	218	8,128
X. Sawmills, Joinery, Boxes, etc., Wood Turning and Carving ..	645	446	255	121	174	167	1,808
XI. Furniture of Wood, Bedding, etc. ..	85	59	33	24	19	5	225
XII. Paper, Stationery, Printing, Bookbinding, etc. ..	1,192	1,411	179	204	69	437	3,492
XIII. Rubber ..	606	562	96	62	11	10	1,347
XIV. Musical Instruments ..	59	8	..	..	..	..	67
XV. Miscellaneous Products ..	309	390	10	23	6	4	742
Total, Classes I. to XV.	17,321	13,582	4,212	3,342	1,738	1,839	42,034
XVI. Heat, Light and Power ..	3,129	200	789	398	497	150	5,163
Grand Total ..	20,450	13,782	5,001	3,740	2,235	1,989	47,197

5. Land and Buildings, Plant and Machinery—Values, Additions and Replacements, Depreciation, 1938-39 and 1948-49 to 1953-54.—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 as at 30th June.(a)		Additions and Replacements during year.		Depreciation allowed during year.	
	Land and Buildings.	Plant and Machinery.	Land and Buildings.	Plant and Machinery.	Land and Buildings.	Plant and Machinery.
1938-39 ..	130,920	143,662	5,578	17,781	1,911	8,736
1948-49 ..	232,740	246,494	15,029	47,226	2,864	21,666
1949-50 ..	259,549	285,602	18,551	59,562	2,983	25,906
1950-51 ..	302,785	336,615	26,710	81,003	3,859	33,006
1951-52 ..	359,490	410,144	37,702	96,370	3,634	30,479
1952-53 ..	414,446	493,534	48,006	119,790	4,683	33,039
1953-54 ..	483,431	580,715	55,668	128,453	5,673	41,524

(a) Includes estimated value of rented premises, plant and machinery.

## § 10. Principal Factory Products.

The monthly factory production of certain commodities is shown in the monthly and quarterly publications of this Bureau and in the *Secondary Industries Bulletin*.

The following table shows the total recorded production of some of the principal articles manufactured in Australia during the years ended 30th June, 1952 to 1954. A more complete list, together with values, where available, is published in the *Secondary Industries Bulletin*.

## QUANTITY OF PRINCIPAL ARTICLES PRODUCED IN FACTORIES : AUSTRALIA.

Article.	Unit of Quantity.	1951-52.	1952-53.	1953-54.
Acid—				
Nitric .. .. .	Ton	9,344	8,693	11,501
Sulphuric .. .. .	"	650,239	627,283	731,897
Aerated and Carbonated Waters .. .. .	'000 gals.	57,092	53,221	56,624
Asbestos Cement Building Sheets .. .. .	'000 sq. yds.	23,321	24,260	26,084
Bacon and Ham .. .. .	Ton	33,163	34,254	33,651
Bags—				
Leather, Fibre, etc.—				
Handbags—				
Leather .. .. .	No.	820,879	918,485	957,810
Plastic .. .. .	"	579,406	512,158	470,379
Other .. .. .	"	156,841	148,891	134,873
School Bags .. .. .	"	109,223	136,186	137,316
Suitcases (a) .. .. .	"	1,061,316	958,099	1,189,899
Trunks .. .. .	"	4,976	2,161	2,902
All other .. .. .	"	269,029	249,110	229,090
Baking Powder .. .. .	lb.	638,253	775,982	771,227
Bath Heaters—				
Electric .. .. .	No.	25,618	17,510	19,045
Gas .. .. .	"	29,264	23,367	27,360
Solid Fuel .. .. .	"	59,056	41,087	42,325
Bathing Suits .. .. .	Doz.	115,726	135,743	156,509
Baths, C.I.P.E. .. .. .	No.	76,848	64,720	89,387
Batteries, Wet Cell type .. .. .	"	1,164,623	1,145,715	1,398,985
Beer (excluding Waste Beer) .. .. .	'000 gals.	182,506	192,344	208,557
Biscuits .. .. .	'000 lb.	149,947	148,278	150,475
Blankets .. .. .	Pair	645,256	469,713	601,163
Boots, Shoes and Slippers (not Rubber)—				
Boots and Shoes .. .. .	'000 pairs	16,795	16,249	18,071
Sandals .. .. .	"	1,715	1,459	1,878
Slippers .. .. .	"	7,578	6,966	8,558
Bran (Wheaten) .. .. .	Ton (2,000 lb.)	318,108	304,394	274,307
Brassieres .. .. .	Doz.	377,980	329,745	416,889
Bricks, Clay .. .. .	'000	719,860	667,055	801,998
Brooms .. .. .	Gross	20,379	18,747	18,539
Brushes (b) .. .. .	"	116,513	127,017	128,845
Butter .. .. .	Ton	131,166	163,589	156,117
Candles .. .. .	Cwt.	16,931	14,256	8,611
Cardigans, Sweaters, etc. .. .. .	Doz.	684,673	700,566	989,529
Cement, Portland .. .. .	Ton	1,237,461	1,439,096	1,700,127
Cheese .. .. .	"	40,582	46,592	49,043
Cigarettes .. .. .	'000 lb.	11,749	13,879	18,393
Cleansing and Scouring Powders .. .. .	Cwt.	83,426	94,447	99,187
Cloth—				
Cotton .. .. .	'000 sq. yds.	32,365	25,716	33,618
Woolen and Worsted (c) .. .. .	"	29,790	29,400	34,832
Coke—				
Metallurgical .. .. .	Ton	1,636,982	1,858,428	2,010,404
Other .. .. .	"	1,203,602	1,071,106	839,793
Confectionery—				
Chocolate .. .. .	'000 lb.	61,276	58,961	62,599
Other .. .. .	"	78,735	76,644	76,872
Coppers—				
Electric .. .. .	No.	41,045	24,673	20,935
Gas .. .. .	"	37,889	25,039	28,047
Inserts (all types) .. .. .	"	107,069	79,407	85,300
Cordials and Syrups .. .. .	'000 gals.	7,204	5,628	3,967
Corsets and Corselets .. .. .	Doz.	131,305	122,262	155,408
Cosmetic Creams and Lotions—				
Face Cream .. .. .	Cwt.	3,934	4,923	5,412
Hand Creams and Lotions .. .. .	"	2,089	3,124	4,800
Other Skin Creams and Lotions .. .. .	"	9,264	6,958	9,102
Custard Powder .. .. .	'000 lb.	5,598	5,745	6,155
Cycles, Assembled .. .. .	No.	84,931	75,378	85,063

(a) Includes Kitbags.

(b) Excludes Industrial Metal and Bristle.

(c) Includes Mixtures.



QUANTITY OF PRINCIPAL ARTICLES PRODUCED IN FACTORIES:  
AUSTRALIA—continued.

Article.	Unit of Quantity.	1951-52.	1952-53.	1953-54.
Dynamos—				
Alternators .. .. .	No.	508	200	293
Generators .. .. .	"	16,256	8,194	9,331
Electricity .. .. .	Mill. kWh	11,297	12,045	13,707
Enamels, Natural and Synthetic .. .. .	'000 gals.	2,093	2,108	2,698
Engines—				
Diesel, other than Marine .. .. .	No.	4,225	4,919	3,787
Petrol—				
Marine .. .. .	"	2,112	1,232	1,357
Other (a) .. .. .	"	26,206	16,527	23,680
Essences, Flavouring—				
Domestic .. .. .	Gal.	93,125	92,592	96,359
Industrial .. .. .	"	258,651	198,092	245,312
Face Powder .. .. .	Cwt.	2,848	2,898	3,396
Fans, Electric .. .. .	No.	75,264	39,292	42,283
Fats, Edible—				
Dripping .. .. .	Cwt.	280,799	426,010	357,802
Other .. .. .	"	261,427	237,902	264,267
Fibrous Plaster Sheets .. .. .	'000 sq. yds.	16,470	15,418	16,185
Fish, Tinned (including Fish Loaf) .. .. .	'000 lb.	7,295	7,705	6,605
Floorboards—				
Australian Timber .. .. .	'000 super. ft.	76,147	87,009	110,536
Imported Timber .. .. .	"	9,272	3,943	3,845
Flour, Wheaten (b) .. .. .	Ton (2,000 lb.)	1,721,151	(c) 1,726,300	(c) 1,600,058
Flour, Self-raising .. .. .	Cwt.	1,255,099	1,105,835	1,116,278
Fruit Juices .. .. .	'000 gals.	1,134	2,075	3,161
Gas .. .. .	Mill. cubic ft.	40,391	40,722	42,100
Gloves—				
Dress—				
Leather .. .. .	Doz. pairs	15,393	25,254	12,113
Other .. .. .	"	53,668	90,397	112,892
Work, All types .. .. .	"	241,984	158,543	214,496
Golf Clubs .. .. .	Doz.	11,371	8,961	15,563
Handkerchiefs—				
Men's .. .. .	"	1,047,452	979,959	1,224,162
Women's .. .. .	"	909,141	882,164	1,538,067
Hats and Caps .. .. .	"	491,512	510,102	530,521
Rose, Rubber .. .. .	'000 lin. ft.	20,336	13,412	12,531
Ice .. .. .	Ton	1,032,823	960,034	877,803
Ice Cream .. .. .	'000 gals.	17,306	13,425	13,678
Iron and Steel—				
Pig Iron .. .. .	'000 tons	1,430	1,692	1,827
Ingot Steel .. .. .	"	1,521	1,801	2,117
Blooms and Billets .. .. .	"	1,361	1,638	1,921
Irons, Electric .. .. .	No.	226,207	179,842	229,910
Jams and Preserves—				
Jams .. .. .	'000 lb.	108,173	77,521	85,687
Fruit, Preserved (d) .. .. .	"	256,133	228,370	338,562
Vegetables, Preserved .. .. .	"	100,446	66,306	40,265
Jelly Crystals .. .. .	"	11,927	9,553	11,028
Kalsomine .. .. .	"	7,363	3,787	3,396
Lacquer, Clear and Colours .. .. .	Gal.	1,190,663	1,012,782	1,306,661
Lard .. .. .	Cwt.	35,363	41,266	40,973
Lawn Mowers—				
Electric .. .. .	No.	28,717	12,849	21,922
Petrol .. .. .	"	818	5,614	9,849
Hand .. .. .	"	97,142	54,186	85,867
Leather—				
Sole and Belting .. .. .	'000 lb.	38,636	38,298	38,675
Harness, Skirt, etc. .. .. .	"	1,881	1,607	1,546
Upholstery .. .. .	'000 sq. ft.	10,095	10,343	13,097
Dressed from Hides .. .. .	"	44,753	46,541	50,333
Dressed from Skins .. .. .	"	25,270	22,561	26,811
Lim—Quick .. .. .	ton	123,876	119,731	123,774
Hydrated .. .. .	"	37,422	36,877	44,047
Agricultural .. .. .	"	87,942	90,883	108,746
Linseed Oil—from Local Crushing .. .. .	'000 gals.	252	1,475	338
from Unrefined .. .. .	"	4,264	1,911	3,946
Lubricating Oil .. .. .	"	15,880	11,290	14,241

(a) Excludes Motor Car, Motor Cycle, Tractor and Aero Engines. (b) Includes Wheatmeal for Baking.  
(c) Includes Sharps. (d) Includes Canned Apple, all types.

QUANTITY OF PRINCIPAL ARTICLES PRODUCED IN FACTORIES:  
AUSTRALIA—continued.

Article.	Unit of Quantity.	1951-52.	1952-53.	1953-54.
Malt, Barley .. .. .	'ooo bus.	6,073	6,620	7,078
Margarine—				
Table .. .. .	'ooo lb.	15,952	15,856	21,866
Other .. .. .	"	56,168	49,337	49,939
Mattresses—Wire .. .. .	No.	221,880	236,527	268,930
Inner Spring .. .. .	"	280,084	320,604	418,811
Soft Filled, etc. .. .. .	"	399,348	349,426	367,116
Meat, Tinned .. .. .	'ooo lb.	161,868	209,376	160,268
Milk—				
Condensed .. .. .	'ooo lb.	117,527	124,063	94,944
Concentrated (Whole) .. .. .	"	37,503	32,465	43,599
Powdered (Whole) (a) .. .. .	"	66,899	72,651	68,643
Mops, Floor .. .. .	Gross	9,396	9,658	11,964
Motor Bodies made .. .. .	No.	98,470	9,822	14,745
Motor Spirit (Including Benzol) .. .. .	'ooo gals	96,108	106,793	182,319
Motors, Electric .. .. .	No.	610,363	601,659	972,887
Nails .. .. .	Ton	24,751	18,392	22,008
Neckties .. .. .	Doz.	412,755	522,590	589,142
Newsprint .. .. .	Ton	32,648	34,010	60,406
Oatmeal including Rolled Oats .. .. .	Cwt.	363,398	381,237	400,095
Paint—Water .. .. .	'ooo lb.	22,543	24,796	31,930
Oil .. .. .	'ooo gals	5,513	4,300	5,180
Peanut Butter and Paste .. .. .	'ooo lb.	3,209	3,419	4,313
Percambulators .. .. .	No.	111,357	131,699	152,048
Pickles .. .. .	'ooo pints	9,748	7,388	6,896
Pigments—Colours ground in oil .. .. .	Cwt.	14,337	18,028	19,047
Zinc Oxide .. .. .	"	223,448	87,260	172,807
White Lead .. .. .	"	181,764	68,284	337,794
Other, including Dry Colours .. .. .	"	257,882	204,684	161,581
Plywood, $\frac{1}{8}$ inch basis .. .. .	'ooo sq. ft.	159,153	115,728	161,581
Pollard .. .. .	Ton (2,000 lb.)	358,883	360,243	335,890
Pyjamas—				
Men's and Boy's (Suits only) .. .. .	Doz.	226,961	180,147	273,423
Women's and Girl's (incl. Nightdresses) .. .. .	"	300,401	289,104	322,010
Racquet Frames (all types) .. .. .	"	14,948	17,391	22,224
Refrigerators—Commercial .. .. .	No.	1,925	1,127	1,442
Domestic .. .. .	"	192,812	182,134	274,487
Rice (Cleaned) .. .. .	Cwt.	659,470	718,556	904,207
Ropes and Cables (excluding Wire) .. .. .	"	141,420	105,519	115,182
Sauce .. .. .	'ooo pints	30,643	25,977	25,770
Sausage Casings .. .. .	Cwt.	78,294	70,603	62,824
Semolina .. .. .	"	217,709	109,253	108,382
Shirts (Men's and Boys') .. .. .	Doz.	1,161,548	881,447	1,239,471
Sink Heaters .. .. .	No.	33,001	20,565	24,907
Soap—				
Household .. .. .	Cwt.	641,274	593,201	568,754
Flakes and Chips (b) .. .. .	"	67,666	70,601	77,406
Industrial (including Wool Scouring Soap) .. .. .	"	88,676	84,173	99,983
Sand .. .. .	"	41,006	28,982	22,045
Toilet and Hand .. .. .	"	316,050	272,630	300,248
Shaving, including Sticks and Creams .. .. .	"	7,039	7,095	7,076
Soft .. .. .	"	18,858	14,512	18,954
Liquid .. .. .	"	116,608	124,098	144,215
Shampoo .. .. .	"	7,810	7,561	8,547
Soap Extracts and Powders .. .. .	"	929,310	885,158	890,241
Socks and Stockings—				
Men's .. .. .	Doz. pairs	1,461,517	1,574,846	1,894,936
Women's .. .. .	"	1,867,261	2,337,332	2,793,050
Children's .. .. .	"	461,505	422,406	570,167
Soup (Tinned) .. .. .	'ooo pints	38,877	22,621	25,509
Spades and Shovels .. .. .	Doz.	31,257	21,821	25,322
Starch—Edible .. .. .	Cwt.	329,947	312,188	334,298
Inedible .. .. .	"	137,565	70,385	90,339
Steel, Structural, Fabricated .. .. .	Ton	119,205	130,029	134,607
Stoves, Ovens and Ranges—				
Domestic Cooking—				
Solid Fuel .. .. .	No.	71,695	47,933	50,376
Gas .. .. .	"	51,007	35,731	43,040
Electric (c) .. .. .	"	101,769	63,385	81,508
Sugar—Raw (94 net titre) .. .. .	Ton	745,401	948,886	1,254,387
Refined .. .. .	"	493,486	440,326	449,015
Sulphate of Ammonia .. .. .	"	63,815	70,174	70,811
Superphosphate .. .. .	"	1,597,080	1,581,001	1,771,196

(a) Includes Malted Milk and Infants' and Invalids' Foods.  
chips. (c) Includes Stovettes, Cookers, etc.

(b) Includes Industrial flakes and

**QUANTITY OF PRINCIPAL ARTICLES PRODUCED IN FACTORIES:  
AUSTRALIA—continued.**

Article.	Unit of Quantity.	1951-52.	1952-53.	1953-54.
Talcum Powder .. .. .	Cwt.	20,944	24,637	30,153
Tallow—				
Inedible .. .. .	"	833,236	1,120,308	1,101,114
Edible .. .. .	"	232,024	317,722	383,222
Tiles, Roofing—				
Cement .. .. .	'000	66,483	46,934	44,651
Terracotta .. .. .	"	48,859	57,977	63,782
Timber—				
From Native Logs—				
Hardwood .. .. .	'000 super. ft.	1,166,114	1,115,423	1,159,163
Softwood .. .. .	"	226,652	224,374	235,383
From Imported Logs—				
Hardwood .. .. .	"	13,468	13,588	20,627
Softwood .. .. .	"	198,599	117,815	154,560
Toasters, Electric (Domestic) .. .. .	No.	21,615	22,334	23,400
Tobacco .. .. .	'000 lb.	1,003,804	1,863,640	622,314
Tomato Juice .. .. .	Gal.	506,965	626,672	659,987
Towels .. .. .	Doz.			
Transformers and Converters—				
Above 20 k.v.a. .. .. .	No.	3,039	3,250	2,949
Below 20 k.v.a. .. .. .	"	235,612	207,084	309,901
Twine (all types) .. .. .	Cwt.	110,557	86,465	107,629
Tyres, Pneumatic—				
Motor Car and Motor Cycle .. .. .	No.	1,874,857	1,288,352	2,214,041
Truck and Omnibus .. .. .	"	587,806	329,848	509,663
All Other (excl. Bicycle) .. .. .	"	114,653	75,834	165,865
Umbrellas .. .. .	"	367,306	338,548	430,422
Underwear .. .. .	'000 doz.	3,681	3,243	4,239
Vacuum Cleaners (Domestic) .. .. .	No.	64,065	38,398	57,275
Varnishes .. .. .	'000 gals.	3,575	2,930	3,135
Washing Machines, Household, Electric .. .. .	No.	99,429	91,384	146,259
Weatherboards—				
Australian Timber .. .. .	'000 super. ft.	20,921	20,944	24,880
Imported Timber .. .. .	"	4,680	3,003	3,271
Wheatmeal (a) .. .. .	Ton (2,000 lb.)	90,255	88,101	137,732
Wheelbarrows (Metal) .. .. .	No.	67,573	62,364	78,874
Wireless—				
Cabinets—				
Wood .. .. .	No.	78,186	55,044	82,603
Other .. .. .	"	288,296	190,008	304,452
Receiving Sets .. .. .	"	358,379	298,955	437,513
Wool Scoured—				
For Sale .. .. .	'000 lb.	38,843	37,348	40,536
For use in own works .. .. .	"	30,116	29,218	38,246
On Commission .. .. .	"	51,839	57,479	57,785
Wool Tops .. .. .	"	24,815	26,467	32,755
Yarn (b)				
Cotton .. .. .	"	34,461	27,611	38,101
Woollen .. .. .	"	17,002	15,468	19,868
Worsted .. .. .	"	19,500	20,141	26,076
Zinc Oxide (See Pigments)				

(a) Excludes Wheatmeal for Baking Included with Flour.

(b) Including mixtures predominantly of the fibre mentioned.

### § 11. Individual Industries.

1. General.—Particulars in pages 328-55, §§ 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 work, 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 and 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.

The statistics in the following tables should be read in the light of the following definitions.

*Factory.* A factory is taken to be a manufacturing establishment in which four or more persons are employed or in which power, other than manual, is used.

*Average Number of Persons Employed.* 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 means, in general, the average number over the whole year and not the average over the period worked.

*Value of Materials Used.* This item 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.* This item includes also the cost of power and light used, of lubricants and of water.

*Value of Output.* The amounts given under this heading represent the selling value at the factory of goods made or processed during the year, including by-products, also the value of other work done.

*Value of Production.* The value of production is obtained by deducting "Value of materials used" and "Value of fuel used", as defined above, from the "Value of output". This method of valuing factory production has been adopted by the Statistical offices throughout Australia.

*Rated Horse-power of Engines Used.* Statistics of power used in factories other than Central Electric Stations relate to the "rated horse-power" of engines ordinarily in use.

For more detailed definitions see § 1, par. 6 of this chapter, page 325.

Details of some of the principal articles produced in factories in Australia during the years 1951-52 to 1953-54 are shown in the table in 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 1953-54 and for a selected number of years in the following table.

### PORTLAND CEMENT, ASBESTOS CEMENT SHEETS, ETC., AND OTHER CEMENT GOODS.

AUSTRALIA, 1953-54.

Items.	Portland Cement.	Asbestos Cement Sheets and Mouldings.	Other Cement Goods.	Total.
Number of factories .. ..	13	16	450	479
Number of persons employed .. ..	2,727	2,314	4,263	9,304
Salaries and wages paid .. .. £	2,330,546	1,977,141	3,127,316	7,435,003
Value of power, fuel, etc., used .. .. £	3,642,068	178,984	128,710	3,949,762
Value of materials used .. .. £	4,850,898	4,376,761	6,784,812	16,012,491
Value of production .. .. £	5,358,132	3,381,432	5,458,863	14,198,427
Total value of output .. .. £	13,851,098	7,937,177	12,372,405	34,160,680
Value of land and buildings .. .. £	1,652,966	903,092	1,650,410	4,206,468
Value of plant and machinery .. .. £	7,543,725	1,288,664	1,963,358	10,795,747
Horse-power of engines ordinarily in use h.p.	67,337	9,060	12,863	89,260

### AUSTRALIA.

Items.	1938-39.	1949-50.	1950-51.	1951-52.	1952-53.	1953-54.
Number of factories .. ..	132	450	526	559	504	479
Number of persons employed .. ..	3,932	8,033	9,192	9,851	9,352	9,304
Salaries and wages paid .. .. £'000	897	3,673	4,860	6,469	6,942	7,435
Value of power, fuel, etc., used .. .. £'000	562	1,444	1,794	2,418	3,436	3,950
Value of materials used .. .. £'000	1,542	6,671	9,025	12,608	14,303	16,013
Value of production .. .. £'000	2,385	6,540	8,635	11,169	12,197	14,198
Total value of output .. .. £'000	4,489	14,655	19,454	26,285	29,936	34,161
Value of land and buildings .. .. £'000	1,350	2,283	3,250	3,466	3,890	4,206
Value of plant and machinery .. .. £'000	2,516	3,970	4,691	6,455	10,018	10,796
Horse-power of engines ordinarily in use .. .. h.p.	39,617	71,000	75,584	81,691	91,880	89,260

3. *Chemicals, Drugs and Medicines.*—In 1945-46 the classification of factories was amended to provide for the separate tabulation of factories engaged in the production of Industrial and Heavy Chemicals and Acids and those engaged in producing Pharmaceutical and Toilet Preparations, which previously had been combined. Details for each of these industries are given in the next two tables for 1953-54 with comparisons with previous years. However, it should be noted that 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).

1953-54.

Items.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas.	Australia.
Number of factories ..	124	76	15	9	9	1	234
Number of persons employed ..	4,742	5,727	258	730	(a)	(a)	11,765
Salaries and wages paid ..	£ 4,795,444	£ 4,665,155	192,893	624,965	(a)	(a)	9,906,692
Value of power, fuel, etc., used ..	£ 1,435,389	£ 653,136	46,515	544,230	(a)	(a)	2,756,787
Value of materials used ..	£ 13,981,705	£ 9,560,899	266,344	1,006,412	(a)	(a)	25,157,890
Value of production ..	£ 9,715,615	£ 8,207,762	436,121	1,849,361	(a)	(a)	20,643,776
Total value of output ..	£ 25,132,709	£ 18,421,797	748,980	3,400,003	(a)	(a)	48,558,393
Value of land and buildings ..	£ 6,906,646	£ 5,422,095	103,782	705,645	(a)	(a)	13,389,044
Value of plant and machinery ..	£ 13,770,583	£ 7,545,472	165,874	1,630,483	(a)	(a)	23,572,816
Horse-power of engines ordinarily in use .. h.p.	38,332	43,428	1,584	4,539	(a)	(a)	90,807

## AUSTRALIA.

Items.	1945-46.	1949-50.	1950-51.	1951-52.	1952-53.	1953-54.
Number of factories ..	165	199	207	219	229	234
Number of persons employed ..	10,228	9,749	10,615	11,504	11,253	11,765
Salaries and wages paid ..	£'000 3,450	£'000 4,890	£'000 6,243	£'000 8,539	£'000 8,928	£'000 9,907
Value of power, fuel, etc., used ..	£'000 618	£'000 1,064	£'000 1,546	£'000 2,110	£'000 2,210	£'000 2,757
Value of materials used ..	£'000 6,007	£'000 10,522	£'000 16,857	£'000 21,097	£'000 19,538	£'000 25,158
Value of production ..	£'000 6,627	£'000 9,075	£'000 13,373	£'000 17,180	£'000 16,879	£'000 20,643
Total value of output ..	£'000 13,252	£'000 20,661	£'000 31,776	£'000 40,387	£'000 38,627	£'000 48,558
Value of land and buildings ..	£'000 11,697	£'000 10,696	£'000 7,770	£'000 8,828	£'000 11,923	£'000 13,389
Value of plant and machinery ..	£'000 10,964	£'000 9,708	£'000 11,043	£'000 12,507	£'000 19,612	£'000 23,573
Horse-power of engines ordinarily in use .. h.p.	69,399	72,183	74,613	76,890	85,254	90,807

(a) Not available for publication; included with total for Australia.

## PHARMACEUTICAL AND TOILET PREPARATIONS.

1953-54.

Items.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas.	Australia.
Number of factories ..	121	62	5	13	4	3	208
Number of persons employed ..	3,006	2,303	(a)	480	102	(a)	6,012
Salaries and wages paid ..	£ 1,865,322	£ 1,629,862	(a)	290,633	56,176	(a)	3,898,486
Value of power, fuel, etc., used ..	£ 74,173	£ 132,321	(a)	26,642	3,319	(a)	237,817
Value of materials used ..	£ 6,105,137	£ 4,509,185	(a)	1,085,653	124,676	(a)	12,017,485
Value of production ..	£ 8,433,736	£ 3,754,452	(a)	462,928	174,398	(a)	12,968,772
Total value of output ..	£ 14,013,066	£ 8,395,958	(a)	1,575,223	302,393	(a)	25,224,074
Value of land and buildings ..	£ 1,658,301	£ 2,754,349	(a)	173,836	115,281	(a)	4,755,228
Value of plant and machinery ..	£ 630,444	£ 1,045,369	(a)	78,939	28,947	(a)	1,792,512
Horse-power of engines ordinarily in use .. h.p.	3,513	7,680	(a)	1,295	187	(a)	12,777

## AUSTRALIA.

Items.	1945-46.	1949-50.	1950-51.	1951-52.	1952-53.	1953-54.
Number of factories ..	215	205	201	208	206	208
Number of persons employed ..	5,514	5,157	5,538	6,149	5,363	6,012
Salaries and wages paid ..	£'000 1,699	£'000 1,840	£'000 2,423	£'000 3,433	£'000 3,468	£'000 3,898
Value of power, fuel, etc., used ..	£'000 57	£'000 73	£'000 91	£'000 150	£'000 197	£'000 238
Value of materials used ..	£'000 5,402	£'000 6,371	£'000 8,291	£'000 9,877	£'000 9,784	£'000 12,017
Value of production ..	£'000 4,790	£'000 6,566	£'000 8,985	£'000 10,314	£'000 10,188	£'000 12,969
Total value of output ..	£'000 10,249	£'000 13,010	£'000 17,667	£'000 20,341	£'000 20,160	£'000 25,224
Value of land and buildings ..	£'000 1,534	£'000 1,706	£'000 1,963	£'000 3,332	£'000 3,931	£'000 4,755
Value of plant and machinery ..	£'000 598	£'000 767	£'000 823	£'000 1,286	£'000 1,569	£'000 1,793
Horse-power of engines ordinarily in use .. h.p.	6,324	7,816	8,357	10,618	12,238	12,777

(a) Not available for publication; included with total for Australia.

4. White Lead, Paint and Varnish.—The following table shows particulars of this industry for each State during 1953-54 and for Australia for a series of years.

## WHITE LEAD, PAINTS AND VARNISH.

1953-54.

Items.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas.	Australia.
Number of factories ..	77	57	17	13	8	2	174
Number of persons employed ..	2,768	1,306	292	480	(a)	(a)	4,934
Salaries and wages paid .. £	2,119,824	1,021,726	195,245	360,585	(a)	(a)	3,756,752
Value of power, fuel, etc., used .. £	233,251	65,789	12,816	21,420	(a)	(a)	337,126
Value of materials used .. £	9,793,104	4,969,046	1,338,015	2,114,382	(a)	(a)	18,603,030
Value of production .. £	4,750,134	3,170,397	805,743	924,162	(a)	(a)	9,891,088
Total value of output .. £	14,776,439	8,205,232	2,156,574	3,059,964	(a)	(a)	28,831,244
Value of land and buildings .. £	2,032,348	1,071,618	246,727	618,610	(a)	(a)	4,065,912
Value of plant and machinery .. £	945,044	766,301	133,052	344,586	(a)	(a)	2,230,202
Horse-power of engines ordinarily in use .. h.p.	13,640	5,979	1,100	1,466	(a)	(a)	22,719

## AUSTRALIA.

Items.	1938-39.	1949-50.	1950-51.	1951-52.	1952-53.	1953-54.
Number of factories ..	102	149	154	158	175	174
Number of persons employed ..	2,271	4,526	4,985	5,141	4,622	4,934
Salaries and wages paid .. £'000	535	2,097	2,784	3,378	3,346	3,757
Value of power, fuel, etc., used .. £'000	45	171	229	303	258	337
Value of materials used .. £'000	2,275	10,903	14,157	16,623	14,657	18,603
Value of production .. £'000	1,585	5,296	7,010	8,112	8,583	9,891
Total value of output .. £'000	3,905	16,370	21,396	24,038	23,498	28,831
Value of land and buildings .. £'000	761	2,038	2,831	3,213	3,669	4,066
Value of plant and machinery .. £'000	324	1,345	1,548	1,842	2,113	2,230
Horse-power of engines ordinarily in use .. h.p.	7,696	17,681	19,875	21,412	22,769	22,719

(a) Not available for publication; figures are included in the total for Australia.

5. Soap and Candle Factories.—The following table shows particulars of factories in the Soap and Candle industry in each State for 1953-54 and for Australia for a series of years:—

## SOAP AND CANDLES.

1953-54.

Items.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas.	Australia.
Number of factories ..	48	23	8	4	3	3	89
Number of persons employed ..	1,884	680	282	133	(a)	(a)	3,058
Salaries and wages paid .. £	1,631,281	562,584	194,986	104,081	(a)	(a)	2,544,461
Value of power, fuel, etc., used .. £	170,656	219,289	17,464	13,308	(a)	(a)	427,661
Value of materials used .. £	5,801,573	3,264,735	630,805	252,984	(a)	(a)	10,213,932
Value of production .. £	4,319,477	1,773,247	392,345	136,668	(a)	(a)	6,731,952
Total value of output .. £	10,291,706	5,257,274	1,040,614	402,360	(a)	(a)	17,373,485
Value of land and buildings .. £	601,286	718,249	108,837	77,072	(a)	(a)	1,505,269
Value of plant and machinery .. £	932,894	1,070,399	133,836	77,765	(a)	(a)	2,243,993
Horse-power of engines ordinarily in use .. h.p.	4,532	2,711	862	513	(a)	(a)	8,795

(a) Not available for publication; figures are included in total for Australia.

## AUSTRALIA.

Items.	1938-39.	1949-50.	1950-51.	1951-52.	1952-53.	1953-54.
Number of factories ..	65	90	93	88	89	89
Number of persons employed ..	2,620	3,646	3,502	3,440	3,028	3,058
Salaries and wages paid .. £'000	501	1,605	1,974	2,555	2,460	2,544
Value of power, fuel, etc., used .. £'000	76	285	353	453	475	427
Value of materials used .. £'000	1,568	5,499	6,330	8,384	8,846	10,214
Value of production .. £'000	1,886	4,442	4,609	4,638	6,324	6,732
Total value of output .. £'000	3,530	10,226	11,292	13,475	15,645	17,373
Value of land and buildings .. £'000	666	1,115	1,200	1,301	1,487	1,565
Value of plant and machinery .. £'000	577	1,201	1,341	1,693	1,985	2,244
Horse-power of engines ordinarily in use .. h.p.	5,267	7,515	7,447	8,769	8,606	8,795
Materials used—						
Tallow .. cwt.	535,511	1,008,257	1,123,895	1,134,935	1,024,772	1,120,828
Alkali for Soap (a) ..	194,869	326,648	343,378	403,241	386,176	377,451
Coconut oil—refined and unrefined .. cwt.	138,954	78,893	91,404	113,203	95,825	86,576
Articles produced—						
Soap (b) .. cwt.	978,113	1,174,605	1,365,669	1,304,987	1,208,853	1,247,228
Soap Extracts and Powders ..	191,232	697,848	754,758	929,310	885,158	890,241
Candles made ..	28,649	21,245	12,871	16,931	14,256	8,611

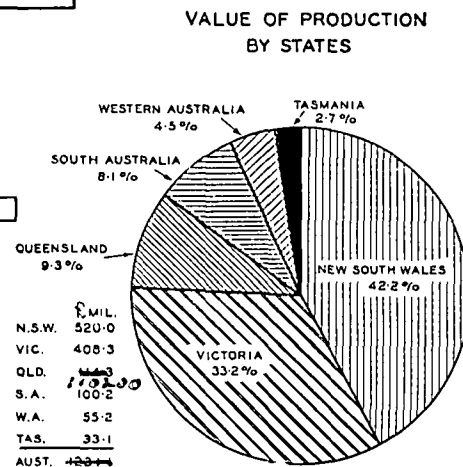
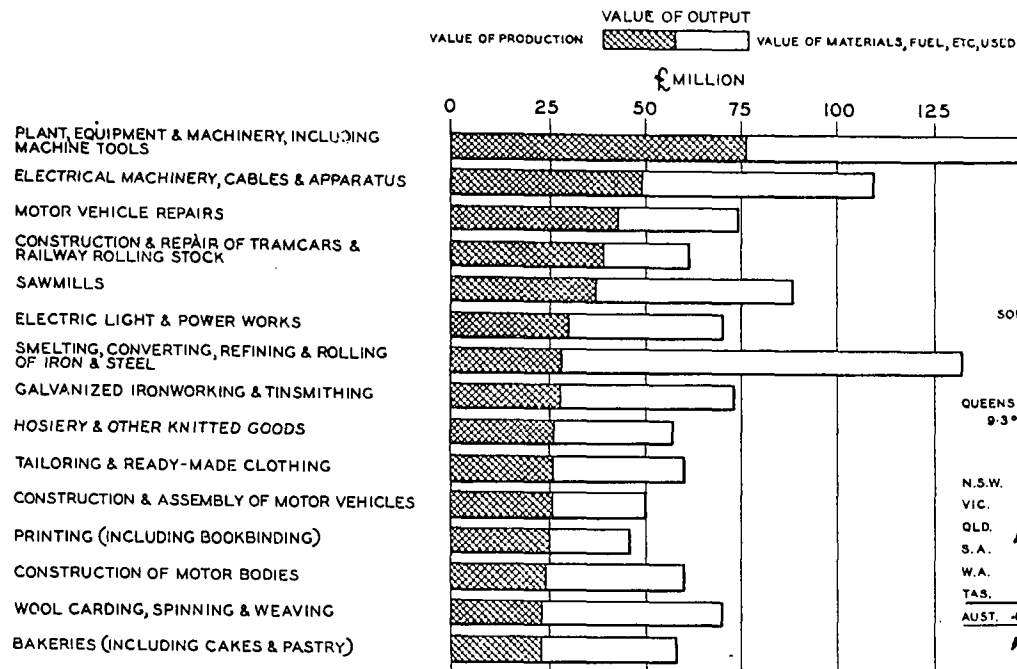
(a) Includes Soda Ash.

(b) Soap made in all factories including those not classified as "Soap and Candle" factories.

NOTE.—Preliminary figures of production in 1954-55 were Soap, 1,268,488 cwt.; Soap Extracts and Powders, 1,003,592 cwt.

# VALUE OF OUTPUT AND VALUE OF PRODUCTION

PRINCIPAL MANUFACTURING INDUSTRIES, AUSTRALIA, 1953-54







6. Chemical Fertilizers.—The following table shows particulars of the factories engaged in the manufacture of chemical fertilizers in each State during 1953-54 and for Australia for a series of years. Details of the consumption, imports and exports of fertilizers will be found in Chapter XXI.—Agricultural Production.

## CHEMICAL FERTILIZERS.

1953-54.

Items.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas.	Australia.
Number of factories ..	14	9	8	7	5	1	51
Number of persons employed ..	1,066	1,336	(a)	860	889	(a)	4,531
Salaries and wages paid .. £	968,553	1,210,919	(a)	735,765	769,629	(a)	3,987,924
Value of power, fuel, etc., used .. £	433,929	176,998	(a)	82,650	126,291	(a)	824,303
Value of materials used .. £	3,376,396	6,141,686	(a)	3,542,292	4,827,575	(a)	20,520,982
Value of production .. £	1,610,328	2,922,067	(a)	1,312,569	1,566,225	(a)	8,109,740
Total value of output .. £	5,420,653	9,240,751	(a)	4,937,511	6,514,091	(a)	29,472,427
Value of land and buildings .. £	2,394,091	754,092	(a)	495,985	1,518,466	(a)	6,067,213
Value of plant and machinery .. £	2,665,728	1,148,388	(a)	963,111	1,530,319	(a)	8,066,852
Horse-power of engines ordinarily in use .. h.p.	12,622	13,717	(a)	6,399	4,864	(a)	41,641

## AUSTRALIA.

Items.	1938-39.	1949-50.	1950-51.	1951-52.	1952-53.	1953-54.
Number of factories ..	36	51	49	49	51	51
Number of persons employed ..	2,540	3,889	4,012	4,325	4,483	4,531
Salaries and wages paid .. £'000	601	2,051	2,540	3,361	3,759	3,988
Value of power, fuel, etc., used .. £'000	114	407	440	589	786	842
Value of materials used .. £'000	3,231	12,737	14,014	20,297	21,100	20,521
Value of production .. £'000	1,600	3,998	4,312	5,998	7,255	8,109
Total value of output .. £'000	4,945	17,142	18,766	26,884	29,131	29,472
Value of land and buildings .. £'000	1,449	3,633	3,900	4,244	4,791	6,067
Value of plant and machinery .. £'000	2,353	4,849	5,418	5,804	6,218	8,067
Horse-power of engines ordinarily in use .. h.p.	18,165	30,855	36,274	38,220	39,551	41,641

(a) Not available for publication; figures are included in the total for Australia.

7. Iron and Steel Works and Engineering.—(i) *General.* In 1945-46 the classification of factories was amended to provide for the tabulation in four separate groups of those industries previously included under Iron and Steel and Engineering. The first group (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.

(ii) *Smelting, Converting, Refining and Rolling of Iron and Steel.* In the following table particulars are shown for each State for 1953-54 and for Australia in selected years for the group Smelting, Converting, Refining and Rolling of Iron and Steel.

## SMELTING, CONVERTING, REFINING AND ROLLING OF IRON AND STEEL.

1953-54.

Items.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas.	Australia
Number of factories ..	19	10	..	3	1	..	33
Number of persons employed ..	15,218	1,133	..	(a)	(a)	..	16,688
Salaries and wages paid .. £	14,302,365	1,006,430	..	(a)	(a)	..	15,608,816
Value of power, fuel, etc., used .. £	13,359,219	242,561	..	(a)	(a)	..	15,430,293
Value of materials used .. £	87,472,332	886,147	..	(a)	(a)	..	88,802,180
Value of production .. £	25,443,829	1,302,276	..	(a)	(a)	..	27,994,696
Total value of output .. £	126,275,380	2,430,984	..	(a)	(a)	..	132,227,178
Value of land and buildings .. £	5,941,965	514,280	..	(a)	(a)	..	6,508,440
Value of plant and machinery .. £	23,369,632	682,764	..	(a)	(a)	..	24,278,983
Horse-power of engines ordinarily in use .. h.p.	276,331	8,650	..	(a)	(a)	..	287,619

## AUSTRALIA.

Items.	1945-46.	1949-50.	1950-51.	1951-52.	1952-53.	1953-54.
Number of factories ..	27	30	30	30	32	33
Number of persons employed ..	10,413	11,509	13,419	14,192	16,188	16,688
Salaries and wages paid .. £'000	4,164	6,978	9,245	11,904	14,455	15,609
Value of power, fuel, etc., used .. £'000	2,777	5,516	7,896	11,186	14,683	15,431
Value of materials used .. £'000	19,134	29,747	40,580	53,342	76,983	88,802
Value of production .. £'000	7,393	12,784	16,594	20,311	27,336	27,995
Total value of output .. £'000	29,304	48,047	65,070	84,830	118,404	132,227
Value of land and buildings .. £'000	2,197	2,812	3,259	4,064	5,278	6,508
Value of plant and machinery .. £'000	5,669	7,185	9,191	14,092	20,753	24,279
Horse-power of engines ordinarily in use .. h.p.	198,317	213,529	216,617	218,857	248,440	287,619

(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 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 1953-54 and for Australia in selected years in the following table :—

### FOUNDRIES—FERROUS.

1953-54.

Items.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas.	Australia.
Number of factories ..	91	204	22	23	17	..	357
Number of persons employed ..	2,599	2,430	652	540	390	..	6,611
Salaries and wages paid .. £	2,110,312	1,827,025	461,005	428,681	301,695	..	5,128,778
Value of power, fuel, etc., used .. £	265,816	227,737	37,642	89,116	81,577	..	701,908
Value of materials used .. £	1,451,376	1,477,273	375,815	413,507	338,896	..	4,056,867
Value of production .. £	2,780,733	2,700,264	871,005	692,255	425,133	..	7,469,450
Total value of output .. £	4,497,925	4,405,294	1,284,522	1,194,878	845,606	..	12,228,225
Value of land and buildings .. £	953,949	814,130	257,266	167,962	106,172	..	2,298,579
Value of plant and machinery .. £	915,374	595,382	302,151	199,017	111,361	..	2,123,285
Horse-power of engines ordinarily in use .. h.p.	9,940	8,022	2,567	2,561	2,325	..	25,415

### AUSTRALIA.

Items.	1945-46.	1949-50.	1950-51.	1951-52.	1952-53.	1953-54.
Number of factories ..	312	353	358	365	373	357
Number of persons employed ..	5,344	6,346	7,198	7,243	6,584	6,611
Salaries and wages paid .. £'000	1,612	2,985	4,134	5,252	4,980	5,129
Value of power, fuel, etc., used .. £'000	161	341	475	633	642	702
Value of materials used .. £'000	1,210	2,116	3,262	4,331	4,026	4,057
Value of production .. £'000	2,341	4,648	6,024	7,622	7,337	7,469
Total value of output .. £'000	3,712	7,105	9,761	12,586	12,005	12,228
Value of land and buildings .. £'000	988	1,207	1,570	1,736	2,144	2,299
Value of plant and machinery .. £'000	619	1,063	1,357	1,574	1,923	2,123
Horse-power of engines ordinarily in use h.p.	13,381	19,306	23,076	25,107	24,467	25,415

(iv) *Plant, Equipment and Machinery (including Machine Tools).* The next table shows particulars for this group for each State during 1953-54 and for Australia for the years 1945-46 and 1949-50 to 1953-54 :—

### PLANT, EQUIPMENT AND MACHINERY (INCLUDING MACHINE TOOLS).

1953-54.

Items.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas.	Australia.
Number of factories ..	953	616	112	145	82	3	1,911
Number of persons employed ..	24,012	20,260	5,599	8,186	2,653	130	60,840
Salaries and wages paid .. £	19,212,170	16,120,490	3,764,549	6,521,264	1,903,496	97,757	47,619,726
Value of power, fuel, etc., used .. £	900,878	677,928	165,357	389,234	83,859	1,329	2,218,585
Value of materials used .. £	27,440,068	23,199,455	4,460,730	10,634,311	2,454,591	99,215	68,288,370
Value of production .. £	30,402,028	26,363,060	5,810,365	10,169,326	3,121,083	131,344	75,997,206
Total value of output .. £	58,742,074	50,240,443	10,436,452	21,192,871	5,659,533	231,888	146,504,161
Value of land and buildings .. £	10,988,658	9,318,213	1,761,275	2,254,175	1,394,980	141,290	25,258,591
Value of plant and machinery .. £	8,836,964	8,031,872	1,179,074	2,134,396	1,052,654	100,068	21,335,028
Horse-power of engines ordinarily in use .. h.p.	82,219	67,228	14,908	24,096	9,351	498	198,300

### AUSTRALIA.

Items.	1945-46.	1949-50.	1950-51.	1951-52.	1952-53.	1953-54.
Number of factories ..	1,038	1,498	1,555	1,684	1,787	1,911
Number of persons employed ..	46,123	56,344	60,990	64,066	60,140	60,840
Salaries and wages paid .. £'000	14,259	20,495	35,215	45,434	45,414	47,620
Value of power, fuel, etc., used .. £'000	605	1,075	1,434	1,937	2,095	2,219
Value of materials used .. £'000	16,455	38,457	53,040	68,943	63,134	68,288
Value of production .. £'000	21,044	40,958	55,934	71,810	70,790	75,997
Total value of output .. £'000	38,104	80,490	110,408	142,690	136,019	146,504
Value of land and buildings .. £'000	7,227	12,680	15,904	19,383	22,332	25,259
Value of plant and machinery .. £'000	7,046	12,571	14,968	17,870	19,784	21,335
Horse-power of engines ordinarily in use h.p.	101,810	158,402	205,736	190,664	197,031	198,300

(v) *Other Engineering.* Details covering jobbing and general engineering works not elsewhere included are shown for each State for 1953-54 and for Australia in selected years in the following table.

## OTHER ENGINEERING.

1953-54.

Items.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas.	Australia.
Number of factories ..	743	787	124	160	143	54	2,041
Number of persons employed ..	5,641	8,702	1,371	2,929	908	1,430	20,981
Salaries and wages paid ..	£ 3,866,688	6,582,568	847,675	2,121,462	557,517	1,123,657	15,099,567
Value of power, fuel, etc., used ..	£ 158,533	208,746	26,223	72,159	32,863	32,211	530,735
Value of materials used ..	£ 4,023,214	7,810,002	851,908	2,042,321	631,312	1,038,025	16,426,782
Value of production ..	£ 6,372,264	10,461,303	1,334,530	3,078,026	914,336	1,594,301	23,754,760
Total value of output ..	£ 10,554,011	18,510,051	2,212,661	5,192,506	1,578,511	2,664,537	41,714,277
Value of land and buildings ..	£ 3,006,163	4,224,179	465,185	1,109,771	430,812	664,385	9,900,495
Value of plant and machinery ..	£ 1,877,506	3,363,449	398,345	806,362	224,558	373,379	7,043,599
Horse-power of engines ordinarily in use .. h.p.	15,605	28,618	3,617	7,925	2,712	4,297	62,774

## AUSTRALIA.

Items.	1945-46.	1949-50.	1950-51.	1951-52.	1952-53.	1953-54.
Number of factories ..	903	1,495	1,627	1,853	1,975	2,041
Number of persons employed ..	13,112	16,798	18,487	20,398	20,005	20,981
Salaries and wages paid ..	£'000 3,634	6,977	9,495	13,124	13,804	15,100
Value of power, fuel, etc., used ..	£'000 162	241	291	413	460	530
Value of materials used ..	£'000 3,599	6,637	9,855	14,268	14,041	16,427
Value of production ..	£'000 5,432	11,086	15,323	20,681	21,551	23,755
Total value of output ..	£'000 9,193	17,964	25,469	35,362	36,052	40,712
Value of land and buildings ..	£'000 2,369	5,191	5,089	7,021	8,285	9,900
Value of plant and machinery ..	£'000 2,091	3,515	4,098	5,434	6,366	7,744
Horse-power of engines ordinarily in use .. h.p.	26,095	41,668	47,396	56,397	59,024	62,774

8. 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 1953-54 and for Australia for a series of years. It should be noted that as "Ore Beneficiation and Concentration", formerly included as part of this section of Manufacturing Industry, was transferred to the Mining Industry in 1952-53 details for that and later years are not comparable with those for 1951-52 and earlier years.

## EXTRACTING AND REFINING OF NON-FERROUS METALS : ALLOYS.

1953-54.

Items.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas.	Australia.
Number of factories ..	27	21	6	3	..	2	59
Number of persons employed ..	1,363	258	462	(b)	..	(b)	6,592
Salaries and wages paid ..	£ 1,253,657	228,228	569,820	(b)	..	(b)	6,060,180
Value of power, fuel, etc., used ..	£ 489,711	34,496	554,456	(b)	..	(b)	3,062,733
Value of materials used ..	£ 10,046,410	1,999,559	11,127,630	(b)	..	(b)	53,710,725
Value of production ..	£ 2,105,338	562,013	1,724,719	(b)	..	(b)	12,648,166
Total value of output ..	£ 12,641,459	2,596,068	13,406,805	(b)	..	(b)	69,421,624
Value of land and buildings ..	£ 571,809	186,757	972,917	(b)	..	(b)	2,742,576
Value of plant and machinery ..	£ 782,391	102,584	1,309,101	(b)	..	(b)	5,389,983
Horse-power of engines ordinarily in use .. h.p.	8,461	655	16,192	(b)	..	(b)	65,067

## AUSTRALIA.

Items.	1938-39.	1949-50.	1950-51.	1951-52.	1952-53.	1953-54.
Number of factories ..	42	62	65	67	54	59
Number of persons employed ..	5,532	7,394	7,664	7,812	6,983	6,502
Salaries and wages paid ..	£'000 1,613	4,324	5,268	6,515	6,085	6,669
Value of power, fuel, etc., used ..	£'000 593	1,908	2,323	3,130	2,803	3,663
Value of materials used ..	£'000 16,844	38,993	59,735	71,097	44,181	53,711
Value of production ..	£'000 3,892	15,718	20,435	27,496	14,163	12,648
Total value of output ..	£'000 21,334	56,619	82,493	101,723	61,447	69,122
Value of land and buildings ..	£'000 1,177	1,861	2,017	2,075	2,669	2,743
Value of plant and machinery ..	£'000 3,526	4,605	4,723	4,936	4,371	5,390
Horse-power of engines ordinarily in use .. h.p.	54,450	79,320	88,410	81,567	70,424	65,067

(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. (c) See table above table.

9. Electrical Machinery, Cables and Apparatus.—The following table shows particulars of this industry for each State during 1953-54 and for Australia for a series of years.

## ELECTRICAL MACHINERY, CABLES AND APPARATUS.

1953-54.

Items.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas.	Australia.
Number of factories ..	495	331	62	62	64	14	1,028
Number of persons employed ..	25,481	8,875	1,620	1,473	770	158	38,377
Salaries and wages paid ..	£19,840,824	6,486,409	1,060,749	978,432	486,829	115,673	28,968,916
Value of power, fuel, etc., used ..	£1,064,108	241,900	29,422	32,037	18,255	4,828	1,391,150
Value of materials used ..	£41,566,222	12,879,319	1,705,546	1,183,403	666,059	175,752	58,236,901
Value of production ..	£34,571,341	10,299,214	1,717,417	1,354,022	849,771	240,207	49,031,972
Total value of output ..	£77,201,071	23,420,433	3,512,385	2,570,062	1,534,685	420,787	108,600,223
Value of land and buildings ..	£8,850,994	3,771,110	399,790	430,876	309,538	66,631	13,828,945
Value of plant and machinery ..	£6,270,726	2,552,583	479,190	202,908	104,307	99,679	9,709,393
Horse-power of engines ordinarily in use ..	h.p. 48,806	17,213	5,022	1,559	1,225	263	74,088

## AUSTRALIA.

Items.	1938-39.	1949-50.	1950-51.	1951-52.	1952-53.	1953-54.
Number of factories ..	360	811	867	928	965	1,028
Number of persons employed ..	10,666	30,956	35,494	36,772	31,949	38,377
Salaries and wages paid ..	£2,031	13,563	18,816	24,277	22,903	28,969
Value of power, fuel, etc., used ..	£105	453	637	976	991	1,391
Value of materials used ..	£3,195	21,149	31,680	40,704	36,668	58,237
Value of production ..	£3,655	21,154	30,867	38,244	38,633	49,032
Total value of output ..	£6,955	42,756	63,184	79,924	76,292	108,660
Value of land and buildings ..	£1,627	6,293	8,224	9,631	11,270	13,829
Value of plant and machinery ..	£897	4,127	5,719	6,957	8,168	9,709
Horse-power of engines ordinarily in use ..	h.p. 12,043	43,095	55,854	62,813	66,512	74,088

10. Railway and Tramway Workshops (Government and Local Authority).—The railway and tramway workshops, which form an important part of Class IV., are chiefly owned by State Governments and Local Authorities. *Workshops (fifteen in 1953-54) controlled by non-public bodies are not included in the figures below :—*

## TRAMCARS AND RAILWAY ROLLING STOCK.(a)

1953-54.

Items.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas.	Australia.
Number of factories ..	44	24	12	14	23	7	124
Number of persons employed ..	16,423	7,257	6,405	4,556	3,707	914	39,262
Salaries and wages paid ..	£12,122,399	5,432,022	4,192,054	3,475,385	2,561,761	640,026	28,424,547
Value of power, fuel, etc., used ..	£418,936	197,534	112,104	159,740	83,116	22,445	993,875
Value of materials used ..	£6,102,964	4,153,593	2,451,163	2,619,507	1,460,337	302,169	17,092,733
Value of production ..	£14,270,078	6,997,850	4,969,832	4,242,601	3,040,165	833,431	34,353,987
Total value of output ..	£20,791,978	11,349,007	7,536,009	7,021,848	4,583,618	1,158,045	52,440,595
Value of land and buildings ..	£5,222,594	1,682,676	590,820	1,196,788	403,697	633,970	9,729,945
Value of plant and machinery ..	£7,802,648	723,295	907,545	1,490,901	922,949	318,213	12,165,551
Horse-power of engines ordinarily in use ..	h.p. 41,289	10,910	16,257	17,540	10,233	3,249	108,478

## AUSTRALIA.

Items.	1938-39.	1949-50.	1950-51.	1951-52.	1952-53.	1953-54.
Number of factories ..	117	127	126	126	123	124
Number of persons employed ..	27,310	38,432	38,253	38,499	39,073	39,262
Salaries and wages paid ..	£6,721	18,057	20,914	26,281	28,002	28,425
Value of power, fuel, etc., used ..	£226	500	617	812	907	994
Value of materials used ..	£4,076	11,133	12,165	15,151	16,706	17,093
Value of production ..	£8,021	21,643	25,738	31,375	33,875	34,354
Total value of output ..	£13,223	33,276	38,520	47,338	51,488	52,441
Value of land and buildings ..	£6,737	8,051	7,983	8,786	9,279	9,730
Value of plant and machinery ..	£5,390	7,925	8,277	9,218	10,701	12,166
Horse-power of engines ordinarily in use ..	h.p. 53,671	89,864	93,567	97,585	98,251	108,478

(a) Government and Local Authority only.

A railway workshop in the Northern Territory is chiefly engaged in making repairs to rolling stock, etc., no new goods being manufactured. Particulars of this establishment are not included in any of the tables in this chapter.

11. Motor Vehicles.—The industries catering for the motor trade are included in Class IV., Industrial Metals, Machines and Conveyances. In the table below a summary is given of the principal statistics for 1953-54 for each branch of industry associated with the motor trade of Australia.

## MOTOR VEHICLES : CONSTRUCTION, ASSEMBLY, REPAIRS, ETC., AUSTRALIA.

1953-54.

Items.	Construc- tion and Assembly.	Repairs.	Motor Bodies. (a)	Motor Access- ories.	Total.
Number of factories .. ..	68	6,972	1,072	190	8,302
Number of persons employed .. ..	15,335	46,869	21,183	6,506	89,913
Salaries and wages paid .. ..	£ 12,965,369	28,057,953	16,472,657	4,958,511	62,454,490
Value of power, fuel, etc., used .. ..	£ 710,078	872,920	370,254	323,760	2,477,012
Value of materials used .. ..	£ 23,656,241	29,751,926	35,220,047	5,544,485	94,172,699
Value of production .. ..	£ 25,580,773	43,348,858	24,189,742	7,935,190	101,054,563
Total value of output .. ..	£ 49,947,092	73,973,704	59,080,043	13,803,435	197,704,274
Value of land and buildings .. ..	£ 6,517,146	28,947,533	7,122,786	3,247,598	45,835,063
Value of plant and machinery .. ..	£ 4,808,962	8,837,293	5,576,518	4,174,036	23,396,809
Horse-power of engines ordinarily in use h.p.	31,098	48,078	43,658	24,096	146,930

(a) Includes motor body repairing, panel beating, duco spraying, etc.

In the next table similar details are shown on a State basis for 1953-54 and for Australia for selected years for these branches combined.

## MOTOR VEHICLES : CONSTRUCTION, ASSEMBLY, REPAIRS, ETC.

1953-54.

Items.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas.	Australia
Number of factories .. ..	3,414	2,172	1,085	640	725	266	8,302
Number of persons employed .. ..	28,152	30,409	9,170	14,119	6,092	1,971	89,913
Salaries and wages paid .. ..	£ 18,578,675	22,337,852	5,126,558	11,201,919	4,016,223	1,193,263	62,454,490
Value of power, fuel, etc., used .. ..	£ 749,636	926,473	175,382	428,031	171,255	26,235	2,477,012
Value of materials used .. ..	£ 23,145,264	36,764,591	5,551,844	20,975,283	6,562,079	1,172,738	94,172,699
Value of production .. ..	£ 30,604,129	36,432,335	9,728,920	16,386,601	6,134,782	1,767,796	101,054,563
Total value of output .. ..	£ 54,499,029	74,123,399	15,456,146	37,789,915	12,869,016	2,966,760	197,704,274
Value of land and buildings .. ..	£ 18,457,426	14,463,802	3,850,974	4,582,889	3,176,664	1,303,308	45,835,063
Value of plant and machinery .. ..	£ 7,787,442	8,251,416	1,417,806	4,392,643	1,205,875	341,627	23,396,809
Horse-power of engines ordi- narily in use .. .. h.p.	43,842	51,147	10,589	28,778	10,153	2,421	146,930

## AUSTRALIA.

Items.	1945-46.	1949-50.	1950-51.	1951-52.	1952-53.	1953-54.
Number of factories .. ..	3,592	5,330	5,730	6,587	7,422	8,302
Number of persons employed .. ..	39,706	67,874	75,580	82,123	82,609	89,913
Salaries and wages paid .. ..	£'000 10,582	28,685	38,789	51,799	54,666	62,454
Value of power, fuel, etc., used .. ..	£'000 395	895	1,215	1,610	1,987	2,477
Value of materials used .. ..	£'000 12,143	32,427	48,542	70,967	74,405	94,173
Value of production .. ..	£'000 15,818	45,091	60,592	78,808	86,305	101,054
Total value of output .. ..	£'000 28,356	78,413	110,349	151,385	162,697	197,704
Value of land and buildings .. ..	£'000 9,878	18,801	23,301	30,799	38,718	45,835
Value of plant and machinery .. ..	£'000 3,758	9,464	11,495	14,982	20,129	23,397
Horse-power of engines ordi- narily in use .. .. h.p.	56,117	95,755	109,707	126,228	139,253	146,930

The table below shows the output of motor bodies and the imports of motor bodies and motor chassis for 1938-39 and 1949-50 to 1954-55 :—

## PRODUCTION AND IMPORTS OF MOTOR BODIES(a) AND IMPORTS OF MOTOR CHASSIS : AUSTRALIA.

Items.	1938-39.	1949-50.	1950-51.	1951-52.	1952-53.	1953-54.	1954-55. (b)
Motor Bodies(a)—							
Made .. ..	No. 79,436	67,196	92,718	98,470	90,822	114,745	127,476
Value .. ..	£'000 6,421	14,095	18,465	22,663	22,536	27,699	(c)
Assembled from imported Panels .. ..	(d)	29,810	33,212	29,205	21,566	43,077	59,863
Imported .. ..	No. 532	115,484	92,791	101,628	7,568	26,874	37,924
Value .. ..	£'000 64	17,994	14,275	16,657	1,441	5,956	8,593
Motor Chassis—							
Imported .. ..	No. 76,094	187,363	185,751	172,419	59,724	137,331	164,756
Value .. ..	£'000 7,315	41,965	46,920	49,864	21,650	36,461	33,209

(a) Excludes sidescars.

(b) Preliminary—subject to revision.

(c) Not yet available.

(d) Not available.

12. Agricultural Machines and Implements.—Owing to the extensive agricultural activities conducted in Australia and the demand for modern mechanized farm equipment, the manufacture of agricultural implements constitutes an important branch of

Australian industry. The articles manufactured include a wide range of implements for tillage, seeding, and planting and the harvesting of crops. Other farm machinery made includes windmills, chaff-cutters and machinery used in the dairying industry.

The following table shows details of establishments classified as agricultural implement works in each State for 1953-54 and for Australia for a series of years.

### AGRICULTURAL MACHINES AND IMPLEMENTS.

1953-54.

Items.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas.	Australia.
Number of factories ..	119	76	36	34	28	..	293
Number of persons employed ..	2,032	6,285	1,511	1,698	404	..	11,930
Salaries and wages paid .. £	1,589,876	5,331,607	980,531	1,283,741	287,220	..	9,472,975
Value of power, fuel, etc., used £	81,350	402,557	50,001	89,379	10,124	..	636,411
Value of materials used .. £	1,581,059	8,599,849	1,078,416	1,533,103	195,930	..	12,988,357
Value of production .. £	2,366,876	7,689,112	1,453,570	1,990,403	424,302	..	13,924,263
Total value of output .. £	4,032,285	16,691,518	2,581,987	3,612,885	630,356	..	27,549,031
Value of land and buildings .. £	1,217,286	1,456,006	402,702	522,749	317,917	..	3,917,560
Value of plant and machinery .. £	715,364	1,995,436	365,667	449,840	101,030	..	3,627,337
Horse-power of engines ordinarily in use .. h.p.	7,858	19,729	4,954	6,405	897	..	39,843

### AUSTRALIA.

Items.	1938-39.	1949-50.	1950-51.	1951-52.	1952-53.	1953-54.
Number of factories ..	161	208	225	257	270	293
Number of persons employed ..	6,563	10,454	11,651	12,481	11,608	11,930
Salaries and wages paid .. £'000	1,373	5,012	6,894	9,044	8,838	9,473
Value of power, fuel, etc., used .. £'000	82	292	433	555	600	637
Value of materials used .. £'000	1,485	6,910	9,952	13,521	11,103	12,988
Value of production .. £'000	1,836	6,983	9,854	13,051	12,787	13,924
Total value of output .. £'000	3,403	14,185	20,239	27,127	24,490	27,549
Value of land and buildings .. £'000	997	2,201	2,814	3,320	3,701	3,918
Value of plant and machinery .. £'000	911	2,215	2,877	3,365	3,526	3,627
Horse-power of engines ordinarily in use .. h.p.	13,346	28,139	33,464	34,598	37,372	39,843

13. **Wireless and Amplifying Apparatus.**—The introduction of wireless broadcasting in 1923 gave rise to a new industry in Australia. Early statistical details of the industry are not available as they were grouped together with other electrical apparatus. In 1930-31 a new classification of factories was adopted and "Wireless Apparatus" was shown as a separate industry. The industry is confined mainly to New South Wales and Victoria, but is becoming increasingly important in South Australia. The number of broadcast listeners' licences increased from a third of a million in 1930-31 to over two million at 30th June, 1955, and this increase reflects the advancement of the industry during that period. During the war years considerable expansion took place in the industry to meet the requirements of the fighting services and apart from a slight drop in output in 1945-46, this expansion has continued.

### WIRELESS AND AMPLIFYING APPARATUS : AUSTRALIA.

Items.	1938-39.	1949-50.	1950-51.	1951-52.	1952-53.	1953-54.
Number of factories ..	72	129	139	141	149	162
Number of persons employed ..	4,828	9,283	10,628	8,733	6,912	8,125
Salaries and wages paid .. £'000	754	3,745	5,140	5,361	4,707	5,751
Value of power, fuel, etc., used .. £'000	23	101	147	184	179	109
Value of materials used .. £'000	1,356	6,409	9,229	8,487	7,661	9,782
Value of production .. £'000	1,123	5,252	7,219	7,023	6,042	7,454
Total value of output .. £'000	2,502	11,762	16,595	15,694	13,882	17,435
Value of land and buildings .. £'000	558	1,205	1,339	1,586	1,713	2,011
Value of plant and machinery .. £'000	305	770	946	980	669	1,132
Horse-power of engines ordinarily in use .. h.p.	2,710	10,357	13,565	12,055	10,596	9,274
Domestic receiving sets made(a) No.	163,821	343,323	459,436	358,379	298,955	437,513

(a) Including radiograms and car radios.

NOTE.—There were 444,286 domestic receiving sets made in 1954-55.

14. Cotton.—(i) *General.* Cotton has been grown in Australia since 1860, but never on a very large scale. The average annual quantity of unginned cotton produced during the five years ended 1938–39 was 18 million lb. and slightly over 2 million lb. in the five years ended 1953–54. Arising out of the development in the local manufacture of cotton materials and the further expansion following the outbreak of war in 1939, plans were completed for an extension of the area devoted to the cultivation of this crop. The downward trend which commenced with the war in the Pacific persisted until recent years but production has recently risen and in 1953–54 amounted to 5,132,000 lb. The growing of cotton, which is restricted to Queensland, is referred to in some detail in Chapter XXI.—Agricultural Production.

(ii) *Ginning.* The ginning and marketing of cotton is controlled by the Queensland Cotton Board. The Board 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 (1953–54) from India, Pakistan, Brazil, Egypt, Peru and the United States of America.

(iii) *Spinning and Weaving.* The recent expansion in the spinning and weaving section of the cotton industry marks an important event in its development. New factories have been established and Australia is now producing an extensive range of cotton goods, including duck and canvas from cotton or flax, denims, drill, etc., tyre cord and tyre cord fabric. 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 1938–39, and 1949–50 to 1953–54.

## COTTON SPINNING AND WEAVING : AUSTRALIA.

Items.	1938–39.	1949–50.	1950–51.	1951–52	1952–53.	1953–54.
Number of factories ..	33	93	91	94	93	96
Number of persons employed ..	3,589	8,377	9,233	8,840	7,673	9,470
Salaries and wages paid .. £'000	493	3,306	4,473	5,297	5,090	6,602
Value of power, fuel, etc., used .. £'000	50	308	441	554	551	690
Value of materials used .. £'000	1,357	9,889	16,873	20,803	14,747	18,083
Value of production .. £'000	979	5,991	7,531	9,272	8,126	10,809
Total value of output .. £'000	2,386	16,188	24,848	30,629	23,421	29,582
Value of land and buildings .. £'000	704	2,844	3,215	3,695	3,951	4,104
Value of plant and machinery .. £'000	736	4,118	4,020	4,214	4,370	4,411
Horse-power of engines ordinarily in use .. .. h.p.	9,128	29,118	31,468	32,285	36,517	33,201

15. Wool Carding, Spinning and Weaving.—The importance of this industry is emphasised by the fact that Australia is the world's chief source of wool and the development of the woollen industry since its establishment at an early period in Australian history is of singular interest. The production consists chiefly of woollen cloth and tweed, worsted cloth, rugs, blankets and yarn, all of which have acquired a reputation for purity and durability.

## WOOL CARDING, SPINNING AND WEAVING.

1953–54.

Items.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas.	Australia.
Number of factories ..	56	93	4	3	3	5	164
Number of persons employed ..	7,133	11,655	870	613	(a)	(a)	22,619
Salaries and wages paid .. £	4,523,982	7,621,760	433,136	361,245	(a)	(a)	14,381,744
Value of power, fuel, etc., used .. £	470,036	672,030	32,053	33,051	(a)	(a)	1,328,975
Value of materials used .. £	14,040,263	22,551,965	1,604,716	975,921	(a)	(a)	45,033,084
Value of production .. £	7,474,671	12,068,647	570,071	581,111	(a)	(a)	23,236,805
Total value of output .. £	21,984,970	35,292,642	2,206,840	1,590,086	(a)	(a)	69,598,864
Value of land and buildings .. £	2,512,330	3,698,311	177,345	34,250	(a)	(a)	6,893,778
Value of plant and machinery .. £	2,970,625	5,169,298	356,788	89,452	(a)	(a)	9,086,059
Horse-power of engines ordinarily in use .. .. h.p.	18,550	39,324	2,799	2,046	(a)	(a)	68,715

WOOL CARDING, SPINNING AND WEAVING—*continued.*

## AUSTRALIA.

Items.	1938-39. (b)	1949-50.	1950-51.	1951-52.	1952-53.	1953-54.
Number of factories ..	90	168	176	181	171	164
Number of persons employed ..	19,608	24,354	24,333	21,244	19,729	22,610
Salaries and wages paid .. £'000	2,888	9,404	11,349	11,543	12,028	14,382
Value of power, fuel, etc., used £'000	393	831	952	1,057	1,175	1,329
Value of materials used .. £'000	7,331	32,741	53,872	44,064	34,655	45,033
Value of production .. £'000	4,791	16,426	18,610	16,272	19,226	23,237
Total value of output .. £'000	12,515	49,998	73,434	61,393	55,056	69,599
Value of land and buildings £'000	2,380	4,347	5,369	6,161	6,242	6,891
Value of plant and machinery £'000	3,370	5,235	6,898	7,881	8,183	9,086
Horse-power of engines ordinarily in use .. h.p.	42,944	63,669	69,070	69,232	67,911	68,715
Articles produced—						
Woollen and worsted cloth (c)						
(d) .. .. '000 sq. yds.	31,768	38,028	38,454	29,790	29,400	34,794
Blankets and rugs (c) .. '000	1,279	1,914	2,068	1,382	1,035	1,340

(a) Not available for publication; figures are included in total for Australia. (b) Includes Woollscouring Works in Victoria and Tasmania and Woollscouring Works and Fellmongeries in South Australia. (c) Includes production in other industries. (d) Includes mixtures.

Preliminary details of production in 1954-55 were: Woollen and worsted cloth, 28,400,000 square yards; blankets and rugs, 1,683,000.

16. Hosiery and Other Knitted Goods.—Details for each State for 1953-54 and for Australia for a series of years are shown in the following table:—

## HOSIERY AND OTHER KNITTED GOODS.

## 1953-54.

Items.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas.	Australia.
Number of factories ..	194	420	7	11	10	3	645
Number of persons employed ..	7,567	15,390	593	119	184	84	23,937
Salaries and wages paid .. £	4,627,712	9,159,653	310,937	49,054	88,456	41,273	14,277,085
Value of power, fuel, etc., used £	221,907	444,278	9,081	2,507	3,906	2,098	683,777
Value of materials used .. £	10,060,976	18,462,401	1,446,158	99,622	237,408	65,491	30,372,056
Value of production .. £	8,095,567	17,081,053	686,266	74,162	166,961	51,404	26,155,413
Total value of output .. £	18,378,450	35,987,732	2,141,505	176,291	408,275	118,993	57,211,246
Value of land and buildings .. £	2,378,104	4,598,502	152,266	31,207	68,459	24,849	7,253,387
Value of plant and machinery .. £	1,894,359	5,049,642	184,316	20,916	37,852	13,807	7,200,892
Horse-power of engines ordinarily in use .. h.p.	6,085	11,566	456	98	203	70	18,478

## AUSTRALIA.

Items.	1938-39.	1949-50.	1950-51.	1951-52.	1952-53.	1953-54.
Number of factories ..	313	496	510	548	587	645
Number of persons employed ..	18,159	21,577	22,268	21,342	20,694	23,937
Salaries and wages paid .. £'000	2,332	7,382	9,605	11,179	11,041	14,277
Value of power, fuel, etc., used £'000	133	315	386	480	588	684
Value of materials used .. £'000	4,284	16,637	22,834	24,517	23,939	30,372
Value of production .. £'000	3,809	12,399	16,257	18,028	21,104	26,155
Total value of output .. £'000	8,226	29,351	39,477	43,025	45,691	57,211
Value of land and buildings .. £'000	1,962	3,877	4,755	5,602	6,329	7,253
Value of plant and machinery .. £'000	1,931	3,815	4,905	5,894	6,038	7,201
Horse-power of engines ordinarily in use .. h.p.	8,884	14,625	16,925	19,677	17,997	18,478

The following quantities of yarn were used in these establishments during 1953-54:—Worsted, 8,206,507 lb.; woollen, 104,384 lb.; wool or worsted and cotton, 378,216 lb.; Wool or worsted and nylon, 48,946 lb.; wool or worsted and rayon, 1,241,941 lb.; cotton, 9,257,773 lb.; mercerised cotton, 818,283 lb.; cotton and rayon, 56,848 lb.; rayon, spun 1,787,680 lb.; rayon filament, 6,195,312 lb.; silk, 31,255 lb.; nylon, spun, 295,291 lb.; nylon filament, 1,162,619 lb.; other, 309,219 lb. Production of garments and stockings is shown in § 10.



17. **Tanning, Currying and Leather Dressing.**—(i) *Details of Industry.* In Class VII. the most important industry is tanning. Formerly the production of tanneries in Australia was confined to the coarser sorts of leathers, but there are now very few kinds which cannot be produced locally, and an export trade has been built up in some varieties.

## TANNING, CURRYING AND LEATHER DRESSING.

1953-54.

Items.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas.	Australia.
Number of factories ..	69	41	13	10	5	1	142
Number of persons employed ..	1,989	2,385	617	223	(a)	(a)	5,445
Salaries and wages paid .. £	1,732,081	1,939,965	443,106	170,048	(a)	(a)	4,464,373
Value of power, fuel, etc., used .. £	186,326	166,169	34,244	17,185	(a)	(a)	417,556
Value of materials used .. £	4,258,693	3,963,734	1,350,053	463,970	(a)	(a)	10,476,745
Value of production .. £	2,432,782	3,043,728	645,340	295,318	(a)	(a)	6,671,673
Total value of output .. £	6,877,801	7,173,631	2,029,637	776,473	(a)	(a)	17,565,974
Value of land and buildings .. £	770,018	1,052,556	103,279	86,974	(a)	(a)	2,054,745
Value of plant and machinery .. £	804,287	783,430	206,923	142,800	(a)	(a)	1,990,371
Horse-power of engines ordinarily in use .. h.p.	12,684	12,505	3,348	1,623	(a)	(a)	31,182

Not available for publication; figures are included in the total for Australia.

## AUSTRALIA.

Items.	1938-39.	1949-50.	1950-51.	1951-52.	1952-53.	1953-54.
Number of factories ..	132	145	143	143	141	142
Number of persons employed ..	4,375	5,473	5,362	5,274	5,240	5,145
Salaries and wages paid .. £'000	920	2,755	3,200	3,889	4,163	4,464
Value of power, fuel, etc., used .. £'000	88	243	275	352	382	417
Value of materials used .. £'000	2,983	6,846	8,221	8,796	9,488	11,477
Value of production .. £'000	1,522	4,330	4,950	5,912	5,983	6,672
Total value of output .. £'000	4,593	11,419	13,446	15,066	15,853	17,566
Value of land and buildings .. £'000	814	1,355	1,638	1,857	1,983	2,055
Value of plant and machinery .. £'000	524	1,171	1,425	1,703	1,832	1,990
Horse-power of engines ordinarily in use .. h.p.	12,345	25,792	27,684	28,980	30,314	31,182

(ii) *Materials Used and Articles Produced.* The quantities of materials used and leather produced in tanneries in each State in 1953-54 are shown in the following table:—

## TANNERIES: MATERIALS USED AND PRODUCTION, 1953-54.

Particulars.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas.	Australia.
<b>Materials used—</b>							
Hides (cattle) .. No.	984,672	1,147,414	396,350	147,521	(a)	(a)	2,835,047
Skins—							
Calf ..	849,483	545,049	22,727	(a)	(a)	..	1,629,458
Goat ..	(a)	(a)	(a)	(a)	(a)	(a)	440,490
Sheep, including Pelts ..	2,079,330	401,242	(a)	(a)(b)	(a)	(a)	h3,473,130
Marsupial ..	46,412	25,480	(a)	(a)	(a)	(a)	108,396
Bark used—							
Wattle .. tons	3,899	5,286	938	(a)	(a)	(a)	h) 10,941
Mallet and Other ..	(a)	1,402	(a)	(a)	238	(a)	b) 1,901
Tanning extract used ..	3,111	2,745	2,033	(a)	952	(a)	9,067
<b>Articles produced—</b>							
Leather made—							
Sole and Belting .. lb.	11,133,054	16,103,750	6,865,316	1,346,139	(a)	(a)	38,674,598
Harness ..	539,761	495,554	569,580	(a)	(a)	(a)	1,546,447
Upholstery .. sq. ft.	(a)	7,185,187	(a)	(a)	(a)	(a)	13,096,682
Dressed and Upper from Hides—							
Sold by Measure—							
Patent .. sq. ft.	(a)	(a)	(a)	(a)	(a)	(a)	3,186,136
All Other ..	16,137,405	17,814,727	7,186,855	3,876,321	(a)	(a)	47,146,512
Sold by Weight (all kinds) .. lb.	(a)	204,544	(a)	..	5,027	(a)	296,940
Dressed from skins—							
Calf .. sq. ft.	5,318,958	3,671,277	1,637,658	(a)	71,987	(a)	10,744,052
Goat ..	1,975,193	78,769	(a)	(a)	(a)	(a)	2,054,262
Sheep ..	7,597,611	1,613,348	(a)	(a)(b)	(a)	(a)	11,336,693
Marsupial ..	270,427	134,777	(a)	(a)	(a)	(a)	580,012

(a) Not available for publication; figures are included in the total for Australia.

(b) Includes an amount produced or used in other works.

18. Tailoring and Ready-made Clothing.—Statistics showing the distribution of this industry between States in 1953-54 and for Australia for a series of years are shown in the following table :—

## TAILORING AND READY-MADE CLOTHING.

1953-54.

Items.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas.	Australia.
Number of factories ..	914	648	141	111	131	18	1,963
Number of persons employed ..	17,086	10,593	2,572	1,720	1,041	252	33,264
Salaries and wages paid .. £	8,742,284	5,954,120	1,116,719	822,995	455,189	123,108	17,214,505
Value of power, fuel, etc., used .. £	197,044	126,587	23,124	20,755	10,542	2,075	380,127
Value of materials used .. £	16,974,210	12,523,828	2,175,943	1,110,792	702,383	111,294	33,598,450
Value of production .. £	13,080,085	9,248,825	1,767,990	1,145,986	673,172	159,485	26,075,543
Total value of output .. £	30,231,339	21,899,240	3,967,057	2,277,533	1,386,097	272,854	60,054,120
Value of land and buildings .. £	4,446,971	2,315,555	570,143	535,399	312,855	60,680	8,250,603
Value of plant and machinery .. £	1,324,796	907,433	126,860	109,405	45,336	9,562	2,523,392
Horse-power of engines ordinarily in use .. h.p.	5,247	2,914	487	464	182	45	9,339

## AUSTRALIA.

Items.	1938-39.	1949-50.	1950-51.	1951-52.	1952-53.	1953-54.
Number of factories ..	1,177	1,902	1,890	1,995	1,961	1,963
Number of persons employed ..	26,409	37,250	38,535	36,226	32,200	33,264
Salaries and wages paid .. £'000	3,168	11,246	14,206	16,132	15,681	17,215
Value of power, fuel, etc., used .. £'000	72	204	249	320	363	380
Value of materials used .. £'000	4,947	20,187	27,539	30,078	28,767	33,598
Value of production .. £'000	4,812	17,085	21,349	23,719	23,581	26,076
Total value of output .. £'000	9,831	37,476	49,137	54,126	52,711	60,054
Value of land and buildings .. £'000	3,176	5,872	6,538	7,308	7,573	8,251
Value of plant and machinery .. £'000	356	1,666	2,030	2,431	2,469	2,523
Horse-power of engines ordinarily in use .. h.p.	2,607	8,805	10,137	11,093	10,693	9,339

19. Dressmaking and Millinery Establishments.—Particulars of dressmaking and millinery establishments in Australia for the years 1938-39 and 1949-50 to 1953-54 are shown in the following table :—

## DRESSMAKING AND MILLINERY : AUSTRALIA.

Items.	1938-39.	1949-50.	1950-51.	1951-52.	1952-53.	1953-54.
Number of factories ..	869	1,313	1,328	1,423	1,405	1,433
Number of persons employed ..	16,398	22,384	22,557	20,912	18,913	19,197
Salaries and wages paid .. £'000	1,653	6,244	7,568	8,412	8,490	9,230
Value of power, fuel, etc., used .. £'000	33	112	130	149	170	187
Value of materials used .. £'000	2,610	8,996	11,567	12,123	11,746	13,634
Value of production .. £'000	2,592	9,812	11,868	12,700	13,193	14,392
Total value of output .. £'000	5,235	18,920	23,565	24,972	25,109	28,213
Value of land and buildings .. £'000	2,052	3,626	4,068	4,588	4,726	5,033
Value of plant and machinery .. £'000	189	713	903	1,032	1,065	1,108
Horse-power of engines ordinarily in use .. h.p.	1,732	4,361	4,671	4,890	4,790	4,858

20. Shirts, Collars and Underclothing.—Particulars of this industry are shown below for each State for 1953-54 and for Australia for a series of years :—

## SHIRTS, COLLARS AND UNDERCLOTHING.

1953-54.

Items.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas.	Australia.
Number of factories ..	148	163	21	25	19	3	379
Number of persons employed ..	3,745	5,275	988	441	676	34	11,156
Salaries and wages paid .. £	1,928,656	2,820,270	445,145	197,580	279,039	13,151	5,683,841
Value of power, fuel, etc., used .. £	34,623	41,481	6,736	3,426	5,204	65	91,535
Value of materials used .. £	4,909,291	5,999,686	413,104	263,621	400,145	1,245	12,077,095
Value of production .. £	3,008,203	5,098,227	600,920	282,544	372,306	15,231	9,377,518
Total value of output .. £	7,952,117	11,139,394	1,050,760	549,591	837,745	16,541	21,546,148
Value of land and buildings .. £	804,060	1,287,626	152,780	62,145	94,875	14,520	2,416,906
Value of plant and machinery .. £	310,008	457,966	56,285	22,754	52,010	5,940	904,963
Horse-power of engines ordinarily in use .. h.p.	1,560	2,201	101	162	181	16	4,320

SHIRTS, COLLARS AND UNDERCLOTHING—*continued.*

## AUSTRALIA.

Items.	1938-39.	1949-50.	1950-51.	1951-52.	1952-53.	1953-54.
Number of factories ..	283	397	410	419	379	379
Number of persons employed ..	11,081	12,545	12,870	12,640	9,657	11,156
Salaries and wages paid .. £'000	1,143	3,515	4,432	5,361	4,397	5,684
Value of power, fuel, etc., used .. £'000	23	60	72	82	76	92
Value of materials used .. £'000	2,651	8,915	10,730	12,333	9,670	12,677
Value of production .. £'000	1,761	5,978	7,503	8,715	7,524	9,377
Total value of output .. £'000	4,435	14,953	18,305	21,130	17,270	21,546
Value of land and buildings .. £'000	946	1,833	2,155	2,091	2,151	2,417
Value of plant and machinery .. £'000	231	693	845	885	846	905
Horse-power of engines ordinarily in use .. h.p.	1,874	3,795	6,017	5,189	4,779	4,320

21. *Boots and Shoes.*—(i) *Details of Industry.* The boot and shoe factories hold an important place both in regard to employment afforded and extent of output. The following tables refer to boot and shoe factories as distinct from those devoted to repairing. It has been necessary to include details of boot and shoe repairing in Tasmania, in order to conceal confidential information for that State. Factories engaged in the manufacture of rubber boots and shoes are excluded, being classified under Rubber Goods, *see* para. 38, page 386.

## BOOTS AND SHOES.

1953-54.

Items.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas.(a)	Australia.
Number of factories ..	191	239	3	23	11	22	520
Number of persons employed ..	7,544	11,402	1,68	1,379	767	180	22,953
Salaries and wages paid .. £	4,735,496	7,114,644	916,857	875,123	444,048	99,093	14,215,261
Value of power, fuel, etc., used .. £	89,347	99,865	12,517	13,223	8,548	1,304	224,804
Value of materials used .. £	6,319,973	11,059,291	1,364,717	1,034,336	596,840	133,099	20,508,256
Value of production .. £	6,577,505	9,866,437	1,146,772	1,123,613	597,791	132,351	19,444,472
Total value of output .. £	12,986,825	21,025,593	2,524,000	2,171,172	1,203,179	260,754	40,177,532
Value of land and buildings .. £	1,274,502	1,604,864	216,838	219,885	138,068	36,715	3,490,872
Value of plant and machinery .. £	771,651	1,711,239	247,919	262,260	134,291	24,342	3,151,702
Horse-power of engines ordinarily in use .. h.p.	4,933	9,150	885	981	595	135	16,679

## AUSTRALIA.

Items.	1945-46.	1949-50.	1950-51.	1951-52.	1952-53.	1953-54.
Number of factories ..	383	570	521	540	509	520
Number of persons employed ..	18,264	23,180	23,783	22,775	20,920	22,953
Salaries and wages paid .. £'000	4,408	8,410	10,212	12,415	12,430	14,215
Value of power, fuel, etc., used .. £'000	75	123	141	172	197	225
Value of materials used .. £'000	7,520	12,353	15,390	18,058	17,668	20,508
Value of production .. £'000	6,472	11,802	14,611	17,162	17,162	19,444
Total value of output .. £'000	14,067	24,368	30,142	35,392	35,027	40,177
Value of land and buildings .. £'000	1,518	2,328	2,822	3,310	3,227	3,491
Value of plant and machinery .. £'000	1,222	1,877	2,265	2,402	2,653	3,152
Horse-power of engines ordinarily in use .. h.p.	9,678	15,644	17,200	18,573	18,214	16,679

(a) Includes details of boot and shoe repairing.

(ii) *Quantity and Value of Production.* The number and value of boots, shoes and slippers made in factories producing and repairing boots and shoes in each State are shown for 1953-54 in the following table. Particulars relating to the output of rubber boots and shoes are not included :—

## BOOT AND SHOE FACTORIES : OUTPUT, 1953-54.

Particulars.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas.	Australia.
Quantity—							
Boots, shoes and sandals pairs ..	6,744,102	9,631,948	1,382,097	1,430,492	650,207	109,777	19,948,623
Slippers ..	2,902,004	4,240,812	723,571	(a)	624,313	(u)	8,557,746
Value—							
Boots, shoes and sandals .. £	11,095,206	17,318,983	1,995,782	2,111,440	865,640	187,298	33,574,349
Slippers ..	1,595,750	2,865,768	310,321	(a)	341,850	(u)	5,149,335

(a) Not available for publication ; figures are included in total for Australia.

22. Flour-milling.—(i) *Details of Industry.* The following table shows the position of the grain-milling industry in each State for the year 1953-54 and for Australia for a series of years :—

## FLOUR-MILLING.

1953-54.

Items.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas.	Australia.
Number of factories ..	53	37	II	26	20	10	157
Number of persons employed ..	1,723	1,240	(a)	460	543	(a)	4,602
Salaries and wages paid ..	£ 1,492,078	1,057,925	(a)	378,421	439,385	(a)	3,847,152
Value of power, fuel, etc., used ..	£ 374,114	177,421	(a)	94,845	125,181	(a)	847,310
Value of materials used ..	£ 20,666,320	14,947,772	(a)	5,611,561	6,752,569	(a)	53,945,882
Value of production ..	£ 3,313,455	2,405,804	(a)	700,225	834,845	(a)	8,133,863
Total value of output ..	£ 24,353,889	17,530,997	(a)	6,406,631	7,712,595	(a)	62,927,064
Value of land and buildings ..	£ 1,578,721	1,164,232	(a)	264,098	697,789	(a)	4,259,932
Value of plant and machinery ..	£ 2,041,200	1,226,794	(a)	471,395	602,736	(a)	4,921,168
Horse-power of engines ordinarily in use .. h.p.	17,443	14,007	(a)	4,392	5,260	(a)	52,545

(a) Not available for publication ; figures are included in total for Australia.

## AUSTRALIA.

Items.	1938-39.	1949-50.	1950-51.	1951-52	1952-53.	1953-54.
Number of factories ..	172	161	165	162	158	157
Number of persons employed ..	3,783	4,541	4,842	4,681	4,892	4,602
Salaries and wages paid .. £'000	896	2,349	2,933	3,466	3,884	3,847
Value of power, fuel, etc., used .. £'000	231	444	545	730	866	847
Value of materials used ..	10,573	27,837	34,350	45,576	51,373	53,946
Value of production ..	£'000 2,001	4,277	5,636	7,313	8,296	8,134
Total value of output ..	£'000 12,895	32,558	40,531	53,619	60,535	62,927
Value of land and buildings .. £'000	2,091	2,557	3,177	3,606	3,912	4,260
Value of plant and machinery .. £'000	1,814	2,593	3,408	4,106	4,531	4,921
Horse-power of engines ordinarily in use .. h.p.	27,795	36,081	38,413	41,824	44,781	52,545

(ii) *Production of Flour and By-products.* The production of flour by the mills in each State (including other than flour mills) for the years 1938-39 and 1948-49 to 1954-55 was as follows :—

## FLOUR-MILLING : PRODUCTION OF FLOUR.

(Tons of 2,000 lb.)

Year.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tasmania.	Australia.
1938-39 ..	547,162	436,829	84,314	146,262	138,583	19,582	1,372,732
1948-49 (a)	667,645	479,288	110,843	211,787	183,143	26,484	1,679,190
1949-50 (a)	597,491	447,784	112,995	162,259	161,251	27,243	1,509,023
1950-51 (a)	694,036	448,881	116,503	189,962	218,841	27,336	1,695,559
1951-52 (a)	578,686	559,224	124,703	206,856	223,936	27,745	1,721,150
1952-53 (a)(b)	543,693	592,465	132,839	201,685	227,260	28,349	1,726,300
1953-54 (a)(b)	603,575	473,842	138,524	164,907	197,654	30,556	1,609,058
1954-55 (a)(b)(c)	570,895	452,536	156,668	141,517	189,603	29,247	1,538,466

(a) Includes wheatmeal for baking.

(b) Includes also sharps.

(c) Preliminary, subject to revision.

In addition, 610,000 tons of bran and pollard were made in 1953-54 and 566,000 tons in 1954-55. The total quantity of wheat ground in flour mills was 72,354,671 bushels in 1953-54 and 70,287,909 bushels in 1954-55.

23. **Bakeries.**—Information regarding establishments in which the manufacture of bread, cakes, etc., was carried on is given in the table below. It should be noted, however, that the details refer only to establishments coming within the definition of a factory as explained at the beginning of this section. For that reason the tables do not give complete details of the industry, as a large number of bakehouses not coming within the definition are excluded. This is true of all other industries covered by the statistics of manufacturing production, but, in view of the omission of such a large number of establishments in this instance, special mention is deemed necessary.

## BAKERIES (INCLUDING CAKES AND PASTRY).

1953-54.

Items.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas.(a)	Australia
Number of factories ..	1,470	1,078	473	223	286	157	3,687
Number of persons employed ..	7,343	5,327	2,312	1,292	980	1,504	18,756
Salaries and wages paid £	3,876,974	2,852,675	1,048,068	741,355	467,892	967,318	9,954,282
Value of power, fuel, etc., used £	739,336	515,345	194,999	132,082	93,699	129,729	1,805,190
Value of materials used £	11,632,528	8,933,182	3,632,306	2,500,270	1,760,184	4,369,961	32,828,431
Value of production ..	£ 8,915,016	6,742,142	2,522,858	1,574,455	1,142,735	2,209,726	32,106,932
Total value of output ..	£ 21,286,880	16,190,669	6,350,163	4,206,807	2,996,618	6,709,416	57,740,553
Value of land and buildings £	5,694,495	3,913,899	1,162,078	944,122	657,996	1,241,498	13,617,088
Value of plant and machinery £	2,631,019	2,276,859	651,065	583,263	393,110	622,737	7,158,053
Horse-power of engines ordinarily in use .. h.p.	8,667	6,396	2,619	2,396	1,566	1,818	26,462

(a) Includes confectionery.

## AUSTRALIA.

Items.	1938-39.	1949-50.	1950-51.	1951-52.	1952-53.	1953-54.
Number of factories ..	1,958	3,064	3,167	3,347	3,534	3,687
Number of persons employed ..	11,715	17,925	17,929	18,332	18,405	18,758
Salaries and wages paid £'000	1,993	5,891	6,942	8,571	9,368	9,954
Value of power, fuel, etc., used £'000	306	917	1,116	1,486	1,694	1,805
Value of materials used .. £'000	6,651	18,406	20,786	26,451	29,672	32,820
Value of production .. £'000	4,509	12,987	14,893	18,624	21,788	23,107
Total value of output .. £'000	11,466	32,310	36,795	46,561	53,151	57,741
Value of land and buildings £'000	4,960	8,817	9,199	10,789	12,145	13,617
Value of plant and machinery £'000	1,478	3,635	4,078	5,082	6,073	7,158
Horse-power of engines ordinarily in use .. h.p.	10,855	19,160	20,483	22,248	23,792	26,462

24. **Sugar-mills.**—(i) *General.* Sugar-cane is grown in New South Wales and Queensland and particulars of area, yield, etc., are given in extended detail in Chapter XXI.—Agricultural Production.

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. Particulars of cane crushed and sugar produced embodied in the following table refer to the quantities treated during the years ended 30th June, irrespective of the season in which the cane was grown; consequently the figures relating to cane crushed and sugar produced may differ slightly from those given in Chapter XXI.—Agricultural Production, which relate to harvest years.

(ii) *Details for States.* The following table shows details of the operations of sugar mills in New South Wales and Queensland for the years 1938-39 and 1940-50 to 1953-54 :—

## SUGAR-MILLS.

Items.	1938-39.	1949-50.	1950-51.	1951-52.	1952-53.	1953-54.
NEW SOUTH WALES.						
Number of factories ..	3	3	3	3	3	3
Number of persons employed ..	212	227	282	176	138	156
Cane crushed .. tons	337,038	330,740	350,849	321,388	125,714	263,249
Raw sugar produced (94 net titre) .. tons	45,106	40,706	41,258	41,060	14,272	34,004
QUEENSLAND.						
Number of factories ..	33	32	32	31	31	31
Number of persons employed ..	4,419	5,898	6,394	5,612	6,495	7,358
Cane crushed .. tons	5,432,193	6,318,006	6,691,704	5,005,172	6,841,536	8,751,063
Raw sugar produced (94 net titre) .. tons	775,064	896,413	879,844	704,341	934,614	1,220,383
Molasses—						
Sold to distilleries .. '000 gals	8,276	17,596	15,234	12,557	15,774	23,323
Used as fodder .. " "	4,237	5,563	5,582	5,900	5,887	5,486
Used as manure .. " "	3,293	7,517	5,555	5,484	7,499	11,466
Run to waste .. " "	499	283	50	37	76	168
Burnt as fuel .. " "	3,749	1,490	2,371	1,005	934	183
Sold or used for other purposes .. '000 gals.	232	727	581	324	426	516
Total molasses disposed of .. '000 gals	20,286	33,176	29,373	25,307	30,596	41,142

25. *Sugar-refining.*—The establishment of the sugar-refining industry considerably antedates the establishment of the sugar-milling industry, the raw material operated on in the earlier years coming chiefly from Mauritius and the East. In 1953-54 there were two sugar refineries in Queensland and one each in New South Wales, Victoria, South Australia and Western Australia. The quantity of raw sugar treated amounted to 465,848 tons for a yield of 449,015 tons of refined sugar.

26. *Confectionery.*—The figures for 1953-54 for each State and for Australia for a series of years are shown hereunder :—

## CONFECTIONERY.

1953-54

Items.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas.	Aust.(b)
Number of factories ..	97	99	23	22	8	(a)	249
Number of persons employed ..	2,930	3,063	318	351	314	(a)	6,976
Salaries and wages paid .. £	1,939,654	1,960,725	128,653	184,837	168,169	(a)	4,382,038
Value of power, fuel, etc., used .. £	230,206	162,704	10,920	22,496	17,589	(a)	443,915
Value of materials used .. £	6,543,033	6,001,657	462,973	416,505	432,757	(a)	13,850,925
Value of production .. £	4,381,632	3,139,110	223,152	258,106	305,467	(a)	8,307,465
Total value of output .. £	11,54,869	9,303,471	697,015	697,107	755,813	(a)	22,608,305
Value of land and buildings .. £	1,180,350	985,339	181,360	219,927	82,947	(a)	2,649,923
Value of plant and machinery .. £	1,398,150	1,333,615	108,764	114,666	83,580	(a)	3,038,775
Horse-power of engines ordinarily in use .. h.p.	13,864	12,016	826	1,578	479	(a)	28,763

## AUSTRALIA.(b)

Items.	1938-39.	1949-50.	1950-51.	1951-52.	1952-53.	1953-54.
Number of factories ..	148	267	250	250	256	249
Number of persons employed ..	7,256	8,064	7,801	7,361	6,873	6,976
Salaries and wages paid .. £'000	1,041	2,974	3,431	4,006	4,084	4,382
Value of power, fuel, etc., used .. £'000	107	263	299	371	436	444
Value of materials used .. £'000	3,102	9,571	10,370	11,997	12,554	13,857
Value of production .. £'000	2,418	6,641	6,810	7,801	7,910	8,307
Total value of output .. £'000	5,627	16,475	17,479	20,169	20,900	22,608
Value of land and buildings .. £'000	1,423	2,071	2,319	2,428	2,510	2,650
Value of plant and machinery .. £'000	1,364	2,087	2,421	2,704	2,872	3,039
Horse-power of engines ordinarily in use .. h.p.	16,154	23,463	26,473	26,887	26,002	28,763

(a) Not available for publication. Included with Bakeries.

(b) Excludes Tasmania.

27. Jam, Fruit and Vegetable Canning, Pickles, Sauces, Vinegar.—(i) *Details of Industry.* The following table shows particulars of factories included in this class for each State for 1953-54 and for Australia for a series of years :—

## JAM, FRUIT AND VEGETABLE CANNING, PICKLES, SAUCES, VINEGAR.

1953-54.

Items.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas.	Australia.
Number of factories ..	59	64	18	23	11	22	197
Number of persons employed ..	2,734	4,314	1,516	1,293	139	1,111	11,101
Salaries and wages paid ..	£ 1,990,566	3,242,993	1,033,319	819,126	78,278	701,013	7,870,295
Value of power, fuel, etc., used ..	£ 105,986	293,378	58,916	54,727	5,424	49,767	667,220
Value of materials used ..	£ 6,779,912	13,546,315	4,513,624	3,197,081	218,176	1,624,567	28,674,662
Value of production ..	£ 3,125,937	7,346,966	2,162,923	1,062,195	144,671	948,990	14,991,684
Total value of output ..	£ 1,101,835	2,388,659	6,735,493	3,309,003	368,265	2,623,317	14,526,572
Value of land and buildings ..	£ 1,743,106	2,540,871	684,603	448,162	103,582	616,653	6,136,665
Value of plant and machinery ..	£ 1,431,856	2,443,327	386,253	414,852	49,096	678,133	5,403,519
Horse-power of engines ordinarily in use ..	h.p. 8,983	14,636	2,376	1,887	371	3,477	31,721

## AUSTRALIA.

Items.	1938-39.	1949-50.	1950-51.	1951-52.	1952-53.	1953-54.
Number of factories ..	123	197	200	201	264	197
Number of persons employed ..	6,476	12,200	13,124	13,152	10,815	11,101
Salaries and wages paid ..	£'000 1,149	4,901	6,298	7,793	9,391	7,870
Value of power, fuel, etc., used ..	£'000 97	415	521	672	636	660
Value of materials used ..	£'000 4,800	17,481	21,234	28,280	27,238	28,875
Value of production ..	£'000 2,334	8,374	10,685	13,623	12,662	14,992
Total value of output ..	£'000 7,231	26,270	32,449	42,581	40,526	44,527
Value of land and buildings ..	£'000 1,382	3,490	4,082	5,031	6,025	6,137
Value of plant and machinery ..	£'000 721	3,116	3,720	4,425	5,095	5,404
Horse-power of engines ordinarily in use ..	h.p. 7,873	25,314	26,718	29,792	30,241	31,721

(ii) *Production.* During the 1939-45 War, production of jams increased greatly and an output of 171 million lb. was attained in 1943-44. Production afterwards decreased, but attained a new record of 198.5 million lb. in 1947-48. It dropped to 85.7 million lb. in 1953-54. Preliminary figures for 1954-55 show production as being 78.7 million lb.

The peak output of preserved fruit occurred in 1953-54 with 338.6 million lb. compared with the previous highest level of 256.1 million lb. attained in 1951-52. Preliminary figures for 1954-55 show production as being 313.9 million lb.

There has also been a marked development in the production of canned vegetables. In 1938-39 output totalled 10.3 million lb. but, as a result of the war-time demand by the armed services, production reached the record level of 119.1 million lb. in 1944-45. However, it has since declined and in 1953-54 amounted to 40.3 million lb. Preliminary figures for 1954-55 show production as being 46.9 million lb.

The following table shows the total quantity and value of jams, pickles, sauces and other items manufactured in each State in 1953-54 :—

## JAMS, PRESERVED FRUIT AND VEGETABLES, PICKLES AND SAUCES : OUTPUT. 1953-54.

Particulars.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas.	Aust.
Jams .. '000 lb.	23,800	(a) 14,395	9,896	6,863	733	(b)	85,687
Fruit, preserved ..	52,592	176,755	59,376	32,072	91	17,676	338,562
Fruit Pulp(d) .. cwt.	11,609	49,681	15,006	13,801	18,102	82,013	223,212
Fruit Juices, natural .. '000 gals.	214	71	2,552	171	73	80	3,161
Vegetables, preserved .. '000 lb.	19,603	14,784	(c)	(c)	(c)	(c)	40,265
Tomato Pulp(d) .. cwt.	24,522	148,131	(c)	15,202	11,486	(c)	199,547
Tomato Paste, Puree, etc. .. '000 pints	286	927	(c)	(c)	(c)	..	1,325
Pickles ..	2,951	2,161	152	1,420	212	..	6,856
Sauces ..	10,426	10,622	1,745	1,834	692	451	25,770
Soup (canned) ..	3,070	22,175	..	243	21	..	25,509

(a) Includes Tasmania. (b) Included with Victoria. (c) Not available for publication. Figures are included in total for Australia. (d) Including quantities made and used in the works producing.

28. Bacon-curing.—(i) *Details of Industry.* The table hereunder shows particulars of factories engaged in bacon-curing in each State for 1953-54 and for Australia for a series of years :—

## BACON-CURING.

1953-54

Items.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas.	Australia.
Number of factories ..	32	16	9	13	4	11	85
Number of persons employed ..	608	623	1,053	380	215	96	2,975
Salaries and wages paid .. £	502,853	460,726	774,484	291,235	166,553	74,117	2,269,968
Value of power, fuel, etc., used £	81,371	59,106	70,052	51,503	29,708	5,912	297,652
Value of materials used .. £	4,524,168	3,667,237	6,507,900	2,071,384	2,035,665	642,158	19,448,512
Value of production .. £	1,081,675	1,183,095	1,439,066	379,066	172,283	154,802	4,409,987
Total value of output .. £	5,687,214	4,909,438	8,017,018	2,501,953	2,237,656	802,872	24,156,151
Value of land and buildings .. £	474,171	306,904	479,722	250,985	103,174	122,348	1,737,304
Value of plant and machinery .. £	211,759	170,324	317,081	193,431	32,845	29,178	954,618
Horse-power of engines ordinarily in use .. h.p.	2,194	2,753	3,696	1,832	762	448	11,685

## AUSTRALIA.

Items.	1938-39.	1949-50.	1950-51.	1951-52.	1952-53.	1953-54.
Number of factories ..	76	86	84	83	85	85
Number of persons employed ..	2,047	2,907	2,961	2,838	2,994	2,975
Salaries and wages paid .. £'000	480	1,318	1,577	1,895	2,225	2,270
Value of power, fuel, etc., used .. £'000	77	170	204	251	292	298
Value of materials used .. £'000	3,768	12,518	14,076	16,269	18,356	19,448
Value of production .. £'000	865	2,283	2,930	3,907	4,026	4,410
Total value of output .. £'000	4,710	14,971	17,210	20,427	23,154	24,156
Value of land and buildings .. £'000	750	1,079	1,270	1,356	1,635	1,737
Value of plant and machinery .. £'000	357	537	610	724	917	955
Horse-power of engines ordinarily in use .. h.p.	9,389	10,093	10,472	10,700	11,636	11,685

(ii) *Quantity of Production.* The number of pigs cured and the quantity of bacon and ham and lard produced in factories in each State for 1953-54 are shown in the following table :—

## BACON-CURING FACTORIES : PIGS CURED AND PRODUCTION, 1953-54.

Particulars.	N.S.W.	Vic.	Qld.	S. Aust.	W. Aust.	Tas.	Aust.
Pigs killed for bacon and ham—							
For curing on own account ..	208,204	131,272	224,595	61,438	77,219	27,010	729,122
For curing on commission ..	10,985	1,716	1,165	552			
Pork and green bacon used for—							
Curing on own account '000 lb.	1,711	2,276	(a)	(a)	835	(a)	5,547
Curing on commission ..	4,565	2	..	..	5	..	4,572
Sugar used .. ton	76	19	145	24	23	14	301
Finished bacon and ham made (b)—							
On own account .. '000 lb.	18,652	14,270	20,587	6,217	7,713	1,983	69,422
On commission ..	5,524	185	129	53	10	56	5,957
Green bacon and ham ..	1,127	1,328	2,545	462	736	246	6,444
Lard produced .. cwt.	4,732	6,657	19,566	3,647	5,471	900	40,973

(a) Not available for publication; figures are included in total for Australia. (b) Includes smoked bacon and ham, cooked ham (not smoked) made for retail sale, and canned bacon and ham.

Bacon and ham and other pig products are dealt with more fully in Chapter XXIII.—Farmyard, Dairy and Bee Products.

20. Butter, Cheese and Condensed and Dried Milk.—(i) *Details of Industry.* The following table shows particulars of butter, cheese and condensed and dried milk factories in each State for 1953-54 and for Australia for a series of years.



## BUTTER, CHEESE AND CONDENSED AND DRIED MILK.

1953-54.

Items.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas.	Australia.
Number of factories ..	78	135	91	49	15	21	380
Number of persons employed ..	2,412	5,162	1,623	771	294	316	10,580
Salaries and wages paid .. £	1,913,753	4,333,802	1,143,410	563,866	222,966	238,569	8,416,368
Value of power, fuel, etc., used .. £	622,688	1,314,460	221,536	115,800	68,775	52,861	2,396,420
Value of materials used .. £	16,631,526	43,447,230	22,436,121	5,049,637	3,236,593	3,323,543	94,019,950
Value of production .. £	3,452,188	8,643,239	1,669,398	816,776	511,822	520,207	15,913,670
Total value of output .. £	20,706,401	53,299,929	24,627,655	5,982,163	3,817,190	3,806,701	112,330,040
Value of land and buildings .. £	2,880,959	4,217,221	1,405,248	453,282	146,772	259,478	9,364,960
Value of plant and machinery .. £	3,814,666	5,545,539	1,788,948	433,936	272,930	226,757	12,082,776
Horse-power of engines ordinarily in use .. h.p.	32,977	32,484	19,715	5,863	1,838	1,986	94,863

## AUSTRALIA.

Items.	1938-39.	1949-50.	1950-51.	1951-52	1952-53.	1953-54.
Number of factories ..	523	428	409	399	384	380
Number of persons employed ..	6,851	10,469	10,707	10,473	10,641	10,580
Salaries and wages paid .. £'000	1,570	4,941	6,020	7,186	8,098	8,416
Value of power, fuel, etc., used .. £'000	390	1,340	1,504	1,837	2,339	2,396
Value of materials used .. £'000	29,162	60,762	61,581	68,038	97,291	94,020
Value of production .. £'000	3,543	8,099	10,790	12,535	14,350	15,914
Total value of output .. £'000	33,095	70,201	73,875	82,410	113,980	112,330
Value of land and buildings .. £'000	2,880	4,562	5,400	6,585	7,571	9,365
Value of plant and machinery .. £'000	3,067	5,547	7,014	8,569	10,250	12,083
Horse-power of engines ordinarily in use .. h.p.	45,059	69,800	74,199	77,439	84,428	91,863

(ii) *Quantity and Value of Production.* The next table shows the quantities and values of butter, cheese and condensed milk produced and the quantities of milk used in their production during 1953-54. These details are restricted to factory production and therefore exclude farm output.

## BUTTER, CHEESE AND CONDENSED MILK, ETC. FACTORIES: PRODUCTION, 1953-54.

Particulars.	N.S.W.	Vic.	Qld.	S. Aust.	W. Aust.	Tas.	Aust.
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## MATERIALS USED.

Whole Milk used in manufacture of—							
Butter .. .. '000 gal	138,106	296,322	189,190	31,909	28,205	37,678	721,410
Cheese .. .. ..	7,333	54,925	15,162	24,915	(a)	(a)	105,719
Condensed, Dried and other Milk Products .. .. '000 gal	10,535	59,732	(a)	(a)	3,089	2,881	86,667
Sugar .. .. .. ton	1,212	13,229	(a)	(a)	(a)	(a)	16,508

## PRODUCTION.

Butter .. .. ton	29,713	63,616	41,797	7,586	6,142	7,263	156,117
Cheese (Green Weight) .. ..	3,210	25,977	(b) 6,746	11,612	(a)	(a)	(b) 49,043
Condensed Milk (Sweetened and Unsweetened) .. ..	(a)	35,999	..	(a)	(a)	..	42,386
Concentrated—							
Whole Milk .. ..	(a)	5,268	(a)	..	(a)	(a)	19,161
Skim Milk .. ..	..	(a)	(a)	..	..	..	797
Powdered Full Cream Milk—							
Spray .. ..	(a)	11,221	(a)	(a)	(a)	(a)	15,616
Roller .. ..	(a)	1,687	(a)	(a)	(a)	(a)	3,289
Infants' and Invalids' Foods (including Malted Milk and Milk Sugar) .. ..	(a)	(a)	..	..	..	(a)	11,740
Powdered Skim Milk—							
Spray .. ..	3,235	5,996	(a)	(a)	(a)	(a)	9,339
Roller .. ..	1,866	7,748	(a)	(a)	(a)	(a)	10,465
Butter, Milk and Whey Powder .. ..	627	3,713	(a)	162	(a)	..	5,358
Casein .. ..	(a)	(a)	..	..	..	..	3,827
Ice Cream Mix—							
Powder .. ..	(a)	(a)	..	(a)	(a)	..	582
Liquid .. ..	(a)	(a)	..	..	..	..	2,998
Processed Cheese .. ..	(a)	(a)	(a)	..	..	..	14,337

(a) Not available for publication; figures are included in total for Australia.  
 tons of cheese valued at £26,348 made in establishments not classified as factories.

(b) Includes 119

The butter, cheese and condensed milk industries are dealt with more fully in Chapter XXIII.—Farmyard, Dairy and Bee Products.

30. 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. The substitution of chilled for frozen meat exported is referred to in Chapter XXII.—Pastoral Production. In recent years there has been considerable expansion in the canning of meat and fish.

### MEAT AND FISH PRESERVING.

1953-54.

Items.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas.	Australia.
Number of factories ..	14	16	26	21	21	4	106
Number of persons employed ..	846	1,064	6,25	345	56	46	9,113
Salaries and wages paid .. £	585,581	844,824	5,217,04	203,116	510,467	33,848	7,391,881
Value of power, fuel, etc., used .. £	100,951	106,352	768,81	20,305	74,153	4,502	1,015,079
Value of materials used .. £	1,137,737	5,155,044	33,640,136	1,136,418	3,536,037	65,680	46,671,052
Value of production .. £	1,161,031	1,261,704	7,525,286	373,611	1,000,629	48,248	11,374,112
Total value of output .. £	1,160,311	6,526,100	41,874,231	1,530,338	4,610,819	118,430	59,060,243
Value of land and buildings .. £	303,316	629,918	2,494,431	169,176	761,052	51,971	4,500,464
Value of plant and machinery .. £	385,347	477,185	1,290,309	148,169	496,206	28,921	2,826,137
Horse-power of engines ordinarily in use .. h.p.	3,057	2,931	20,356	1,011	4,114	341	31,810

### AUSTRALIA.

Items.	1938-39	1949-50.	1950-51.	1951-52.	1952-53.	1953-54.
Number of factories ..	3	86	86	87	98	106
Number of persons employed ..	4,09	8,552	7,940	7,356	8,771	9,113
Salaries and wages paid .. £'000	1,181	4,165	4,752	5,222	6,820	7,395
Value of power, fuel, etc., used .. £'000	134	550	633	742	972	1,015
Value of materials used .. £'000	6,351	23,640	30,578	33,821	47,637	46,671
Value of production .. £'000	1,601	7,200	6,528	8,751	12,126	11,374
Total value of output .. £'000	8,086	31,390	37,739	43,321	60,735	59,060
Value of land and buildings .. £'000	1,966	3,015	3,223	3,990	4,562	4,500
Value of plant and machinery .. £'000	1,325	1,970	2,297	2,623	2,786	2,826
Horse-power of engines ordinarily in use .. h.p.	1,385	28,668	30,081	34,510	33,328	31,810

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 XXII.—Pastoral Production.

31. Breweries.—(i) *Details of Industry.* The following table gives particulars of breweries in each State for the year 1953-54 and for Australia for a series of years. It should be noted, however, that the data shown are not strictly comparable throughout, owing to the inability or failure of some breweries to furnish a separate return for each branch of activity. Consequently the figures for some States include details of employment, wages, output, etc., not connected with the brewing of beer, although associated with it. These extraneous activities include cooperage, malt works, aerated waters, etc.

### BREWERIES.

1953-54.

Items.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas.	Australia.
Number of factories ..	9	7	6	4	3	2	31
Number of persons employed ..	1,737	2,152	779	745	(a)	(a)	6,193
Salaries and wages paid .. £	1,674,080	1,730,707	593,579	634,531	(a)	(a)	5,325,416
Value of power, fuel, etc., used .. £	493,568	400,405	158,922	118,418	(a)	(a)	1,366,161
Value of materials used .. £	6,412,436	7,060,641	1,787,853	1,890,040	(a)	(a)	19,974,349
Value of production .. £	5,100,949	3,048,705	1,754,866	1,274,208	(a)	(a)	13,048,265
Total value of output (b) .. £	12,006,953	10,509,751	3,701,641	3,282,666	(a)	(a)	34,388,775
Value of land and buildings .. £	2,007,048	2,351,068	1,323,538	544,337	(a)	(a)	7,255,798
Value of plant and machinery .. £	2,615,833	1,318,513	1,219,121	1,236,742	(a)	(a)	7,681,217
Horse-power of engines ordinarily in use .. h.p.	15,467	0,306	6,128	3,506	(a)	(a)	38,803

## BREWERIES—continued.

## AUSTRALIA.

Items.	1938-39.	1949-50.	1950-51.	1951-52.	1952-53.	1953-54.
Number of factories ..	34	30	29	31	32	31
Number of persons employed ..	3,668	5,258	5,517	5,914	5,904	6,193
Salaries and wages paid .. £'000	1,215	2,896	3,666	4,564	5,030	5,325
Value of power, fuel, etc., used .. £'000	251	704	849	1,145	1,388	1,366
Value of materials used .. £'000	3,407	7,584	9,081	11,739	16,452	19,975
Value of production .. £'000	5,372	7,563	8,458	10,298	11,458	13,048
Total value of output(b) .. £'000	9,030	15,851	18,388	23,182	29,208	34,389
Value of land and buildings .. £'000	2,801	3,507	5,162	5,715	6,480	7,256
Value of plant and machinery .. £'000	2,737	3,623	4,489	4,832	5,870	7,681
Horse-power of engines ordinarily in use .. h.p.	23,231	26,512	28,765	30,181	32,754	38,803

(a) Not available for publication; figures are included in total for Australia.

(b) Excludes Excise Duty.

(ii) *Production, Consumption, Materials Used.* The quantity of ale, stout and beer brewed fell from 73.7 million gallons in 1928-29 to 49.8 million gallons in 1931-32, but thereafter increased each year to 109.2 million gallons in 1941-42. Under the Control of Liquor Order which operated between March, 1942 and March, 1946, the production of beer was restricted and consequently output remained static at about 100 million gallons from 1942-43 to 1944-45. Thereafter production increased, and in 1954-55 amounted to over 220 million gallons.

The average annual consumption of ale, stout and beer prior to the economic depression of the early thirties exceeded 11 gallons per head of the population: it dropped to 7.32 gallons in 1931-32, increased to 13.76 gallons in 1941-42 and declined again to about 13 gallons during the period of control. The consumption per head had increased to 24.09 gallons by 1954-55.

The table below shows the quantities of materials used and the quantity and value of ale, stout and beer (excluding waste beer) brewed in each State during 1953-54:—

## BREWERIES: MATERIALS USED AND PRODUCTION, 1953-54.

Particulars.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas.	Australia.
MATERIALS USED.							
Malt .. bus.	2,234,154	2,047,945	683,695	555,319	(a)	(a)	6,378,087
Hops .. lb.	2,094,935	1,332,912	460,248	438,046	(a)	(a)	4,874,837
Sugar .. ton	18,325	12,122	4,139	3,770	(a)	(a)	41,273

## ALE, BEER AND STOUT BREWED (EXCLUDING WASTE BEER).

Quantity .. '000 gals.	79,943	63,633	21,323	19,387	(a)	(a)	208,557
Value(b) .. £'000	11,881	10,396	3,684	3,277	(a)	(a)	33,782

(a) Not available for publication; figures are included in total for Australia.

(b) Excludes Excise Duty.

32. *Wineries and Distilleries.*—The following table shows particulars of the operations of Wineries and Distilleries for each State during 1953-54 and for Australia for a series of years.

## WINERIES AND DISTILLERIES.

## 1953-54.

Items.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas.	Australia
Number of factories ..	32	32	5	78	17	..	164
Number of persons employed ..	275	314	182	1,154	56	..	1,981
Salaries and wages paid .. £	229,529	235,316	121,149	860,918	28,271	..	1,475,183
Value of power, fuel, etc., used .. £	97,060	70,041	79,766	116,137	1,941	..	364,965
Value of materials used .. £	1,040,397	676,616	345,043	3,542,670	116,443	..	5,721,169
Value of production .. £	785,078	532,175	266,281	1,665,472	64,466	..	3,253,472
Total value of output .. £	1,922,535	1,278,832	691,110	5,264,279	182,850	..	9,330,606
Value of land and buildings .. £	566,090	251,931	181,579	1,234,545	48,709	..	2,283,664
Value of plant and machinery .. £	546,468	374,657	269,787	881,028	35,763	..	2,107,703
Horse-power of engines ordinarily in use .. h.p.	1,679	2,639	591	6,073	293	..	11,275

WINERIES AND DISTILLERIES—*continued.*

## AUSTRALIA.

Items.	1938-39.	1949-50.	1950-51.	1951-52.	1952-53.	1953-54.
Number of factories .. ..	135	146	153	158	167	164
Number of persons employed ..	1,133	2,130	2,158	2,277	2,021	1,981
Salaries and wages paid .. £'000	246	976	1,122	1,416	1,431	1,475
Value of power, fuel, etc., used .. £'000	58	260	294	383	333	365
Value of materials used .. £'000	1,421	4,484	4,810	7,076	5,464	5,721
Value of production .. £'000	811	2,169	2,637	3,118	3,198	3,254
Total value of output .. £'000	2,290	6,913	7,741	10,577	8,995	9,340
Value of land and buildings .. £'000	1,002	1,300	1,795	1,920	2,104	2,284
Value of plant and machinery .. £'000	916	1,210	1,556	1,774	1,913	2,108
Horse-power of engines ordinarily in use .. .. h.p.	4,396	8,175	9,189	11,038	10,995	11,275

33. Tobacco, Cigars and Cigarettes.—Particulars of establishments in which the manufacture of tobacco, cigars or cigarettes was carried on during 1953-54 are shown below for each State and for Australia for a series of years. There are no such factories in Tasmania.

## TOBACCO, CIGARS AND CIGARETTES.

## 1953-54.

Items.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Australia.
Number of factories .. ..	15	12	7	..	2	36
Number of persons employed ..	2,451	2,023	(a)	..	(a)	4,757
Salaries and wages paid .. £	1,804,984	1,437,632	(a)	..	(a)	3,416,708
Value of power, fuel, etc., used .. £	106,851	37,853	(a)	..	(a)	151,043
Value of materials used .. £	15,845,396	10,370,568	(a)	..	(a)	26,834,971
Value of production .. £	3,951,651	4,089,786	(a)	..	(a)	8,340,848
Total value of output .. £	19,903,898	14,498,207	(a)	..	(a)	35,326,862
Value of land and buildings .. £	742,802	841,731	(a)	..	(a)	1,821,696
Value of plant and machinery .. £	679,324	1,014,396	(a)	..	(a)	1,916,924
Horse-power of engines ordinarily in use .. .. h.p.	4,327	2,145	(a)	..	(a)	6,919

## AUSTRALIA.

Items.	1938-39.	1949-50.	1950-51.	1951-52.	1952-53.	1953-54.
Number of factories .. ..	30	37	37	36	37	36
Number of persons employed ..	5,544	5,167	5,044	4,971	4,704	4,757
Salaries and wages paid .. £'000	1,096	1,992	2,380	2,932	3,204	3,417
Value of power, fuel, etc., used .. £'000	34	89	90	126	144	151
Value of materials used .. £'000	7,081	15,016	16,599	19,419	22,416	26,835
Value of production .. £'000	2,685	3,869	4,897	5,206	7,078	8,341
Total value of output .. £'000	9,800	18,974	21,586	24,751	29,638	35,327
Value of land and buildings .. £'000	1,042	1,276	1,485	1,598	1,741	1,822
Value of plant and machinery .. £'000	943	1,060	1,171	1,284	1,458	1,917
Horse-power of engines ordinarily in use .. .. h.p.	4,610	5,796	6,056	5,862	6,028	6,919
Leaf used—						
Australian (stemmed) .. '000 lb.	4,489	3,313	3,775	3,664	4,222	4,866
Imported (stemmed) .. '000 lb.	16,011	24,043	24,558	26,131	28,410	33,076
Tobacco made .. .. '000 lb.	16,305	20,168	20,967	21,615	22,334	23,400
Cigars made .. .. '000 lb.	238	169	179	175	129	173
Cigarettes made .. .. '000 lb.	6,731	10,341	10,670	11,740	13,879	18,303

(a) Not available for publication; figures are included in total for Australia.

For many years the production of locally-grown leaf was comparatively small, and manufacturers were dependent on imported leaf for the supply of their raw material. Increased import duties stimulated local production, and the quantity of Australian leaf used by manufacturers rose from 1.2 million lb. in 1929-30 to over 3 million lb. in 1930-31. During the 1939-45 War about 4.7 million lb. of Australian-grown leaf was used annually, but in subsequent years the figure fell, and the 1953-54 usage showed an increase to 4.9 million lb. In this connexion, see Chapter XXI.—Agricultural Production.

Imports of tobacco during 1953-54 comprised—manufactured tobacco, 200,925 lb.; cigars, 39,734 lb.; cigarettes, 6,210,425 lb.; unmanufactured tobacco, 37,253,690 lb.

34. Sawmills, etc.—The most important industry in Class X. is that of sawmilling. Because of difficulties associated with the classifying of sawmills into forest and town, they have been combined in the following table, together with plywood and bark mills.

## SAWMILLS, PLYWOOD AND BARK MILLS.

1953-54.

Items.	N.S.W.	Vic.	Q'land.	S. Aust.	W. Aust.	Tas.	Australia.
Number of factories ..	1,145	645	658	92	253	345	3,130
Number of persons employed ..	10,821	7,360	8,603	2,116	4,395	2,194	35,489
Salaries and wages paid .. £	7,194,866	4,960,036	5,268,134	1,661,613	2,993,390	1,483,861	23,561,900
Value of power, fuel, etc., used £	546,968	392,214	282,594	71,548	250,813	95,796	1,639,933
Value of materials used .. £	19,759,994	11,478,692	10,574,679	4,754,713	4,535,788	2,947,286	54,051,152
Value of production .. £	12,834,126	8,604,979	8,671,845	2,355,069	5,020,889	2,375,434	39,862,336
Total value of output .. £	33,141,082	20,475,885	19,529,118	7,181,330	9,807,490	5,418,516	95,553,421
Value of land and buildings .. £	3,157,377	2,053,273	1,339,852	933,710	942,311	403,873	8,830,393
Value of plant and machinery .. £	3,875,667	2,915,836	2,652,710	821,431	1,394,757	855,470	12,515,871
Horse-power of engines ordinarily in use .. h.p.	112,320	75,022	74,740	18,028	31,309	26,139	337,558

## AUSTRALIA.

Items.	1938-39.	1949-50.	1950-51.	1951-52.	1952-53.	1953-54.
Number of factories ..	1,660	2,781	2,937	3,133	3,264	3,138
Number of persons employed ..	19,104	31,493	32,978	35,685	34,589	35,489
Salaries and wages paid .. £'000	3,635	12,031	14,999	20,100	21,392	23,562
Value of power, fuel, etc., used .. £'000	226	804	1,032	1,400	1,548	1,640
Value of materials used .. £'000	8,523	27,020	34,965	49,217	46,710	54,051
Value of production .. £'000	5,789	20,727	26,747	35,965	35,710	39,862
Total value of output .. £'000	14,538	48,551	62,744	86,582	83,968	95,553
Value of land and buildings .. £'000	2,055	4,477	5,819	7,148	8,007	8,830
Value of plant and machinery .. £'000	2,786	7,077	8,881	10,876	11,918	12,516
Horse-power of engines ordinarily in use .. h.p.	90,315	243,927	276,232	310,861	333,297	337,558

The sawmill output of native timber, which declined from 740 million super. feet in 1925-26 to the abnormally low figure of 237 million super. feet during the depth of the depression, recovered to 717 million super. feet in 1938-39 and by 1954-55 had risen to 1,422 million super. feet. Further reference is made to the sawmilling industry in Chapter XXIV.—Forestry.

35. Cabinet and Furniture Making and Upholstery.—These industries constitute the principal manufactures in Class XI. The following table shows particulars for each State in 1953-54 :—

## CABINET AND FURNITURE MAKING AND UPHOLSTERY, 1953-54.

Items.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas.	Australia.
Number of factories ..	525	549	227	121	153	67	1,642
Number of persons employed ..	5,253	4,447	2,382	1,560	1,179	431	15,252
Salaries and wages paid .. £	3,523,657	2,719,519	1,256,620	951,363	646,524	236,938	9,334,621
Value of power, fuel, etc., used .. £	103,468	60,736	27,100	27,060	18,391	4,498	241,253
Value of materials used .. £	5,689,089	3,977,256	2,048,036	1,653,797	1,103,039	243,227	14,714,441
Value of production .. £	5,574,618	4,338,569	1,927,158	1,418,474	1,068,521	365,677	14,693,017
Total value of output .. £	11,367,175	8,376,561	4,002,294	3,099,331	2,189,951	613,402	29,648,714
Value of land and buildings .. £	2,118,757	1,807,921	704,151	434,912	443,452	125,555	5,634,748
Value of plant and machinery .. £	618,376	622,383	280,581	223,108	177,078	48,784	1,970,310
Horse-power of engines ordinarily in use .. h.p.	14,936	14,489	6,371	5,437	3,505	1,478	46,216

36. Printing Works.—Printing and bookbinding rank high in importance among the industries of Australia, and in 1953-54 afforded employment for 35,390 employees, and paid £26,023,000 in salaries and wages, while the value of output amounted to £86,054,000. The first table below gives particulars of establishments engaged in general printing in each State for 1953-54. These establishments include those engaged in lithographic

printing, bookbinding, paper ruling and linotyping and Government printing works. Establishments producing newspapers and periodicals are shown separately in the second table to follow :—

### GOVERNMENT AND GENERAL PRINTING WORKS, 1953-54.

Items.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas.	Australia.
Number of factories ..	487	488	103	72	71	20	1,241
Number of persons employed ..	9,070	7,725	2,150	1,500	1,256	551	22,252
Salaries and wages paid .. £	6,594,988	5,452,015	1,282,749	973,697	755,65	375,349	15,434,440
Value of power, fuel, etc., used £	237,679	126,040	33,318	26,201	23,892	7,250	454,380
Value of materials used .. £	9,700,424	6,955,789	1,316,612	1,061,719	909,349	408,140	20,332,933
Value of production ..	11,050,952	8,576,365	1,970,019	1,544,850	1,419,109	543,302	25,104,597
Total value of output .. £	20,989,055	15,658,194	3,319,949	2,632,770	2,352,350	958,692	45,911,010
Value of land and buildings .. £	3,763,271	3,296,680	671,266	437,900	471,796	151,786	8,792,699
Value of plant and machinery .. £	4,105,649	3,617,350	629,011	743,070	561,033	231,822	9,887,935
Horse-power of engines ordinarily in use .. h.p.	15,104	11,434	2,197	1,907	1,784	741	33,167

### NEWSPAPERS AND PERIODICALS, 1953-54.

Items.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas.	Australia.
Number of factories ..	182	113	57	33	24	7	416
Number of persons employed ..	5,686	3,380	1,966	1,055	641	410	13,138
Salaries and wages paid .. £	4,543,558	2,829,469	1,416,333	917,773	531,434	349,815	10,588,382
Value of power, fuel, etc., used £	249,869	104,793	59,275	30,369	34,630	5,276	484,212
Value of materials used .. £	8,964,537	6,568,338	2,241,298	1,517,762	1,015,039	245,618	20,552,592
Value of production ..	8,473,456	4,842,317	2,536,692	1,672,641	1,168,972	412,555	19,106,633
Total value of output .. £	17,687,862	11,515,448	4,837,265	3,220,772	2,218,641	663,449	40,143,437
Value of land and buildings .. £	3,520,909	1,230,180	873,266	594,378	238,381	161,415	6,618,529
Value of plant and machinery .. £	3,470,613	2,916,887	1,145,485	497,829	683,360	110,875	8,825,049
Horse-power of engines ordinarily in use .. h.p.	16,705	9,985	4,492	2,796	1,980	575	36,533

37. **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.

Plants producing pulp from eucalypt timber are operating in Victoria and Tasmania, whilst in South Australia pulp is being produced from locally-grown softwoods. The production of pulp rose from 6,000 tons in 1938-39 to 88,000 tons in 1946-47, and remained about this level until 1953-54, when production totalled 137,000 tons.

The number of factories operating in 1953-54 comprised two in New South Wales, nine in Victoria, one in Queensland, South Australia and Western Australia and four in Tasmania. In the latter State, 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.

### PAPER MAKING, INCLUDING PULP MILLS : AUSTRALIA.

Items.	1938-39.	1949-50.	1950-51.	1951-52.	1952-53.	1953-54.
Number of factories ..	7	14	14	16	17	18
Number of persons employed ..	1,961	6,160	6,336	7,237	6,441	7,179
Salaries and wages paid .. £'000	467	3,183	4,231	5,852	5,338	6,130
Value of power, fuel, etc., used .. £'000	201	998	1,181	1,610	1,649	2,048
Value of materials used .. £'000	1,096	6,154	7,487	14,558	12,637	15,198
Value of production .. £'000	1,005	6,581	9,165	12,623	11,085	15,451
Total value of output .. £'000	2,302	13,733	17,833	28,791	25,371	32,697
Value of land and buildings .. £'000	850	3,331	4,871	6,820	7,324	8,106
Value of plant and machinery .. £'000	1,713	5,754	9,814	12,961	15,263	16,810
Horse-power of engines ordinarily in use .. h.p.	31,548	95,999	103,098	112,469	127,558	141,373

38. **Rubber Goods.**—The following table shows particulars of this industry for each State during 1953-54 and excludes establishments engaged primarily in the retreading and repairing of tyres.

## RUBBER GOODS, 1953-54.

Items.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas.	Australia.
Number of factories	33	46	7	9	2	1	98
Number of persons employed	5,996	4,804	978	606	(a)	(a)	12,421
Salaries and wages paid	£ 5,198,534	4,147,602	678,831	510,410	(a)	(a)	10,549,573
Value of power, fuel, etc., used	£ 798,572	713,696	68,485	49,282	(a)	(a)	1,632,453
Value of materials used	£ 12,311,661	10,623,038	1,943,067	842,479	(a)	(a)	25,778,271
Value of production	£ 6,653,438	8,487,178	1,602,325	805,923	(a)	(a)	17,569,885
Total value of output	£ 19,783,671	19,823,912	3,613,377	1,697,684	(a)	(a)	44,980,309
Value of land and buildings	£ 1,999,025	2,123,371	249,740	97,615	(a)	(a)	4,515,654
Value of plant and machinery	£ 1,901,394	1,983,520	275,441	182,368	(a)	(a)	4,361,352
Horse-power of engines ordinarily in use	h.p. 44,356	40,058	5,886	2,257	(a)	(a)	93,621

(a) Not available for separate publication; figures included in total for Australia.

39. Electric Light and Power Works.—(i) *Details of Industry.* The increased demand for electrical energy has been responsible for considerable development in electric light and power works during recent years. For further information on this subject see Chapter X.—Electric Power Generation and Distribution. Particulars of the industry for each State during the year 1953-54 and for Australia for a series of years are shown below:—

## ELECTRIC LIGHT AND POWER WORKS.

1953-54.

Items.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas.	Australia.
Number of factories	84	67	54	44	93	9	351
Number of persons employed	5,140	2,690	1,289	(a)	961	(a)	11,395
Salaries and wages paid	£ 4,764,853	2,431,526	1,061,656	(a)	849,712	(a)	10,308,281
Value of power, fuel, etc., used	£ 11,471,667	8,902,076	5,001,814	(a)	3,079,371	(a)	35,082,984
Value of materials used	£ 2,030,358	404,570	900,494	(a)	275,339	(a)	4,800,123
Value of production	£ 13,996,253	6,862,091	3,154,215	(a)	2,308,621	(a)	30,098,090
Total value of output	£ 31,401,278	16,168,746	9,056,553	(a)	5,663,331	(a)	69,481,197
Value of land and buildings	£ 13,681,350	8,922,235	4,294,708	(a)	3,046,293	(a)	47,369,225
Value of plant and machinery	£ 42,714,300	34,925,189	16,667,426	(a)	8,595,465	(a)	122,773,375
Generators installed—Kilowatt capacity	K.W. 1,421,951	829,405	398,625	(a)	198,982	(a)	3,416,609

## AUSTRALIA.

Items.	1938-39.	1949-50.	1950-51.	1951-52.	1952-53.	1953-54.
Number of factories	395	358	354	331	349	351
Number of persons employed	6,508	9,433	9,815	10,381	10,891	11,395
Salaries and wages paid	£'000 1,977	5,368	6,541	8,178	9,675	10,308
Value of power, fuel, etc., used	£'000 3,239	15,491	21,259	28,724	32,205	35,083
Value of materials used	£'000 530	2,180	2,712	3,481	3,296	4,800
Value of production	£'000 8,714	12,885	14,790	18,065	24,582	30,098
Total value of output	£'000 12,483	30,556	38,761	50,276	60,083	69,981
Value of land and buildings	£'000 8,388	13,486	16,932	21,641	29,531	47,369
Value of plant and machinery	£'000 27,751	45,454	53,441	66,630	94,169	122,773

(a) Not available for separate publication; figures included in 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 333.

(ii) *Production.* The increase in the production of electric light and power in each of the States since 1938-39 is shown in the following table:—

ELECTRIC LIGHT AND POWER WORKS: ELECTRICITY PRODUCED.  
(Million kWh)

Year.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tasmania.	Australia
1938-39	1,018.5	1,222.5	387.3	256.3	307.0	566.7	4,688.3
1948-49	3,217.0	2,504.0	890.3	566.6	398.6	976.4	9,052.9
1949-50	3,758.1	2,706.1	971.6	593.8	417.5	1,061.6	9,508.7
1950-51	4,251.1	2,875.9	1,115.4	713.0	469.9	1,077.7	10,503.3
1951-52	4,628.1	2,964.1	1,242.1	787.8	529.7	1,145.5	11,297.3
1952-53	4,868.3	3,074.0	1,349.1	822.3	568.7	1,213.5	12,944.8
1953-54	5,450.1	3,692.7	1,510.7	955.2	626.9	1,471.4	13,707.0
1951-55 (a)	5,017.5	4,150.5	1,658.7	1,157.0	738.5	1,595.3	15,298.4

(a) Preliminary—subject to revision.

40. Gas-works.—(i) *Details of Industry.* Gas-works are in operation in the majority of important towns in Australia. The following table shows particulars of gas-works in each State for the year 1953-54 and for Australia for a series of years :—

## GAS-WORKS.

1953-54.

Items.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas.	Australia
Number of factories ..	39	34	16	3	4	2	98
Number of persons employed ..	1,533	1,461	434	(a)	201	(a)	4,141
Salaries and wages paid .. £	1,422,455	1,393,032	342,789	(a)	180,647	(a)	3,767,359
Value of power, fuel, etc., used .. £	1,979,861	129,185	26,883	(a)	98,986	(a)	2,244,073
Value of materials used .. £	6,025,510	5,991,089	1,003,178	(a)	678,560	(a)	15,248,733
Value of production .. £	4,884,807	1,652,034	835,836	(a)	225,622	(a)	8,120,811
Total value of output .. £	12,890,208	7,772,308	1,865,897	(a)	1,003,168	(a)	25,613,617
Value of land and buildings .. £	1,299,645	610,660	285,960	(a)	142,578	(a)	2,416,176
Value of plant and machinery .. £	5,486,579	6,255,590	1,605,318	(a)	1,464,799	(a)	17,234,856
Horse-power of engines ordinarily in use .. h.p.	15,342	9,740	2,134	(a)	1,202	(a)	30,055

## AUSTRALIA.

Items.	1938-39.	1949-50.	1950-51.	1951-52.	1952-53.	1953-54.
Number of factories ..	107	100	100	100	99	98
Number of persons employed ..	2,931	3,815	3,871	4,042	4,199	4,141
Salaries and wages paid .. £'000	785	2,027	2,401	3,207	3,553	3,767
Value of power, fuel, light, etc., used .. £'000	251	845	1,179	1,777	2,080	2,244
Value of materials used .. £'000	1,872	7,220	9,450	13,401	15,576	15,249
Value of production .. £'000	2,694	3,663	4,426	7,165	8,473	8,121
Total value of output .. £'000	4,817	11,728	15,055	22,343	26,129	25,614
Value of land and buildings .. £'000	1,463	1,930	2,071	2,186	2,342	2,416
Value of plant and machinery .. £'000	7,498	11,656	12,386	13,846	15,962	17,235
Horse-power of engines ordinarily in use .. h.p.	17,905	26,225	28,205	28,427	29,514	30,055

(a) Not available for publication ; figures are included in the total for Australia.

(ii) *Coal Used and Production.* The following table shows details for 1953-54 :—

## GAS-WORKS : COAL USED AND PRODUCTION, 1953-54.

Particulars.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas.	Australia
Coal used '000 tons	946	687	196	(a)	56	(a)	2,047
Gas produced million cubic ft.	20,802	13,715	2,902	(a)	1,443	(a)	42,100
Gas sold ..	17,820	11,763	2,551	(a)	1,240	(a)	36,178
Coke produced (b) .. tons	382,565	261,433	85,076	(a)	17,800	(a)	839,793

(a) Not available for publication ; figures are included in total for Australia.  
2,010,404 tons of metallurgical coke were made in Coke Works in 1953-54.

(b) In addition,

Since 1938-39, when the output of gas was 21 thousand million cubic feet, production has increased each year and reached 43 thousand million cubic feet in 1954-55:



## CHAPTER X.

### ELECTRIC POWER GENERATION AND DISTRIBUTION.

This chapter is based on an article contributed by the Division of Industrial Development of the Commonwealth Ministry of National Development which was published in Official Year Book No. 39. The chapter is divided into three major parts. A.—Introduction, which deals briefly with the resources, generation and distribution, and future developments, of electric power in Australia; B.—The Snowy Mountains Hydro-electric Scheme; and C.—The origins, development, present situation and new projects of electrical systems in each Australian State and Territory (internal and external). A Statistical Summary is appended.

It should be noted that the information contained in the chapter relates to situations existing and projects contemplated in 1955 and that it may be considerably affected by changes in policy or plans, or by developments in the projects themselves.

#### A. INTRODUCTION.

1. *Distribution of Population and Location of Power Resources.*—The geographical pattern of electric power generation and distribution in Australia has been affected by two main influences—the distribution of population, with a resulting distribution of industry, and the location of fuel and water resources.

The Australian population between 1939 and 1955 increased by approximately 2,233,000 to reach a total of 9,201,000. The two principal centres of population and industry, the metropolitan areas of Sydney and Melbourne, make the greatest demands for electric power. 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 the Commonwealth, 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, 1954 thermal power equipment represented 82 per cent., hydro 11 per cent. and internal combustion equipment 7 per cent. of the total installed generating capacity.

Most of Australia is poorly supplied with water, only 15.2 per cent. receiving an annual rainfall of 30 inches or over. This is confined largely to Tasmania and to the narrow coastal strip on the east coast. The possibility of establishing large hydro or steam stations in inland areas is therefore strictly limited by the lack of sufficient water for feed and condensing purposes.

The only region on the mainland of Australia where land is high enough to receive reliable winter snowfall, and from which reasonably constant water supplies throughout the year can therefore be expected, is the mountain chain which stretches from the high plateaux of south-eastern New South Wales through 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 schemes in this area are the Snowy Mountains and Kiawa projects. 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 only a small proportion of 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. Whereas on the mainland the chief source of energy is coal, water occupies this position in Tasmania.

### 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 some measure of governmental control was exercised through various electric light and power Acts. This legislation was designed to provide standards of safety, and to define the scope and obligations of the private organizations engaged in producing electric power for sale. A trend towards public ownership commenced during the 1914-18 War and became more pronounced after the 1939-45 War. By 1955, all major generating stations supplying the public were, in varying degrees, under the control of State statutory organizations, constituted with the object of unifying and co-ordinating the generation and distribution of electricity supplies within the various States. There are, however, still a large number of small private and municipal enterprises generating power for supply to country towns, but, where practicable, central authorities are extending supply to these places. In many areas, however, it has been and remains the practice for central authorities to sell power in bulk to local distributing organizations who undertake local reticulation.

In addition to the private, local government and statutory organizations who generate and/or distribute electricity for sale, there are numerous firms generating 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 total power produced.

(ii) *Power Production and Generating Capacity.* In the period between 1938-39 and 1953-54 production of electric power in Australia increased by about 190 per cent. from 4,688 to 13,587 million kilowatt hours.

Since the 1939-45 War, industry and commerce have expanded rapidly, many new houses have been built and the population has increased by approximately 20 per cent. These factors, together with extension of electricity supplies to rural areas and the increased use of domestic electric appliances, have all contributed to bring about a position where the greatly increased demand for power cannot be satisfied by the existing installed capacity of central generating stations.

At 30th June, 1954, installed generating capacity in Australia totalled approximately 3.4 million kW compared with 1.6 million kW in 1939, an increase of about 110 per cent. In 1938-39 each kW of installed capacity produced an average of 3,000 kWh per annum, compared with an average of 3,977 kWh in 1953-54. 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 Tasmania, for example, average output per kW installed was 5,000 kWh in 1938-39 and 4,943 kWh in 1953-54 compared with 2,300 and 3,538 kWh respectively in South Australia.

3. *Future Developments.*—Each central authority has embarked upon constructional programmes to overcome the lag between supply and demand. However, industrial and commercial expansion has continued on a high level, and several projects have been commenced or planned in various parts of the Commonwealth for suburban and main railway line electrification. Other fields directly connected with the demand for power, such as house building, must also be taken into account.

An important factor to be considered in regard to future development is the increasing relative importance of the generation of electric power from water resources.

## B. SNOWY MOUNTAINS HYDRO-ELECTRIC SCHEME.\*

1. *Geography of Area.*—The Snowy country in south-eastern New South Wales is the only part of the continent in which any 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 120 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, which flows southwards to Bass Strait.

\* See also Chapter XI.—Water Conservation and Irrigation, §3, para. 4. For more detailed information see special article by the Commissioner, Snowy Mountains Hydro-electric Authority (Sir William Hudson), which appears in Chapter XXIX.—Miscellaneous.

2. *Historical.*—The Murray and Murrumbidgee have been subject to control and intensive development for irrigation for many years; the Snowy, however, flows through mountainous and practically uninhabited country until debouching onto the river flats of East Gippsland, not many miles above its mouth. It has never been controlled in any way, either for the production of power or for irrigation, and a great proportion of its waters flow to waste into the sea. As a result, attention has long been directed towards this river, which has the highest source of any in Australia and which conducts away a large proportion of the waters from the south-eastern New South Wales snowfields, and it has been consecutively considered as a means of supplementing the flow of the great inland rivers, a source of water supply to the rapidly growing metropolitan area of Sydney, a means for developing hydro-electric power and, again, as a source of increasing agricultural production in the rich Murray and Murrumbidgee valleys.

The 1939–45 War, and the plans for post-war reconstruction which then originated, led to a proposal by the State of New South Wales for diversion for irrigation and agricultural purposes of the waters of the Snowy to the Murrumbidgee River—a scheme in which little emphasis was placed on the generation of power. The Victorian Government proposed a counter-scheme, involving very much greater generation of power, and involving diversion, not to the Murrumbidgee, but to the Murray.

The Commonwealth Government, however, being seized with the national implications of these proposals, brought about a meeting in 1946 of Commonwealth and State representatives to discuss the general utilization of Snowy waters, and subsequently a Committee was set up to examine the whole question on the broadest possible basis. This Committee, in a report submitted in November, 1948, suggested consideration of a far greater scheme than any previously put forward. It involved not only the simple question of utilization of the waters of the Snowy, but a general consideration of the possible diversion of a number of rivers in the area, tributaries, not only of the Snowy, but of the Murray and Murrumbidgee. The recommendations of the Committee were generally agreed to by a conference of Ministers representing the Commonwealth and States of New South Wales and Victoria, and it was also agreed that the Committee should continue its investigations. A further report was submitted by the Committee in June, 1949, as a result of which the Commonwealth Parliament passed the Snowy Mountains Hydro-electric Power Act. In the next month the Snowy Mountains Hydro-electric Authority was constituted, and thus was inaugurated the greatest engineering scheme in Australian history.

3. *Description of Scheme.*—(i) *General.* The proposals at present being implemented fall into two groups, Tumut Development and Snowy-Murray Development—each having its associated plans for hydro-electric power production. The features described hereunder may be identified by reference to the map on page 397. It should be remembered that, as the final designs for practically every element of the scheme have not yet been completed, and in many cases will not be completed for many years, any figures which are now quoted in respect of those elements will undoubtedly be subject to modification in the future.

(ii) *Tumut Development.* The central feature of this part of the plan is diversion to, and regulation of, the waters of the Tumut River, a stream at present completely unregulated, but which contributes approximately half of the flow of the Murrumbidgee River at Gundagai below the existing main storage on the Murrumbidgee at Burrinjuck. To the Tumut will be diverted the waters of the Eucumbene, a major tributary of the Snowy, and the headwaters of the Tooma, a tributary of the Upper Murray. The headwaters of the Murrumbidgee itself will also be diverted to the Tumut, principally to secure desirable electric power.

A major dam is being constructed on the Eucumbene River at Aaminaby, creating a storage of at least 3.5 million acre feet, and from this, water will be conveyed by a 14-mile tunnel to Tumut Pond on the upper reaches of the Tumut River, where it will be joined by the waters from the Tooma, diverted by aqueducts and tunnels. From Tumut Pond another tunnel will convey the water to power station T.1 with an installed capacity of about 320,000 kW and a further tunnel to power station T.2 with a capacity of 280,000 kW thence discharging into a smaller storage at Lob's Hole.

As originally planned the waters of the Upper Murrumbidgee were to be brought to the Lob's Hole Reservoir from another major storage at Tantangara, holding 480,000 acre feet by tunnel to power station T.3 with an installed capacity of 150,000 kW, discharging into a pond on the Yarrangobilly River, a tributary of the Tumut, and from Yarrangobilly Pond by further tunnel to power station T.4 with an installed capacity of 150,000 kW which, in turn, would discharge into the Lob's Hole Reservoir. This part of the scheme has been temporarily abandoned and the waters to be stored at Tantangara will now be diverted to the Adaminaby storage through nine miles of tunnel.

Between the foot of the Lob's Hole storage and the top of the Blowering storage will be power stations T.5 and T.6. The total capacity of these stations will be 410,000 kW.

The Blowering storage with its capacity of about 860,000 acre feet, is an adjunct to the Snowy Mountains Hydro-electric Scheme and will be required for the regulation both of the Tumut waters and of the waters diverted into the Tumut. This regulation is essential if the waters impounded are to be fully utilized for irrigation purposes. At the foot of the Blowering Dam will be the last of the Tumut Power stations, T.7, with a capacity of some 60,000 kW, but this station will operate only when water is released for irrigation. The State of New South Wales will be responsible for the construction of the Blowering works.

The total extra new water which will reach the Murrumbidgee is expected to average 528,000 acre feet per annum and the total installed capacity of the various power stations is estimated at 1,310,000 kW (excluding T.7).

(iii) *Snowy-Murray Scheme.* The central feature of this part of the scheme is the diversion of the waters of the Upper Snowy itself from a major dam to be constructed at Jindabyne on that river, a little below its junction with the Eucumbene and the Crackenback Rivers. This reservoir will have a storage capacity of approximately 1,100,000 acre feet and from it a tunnel approximately 28 miles in length will run right through the Great Dividing Range finally discharging into Swampy Plains River, not far above its junction with the Murray proper.

Into this tunnel will be collected a considerable quantity of water from the very high altitude country of the Kosciusko area, and from a number of smaller tributaries of the Murray. The collection from the Kosciusko area commences at the Kosciusko Reservoir at an altitude of 5,725 feet, not many miles below the source of the Snowy. A tunnel will convey water from this reservoir to power station M.1.A. with an installed capacity of 60,000 kW and thence to a pond on the Snowy River, at its junction with the Guthega River.

From the Guthega Pond, a further tunnel and penstock lead to station M.1.B. with a capacity of 60,000 kW (ultimate capacity 90,000 kW), which discharges into a pond at the junction of the Munyang and Snowy Rivers. Construction of this part of the scheme has been completed. Munyang Pond will discharge into a tunnel leading to station M.2.L., with installed capacity of 60,000 kW. This station also receives the flow of a tributary of the Snowy River via station M.2.H. From station M.2.L. the water discharges into a reservoir at Island Bend on the main stream of the Snowy.

From the Island Bend reservoir, a vertical shaft, 1,700 feet deep, will lead to the main tunnel from Jindabyne reservoir previously referred to, passing on its way through power station M.3 with installed capacity of 265,000 kW. Into this main tunnel will also be collected waters from the Upper Murray tributary streams previously mentioned.

Of these, the most important is the Windy Creek-Geehi River series. A pond on Windy Creek, a small tributary of the Geehi, situated at an altitude of over 5,000 feet, will provide water through a tunnel to station M.4 with an installed capacity of 75,000 kW thence by aqueducts and tunnel to station M.5.H. with an installed capacity of 40,000 kW discharging into the M.5.L. Intake Pond on the Geehi River.

A vertical shaft will lead this water into the main tunnel, passing through station M.5.L. with an installed capacity of 20,000 kW. The combined waters thus collected into the main tunnel will pass through station M.6 with an installed capacity of 540,000 kW and then discharge into a pond on Bogong Creek, another of the Upper Murray tributaries. At this point, the water is still at an altitude of nearly 2,000 feet, and the main tunnel will thence continue to station M.7 with a capacity of 540,000 kW.

From M.7 the total collected waters will flow into the Swampy Plains River at a point some seven miles, in a direct line, above its confluence with the Murray. It will be necessary, however, to provide on the Murray a further storage for the proper regulation of these waters for irrigation purposes.

The total water flowing to the Murray from these works will amount on the average to 722,000 acre feet per annum, but as 280,000 acre feet which now reaches the Murray from the Tooma will be, as indicated previously, diverted to the Tumut, the total extra water actually reaching the Murray will be, on the average 442,000 acre feet per annum : the total installed capacity of the power stations will be 1,700,000 kW.

An integral part of each development is the construction of hundreds of miles of aqueducts to collect and divert water from the many streams in the area into storages and tunnels.

4. *Utilization of Power.*—The total capacity of all stations in the scheme will be of the order of 3,000,000 kW, which is only slightly less than the present total installed capacity of all the generating stations in the Commonwealth.

If, however, the demand for power continues to increase as is expected, the major source of power must still be thermal stations. The operation of the whole scheme is dependent on the appropriate development and integration of these stations, as otherwise there would be a serious loss in ultimate economy ; all economic estimates therefore postulate that thermal capacity will be expanded so as to preserve an appropriate ratio.

It has been estimated with a reasonable degree of probability that the power available from the scheme will save coal to the order of five million tons annually.

The first call on the power generated under the Snowy Scheme will be by the Commonwealth Government for supply to the Australian Capital Territory of power which it needs in that area, particularly for certain projects with defence significance, and no indication can at present be given as to how great that call will be. It is not likely, however, to amount to more than a relatively small fraction of the total power available, and it has been agreed that the balance will be divided between the States of New South Wales and Victoria in a proportion of two-thirds to New South Wales and one-third to Victoria.

The first power station in the scheme, M.1.B., the Guthega Project, is now producing power. A 132,000 volt transmission line extends from the power station via Cooma to the Australian Capital Territory where it joins into the main New South Wales transmission network. The construction of the Eucumbene-Tumut diversion tunnel, Tumut Pond Dam and Power Station T.1 is in progress. Adaminaby Dam is in course of construction by the Public Works Department of New South Wales on behalf of the Authority. Power Station T.1 will enter the New South Wales network via a 330,000 volt transmission line early in 1959.

## C. STATES AND TERRITORIES.

### § 1. New South Wales.

1. *General.*—In Official Year Book No. 39 an account is given in some detail of the origin and development of electricity generation and distribution in New South Wales, describing in particular the growth of the systems of the Sydney County Council, the Department of Railways, the Electric Light and Power Supply Corporation Ltd., the Southern Electricity Supply and the Clarence River County Council (now the Northern Rivers County Council). A description is also given of the legislation existing prior to, and that which constituted, the Electricity Authority of New South Wales and the Electricity Commission of New South Wales. At present, the three main Acts governing electricity supply in New South Wales are :—

- (i) 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.

- (ii) The Electricity Development Act 1945-1948 which established the Electricity Authority of New South Wales as the body responsible for the co-ordination of electricity supply throughout the State.
- (iii) The Electricity Commission Act 1950 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 was constituted under the Electricity Commission Act 1950, consists of five members of whom one is a full-time Chairman. In its administration the Commission is directly responsible to the Minister for Local Government.

When the Commission was established, 93 per cent. of the State's power requirements were generated by four bodies—the Sydney County Council, the Department of Railways, Southern Electricity Supply (a division of the Department of Public Works) and the privately-owned Electric Light and Power Supply Corporation Ltd. The Electricity Commission Act 1950 and the Electricity Commission (Balmain Electric Light Company Purchase) Act 1950 provided for the acquisition of the power stations and main transmission lines of those bodies. The transfer of the power stations and transmission lines of the Sydney County Council, Southern Electricity Supply and the Department of Railways has now been effected. The date of transfer of the undertaking owned by the Electric Light and Power Supply Corporation Ltd. is dependent upon the determination of the valuation of the undertaking by the Land and Valuation Court.

The main function of the Commission is the generation and transmission of electricity which it sells in bulk to distribution authorities (mainly local government bodies) throughout a large part of the State, to the government railways and tramways and to certain large industrial consumers. As the major generating authority, it is also responsible for the development of new power sources. An important exception is the hydro-electric resources of the Snowy Mountains region which are being developed by the Snowy Mountains Hydro-electric Authority, a Commonwealth Government body.

(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 a grouping of shire and/or municipal councils) or private franchise holders. At 1st July, 1955 there were 123 of these supply authorities throughout the State of which 37 also generated part or the whole of their power requirements. A few authorities—the most notable being Tamworth City Council—also supply in bulk to other councils. The great majority of country power stations are, however, small oil engine plants which are becoming increasingly costly to operate. Consequently, they are gradually being closed down as the main transmission network is extended further afield.

Over the past few years there has been a distinct trend towards the consolidation of supply areas, many of which have been regarded as being too weak individually 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 for electricity supply purposes only and administered by a county council of representatives elected by the constituent shire and municipal councils.

It is interesting to note that of the 238 shires and municipalities in New South Wales, 135 are included in one or other of the 26 electricity county districts. Twenty-one (21) of these county districts have been constituted since 1945. The largest of the county councils is the Sydney County Council which at 30th June, 1954 was supplying 314,904 consumers in the Sydney Metropolitan Area. Unlike the other county councils, which are constituted under the provisions of the Local Government Act 1919, the Sydney County Council was specially constituted under the Gas and Electricity Act 1935.

(iii) *The Electricity Authority of New South Wales.*—The Electricity Authority was constituted under the Electricity Development Act 1945 for the stated purpose of promoting and regulating the co-ordination, development, expansion, extension and improvement of electricity supply throughout the State. The Authority, which is a regulatory body only, consists of seven members of whom one is a full time Chairman. Like the Commission, it is responsible to the Minister for Local Government.

The main functions of the Authority are as follows :—

- (a) *Distribution.* Under the Act the approval of the Authority is required, *inter alia*, 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 mainly concerned to see 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. Many of the new county districts referred to earlier have been formed largely as a result of the Authority's advice.
- (b) *Rural Electrification.* The Authority administers the rural electricity subsidy scheme under which rural electrification throughout the State is progressing very rapidly (*see below*).
- (c) *Safety.* The Electricity Development Act 1945–1948 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 consumer's installations, licensing of electricians and electrical contractors, approval of electrical appliances, safety of linesmen and overhead line construction.
- (d) *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). The Authority may, for example, refuse approval for the establishment of a new power station if it is more economical and in the general interest for the supply authority concerned to purchase in bulk from another body.

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, therefore, mainly dependent on steam power stations. During the year ended 30th June, 1954 coal-fired stations generated 94 per cent. of the State's energy requirements, hydro-electric stations 4 per cent. and internal combustion plants 2 per cent.

The proportion of power generated in hydro-electric stations will increase considerably in the future with the development of the Snowy Mountains Scheme by the Commonwealth Government. The possibility of developing the hydro-electric potential of the Clarence River and other rivers is also being investigated. Nevertheless, coal-fired steam power stations 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 inter-connected transmission networks. The greater part of the coal-fired generating plant is now concentrated within the bounds of the major coal-fields, where the big industrial centres and most of the population are also located.

As at 1st July, 1954, the major power stations within the main inter-connected system and their installed capacities were as follows :—*Steam*—Bunnerong "A" and "B" (Sydney), 370,000 kW; Pyrmont "A" and "B" (Sydney), 182,000 kW; White Bay (Sydney), 118,000 kW; Ultimo (Sydney), 80,000 kW; Balmain (Sydney), 70,625 kW; Port Kembla, 69,000 kW; Zarra-street (Newcastle), 67,000 kW; Maitland, 25,000 kW; Penrith, 25,000 kW; Lithgow, 22,000 kW. *Hydro*—Burrinjuck (near Yass), 20,000 kW. There were also various other steam, hydro and internal combustion stations aggregating 69,100 kW. The total installed capacity of the main inter-connected system was 1,117,725 kW.

It will be seen therefore that the greater part of the State's generating plant is concentrated within a hundred mile radius of Sydney—that is, at Sydney itself (five stations), Port Kembla, Newcastle, Maitland, Penrith and Lithgow. The largest single station outside this area is located at Tamworth.

(iii) *Interconnected Network.* Over 90 per cent. of electricity consumers in New South Wales are now supplied through the main interconnected systems. In this network, transmission lines operating mainly at 132,000, 66,000 or 33,000 volts interconnect the various power stations and distribute power to load centres throughout most of the south-eastern portion of the State and the north coast region. At 30th June, 1954, 132,000 volt transmission lines were in service between Sydney and Newcastle; Sydney and Orange; Sydney and Port Kembla; and Port Kembla and Burrinjuck. The total installed capacity of the interconnected systems, which includes an aggregated capacity of 46,226 kW for various stations, including the Northern Rivers County District, linked with the main system, was 1,163,951 kW (as at 1st July, 1954).

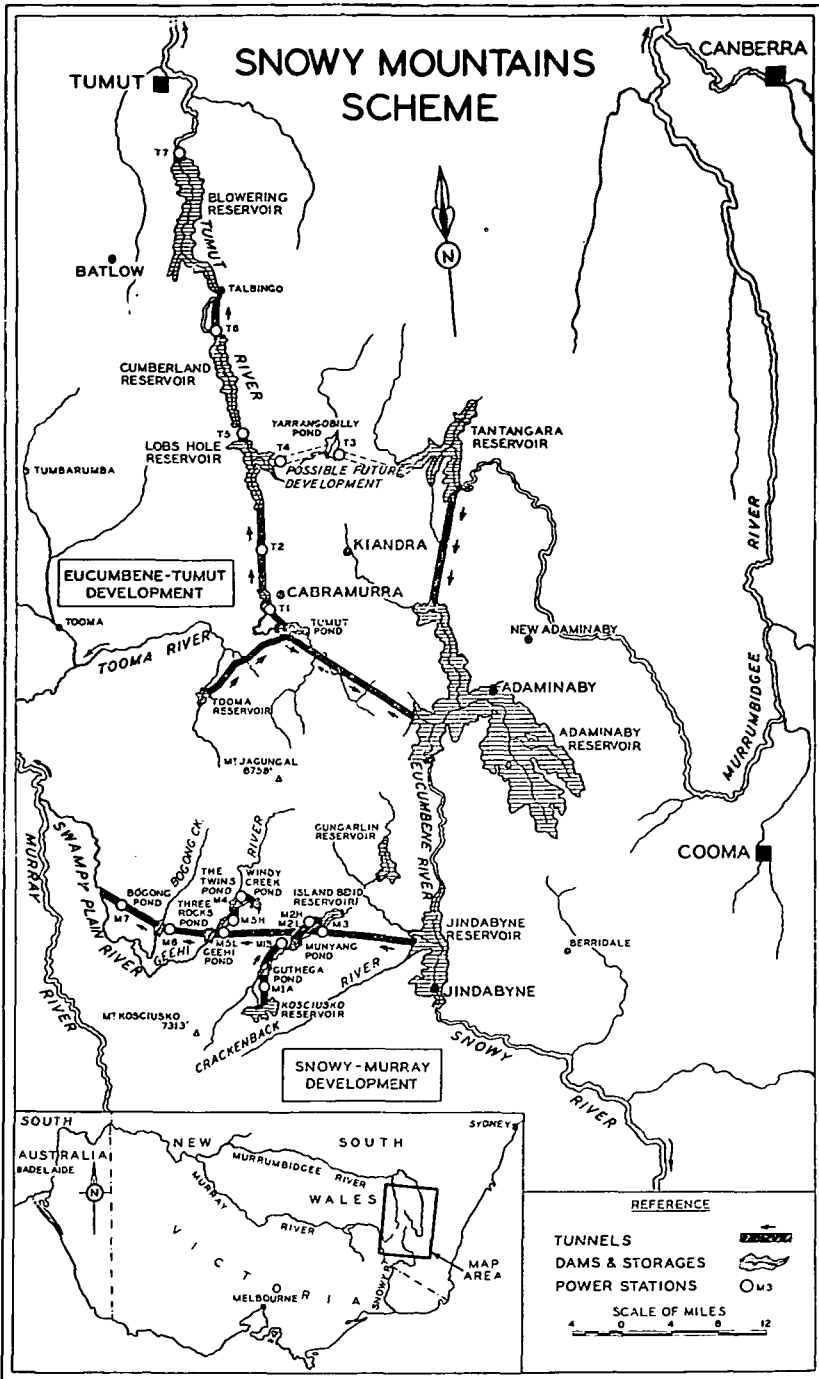
(iv) *Separate Systems and Total State Installed Capacity.* There are a number of separate systems and isolated plants which have not yet been interconnected with the main network and which at 1st July, 1954, had an aggregate installed capacity of 66,405 kW. The most notable are the Tamworth and Muswellbrook Coal Company systems and that of the Bega Valley County Council on the far south coast. The Tamworth system (22,000 kW) supplies power to an extensive district in the north-east of the State through 66,000 volt and 33,000 volt transmission lines. The Bega Valley system is shortly to be interconnected by means of a 66 kV transmission line from Cooma to the Bega Valley County Council's power station at Brown Mountain. Some councils along the Victorian border receive bulk supplies from Victorian authorities.

The aggregate installed capacity for the whole of the New South Wales systems and isolated plants was 1,230,356 kW (as at 1st July, 1954).

(v) *Future Development.* The following major power stations in Sydney are at present being extended by the installation of additional generating plant:—Pymont "B", 50,000 kW; Balmain, 43,000 kW; White Bay, 50,000 kW. Construction is also proceeding on new major power stations on the coalfields at Lake Macquarie, near Newcastle (330,000 kW), Tallawarra, near Port Kembla (120,000 kW), and Wallerawang, near Lithgow (120,000 kW). These stations will be linked with Sydney by 132,000 volt transmission lines, and extensive additions to the 132,000 volt system to supply increasing loads at various centres are also planned. A 132,000 volt system will be established around the outer Sydney Metropolitan Area for the supply of load centres at present fed through 33,000 volt circuits direct from the inner Sydney power stations. Future plans provide for the construction of a hydro-electric power station on the Hume Reservoir of 25,000 kW capacity, connected to the New South Wales network through a 132,000 volt transmission line between Hume and Wagga Wagga. Plans provide for the construction of a hydro-electric power station on the Warragamba Dam of 50,000 kW capacity to be connected to the 132 kV Sydney metropolitan network.

In addition to the power stations mentioned above which are under construction or planned for the system controlled by the Electricity Commission, a number of local government bodies have plans in hand for the development of independent power stations. Of these the more important are as follows:—The Northern Rivers County Council is constructing a steam power station at Koolkhan (near Grafton). Plans provide for an installed capacity of 25,000 kW. The first two units, totalling 10,000 kW, were in operation at 30th June, 1954. The Tamworth City Council is proceeding with the construction of a new steam power station at Gunnedah for the augmentation of supply to the separate system now supplied from Tamworth power station. The initial installation will be 30,000 kW and the ultimate now envisaged will be 75,000 kW. The North-West County Council has made plans for the establishment of a 10,000 kW steam power station on the Ashford coal-field. The New England County Council and the Bega Valley County Council are constructing small hydro-electric power stations on the Oakey River (near Armidale), and Georges Creek (near Bega) respectively.







(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. 390-393). Apart from this area there is, at present, only one hydro-electric station in New South Wales with an installed capacity of more than 10,000 kW. This is the 20,000 kW station at Burrinjuck Dam on the Murrumbidgee River (1927) the largest of the other installations being the 7,000 kW station at Wyangala Dam on the Lachlan River (1947). The output of both these plants is dependent on the release of waters for irrigation purposes.

Similar schemes, for which the water release will be dependent upon other than electrical requirements, are being constructed at the Hume Irrigation Dam on the Murray River and at Warragamba Dam which is being constructed to provide water supply for the Sydney Metropolitan Area. At Hume, two 25,000 kW units are to be installed and the output of the station will be shared equally between New South Wales and Victoria. At Warragamba, a 50,000 kW unit is to be installed.

Of the remaining hydro installations, the largest is that of the Northern Rivers County Council on the Nymboida River, a tributary of the Clarence. This station, which now has a capacity of 4,600 kW, commenced operation in 1924. The County Council also has two 100 kW hydro units in operation at Dorrigo on Bielsdown Creek, a tributary of the Nymboida River. The investigation of a number of much larger schemes for the further development of the Nymboida River is at present in progress.

The Clarence Gorge Scheme is a proposal for combined flood mitigation and hydro-electric generation on the Clarence River about 40 miles from Grafton and 240 miles from Newcastle. In February, 1955, the Clarence Advisory Committee which was set up by the New South Wales Government to report on the scheme recommended, because of economic reasons, against the construction of a dam at the Clarence Gorge either solely for flood mitigation or for the dual purpose of hydro-electric power generation and flood mitigation. The scheme is, however, still being considered, together with other alternatives, as a source of hydro-electric power.

The New England County Council has under construction a 2,500 kW hydro scheme near Armidale on the Oakey River, a tributary of the Macleay River.

The Mullumbimby Municipal Council has in operation two 150 kW hydro units, which were installed in 1925, on Wilson's Creek, a tributary of the Richmond River.

The Bega Valley County Council operates a hydro-electric scheme at Brown Mountain, utilizing the headwaters of the Bemboka River. This installation, which now has a capacity of 1,900 kW, was opened in 1944. Work is in progress on extensions to provide for two further 1,000 kW units.

There are also possibilities of relatively large scale developments on the Shoalhaven and Macleay Rivers. Preliminary investigations have been made by the New South Wales Government but no concrete proposals have as yet been adopted.

4. *Rural Electrification.*—When the Electricity Authority of New South Wales was constituted in 1946, one of its first tasks was the devising of a scheme for subsidizing the cost of rural electrification. At that time only 16,000 New South Wales farms were being served with electricity—less than one-third of those within reasonable reach of public electricity supply systems. In August, 1946 a subsidy scheme was approved by the Government and put into immediate operation. Under this scheme local electricity supplies receive subsidies from the Electricity Authority towards the cost of new rural lines. The amount of subsidy is based on the estimated cost of a proposed extension and the number of consumers able to be served by the new lines. In order that the funds available for subsidy purposes might be used to the best possible advantage, the scheme is designed to encourage local electricity supply authorities to construct the more economic extensions first. This has been achieved by fixing a limit to the cost

eligible for subsidy. 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 is paid on higher cost extensions but the excess over an average of £400 is not subsidized.

Between August, 1946 and June, 1955 about 17,500 miles of new distribution lines in rural areas were erected at a cost of over £11,250,000. These lines served 25,000 farms and 18,750 other rural consumers. At 30th June, 1955, the Electricity Authority was committed to the payment of £4,285,354 in subsidies of which over £1,804,327 had actually been paid. At that time the percentage of farms connected had been raised from 22 per cent. (in 1946) to 58 per cent.

Surveys have indicated that with the aid of subsidies, it should be possible to supply, from the public mains, about 90 per cent. of the 72,000 farms in New South Wales. At the present rate of progress, which shows no slackening, this target should be reached within the next ten years.

## § 2. Victoria.

1. *General.*—In Official 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 these 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. *The State Electricity Commission of Victoria.*—(i) *Functions of Commission.* Under the terms of the State Electricity Commission Act, three Commissioners were appointed, who took up duty on 4th March, 1919. Subsequently, in 1921, a full time Chairman was appointed, in addition to the three part-time Commissioners. Their powers authorized them to erect and operate electrical undertakings; to supply electricity in bulk to any corporation; to supply electricity to any person outside any area in which there was an existing undertaking; to carry on any business associated with an electrical undertaking; to make regulations as to precautions to be adopted in the use of electricity and arrange for the licensing of wiremen (powers which were subsequently extended to include the registration of electrical contractors, and the testing and approval of electrical appliances); and to establish and operate State coal winning projects.

In addition to these powers, the Commissioners were to enquire into and report to the Government as to the steps which should be taken to co-ordinate and concentrate all electrical undertakings in Victoria; to secure the efficient inter-connexion of such undertakings by adopting the necessary standards of plant, voltages, etc.; to encourage and promote the use of electricity for industrial purposes; to report to the Government on the prospects of establishing new industries in Victoria requiring large quantities of electrical energy; and to carry out investigations of coal deposits or hydro-potential that could be used for the generation of electrical energy.

(ii) *Newport and Yallourn Power Stations.* Action was taken to investigate the practicability of utilizing the State's brown coal and water power resources for the production of electricity. In a Report dated 26th November, 1919, the Commissioners concluded, *inter alia*, that the brown coal field located at what is now known as Yallourn in the neighbourhood of Morwell should be developed and a power house established thereon by 1923, with an initial capacity of 50,000 kW. As to water power, they were of the opinion that consideration of hydro-electric power schemes should be deferred until further investigations then being undertaken were completed. It was further concluded that in order to obtain maximum economy, the proposed station in the neighbourhood of Morwell and any other power house to be erected in connexion with the

proposed State electricity supply scheme should be interconnected with the Railways Department power station at Newport and operated under the control of a single authority.

The actual transfer of the Railways Department station at Newport did not take place until 1951, and in the meantime two new stations had been constructed by the Commission and were in operation. By the latter months of 1954, the total installed generator capacity of the Newport power station, consisting of Newport "A" (originally under the control of the Railways Department), Newport "B", and Newport "C", was 311,000 kW, which, added to Spencer Street (Melbourne City Council—89,000 kW) and Richmond (53,000 kW), made a total of 453,000 kW installed in the Melbourne metropolitan area.

To implement one of the main reasons for the establishment of the State Electricity Commission, namely, development of Victoria's brown coal resources, particularly for production of electrical energy, construction commenced in 1920 of the Yallourn power station, designed for an initial capacity of 50,000 kW, but increased within a few years by the addition of two further machines. On 24th June, 1924, power was first transmitted on a commercial basis from Yallourn to Melbourne.

The site chosen for the power station on the bank of the Latrobe River, about 6 miles from Morwell, had numerous advantages. Adequate water was available for the station's requirements, land nearby provided a good town site, while, most important of all considerations, an initial area of one square mile, adjacent to the station, contained proved reserves of brown coal totalling about 150 million tons with averages of 174 feet thickness and 33 feet overburden. By the use of mechanized methods for open-cut coal winning, the coal could be extracted and delivered to the power station at a cost of only a few shillings a ton. Development of these resources was designed to ensure to a large degree the State's independence in fuel requirements for the production of electrical energy.

Subsequent investigation in the Latrobe Valley has revealed what are believed to be the largest continuous deposits of brown coal in the world.

Proven coal suitable for open cut working totals 20,000 million tons. The Yallourn-Morwell brown coal-field, covering an area of 40 square miles and estimated to contain 10,000 million tons of brown coal capable of being won by open cut methods, forms an important part of the Latrobe Valley coal belt.

As the Yallourn station was intended to carry the base load of the system, steps were taken to augment its capacity to keep pace with the anticipated and continually increasing demand for electric power, and by the middle of 1955 Yallourn "A", "B" and "C" had a total capacity of 275,000 kW. In addition, an average of 8,000 kW of by-product electricity is fed into the system from the Yallourn briquette factory.

(iii) *Hydro-electric Development.* Development of the State's hydro-electric potential, the necessity of which was foreseen in the Commissioners' initial Report of November, 1919, but deferred pending further investigations, commenced in 1922. The project selected was dependent on the waters of the Goulburn River and adjacent mountain streams in the Cereberan Range, about 65 miles north of Melbourne. These two sources of water power provided a distinct advantage in that one was mainly summer flow and the other winter flow, thus permitting the continuous generation of power. Five small stations, namely, Sugarloaf (Eildon Dam, 15,000 kW), Rubicon (9,100 kW), Lower Rubicon (2,700 kW), Royston (840 kW), and Rubicon Falls (275 kW), were installed totalling approximately 27,900 kW. The complete project was in service by 1929. In conjunction with the new Big Eildon Dam, the Sugarloaf station has since been replaced by one designed for an ultimate total installed capacity of 135,000 kW. Two new generators, totalling 120,000 kW capacity are in process of being installed, while the two 6,750 kW machines in the former Sugarloaf power station have been re-built and re-installed at the revised rating of 7,500 kW each. The new power station, already in

partial operation, will operate on the increased flow of water from the new Big Eildon Reservoir constructed by the State Rivers and Water Supply Commission of Victoria. The power station is scheduled for completion early in 1957.

Located within a few miles of Eildon Dam is a group of four hydro-electric power stations operating on the natural flow of the Rubicon and Royston Rivers. With a total installed capacity of 12,900 kW, the group has an average annual production of 75 million kWh. The Rubicon and Royston stations form the oldest existing hydro development in Victoria. The stations came into service in 1928 and for 25 years operated in conjunction with the former Sugarloaf power station (at the old Eildon Dam). Maximum production of the group is in winter and spring when water flow is at its greatest. The Rubicon and Royston stations will continue to offset the winter-time reduction in output at the new Eildon power station, which is designed to operate primarily on the summer-time release of water for irrigation purposes.

In a Report to Parliament during 1920, the Commissioners included details of a large-scale project for harnessing the Kiewa River in the valleys and tablelands of the Bogong High Plains area of the Main Dividing Range, located approximately 150 miles north-east of Melbourne. At that time the Commission was not prepared to recommend adoption of the plan, but, on the other hand, suggested further consideration of the smaller Sugarloaf and Rubicon scheme. However, during the following 17 years, hydrological investigations were carried out in the Kiewa area which greatly facilitated the subsequent planning of a major hydro-electric project. On 12th June, 1937, a further Report was submitted to Parliament recommending adoption of a plan to provide an ultimate capacity of 117,000 kW from the Kiewa project. The plan, which included construction of four power stations with an initial installation comprising 20,000 kW to be in service by 1942, was approved and its provisions embodied in the State Electricity Commission (Extension of Undertaking) Act 1937. Construction commenced during 1938, but the war delayed progress and it was not until September, 1944 that the first station came into partial operation with 13,000 kW—a second unit of 13,000 kW was brought into service in April, 1945 and is contributing annually an average of 57 million kWh of electricity to the State system.

The 1937 Kiewa project, prior to its submission to the Government, was critically reviewed by a group of oversea consulting engineers, and their report confirmed that an enlarged scheme might be possible after further detailed investigation of the water power resources of the terrain adjacent to the Bogong High Plains. On 21st November, 1947, the Commission submitted proposals for expanding the original Kiewa scheme of 117,000 kW to one of 289,000 kW. Approval for the amended scheme was contained in the State Electricity Commission Act 1948. In accordance with this revised project, a second power station of 62,000 kW capacity began operation in 1955 and is due for completion early in 1956. On completion early in 1957 of a new supplementary diversion tunnel, combined production of the two power stations at Kiewa will average more than 200 million kWh annually. Work is in progress in connexion with a third power station of 96,000 kW, which is due to start operating in 1958; and work, suspended for three years on account of financial conditions, has been resumed on one of the main storage reservoirs at Rocky Valley on the Bogong High Plains.

Continued investigation of the area has resulted in further modification of the scheme to provide for an ultimate capacity of 333,000 kW, and an average annual production exceeding 800 million kWh.

Irrigation water will also be utilized at the Hume Reservoir where a new power station being erected for the Electricity Commission of New South Wales will serve both Victoria and New South Wales. Initially, the installed capacity of the power station will be 50,000 kW. Production of electricity, averaging about 200 million kWh a year, will be shared equally by the two States, each contributing its quota of the

annual cost. Victoria's share of the electricity generated will be fed into the State system. The power station is due to begin operating in 1957. Victoria will also buy its allotted share of electricity from the Snowy Mountains Hydro-electric Authority. Power will be fed into the Victorian system by a high voltage transmission line from the Snowy undertaking, connecting initially to the Victorian network near Kiewa. Transmission from the Snowy Mountains to the Victorian system is due to start in 1959.

(iv) *State Supply System. (a) Growth and Extent.* Since its inception, the Commission has gradually extended the State's system of supply so that it now serves two-thirds of the populated area of the State, in which nine-tenths of the population reside, and certain towns in New South Wales, including Albury. The following comparative table indicates the growth of the Commission's State system between 1929 and 1954

VICTORIA : STATE ELECTRICITY COMMISSION SYSTEM.(a)

Particulars	Year ended 30th June—			
	1929.	1939.	1949.	1954.
Installed Capacity .. .. kW	148,000	(b) 281,400	480,300	(c) 811,500
Units Generated .. .. million kWh	422	898	2,148	(c) 3,502
No. of consumers (approx.) (including bulk supply areas) .. ..	230,000	368,000	500,000	657,000
Country and Provincial Centres Served	141	419	699	973
Farms Served .. ..	700	4,985	14,419	27,082

(a) About 99 per cent. of electricity produced in Victoria is now generated by the State Electricity Commission, which also supplies 96 per cent. of consumers. Statistics for 1949 and 1954 include 1,850 kW and 20,000 kW, respectively for regional power stations not at present connected with the State system. (b) Includes Geelong power station (acquired 1st September, 1939) and Ballarat power station (acquired 1st July, 1934, but not in 1939 connected with the rest of the State system); excludes Spencer-street power station, which was not connected with the State system until 1st January, 1941. (c) Includes 25 cycle generation at Newport Power Station.

During 1953-54 electricity was reticulated to the various classes of consumers in the following proportions—domestic, 35 per cent.; commercial, 14 per cent.; industrial, 40 per cent.; public lighting, 1 per cent.; and traction (including railways), 10 per cent.

To 30th June, 1954 the Commission had acquired 85 country undertakings in addition to those acquired in the metropolitan area and in provincial cities. It carries out retail distribution throughout its area of supply, except for part of the metropolitan area where eleven municipal undertakings, operating under Orders-in-Council granted before the foundation of the Commission, purchase their electricity in bulk from the Commission. Bulk supply is given to the following New South Wales border municipalities and shires: Albury, Berrigan, Coreen, Corowa, Moama and Wentworth, and to a number of irrigation settlements bordering the River Murray. There were, at 30th June, 1954, 50 independent undertakings in various country towns in Victoria generating and distributing their own supplies. Operations of independent undertakings are governed by the Electric Light and Power Act 1928, which the Commission administers.

(b) *Composition and Control of Inter-connected Generating System.* Included in the inter-connected State generating system there were at 30th June, 1954 fifteen steam-electric, hydro-electric and diesel-electric power stations located at different centres in the State, and all comprised in one State-wide system. The distribution system comprised approximately 19,200 miles of high and low voltage power lines, nine terminal

receiving stations and 9,900 distribution sub-stations. The Commission's inter-connected generating system comprises three principal groups of power stations, namely :—

*Steam stations.*

Yallourn—burning raw brown coal; Metropolitan and provincial stations—burning mainly briquettes and brown coal. (Supplementary fuels used in metropolitan power stations comprise oil fuel, black coal and coke).

*Hydro stations.*

Kiewa; Eildon (commenced August, 1954); Rubicon-Royston.

*Diesel stations.*

Shepparton; Warrnambool.

In meeting the total demand on the system which, of course, fluctuates throughout the day and from month to month throughout the year, each group of stations is assigned a predetermined function dependent upon the availability of power from each group and the overall economics of generation. The various stations are utilized in a combination that will most economically meet the system load at a given time. For a description of the arrangement of the system thus involved see Official Year Book No. 39, p. 1170.

(c) *Organization.* In the Commission's organization, the functions of generating and distributing electrical energy are under the control of two separate departments—the Production Department in charge of power stations, brown coal winning, briquette manufacture, terminal stations and main substations, and the Electricity Supply Department, responsible for distribution to consumers. Energy throughout the inter-connected system is delivered by the Production Department to the Electricity Supply Department from the main transmission network, and not specifically from local power stations, since all power stations in the interconnected system, wherever they are situated feed into a common "pool". The territory covered by the Electricity Supply Department is divided into nine areas, each constituting a supply branch. Isolated areas, not at present included in the interconnected system—namely, Mildura and Wimmera (Horsham undertaking acquired in June, 1955)—operate as sub-branches of the North Western Region. The Metropolitan Branch supplies Melbourne and suburbs, with the exception of certain areas supplied by City Councils reticulating Commission electricity. Energy is supplied by the Production Department to the Metropolitan Branch, and those metropolitan municipal supply authorities which purchase electricity in bulk, at metropolitan terminal stations and a number of main transmission substations. Supply to the Eastern Metropolitan Branch (which has its headquarters at Dandenong) is on similar lines.

Headquarters of the Electricity Supply Department's branches outside the metropolis are located at Dandenong (Eastern Metropolitan), Traralgon (Gippsland), Geelong, Colac (South Western), Ballarat, Castlemaine (Midland), Benalla (North Eastern), and Bendigo, which is also the headquarters of the North Western Region.

Supply to the Gippsland Branch is obtained from the system via Yallourn power station at 22,000 volts and by 66,000 volt transmission lines extending within the branch to Maffra in the east, Leongatha in southern Gippsland and Warragul in western Gippsland.

Supply to the Geelong Branch is obtained from the two Geelong power stations and Geelong terminal station, the three being inter-connected with the rest of the system by a 66,000 volt transmission line to Newport power station.

Supply to the South Western Branch is obtained through Geelong terminal station by a 66,000 volt transmission line extending through Colac to Warrnambool, and also from Warrnambool power station and Hamilton power station which was interconnected with the rest of the system in November, 1954.

Ballarat Branch obtains its supply through the two Ballarat power stations and Ballarat terminal station which are inter-connected with the rest of the system by a 66,000-volt transmission line from Sunshine terminal station in the Melbourne Metropolitan area.



Both the Midland and Bendigo Branches obtain their supply through the 66,000-volt power line from Thomastown terminal station, one of the major metropolitan terminal stations in the system.

For the North Eastern Branch, supply is obtained through Rubicon "A" switching station and the Kiewa hydro-electric undertaking, while local reinforcement of supply is provided by Shepparton power station. Inter-connexion with the rest of the system is provided by the 66,000-volt transmission line extending from Thomastown terminal station to Kiewa via Rubicon "A" and Benalla, with branches to Shepparton and Kyabram, Yarrawonga and Mulwala (New South Wales), and via Wangaratta to Wodonga for supply to Albury.

The two isolated sub-branches not at present included in the interconnected State supply network are served by regional stations located as follows :—

Mildura sub-branch—

Mildura and Redcliffs (locally interconnected).

Wimmera sub-branch—

Horsham.

(v) *New Capacity.* Approved new electric power projects, all due for operation by 1960, will add about 500,000 kW to the installed capacity of the State generating system. This total does not include Victoria's half share in the hydro station now being built at Hume Dam, nor the quota it is proposed to take from the Snowy Mountains hydro-electric scheme; nor does it include additional plant at Yallourn programmed for service in 1960 but not yet formally authorized.

Major works brought into service since 30th June, 1954, or now under construction include—

(a) *Thermal stations.*

Yallourn extension—156,000 kW (under construction). Of this total, one 50,000 kW generator came into service in May, 1955. Further extensions (in addition to those now in progress) are to be made later.

Morwell—91,000 kW (initial stages), being the generating capacity available for public supply by 1960 at the new power station to be built in association with two new brown coal briquette factories. Further expansion would be possible, but development after 1960 has not yet been decided.

Metropolitan—40,000 kW at Spencer-street (Melbourne City Council) power station, comprising 15,000 kW brought into service for the latter months of 1954 and a 25,000 kW generator scheduled for service in 1959.

(Plant on order also includes a 40,000 kW steam-electric generator, the location of which has not yet been determined).

(b) *Hydro Stations.*

Kiewa—62,000 kW station (in partial service 1955) to be completed early 1956; 96,000 kW station; and a further construction to follow at a later date.

Eildon Dam—135,000 kW—comprising 120,000 kW of new plant (under construction) and 15,000 kW from re-designed plant.

Hume—25,000 kW representing Victoria's share of a 50,000 kW power station shared equally by Victoria and New South Wales (under construction).

A 220 kV transmission line from the Kiewa undertaking to Thomastown terminal station in Melbourne was completed in 1955 and is now being linked with the completed new 200 kV line built from Yallourn to Malvern terminal station to reinforce the existing 132 kV circuits already linking Yallourn with metropolitan terminal stations.

The Commission's long-term plans for State-wide extension of electricity supply involve the construction of a 220 kV transmission line from Kiewa to Mildura by way of Shepparton—a distance of approximately 350 miles. Construction has begun of the first section of this line to Shepparton, with a 220 kV spur line to Bendigo. The new regional station for Mildura at Redcliffs will function primarily as a peak-load station when the line is completed.

The Commission has submitted to the State Parliament its plan for the final phase of rural electrification of Victoria, extending supply to all populated regions of the State. The plan provides for the extension of State Electricity Commission supply to every home in Victoria except for about 15,000 homes located in the most isolated parts of the State.

### § 3. Queensland.

1. *General.* In Official 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.

The first of these organizations, which was operating in Brisbane well before the end of the last century, now supplies a large part of Brisbane's electric power requirements and a considerable rural area in the south-east corner of the State. By 1933 this organization was operating a modern power station at Bulimba, a suburb of Brisbane, with an installed generator capacity of 37,500 kW, from which it supplied more than 16,000 consumers and generated about 60 million kWh of energy per annum. Capacity is now 95,000 kW at Bulimba "A" plus 10,000 kW, "packaged plant" at Abermain (near Ipswich) and 60,000 kW at a new generating station known as "Bulimba B". The output from a 3,200 kW hydro-electric unit installed at Somerset Dam near Brisbane is fed into the Southern Electric Authority system. With these plants 553 million kWh were generated in 1953-54 while the total number of the Authority's consumers at 30th June, 1954 was 75,311.

The Brisbane City Council established an electricity supply service after the 1914-18 War, and by 1938 it was supplying an area of about 365 square miles, purchasing energy in bulk from a power station located at New Farm (administered by the Tramways and Power House Department) and from the City Electric Light Co. Ltd. Growth of the Council's electrical undertaking and power production is indicated by the following comparisons between 1937-38 and 1953-54 figures, respectively:—Installed capacity, 56,250 kW and 75,000 kW plus a 10,000 kW "packaged" plant erected at Tennyson; units purchased and generated, 71 million kWh and 438 million kWh; consumers, 57,000 and 111,230. Since 30th June, 1954 the first 30,000 kW set at a new power station at Tennyson has been commissioned by the Council.

During 1905, the Toowoomba Electric Light and Power Co. Ltd. established supply in Toowoomba, and has since supplied a considerable area including portion of the Darling Downs. Power was generated at the Company's diesel stations of 3,300 kW supplemented by bulk supplies purchased from the Southern Electric Authority of Queensland. In 1940 the company purchased the power undertakings at Warwick, and in 1946 the Killarney undertaking. The Toowoomba Electric Light and Power Co. Ltd. has now been absorbed by the Southern Electric Authority of Queensland.

The generation and distribution of electric power in Queensland had, until the last decade, tended to lag behind developments in this field in other States of Australia. The comparatively slow growth in the production and consumption of electricity can be attributed to some extent to the absence, prior to 1938, of a central statutory authority constituted to undertake the functions of co-ordinating, unifying and controlling the production and transmission of electric power. In addition, Queensland's vast area, coupled with a low population density, made large-scale rural electrification, elsewhere than in the south-eastern portion of the State which surrounds the major centres of industry and population, an uneconomic proposition.

Before establishment of the Regional Electricity Boards in 1945, no attempts had been made to unify or co-ordinate electricity supplies outside of South Eastern Queensland, and rural electrification, apart from reticulation within certain townships, was practically unknown.

2. **Royal Commission on Generation and Distribution of Electric Power in Queensland, 1936.**—On 5th December, 1935, the Queensland Government 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 p. 1182 of Official Year Book No. 39.

3. **The State Electricity Commission of Queensland.**—In 1937, the State Government legislated to constitute a State Electricity Commission (legislation administering the generation and distribution of electricity in Queensland prior to the establishment of the Commission is referred to on p. 1181 of Year Book No. 39), which commenced to function during January, 1938—to it was passed administration of the Electric Light and Power Acts 1896–1938. The Commission's main powers were :—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. In addition, the Commission was empowered to co-ordinate the industry's development throughout Queensland. Between 1938 and 1954, the number of private companies was reduced by absorption and acquisition from twenty-one to six, and publicly owned undertakings, by amalgamation into Regional Authorities, from forty-seven to forty-one including thirteen new schemes for small Western Queensland towns.

By agreement with the Commission in 1939, the City Electric Light Co. Ltd. (now the Southern Electric Authority of Queensland) became the co-ordinating authority for the provision of electricity in an area of some 10,062 square miles, extending from the New South Wales-Queensland border to Gympie, north of Brisbane. The Company acquired the undertakings at Bonnah, Beaudesert, Gympie, Coolangatta, Ipswich, Nambour, Southport, Redcliffe and the Somerset Dam supply and transmission line to Brisbane. Certain restrictions were placed on the Company's dividend rate, namely, limitation to the rate on Commonwealth bonds, plus 2 per cent. During 1940, a similar agreement was made with the Toowoomba Electric Light and Power Co. Ltd. for the supply of electricity in the Toowoomba, Warwick, Killarney and Allora districts, subsequently being extended to cover a comprehensive area of 9,324 square miles, including Stanthorpe and other districts. Transmission line extensions since that year have made supply available to a number of adjacent districts on the Darling Downs. The City Electric Light Co. Ltd. was converted to a public authority as from 1st February, 1953 by the Southern Electric Authority of Queensland Act of 1952 (see para. 5 below).

Amending legislation, passed by the Queensland Parliament in March, 1948, changed the constitution of the State Electricity Commission from a body corporate to a corporation sole. On 1st July, 1948, a Commissioner for Electricity Supply was appointed in lieu of the previous Commission of four Commissioners. Since its inception in 1938,

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 favorably with other States in the Commonwealth.

4. **Regional Electricity Boards.**—With a view to facilitating the control and development of electricity supply in areas of low population density or those having a predominantly primary producing economy, the Government in 1945 passed the Regional Electric Authorities Act. This legislation, as later amended, provides for the creation of regions of electricity supply and constitution of Regional Electricity Boards. The Act provided for transfer to the Boards of local authority electricity undertakings in their regions, and for acquisition by the Boards of privately owned undertakings when purchasing rights fell due. Each Board comprises representatives of local authorities in the region and a representative of the Commission. Financial operations of the Boards are under the control of the Commission.

Soon after passage of the Regional Electric Authorities Act, four regions were defined and four Regional Boards constituted, namely, Wide Bay, Capricornia, Townsville and Cairns. A fifth Board, entitled South Burnett, became an operating authority in October, 1947, but on 1st July, 1951 was absorbed in the Wide Bay Regional Board and the organization is now known as the Wide Bay-Burnett Regional Electricity Board. As power was to be obtained from the Wide Bay Regional Board's station at Howard, the Commission decided that development of the two regions could be planned more effectively by a single authority.

Activities of the four Regional Boards in 1953-54 compared with operations of the stations located in regions in 1945-46, and totals for Queensland as a whole, are shown in the following table:—

QUEENSLAND : REGIONAL OPERATIONS.

Region.	1945-46.		1953-54.	
	Units Generated.	No. of Consumers.	Units Generated.	No. of Consumers.
	m.kWh		m.kWh	
Wide Bay-Burnett .. .. .	13.7	11,467	46.1	21,910
Capricornia .. .. .	19.5	11,196	69.5	17,483
Townsville .. .. .	25.8	11,612	70.0	17,532
Cairns .. .. .	22.7	9,722	67.6	16,212
<b>Total</b> .. .. .	<b>81.7</b>	<b>43,997</b>	<b>253.2</b>	<b>73,137</b>
<b>Queensland</b> .. .. .	<b>487.0</b>	<b>194,429</b>	<b>1,388.0</b>	<b>305,636</b>

Generator capacity of the four existing Regional Boards installed at 30th June, 1955 was:—Wide Bay-Burnett, 22,500 kW; Capricornia, 22,500 kW; Townsville, 22,500 kW; Cairns, 17,070 kW; total, 84,570 kW.

5. **Creation of Southern Electric Authority of Queensland.**—A further major step in electrical progress, comparable with that taken when the agreements with the City Electric Light Co. Ltd. and Toowoomba Electric Light and Power Co. Ltd. were first entered into, was taken by the passing of the Southern Electric Authority of Queensland Act of 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 are included on the Board of the new 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.

An important advantage gained by the creation of this Authority is that on 30th June, 1968, acquisition of the Authority by the State Government can be effected without the necessity of a cash payment as the Government will have the power to convert the Authority's existing stock to inscribed stock. Furthermore, the replacement of the City Electric Light Co. Ltd. by the Southern Electric Authority as a public body relieves electricity consumers in the Authority's area of supply from the burden of taxation which has hitherto been payable by the City Electric Light Co. Ltd., but will not require to be met by the new Authority. An agreement has been signed between the State Government and the Southern Electric Authority giving effect to the principles contained in the new legislation.

As from 1st July, 1954 the Southern Electric Authority acquired the Toowoomba Electric Light and Power Co. Ltd., thus bringing this 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 19,386 square miles.

6. New Capacity.—(i) *Regions.* To provide for development of the electric power resources in the regions, the State Electricity Commission formulated a ten-year programme divided into two five-year periods. In the first, it was planned to erect main transmission systems to connect existing power stations located within the regions and supplement generating capacity by the construction of new stations. Work on this section of the plan is now nearing completion. In the second period, the transmission system will be extended to more sparsely settled areas, the ultimate purpose being the provision of "ring" transmission lines throughout each region and inter-connexion between the regions.

A number of new generating stations have been commissioned as follows:—Wide Bay (Burnett Region), of which 15,000 kW was placed in service during September, 1951—a further 7,500 kW in 1954 and a further set of 15,000 kW is scheduled for installation in 1956; Rockhampton (Capricornia Region) of which 22,500 kW was placed in service during September, 1952 and a further 15,000 kW is scheduled for installation in 1955; and Townsville (Townsville Region) of which 22,500 kW was commissioned in July, 1953, with a further 15,000 kW to follow in 1955. Each of these stations will have an ultimate capacity of 52,500 kW and be steam-operated. In the Cairns Region, construction is proceeding on the Tully Falls hydro-electric scheme and two 18,000 kW turbo alternator sets should be giving a supply of electric power by the end of 1956. The scheme is designed for an ultimate installed capacity of 92,400 kW. To augment existing capacity and to meet anticipated demands pending operation of Tully Falls, the Cairns Regional Board has installed nineteen diesel units with a total capacity of 13,110 kW.

The Tully Falls scheme is planned to link with the Townsville Regional Electricity Board's system for the purpose of marginal supply, and construction of this interconnexion has now commenced. Plans for the development of the Burdekin Falls Hydro-electric project are also proceeding. These schemes and the existing Barron Falls hydro-electric plant will exploit North Queensland's principal hydro-electric potential estimated conservatively at more than 316,000 kW.

At Mackay, where supply was first given in 1924, and Bowen, both situated on the coast between the Capricornia and Townsville Regions, the local Councils operate power stations of 4,500 kW and 1,000 kW respectively. The Mackay City Council has embarked on a scheme for rural development under an agreement with the State Electricity Commission. To cater for the anticipated growth in demand, the capacity of its station will be increased to 9,500 kW in 1954–55. At Bowen, the Town Council,

which established the service in 1925, is extending the station's capacity by installation of one 1,000 kW unit. During 1935, a small (3,800 kW) power house—Australia's first underground hydro station—was placed in service at Barron Falls near Cairns. When the Cairns Regional Board was established during 1946, operation of the station passed to the Board's control and now comprises part of its generating plant, totalling 15,370 kW, supplying an area of approximately 42,000 square miles.

(ii) *Western Queensland.* In Western Queensland, where a number of small isolated generating stations supply power to some of the larger towns, the Commission has evolved a plan to increase and modernize existing capacity. It involves installation of small internal combustion units ranging in size from 100 kW to 600 kW according to the load likely to be experienced, and conversion from direct to alternating current supply. The Government is assisting the scheme by subsidy—a feature of electrical development in Queensland. In general, the assistance provided comprises subsidies of up to one-third of capital cost on annual loan charges, with special subsidies of up to 50 per cent. for authorities in isolated areas.

In addition to improving supplies to the larger western towns, a scheme has been devised for electricity supplies for smaller towns in the western districts, where consumers range from 50 to 200. Subsidies of 65 and 60 per cent. will apply in those cases where the number of consumers supplied is less than 100 and 200, respectively. This plan is now being implemented and at 30th June, 1955, twenty-two townships in the west of Queensland have been provided with the amenities of electricity. Work is at present proceeding on similar schemes for a further four townships and such supply is expected to be available before the close of 1955. In addition investigations of the possibility of supply are being carried out at eleven other centres. The power is being supplied by small oil driven generating sets with automatic controls which can be run with a minimum of operating attendance.

Coal-burning gas producers have been successfully commissioned for public electricity supply purposes in the West. They have been or are now being installed at Longreach, Clermont, Dalby, Blackall and Barcaldine and further extensions of their use in Western Queensland is predicted, as lower tariffs and more efficient production of electricity should follow their use.

(iii) *South-eastern Queensland.* To increase the availability of electric power in the south-eastern area of the State, the two major generating authorities, in conjunction with the Commission, have power station projects under construction which are designed to place in service by 1956 new generating units totalling 335,300 kW. The Southern Electricity Authority is building a station known as Bulimba "B" on a site adjacent to Bulimba "A"—60,000 kW has been installed, but the ultimate capacity may reach 180,000 kW. A 3,200 kW unit at Somerset Dam near Brisbane is now in service and feeds into the Southern Electric Authority's system. At Tennyson in the Brisbane area the Brisbane City Council is constructing a new power station—initial capacity 60,000 kW which may be ultimately increased to 180,000 kW. The first 30,000 kW set has been commissioned and the second set is scheduled for commissioning in 1956. To supplement capacity pending operations of these projects, "packaged" generating units totalling 20,000 kW were obtained from overseas and commissioned early in 1953, one 10,000 kW set having been installed at Tennyson and another 10,000 kW set at Ipswich.

The power stations of the two major generating authorities at New Farm and Bulimba are interconnected at 33,000 volts.

(iv) *The Burdekin River Hydro-electric Project.* In the vicinity of Townsville, the Commission, acting on behalf of the Burdekin River Authority, has investigated the proposed hydro-electric development of the Burdekin. This project is linked with the plan to conserve the waters of the river for irrigation and flood mitigation and surveys undertaken indicate that approximately 80,000 kW could be generated. It has been

estimated that a hydro-electric station approaching this size should meet the requirements of Townsville and the coal mines in the region of Collinsville, for at least 20 years, and also transmit supply to Bowen and Proserpine and possibly to the Mackay area, and by obviating the continuous operation of thermal plant achieve significant savings in fuel.

(v) *The Tully Falls Hydro-electric Project.* The development of the Tully Falls for the hydro generation of electricity is now well advanced, the initial plant installation being 36,000 kW, and is scheduled for commissioning in 1956. This installation comprises a storage weir upstream from the falls, with an underground power station in the gorge at the foot of the falls. Arrangements were recently approved whereby a marginal supply of electricity will be provided from the project to the Townsville Regional Electricity Board, and tenders have been accepted for a further 36,000 kW of hydro generating plant to be installed. This hydro scheme is capable of development to supply the electrical needs of North Queensland for many years to come.

7. *Hydro-electricity.*—Behind the coastal plain of the Cairns-Ingham area is an extensive plateau, the 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 old divide. With heavy monsoonal rainfall on their catchments and concentrated fall, these streams represent a considerable potential source of power, but storage, which can in most cases be provided, is essential to control the very variable flow.

The Barron Falls scheme, 14 miles north-west of Cairns, came into operation in 1935. The installed plant operates under a head of 410 feet and comprises three 2,000 h.p. turbines each connected to a 1,320 kW generator. Average rainfall varied from 80-150 inches along the ranges to less than 35 inches in the western portion of the catchment. There is extreme variation from year to year, resulting in great fluctuation of stream flow which, at Kuranda, has varied from a maximum of 117,000 cusecs in 1911 to a minimum of 30 in 1915. Storage to regulate the flow is possible but has not yet been provided. During periods of low flow the supply of electricity is supplemented by fuel plants at Cairns, Atherton and Innisfail. Power is distributed over 22,000 volt transmission lines serving the tableland and extending southward along the coast to Tully.

A small hydro-electric scheme on the Mossman River, 5 miles from Mossman, North Queensland, comprises two 120 h.p. turbines operating under a head of 200 feet.

A hydro-electric power scheme at Tully Falls is being constructed. Water controlled by Koombooloomba Dam to be built on the upper Tully River will be diverted, a short distance above Tully Falls, through a tunnel and steel penstocks to Pelton-driven generators under a head of 1,485 feet. Ultimate installation will be four 18,000 kW sets, two of which will be installed initially. Future automatic power plants upstream and downstream from Tully Falls will consist of two 7,500 kW sets under 405 feet head and one 5,400 kW set under 230 feet head. The combined peak load for the three plants will be 69,000 kW. Interconnexion of the Townsville area, currently supplied by a thermal station, with the Tully scheme has been authorized and revision of the 160 mile duplicate 132 kV transmission line is under way. On present estimates power from the Tully scheme will be sufficient to supply the interconnected area until 1965, when addition power will be required. A full investigation by the State Electricity Commission of the electricity supply industry in North Queensland is proceeding and the terms of reference include the survey of additional hydro-electric projects.

Other northern schemes which have been investigated include Freshwater Creek (3,900 kW); North Johnstone-Russell Rivers (32,000 kW); Beatrice-North Johnstone Rivers (9,000 kW); South Johnstone River (25,000 kW); extension of Barron Falls scheme (22,000 kW); Herbert River (90,000 kW). The total potential of the plateau region is therefore about 250,000 kW at 50 per cent. load factor.

A power plant immediately below the Burdekin Falls Dam of the proposed Burdekin River Irrigation scheme will operate under an average head of 225 feet. The output of firm power will depend upon the varying demand for water for irrigation, but it is expected to average about 50,000 kW.

South of the Burdekin River no appreciable hydro-electric development is practicable. A plant of 3,200 kW capacity has been installed to utilize the outflow from Somerset Dam on the Stanley River a few miles above its confluence with the Brisbane River.

## § 4. South Australia.

1. *General.*—An account referring to the companies generating electric power in South Australia prior to the advent of the Adelaide Electric Supply Co. Ltd., and describing the development of that company's activities, was given in Official 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 upon 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. However, until the State assumed full responsibility for the supply of electric power, this body was not able to do much more than exercise the formal functions conferred on it by the Act.

Under the provisions of Section 3 of the Adelaide Electric Supply Company Act 1944, a Royal Commission was appointed to inquire into and report upon the supply of electricity by the Company and upon all matters concerning it. The Commission presented its report on 28th August, 1945, the main substance of which was, subject to certain considerations and assumptions, that the Government acquire the assets and liabilities of the Adelaide Electric Supply Co. Ltd., and the responsibility for the generation and transmission of electric power in South Australia be vested in a public authority to be called the South Australian Electricity Trust, or, alternatively, if acquisition were not considered desirable, that prices charged for the supply of electricity by the Company be fixed by regulation and determined from time to time by a Committee appointed by the Governor in Council, giving due regard to the interests of the public and a fair return to the shareholders of the Company. The Commission also recommended that an inquiry be held forthwith by the South Australian Electricity Commission regarding the co-ordination of electricity supplies in the State, and that the Commission have power to veto any proposals for the construction of works to generate and transmit electric power.

2. *The Electricity Trust of South Australia.*—Early in 1946, a Bill was passed transferring the assets of the Adelaide Electric Supply Co. Ltd. to the newly formed Electricity Trust of South Australia, which became responsible for unification and co-ordination of the major portion of the State's electricity supplies. This legislation provided that the Trust should take over the powers vested in the South Australian Electricity Commission under the 1943 Act, which, after establishment of the Trust, would cease to exist. In addition to the powers specified in the Adelaide Electric Supply Company's Acts 1897–1931, the Trust may, *inter alia*, supply electricity direct to consumers within a district or municipality with the approval of the local authority, and by agreement with other persons who generate or supply electricity, arrange to inter-connect the mains of the Trust with those of other persons, and give or receive supplies of electricity in bulk.



3. **Capacity and Production.**—There are three main categories of organizations generating electric power in South Australia, namely :—(a) Governmental, which include the Electricity Trust ; (b) Local Authorities, e.g., municipal and district councils, Renmark Irrigation Trust, Municipal Tramways 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 for their own use.

In 1953-54 total installed capacity in South Australia was 269,992 kW, an increase of 1,858 kW on the year before. The units generated totalled 955 million kWh compared with 822 million kWh in the previous year.

Of the total installed capacity, the Electricity Trust of South Australia operated plant with a capacity of 219,700 kW. It is thus the most important authority supplying electricity in the State. There were approximately 216,289 ultimate consumers of electricity, of whom 188,936 were supplied by the Trust. Its major steam stations were Osborne "A" (79,000 kW), Osborne "B" (120,000 kW) and Port Augusta "A" (15,000 kW) while the balance of the capacity controlled consists of a limited number of small internal combustion plants located in rural districts.

No hydro-electric potential exists in South Australia. Steam generating units comprise 94 per cent. of installed capacity and the balance, 6 per cent., is internal combustion equipment. Until recently, 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, 1954, 455,510 tons of coal were sold. Of this amount the Electricity Undertaking used 332,365 tons.

In order to cope with the rapidly increasing demand for power, the Electricity Trust is installing two additional 30,000 kW units at Osborne "B" Power Station. These will complete the "B" station which will then have a total capacity of 180,000 kW. Another major work under construction is the power station at Port Augusta with an ultimate capacity of 90,000 kW. The first 15,000 kW boiler and 30,000 kW turbo-alternator were commissioned in June, 1954. This power station is located at Port Augusta because of its proximity to the Leigh Creek coalfield and the station will use Leigh Creek coal exclusively. A new standard gauge railway line to connect Leigh Creek with Port Augusta is being constructed by the Commonwealth Railways Department. The power station is inter-connected with the Metropolitan Area by two transmission lines which will also supply power at intermediate points. The Trust has now decided to construct a second power station at Port Augusta to be known as Port Augusta "B". This station will have a capacity of 180,000 kW making the combined capacity at Port Augusta 270,000 kW. With the two Port Augusta power stations and the extensions to Osborne "B" station the planned increase in generating capacity is 315,000 kW.

5. **The Municipal Tramways Trust.**—In addition to the instrumentalities mentioned above which are engaged in the generation and distribution of electric power in South Australia, the Municipal Tramways Trust operates a power station of 19,100 kW at Port Adelaide, which supplies energy for traction purposes. In 1943 a 5,500 kW frequency changer was installed to form a link between the power stations of the Trust and the Electricity Trust of South Australia to permit interchange of power when necessary. In 1954 the service consumed approximately 19 million kWh of electricity.

## § 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 now 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 Official Year Book No. 39, p. 1189.

2. **Metropolitan Undertaking.**—Statistics relating to activities at the Metropolitan undertaking are shown in the following comparative table.

WESTERN AUSTRALIA : METROPOLITAN UNDERTAKING.

Particulars.					1928-29.	1938-39.	1953-54.
Plant capacity	..	..	..	kW	32,000	57,000	124,000
Maximum load	..	..	..	kW	21,500	33,000	89,000
Units generated	..	..	..	Million kWh	80	137	401
Coal used per unit generated	..	..	..	lb.	3.1	2.77	1.75
Coal used—							
Colliery small..	..	..	..	tons	110,460	165,355	312,903
Imported	..	..	..	..	427	3,367	..

As a result of a separate inquiry conducted at the same time as the early investigations into the proposed new station at South Fremantle, a recommendation was made favouring conversion of the East Perth 40 cycle system to the British and Australian Standard Frequency of 50 cycles per second. The recommendation was adopted and implemented by making the frequency of generation at South Fremantle 50 cycles and installing at East Perth a frequency changer able to convert 25,000 kW of energy from one frequency to the other. Change-over of consumers' plant is proceeding and a large number of important loads are now supplied at 50 cycles.

3. **Kalgoorlie.**—In Kalgoorlie, the Municipal Council in 1895 first established electricity supply and by 1945 it was supplying 3,350 consumers with direct current from a diesel station of 1,350 kW generating capacity. Primarily established to supply power for the gold mines and for traction, the Kalgoorlie Electric Power and Lighting Corporation operates a steam station of 18,750 kW and maintains a 22 kV line of 21 miles to the Celebration mine. Alternating current is also supplied to about 1,000 consumers. The Corporation's undertaking generates approximately 42 million kWh and new boilers have been installed to permit steam-raising from Colliery coal, since depletion of timber in neighbouring areas has proceeded to the point where firing on wood fuel is no longer economic.

4. **General Pattern of Electricity Supply.**—The pattern of the generation and distribution of electric power in Western Australia consisted until recently of a number of isolated systems each supplying a particular area. Except in the metropolitan area and in the area embraced by the South-West Power Scheme (See para. 6 below), where in both cases electricity supply is in the hands of the State Electricity Commission of Western Australia, local authorities are generally responsible for the supply of electricity for domestic, industrial and traction purposes. In the area between the Great Southern Railway from Northam to Albany and the west coast, however, the State Electricity Commission has now constructed transmission lines to give central station supply to the towns and their surrounding rural areas. In addition, there are

several mining companies which generate electricity for use in their mines. In order to cater for the expected growth in demand, capacity of the State's major generating stations is being increased and designs are proceeding for the inter-connexion of the Perth-Fremantle system with the south-western area.

The main load centre of the State is, of course, the Perth-Fremantle area into which is concentrated the major portion of the State's population and industry. The pending inter-connexion between the Metropolitan and Country systems is, however, expected to lead to a gradual decentralization of load.

5. The State Electricity Commission of Western Australia.—(i) *Origin and Aims.* In order to ensure an organized and co-ordinated future growth of electricity generation and distribution throughout the State, the Government introduced a Bill in 1945 to establish the State Electricity Commission, which, together with an Electricity Bill, became law early in 1946. Under these Acts, the Commission was given power, *inter alia*, 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 purchase as a going concern and carry on the undertaking of any supply authority. Under the Electricity Act, which should be read in conjunction with, and is subject to, the State Electricity Commission Act, 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 any proposals are not inconsistent with the Commission's plans.

(ii) *New Projects.* Since its inception in 1946, the Commission has proceeded with the task of increasing generating capacity in an endeavour to cater for a greatly increased demand for power. Long-range plans have been formulated to inter-connect the south-western portion of the State with the Perth-Fremantle system. One of its most important and immediate problems was to increase the capacity of the generating equipment serving Perth and Fremantle. During the 1939-45 War years, it became evident that the growth of demand for electric power would necessitate provision of additional generating equipment in the metropolitan area as soon as possible. Accordingly, the Government Electricity Supply authority commenced design work for a new station of 50,000 kW capacity. Contracts were let in 1945 and construction commenced on a site selected at South Fremantle, on the coast south of Fremantle proper. Responsibility for completion of this project was given to the Commission under the Act of 1946. As it was considered that an even larger station would be required, provision was made for the installation of two additional units giving an ultimate capacity of 100,000 kW. Steam is furnished by eight boilers designed to use pulverized coal from Collie, which is located about 120 miles from the station. At the end of 1954 four units had been placed in service and the output was being fed into the metropolitan system.

Most of the plant at the East Perth power station, which passed to the Commission's control in 1946, is due for retirement. Work is now proceeding upon dismantling the oldest boilers and generators in order to make room within the existing buildings for new and modern plant which will possess the merit of high efficiency, yet may be cheaply installed by requiring a minimum of site preparation, building and distribution expenditure. Current contracts provide for the installation of 30,000 kW of new plant in this station.

6. *South-west Development.*—At the request of the Government, the Electricity Advisory Committee in 1945 submitted a report recommending, amongst other things, that a National Power Scheme for the south-west be proceeded with (implementation of the recommendation of a previous Committee in 1939 had been prevented by the conditions then prevailing). 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. On 12th October, 1946, the State Electricity Commission acquired the Collie power station, which prior to 1946 was owned and operated by the Collie Power Company Limited. At the date of acquisition, the station's installed capacity was 5,000 kW, comprising two steam units. The capacity of the station was increased to 12,500 kW in 1952.

Since 1950, the Commission 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 many of the south-west towns have now been connected by transmission line to the Collie Power Station. When completed, a system of power lines will reticulate electricity over an area of approximately 1,800 square miles. Contracts have been let for the first three 30,000 kW units for a new power station at Bunbury, which will be inter-connected by transmission lines to the Collie and the metropolitan stations, permitting an interchange of power between the metropolitan and south-west systems.

## § 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. Other contributing factors to the low costs are 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 works with high load factor, and as a consequence the system load factor is also very high and at present is 61 per cent.

For information on hydro-electric development in Tasmania prior to the establishment of the Hydro-Electric Commission in 1930 see Official Year Book No. 39, pp. 1192-3.

2. *The Hydro-Electric Commission.*—(i) *Present System.* In 1929 the Government passed the Hydro-Electric Commission Act, under which was established the Hydro-Electric Commission and which 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 (Miena Dam) and Waddamana forebay. A small earthen dam diverts the outflow from the Great Lake through 2½ miles of canal and then by two pipelines to the Shannon Power Station, where 10,500 kW was added to the system in 1934. After passing through Shannon Power Station the water discharges into the Waddamana canals to be used again at the Waddamana Power Stations.

In 1933 it was decided to proceed with the Tarraleah Power Development. 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 where three 15,000 kW generators were placed in service in 1938. Shortly afterwards two more 15,000 kW units were added and a sixth machine installed in 1951 brought the total installed capacity at Tarraleah Power Station to 90,000 kW. Storage is provided at Lake St. Clair and at Lake King William, an artificial lake created by the 200-ft. high Clark Dam across the Derwent at Butler's Gorge. In the Butler's Gorge Power Station at the foot of the dam a single 12,200 kW generator was installed in 1951. To increase the security of the system and to permit variable seasonal loading of Tarraleah station a second canal from Clark Dam to Tarraleah was completed in 1955.

Early in 1939 it was decided to make full use of the Great Lake storage by increasing the peak capacity at Waddamana. War conditions impeded progress, but by the end of the war two 12,000 kW generators had been installed in a new power station, Waddamana "B", adjacent to the original station Waddamana "A". A third unit installed in 1946 and a fourth in 1949 brought the total to 48,000 kW. To enable a full peak capacity to be maintained at both Waddamana stations a duplicate of the original Waddamana canal was constructed during 1947-48.

Between 1930 and 1948 the generating capacity of the system was increased by 121,500 kW but the demand for power continued to increase rapidly and it was obvious that a greatly accelerated construction programme would have to be undertaken. Construction of the Tungatinah Power Development was started in 1948 and the Trevallyn Power Development in 1949.

The Tungatinah scheme draws water from three separate catchment areas located on the Central Plateau between the Great Lake (Shannon-Waddamana) and the 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 principal catchment utilized by the Tungatinah scheme is drained by the Nive River. A 120-ft. high dam at Pine Tier diverts the waters of the Nive through 6½ miles of canal system to the first of a chain of four artificial lakes, created by dams constructed across the outlets from natural marshes and linked by large open cuts. From the southernmost lake a tunnel and then five steel pipelines lead to the six 25,000 kW generators in Tungatinah Power Station, 1,005 feet below on the Nive River just upstream from Tarraleah station on the opposite bank of the river. Power was first generated at Tungatinah in mid-1953 and with a capacity of 150,000 kW it is the largest hydro-electric power station in Australia. Water from the smaller Clarence River catchment is brought into one of the lakes in the Tungatinah system by means of a woodstave pipeline 5½ miles in length and the third catchment area utilized is the Lake Echo-Dee River catchment. Regulation of this catchment has been achieved by construction of a dam at Lake Echo to provide the main storage reservoir for the Tungatinah scheme, construction of the Lake Echo Power Station (one 32,400 kW generator) to utilize 568 feet of the difference in level between Lake Echo and Dee Lagoon and the diversion of water from Dee Lagoon through 2 miles of tunnel to the main Tungatinah system.

The Trevallyn Power Development, the first constructed by the Commission outside the Central Plateau region, was undertaken primarily to meet the requirements of the aluminium industry. The waters of the South Esk River are diverted through 2 miles of tunnel and pipeline to a power station on the Tamar River near Launceston. Three 20,000 kW generators were installed in mid-1955 and a fourth unit has since brought the total capacity of Trevallyn Power Station to 80,000 kW.

(ii) *New Capacity.* The Hydro-Electric Commission is still engaged in the most progressive construction programme in its history. Since 1948 the generating capacity of the system has been increased by 276,600 kW to a total of 447,100 kW and present construction is planned to bring this total to 569,000 kW by 1960. There will still remain very considerable resources for future development as it is considered that at least 2,400,000 kW can be economically developed.

The Wayatinah Power Development, now under construction, will comprise 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. All the water which has passed through Tarraleah or Tungatinah stations will be diverted, by a weir across the Nive River below Tarraleah, through 4 miles of tunnel and then steel pipes to Wayatinah "A" Power Station lower down on the Nive River where 83,700 kW will be installed by 1960.

A dam across the River Derwent, just below its junction with the Nive, will create a small lake into which will flow all the water from Wayatinah "A" plus water collected by the Derwent below Clark Dam. One mile of tunnel and one mile of pipeline will lead the water to Wayatinah "B" Power Station on the Derwent three-quarters of a mile below its junction with the Florentine River. The lower station, Wayatinah "B", is being constructed first for completion by 1958. Installed capacity will be 38,250 kW.

There is every indication that the demand for power in Tasmania will continue to increase. 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.*—After 1930, every effort was made to keep pace with anticipated increases in demand by means of a progressive construction policy. The abundant and comparatively cheap supplies of electricity and other natural resources attracted to Tasmania a number of important secondary industries for which energy costs constitute a significant proportion of the total cost of production. Some of the more important organizations and their continuous power demands when plant is operating are as follows:—Electrolytic Zinc Company of Australasia Ltd., 51,000 kW; Australian Commonwealth Carbide Company Ltd., 6,500 kW; Goliath Portland Cement Company Ltd., 1,800 kW; Associated Pulp and Paper Mills Ltd., 8,600 kW; Australian Newsprint Mills Ltd., 24,000 kW; and Australian Aluminium Production Commission, 30,000 kW.

## § 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. Administration and control of these undertakings is vested in the Commonwealth Department of Works.

(ii) *Australian Capital Territory.* Supply was first established at Canberra during 1915. The Department owns steam stand-by plant of 2,100 kW capacity which is operated in conjunction with the New South Wales Electricity Commission's generating equipment. The major portion of Canberra's power requirements are supplied in bulk from the New South Wales inter-connected system. Within the next few years, defence projects at present under construction in Canberra will greatly increase the demand for electrical energy. These requirements will be met from the Snowy Scheme, the first section of which came into operation early in 1955, the power produced being fed into the New South Wales inter-connected system at Cooma.

(iii) *Northern Territory.* At Darwin, supply was established by the Town Council in October, 1934, but later, during April, 1937, responsibility for generation and supply was placed in the hands of the Northern Territory Administration. The power station is equipped with diesel generating plant of 3,925 kW capacity. Two 970 kW diesel sets will be installed in 1955–56. Small diesel generating units supply the requirements of Katherine (297 kW), Tennant Creek (165 kW) and Alice Springs (1,042 kW).

In 1948 it was announced that the Department of Works and Housing (now the Department of Works) had selected a site for a hydro-electric station on the Adelaide River, 72 miles from Darwin. The scheme is designed to augment supply to Darwin and suburbs when the diesel equipment at present installed is unable to cope with the demand for power. No constructional work has yet been undertaken on the project.

2. *External Territories—Papua and New Guinea.*—Responsibility for the operation and establishment of electrical undertakings in Papua and New Guinea is vested in the Administration of the Territory of Papua and New Guinea, whose headquarters are

located at Port Moresby. The total generating capacity of the diesel engine-driven generating sets amounts to 4,708 kW. The generating capacity of the power plants at the main centres is—Port Moresby, 2,569 kW; Rabaul, 561 kW; Lae, 598 kW; Madang, 280 kW; Samarai, 200 kW; Kavieng, 67 kW; Wewak, 110 kW; Lorengau, 100 kW; and 223 kW distributed among eleven outstations where generating capacity is between 5 kW and 60 kW. New power plant is under construction at Lae (874 kW) and Rabaul (1,451 kW). The townships of Wau and Bulolo are supplied by the Bulolo Gold Dredging Co., which operates a hydro-electric plant of 5,500 kW. This power is produced mainly to supply the alluvial dredges and, in addition, now supplies the recently constructed plywood mill at Bulolo.

Vast hydro-electric potential exists in New Guinea—it has been estimated at 15,000,000 kW, but because of the island's location, absence of large load centres and lack of industrialization, only a very small proportion could, at present, be economically developed.

In 1950 it was announced that the Commonwealth Government had joined with British Aluminium Co. Ltd. of London to locate and develop large capacity hydro-electric schemes in New Guinea. A new company was formed, known as New Guinea Resources Prospecting Co. Ltd., with a capital of £100,000. The Commonwealth holds 51 per cent. of the shares and has a controlling interest on a board of five members. The agreement for formation and operation of the Company is administered by the Commonwealth Department of Supply, except in matters requiring compliance with the law of New Guinea, when responsibility for administration rests with the Department of Territories. Surveys and comprehensive investigations are in progress.

The following hydro-electric schemes are under construction:—Port Moresby—at Rouna on the Laloki River providing 3,000 kW when complete, with provision for expansion to 5,000 kW. It is anticipated that the power station should be in operation during 1956. The present project utilizes only portion of the power available from the Laloki River and the economic ultimate development will be of the order of 50,000 kW; Goroka—with an initial capacity of 100 kW and Aiyura (for the Agricultural Experimental Station) with an initial capacity of 30 kW. Stream gauging and other preliminary investigations for hydro-electric schemes have been carried out at Lae, Rabaul and Madang.

There are possibilities for major hydro-electric development in the following localities:—Rouna Falls (near Port Moresby), Upper Snake and Busu-Erap-Leron (near Lae), Upper Ramu (near Markham-Ramu divide—80 miles from Lae) and Hathor Gorge (on Purari River) with an estimated average power of 100,000 kW, 150,000 kW, 2 million kW, 250,000 kW, and 3 million kW respectively. These have estimated run-offs of 1,400; 600; 12,000; 1,000; and 75,000 cusecs respectively.

In an area of 150,000 square miles of the Eastern New Guinea mainland, the power potential has been estimated at 150 kW per square mile which compares favourably with potentials of 170 kW per square mile for Switzerland and 95 kW per square mile for Norway.

#### D. STATISTICAL SUMMARY, 1948-49 AND 1953-54.

The following table shows statistics for each State separately and for the six States combined for 1948-49 and 1953-54 and relates to:—(i) the numbers and installed capacity of central electric generating stations, (ii) the values of production and output and the average numbers of persons employed in the generating side of the electricity supply industry and (iii) the amount of electricity generated in both years and the number of ultimate consumers of electricity in 1954-55.

For further statistics of the electricity supply industry (years 1938-39 and 1949-50 to 1953-54) see Chapter IX.—Manufacturing Industry.

## CENTRAL ELECTRIC STATIONS.

Particulars.	N.S.W.	Vic.	Q'land.	S. Aust.	W. Aust.	Tas.	Total.
1948-49.							
Generating Stations—							
Government .. No.	10	10	..	2	9	2	33
Local Authority ..	41	33	36	13	42	..	165
Companies ..	40	25	11	23	65	1	165
Total .. ..	91	68	47	38	116	3	363
Installed Capacity of Generators—							
Steam .. kW	869,109	518,950	206,334	(a)	78,225	(a)	1,869,769
Hydro ..	33,155	52,419	4,141	(a)	..	(a)	272,763
Internal combustion ..	51,581	17,237	25,506	(a)	37,476	(a)	143,476
Total .. ..	953,845	588,606	235,981	(a)	115,701	(a)	2,286,008
Persons employed(b) No.	3,853	2,059	885	(a)	915	(a)	8,822
Value of output(c) £,000	13,368	5,512	2,893	(a)	2,172	(a)	26,938
Value of production(d) ..	6,582	2,653	905	(a)	664	(a)	12,233
Electricity generated(e) Million kWh	3,717	2,504	890	567	399	976	9,053
1953-54.							
Generating Stations—							
Government .. No.	20	15	1	7	8	6	57
Local Authority ..	34	28	45	14	38	..	159
Companies ..	30	24	8	23	47	3	135
Total .. ..	84	67	54	44	93	9	351
Installed capacity of Generators—							
Steam .. kW	1,288,349	749,675	354,754	(a)	154,900	(a)	2,802,254
Hydro ..	36,980	38,919	7,160	(a)	..	(a)	380,709
Internal combustion ..	96,622	40,811	36,711	(a)	44,082	(a)	233,646
Total .. ..	1,421,951	829,405	398,625	(a)	198,982	(a)	3,416,609
Persons employed(b) No.	5,140	2,690	1,289	(a)	961	(a)	11,395
Value of output(c) £,000	31,401	16,169	9,057	(a)	5,633	(a)	69,981
Value of production(d) ..	13,996	6,862	3,154	(a)	2,309	(a)	30,098
Electricity generated (e) Million kWh	5,450	3,573	1,511	955	627	1,472	13,588
Ultimate consumers(f) No.	921,229	687,949	305,636	216,289	118,117	97,400	2,346,620

(a) Not available for publication; included in total for Australia. (b) Average employment over whole year including working proprietors. (c) Value of electricity produced plus certain earnings. (d) Value added to materials and fuel 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. This detail is not available for 1948-49. 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 synonymous with the number of persons served with electricity because one ultimate consumer may embrace three or four persons, e.g., in a household.



## CHAPTER XI.

## WATER CONSERVATION AND IRRIGATION.

## A. RESOURCES, UTILIZATION AND NATIONAL AND INTERSTATE ASPECTS.

## § 1. Introduction.

Official Year Book No. 37, pp. 1096-1141, contained a special article "The Conservation and Use of Water in Australia" prepared by Mr. Ulrich Ellis of Canberra. In subsequent issues much of Mr. Ellis's article of a statistical nature has been advanced, as has the general information on the more important developments in this field, but for details of general, descriptive and historical matter reference should be made to the original article. Appended to the special article was a bibliography of selected books, reports, papers, etc. dealing with the development of the water resources of Australia and their conservation (*see* pp. 1140-41).

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 XVIII.—Local Government: and on the generation of hydro-electric power to Chapter X.—Electric Power Generation and Distribution.

A series of maps showing the location of major dams and reservoirs and the various irrigation schemes operating in each of the States was published on pp. 1073-9 of Official Year Book No. 40.

## § 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. Therefore, it is impossible at present to estimate, with any degree of reliability, the total average annual flow of Australian streams, but it is doubtful whether the total average annual flow of all Australian rivers would exceed 60,000,000 acre feet, a figure small 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, 900 (in the aggregate).

2. *Major Dams and Reservoirs.*—The table below lists existing major dams and reservoirs together with those under construction or projected as at June, 1955.

## MAJOR DAMS AND RESERVOIRS IN AUSTRALIA.

Name.	Location.	Capacity (Acre feet).	Height of Wall (Feet).	Remarks.
EXISTING DAMS AND RESERVOIRS.				
Eildon .. ..	Upper Goulburn River, Victoria	2,750,000	250	Earthen embankment 3,300 feet long. Storage for irrigation and for the generation of electricity.
Hume .. ..	Murray River near Albury	1,382,000	110	Part of Murray River Scheme—storage for domestic, stock and irrigation purposes. Being increased to 2,500,000 acre feet. Hydro-electric power to be developed.
Miena .. ..	Great Lake, Tas- mania	1,125,000	40	Regulates water to Waddamana hydro-electric power station.
Burrinjuck ..	Murrumbidgee River, New South Wales	652,200	247	Storage for irrigation and production of hydro-electric power.
Lake Victoria ..	Murray River near South Australian border, in New South Wales	551,700	..	Natural storage for irrigation in South Australia.
Waranga .. ..	Goulburn River, Victoria	333,400	..	Earthen embankment, 23,800 feet long. Irrigation storage.

MAJOR DAMS AND RESERVOIRS IN AUSTRALIA—*continued.*

Name.	Location.	Capacity (Acre feet).	Height of Wall (Feet).	Remarks.
EXISTING DAMS AND RESERVOIRS— <i>continued.</i>				
Wyangala ..	Lachlan River, New South Wales	303,900	190	Storage for domestic, stock and irrigation purposes and for generation of hydro-electric power.
Rocklands ..	Glenelg River, Victoria	272,000	..	Part of Wimmera-Mallee domestic and stock water supply system.
Clark ..	Derwent River, Tasmania	243,000	200	Serves Tarrareah hydro-electric power station.
Avon ..	Nepean River, New South Wales	173,800	230	Part of Sydney water supply.
Lake Brewster ..	Lachlan River, near Hillston, New South Wales	108,000	..	Storage of rural water supplies for the Lower Lachlan.
Glenmaggie ..	Gippsland, Victoria	106,000	100	Storage for irrigation.

## DAMS AND RESERVOIRS UNDER CONSTRUCTION OR PROJECTED.

Burdekin Falls ..	Burdekin River, North Queensland	6,584,000	150	Projected for generation of hydro-electric power, irrigation and flood mitigation.
Adaminaby ..	Eurombene River, New South Wales	3,500,000	390	Projected as part of Snowy Mountains Hydro-electric Scheme.
Menindee Lakes Project	Darling River near Menindee, New South Wales	2,000,000	..	Part of Darling River water conservation scheme—under construction.
Warragamba ..	Warragamba River, New South Wales	1,678,500	415	Under construction for Sydney water supply.
Jindabyne ..	Snowy River, New South Wales	1,100,000	260	Projected as part of Snowy Mountains Hydro-electric Scheme.
Burrendong ..	Macquarie River, near Wellington, New South Wales	914,000	193	Under construction for rural water supplies.
Blowering ..	Tumut River, New South Wales	860,000	300	Projected as part of Snowy diversion scheme.
Somerset ..	Stanley River, Queensland	724,000	130	Under construction for Brisbane-Ipswich water supply.
Tantangara ..	Murrumbidgee River, New South Wales	480,000	183	Projected as part of Snowy Mountains Hydro-electric Scheme.
Warkworth ..	Wollombl Brook (Hunter Valley), New South Wales	400,000	100	Projected as a flood mitigation dam for the Hunter Valley.
Lake Echo ..	Lake Echo, Tasmania	384,000	55	Under construction for hydro-electric purposes.
Keepit ..	Namoi River, near Gunnedah, New South Wales	345,000	135	Under construction for rural water supplies.
Tinaroo Falls ..	Barron River, North Queensland	320,000	133	Under construction for irrigation purposes in the Mareeba-Dimbulah area.
Glenbawn ..	Hunter River, near Scone, New South Wales	296,000	240	Under construction as part of Hunter Valley conservation work.
Wellington ..	Collic River, Western Australia	150,000	..	Existing dam to be enlarged for supply of water to irrigation districts and to agricultural areas and towns.
Koombooboomba ..	Tully River, North Queensland	146,000	123	Under construction for hydro-electric and possibly irrigation purposes.
Calra Curran ..	Loddon River, Victoria	120,000	..	To be completed in 1955-56. Storage for irrigation.
Upper Yarra ..	Yarra River, Victoria	110,000	270	Under construction for Melbourne water supply.

The maps on pp. 1073-9 of Official Year Book No. 40 show the positions of the above-mentioned dams and reservoirs.

3. Irrigation.—(i) *History.* For some brief remarks on the history of irrigation in Australia referring to the efforts of the Chaffey Brothers and to the Victorian Irrigation Act in 1886 see issues of the Official Year Book prior to No. 39.

(ii) *Extent and Nature of Irrigated Culture.* About half of Australia's irrigated acreage is now 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 these areas served by the Murray and its tributaries irrigation water is used extensively for vines, orchards, pastures, fodders, and for domestic and stock purposes. Approximately half 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, fodders and pastures are served. Irrigation schemes have not been developed in Tasmania or the Northern Territory.

The following table shows the area of land irrigated in each State during the years 1938-39 and 1950-51 to 1954-55 :—

## AREA OF LAND UNDER IRRIGATED CULTURE.

(Acres.)

Season.	N.S.W. (a)	Vic. (b)	Q'land.	S. Aust.	W. Aust.	Tas.	A.C.T.	N.T.	Aust.
1938-39 ..	183,518	515,357	48,953	43,602	14,278	8,599	50	..	814,357
1950-51 ..	597,773	716,051	83,150	79,062	28,197	7,242	468	..	1,511,943
1951-52 ..	596,601	723,797	113,040	58,427	29,106	6,830	656	..	1,528,457
1952-53 ..	494,900	755,035	126,693	57,057	31,067	8,414	666	..	1,473,767
1953-54 ..	540,243	821,025	146,282	62,062	34,247	9,412	800	..	1,614,071
1954-55 ..	616,264	863,563	139,414	69,452	36,130	13,761	791	151	1,739,526

(a) Source : Water Conservation and Irrigation Commission. (b) Source : State Rivers and Water Supply Commission. (c) Excludes pasture and fallow lands.

The next table shows the area of land irrigated in each State during 1954-55 according to the nature of irrigated culture.

## AREA OF LAND UNDER IRRIGATED CULTURE, 1954-55.

(Acres.)

Crop.	N.S.W. (a)	Vic.(b)	Q'land.	S. Aust.	W. Aust.	Tas.	A.C.T.	N.T.	Aust.
Rice ..	38,674	..	(c)	..	..	..	..	..	38,674
Vegetables ..	16,103	14,669	18,835	9,061	6,814	(c)	139	52	65,673
Fruit ..	20,012	35,677	3,901	14,749	4,504	1,148	10	55	165,719
Vineyards ..	13,567	45,185	..	26,521	390	..	..	..	62,323
Sugar-cane ..	(c)	..	62,323	..	..	..	..	..	1,286
Hops ..	..	(c)	403	..	..	1,286	..	..	403
Cotton ..	..	..	..	..	..	..	..	..	..
Other Crops (including Fodder and Fallow land)	179,786	95,819	(d) 31,808	2,785	1,476	2,145	508	37	314,667
Total, Crops	268,142	191,350	117,270	53,116	13,184	4,882	657	144	648,745
Pastures ..	348,122	667,213	22,144	(c) 16,336	22,946	8,879	134	7	1,090,781
Total ..	616,264	863,563	139,414	69,452	36,130	13,761	791	151	1,739,526

(a) Source : Water Conservation and Irrigation Commission. (b) Source : State Rivers and Water Supply Commission. (c) Included in Other Crops. (d) Includes tobacco, 4,533 acres. (e) Includes lucerne for pasture.

(iii) *Irrigation Trends.* In Official Year Book No. 37, p. 1099, the following trends in irrigation practice were described :—the improvement of irrigation techniques in established areas, a growing appreciation of the benefits and necessity of irrigation in humid and sub-humid areas with a flush annual rainfall, the use of irrigation to stabilize the stock industries, especially on an "extensive" basis, consideration regarding the provision of weirs to prevent the entry of salt water, the increasing quest for cheap electric power to aid pumping operations for stock, domestic and irrigation purposes, and an increase in the extent of spray irrigation.

(iv) *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; increasing density of stock on irrigated pastures which leads to the spread of such diseases as foot rot and fluke in sheep, and mastitis and contagious abortion in cattle; growth problems affecting plants and trees; the prevention of evaporation from water storages; and the potability of saline waters for stock.

The Commonwealth Scientific and Industrial Research Organization maintains the following research stations:—Merbein (Victoria)—horticultural problems, particularly of the dried vine fruits industry; Griffith (New South Wales)—influence of irrigation on plant life (using horticultural trees as test plants), irrigation methods, land drainage and soil structure; Deniliquin (New South Wales)—pastures; Werribee (Victoria)—diseases of dairy cattle, and the Kimberley Research Station (Western Australia)—tropical crops and pastures. In the maintenance of Merbein and Griffith Stations the Commonwealth is assisted, financially and otherwise, by the New South Wales Water Conservation and Irrigation Commission, by the Dried Fruits Export Control Board and by private organizations.

The Soils Division of the Organization has made detailed surveys of more than a million acres since 1927, with less detailed reconnaissance surveys over many millions of acres. The Division works closely with State authorities. The keynote of soil investigations is relationship between soil and land use, and there is an increasing tendency to seek such surveys before irrigation districts are established. Research is also conducted in the field of water percolation in relation to soil structure.

The Irrigation Research and Extension Committee plays an important part in the agricultural activity of the Murrumbidgee Irrigation Areas. It is representative of the State 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 effects of floods, overstocking, bush fires, and 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.* While a more or less complete general picture of the available and potential surface water resources exists, much remains to be done with regard to the location and development of sub-surface supplies (artesian, sub-artesian and ground water), in view of their importance as the basis of settlement over large areas of Australia.

The extent of the artesian basins—particularly the Great Artesian Basin—has been fairly accurately determined, and the use of sub-artesian supplies is extensive and more development is possible. The shallower ground-water supplies, however, particularly along alluvium valleys and coastal sandbed areas, have not been investigated and developed in any degree, except in a few localities.

(ii) *Artesian and Sub-artesian Supplies.* Pressure water, variable in quantity and quality, either artesian or sub-artesian, is obtainable in many parts of Australia, the various artesian basins extending over approximately one-third of the continent. A map of Australia showing the extent of the known artesian basins appears on page 1211 of Official Year Book No. 39.

The Great Artesian Basin, the most extensive in the world, underlies an area of approximately 670,000 square miles, comprising about 430,000 in Queensland, 80,000 in New South Wales, 120,000 in South Australia and 40,000 in the Northern Territory. Of the numerous defined major and minor water-bearing basins in Australia, the following are the principal :—

#### PRINCIPAL WATER-BEARING BASINS : 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	Pliocene-Permian ..	670,000	Up to 7,000
Murray ..	Victoria, New South Wales, and South Australia	Miocene-Oligocene ..	107,000	100 to 900
Torrens ..	South Australia	Recent Pleistocene ..	4,000	Up to 600
Coastal Plain ..	Western Australia	Recent Jurassic ..	10,000	200 to 2,500
Adelaide ..	South Australia..	Recent Oligocene ..	1,100	10 to 850
Gippsland ..	Victoria ..	Pleistocene-Oligocene	1,800	200 to 1,800
Port Phillip ..	Victoria ..	Pleistocene-Oligocene	300	Up to 600
Eucla.. ..	Western Australia, South Australia	Pliocene-Miocene ..	68,000	300 to 2,000
North-west ..	Western Australia	Tertiary Permian ..	50,000	230 to 4,000
Collie ..	Western Australia	Permian ..	500	..
Desert ..	Western Australia	Permian ..	130,000	100 to 3,000
Barkly ..	Northern Territory, Queensland	Cretaceous, Cambrian and Upper Pre-cambrian	57,000	150 to 1,000

More than 3,000 artesian bores have been constructed within the Great Artesian Basin and the daily free discharge from all bores continuing to flow in Australia has been stated to exceed 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 it is unsuitable for plant life, while in certain areas sub-artesian waters are suitable for all uses including irrigation. In some districts a considerable amount of irrigation is carried out from shallow ground-water supplies.

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, many will not cease, but will assume a perpetually steady rate of flow, corresponding with the average intake of water from rainfall absorbed

by sandstone outcrops. 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* Official Year Book No. 37, pp. 1103-4.)

(iii) *Ground Water.* Ground water 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 10 million gallons per day for general use from the Tomago coastal sands near Newcastle and at Botany, Sydney, private industry pumps 5 million gallons per day for its own use from similar sands.

### § 3. National and Interstate Aspects.

1. *General.*—As the Commonwealth Constitution makes special reference to water problems, both the Federal and the State Governments have an interest in the control and conservation of water. The main responsibility for control of water resources resides in 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 sections.

In the Report on Irrigation, Water Conservation and Land Drainage presented to the Commonwealth Government by the Rural Reconstruction Commission in 1945 national aspects of water conservation and use were emphasized. The report recommended that to obviate lack of co-ordination, an all-Australian plan, having the assent of the various governments be adopted, and that the Commonwealth should endeavour to promote interstate co-operation and co-ordinated development generally.

In 1946 a conference between the Commonwealth and States agreed to revive the Irrigation Production Advisory Committee first established under the authority of the Australian Agricultural Council in 1938. Its functions are:—(a) to prepare for the consideration of the Australian Agricultural Council, or any Committee of Ministers appointed by the Council, conclusions formed from investigations to be carried out by Commonwealth and State Officers into the various agricultural industries which it is possible to develop on irrigated lands; (b) to undertake long-term co-ordination of land utilization in irrigable areas served by the River Murray and its tributaries, this involving co-ordination of all available lands and the carrying out of such supplementary investigations as may prove necessary.

2. *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 Murrumbidgee (980 miles), the Darling (1,700 miles), and the Goulburn (280 miles). The average annual flow of each of the chief contributory streams is as follows:—Upper Murray, including the Mitta Mitta and Kiewa Rivers, 3,506,000 acre feet; Murrumbidgee River, 2,280,000 acre feet; Goulburn River (including Broken River), 2,502,000 acre feet; Darling River, 2,224,000 acre feet; and Ovens River, 1,169,000 acre feet. Irrigated production in the River Murray basin is mainly in the form of wine, dried fruits, fresh fruits, dairy produce, wool, fat lambs, rice, vegetables, poultry, eggs and pigs.

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. The Agreement provided for the construction of works, the allocation of the water between the three States, and the appointment of a Commission to implement the Agreement. The Commission comprises four Commissioners, representing the Commonwealth and the three States respectively. The Commonwealth representative presides.

(ii) *River Murray Waters Agreement.* Under the Agreement, construction works are carried out by the States (who 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 fill Lake Victoria storage once, and with the aid of water returned from Lake Victoria, to maintain certain specified flows in the lower river varying from 47,000 acre feet per month in the winter months to 134,000 acre feet per month in the four summer months of maximum demand—the total amounting to 1,254,000 acre feet over twelve months. These flows are to meet domestic and stock requirements in South Australia, losses of water in lockages and evaporation losses other than in the lakes at the Murray mouth, together with 603,000 acre feet per annum for diversion from the Murray for irrigation in South Australia. 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 Official Year Book No. 40 (p. 1065) and earlier issues.

At a Conference of Ministers held in July, 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 400,000 acre feet per annum would be added to the Murray River and that a storage of not less than 1,500,000 acre feet 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 found that an increase in capacity of 500,000 acre feet in storage on the Upper Murray River above Albury was the maximum that was economically justifiable for the regulation for irrigation purposes of the waters of the Upper Murray River and of waters added from the Snowy River. The Commission agreed that this increase could best be provided by increasing the size of the Hume Reservoir from its previously designed capacity of 2,000,000 acre feet to 2,500,000 acre feet, but if for hydro-electric purposes additional storages become justified in the future further increases would best be provided at some other site. It subsequently recommended to the contracting Governments that the River Murray Waters Agreement be amended to provide for this enlargement of the Hume Reservoir to 2,500,000 acre feet. A conference of Ministers considered the recommendation in July, 1954 and agreed to the enlargement. In addition it was agreed that the Commission should be given power to construct regulators to carry out such other work on the River Murray 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.

The total estimated quantity of water diverted in 1954-55 for irrigation and other purposes from the Murray and its tributaries (under the River Murray Agreement) was as follows (in acre feet):—New South Wales, 1,531,000; Victoria, 2,197,000; South Australia, 205,000; a total of 3,933,000 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 33,000 acres. The design comprises a mass concrete spillway and outlet works extending 1,000 feet and an earthen embankment 106 feet high extending for 4,000 feet across the river flats. The length of the total structure is approximately one mile. Work on the installation of a hydro-electric generating station below the dam is now in progress. Work is also proceeding on the completion of the reservoir to its recently approved capacity of 2,500,000 acre feet.

The Yarrawonga Diversion Weir was completed in 1939 to raise 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 per second, and will 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 per second, and is designed to serve 270,000 acres. Only a portion of both these areas will be irrigated.

Adjoining the river in New South Wales and 35 miles from the Murray-Darling Junction, Lake Victoria storage, with a capacity of 551,700 acre feet and a surface area of 27,670 acres, was completed in 1928. The water released from Lake Victoria is used by the South Australian settlements. Work is proceeding on the enlargement of the inlet channel to Lake Victoria 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 provided a number of storages on the tributaries, thereby contributing very materially to the large amount of irrigation development in the Murray Basin. The total capacities of such main storages are: New South Wales—Burrinjuck (Murrumbidgee), 652,200 acre feet; Wyangala (Lachlan), 303,900 acre feet; Victoria—Eildon (Goulburn), 2,750,000 acre feet Waranga (Goulburn), 333,400 acre feet. No storages exist on the Murray in South Australia. More details of these and other State works on Murray tributaries will be found in the sections dealing with State systems.

3. **New South Wales-Queensland Border Rivers Agreement.**—The New South Wales-Queensland Border Rivers Agreement which was ratified by the Parliament of both States, was executed on 27th November, 1946 and came into effect on 1st July, 1947 while the Dumaresq-Barwon Border Rivers Commission, which is charged with the duty of giving effect to the Agreement and the ratifying Acts, was constituted on 1st May, 1948. The Agreement provides for the construction of certain works on parts of those portions 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 in the Macintyre River at Goondiwindi and the existing weir in the Barwon River at Mungindi. The costs of these works and of administration are to be borne by the States in equal shares. The agreement further provides that the water discharged 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, has for some time past been carrying out investigations of alternate 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 have now been extended to tributary streams and superficially suitable sites have been located on Pike's Creek and the Mole River. A geophysical survey has recently been made at each of these sites and comparative estimates are in course of preparation to determine the relative economy of providing one large storage at Mingoola or two smaller storages on the tributaries.



The Irrigation and Water Supply Commission of Queensland, which is the constructing authority for the new weirs and regulators, has carried out detailed investigations as to sites for such works. The construction of Bonshaw and Cunningham Weirs on the Dumaresq River was completed in January, 1953 and June, 1954 respectively.

Investigations are proceeding and designs are being prepared for a weir and regulator on the Barwon River at the offtake of the Boomi River and for a low level weir to establish a pumping pool at a location 32.9 miles on the Dumaresq River. The existing Goondiwindi and Mungindi Weirs are being maintained, operated and controlled by the Queensland Irrigation and Water Supply Commission.

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 it is necessary to supplement rainfall from April to October by irrigation to stabilize and increase production. The capacity of the area to grow lucerne and tobacco under irrigation has already been demonstrated. Irrigation of cotton, root crops, cereals, and citrus fruit, and expansion of the fat stock industry, is being examined.

4. **Snowy Mountains Hydro-electric Scheme.\***—(i) *General.* 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 in July, 1949 passed the Snowy Mountains Hydro-electric Power Act 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.

The scheme will be constructed in two parts, the first being known as the Snowy-Murray system, where the water is to be diverted by tunnel from a large dam across the Snowy River at Jindabyne, to the Swampy Plains River in the Murray Valley; and the second as the Snowy-Tumut system, the water in which will be diverted by tunnel from a dam on the Eucumbene River—a tributary of the Snowy—at Adaminaby to the Tumut River, a tributary of the Murrumbidgee. The whole scheme will involve the construction of:—seven major dams (with a total storage capacity of approximately 7 million acre feet); sixteen power stations; 80 miles of tunnels varying in diameter from 18 feet to 42 feet—one projected tunnel 30 miles long under the Alps will be one of the largest in the world; nearly 500 miles of racelines at high elevations.

The total expenditure was originally estimated to be £225 million but latest expectations are that the cost will be approximately £419 million. The scheme will form the greatest engineering and developmental work ever undertaken in Australia and one of the major engineering projects of the world.

(ii) *Snowy Mountains Hydro-electric Power Act 1949.* The Snowy Mountains Hydro-electric Authority is constituted by a Commissioner; he is assisted by two Associate Commissioners. The functions of the Authority are defined in the Act as follows:—(a) to generate electricity by means of hydro-electric works in the Snowy Mountains area and (b) to supply electricity so generated to the Commonwealth for defence purposes and for consumption in the Australian Capital Territory. The general powers of the Authority as defined in the Act are as follows:—For the purpose of performing its functions the Authority shall have power 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 electricity generated by the Authority; and (d) incidental or

\* See also Chapter X.—Electric Power Generation and Distribution, pp. 390–393. For more detailed information see special article by the Commissioner, Snowy Mountains Hydro-electric Authority (Sir William Hudson) which appears in Chapter XXIX.—Miscellaneous.

related to the construction, maintenance, operation, protection, management or control of any of the works specified above. The Act provides that the Authority may sell to a State, or to an authority of a State, electricity generated by the Authority which is not immediately required by the Commonwealth for defence purposes or for consumption in the Australian Capital Territory.

(iii) *The Authority's Objectives and Programme.* The two basic objectives are the production of electricity and the diversion of water inland.

The first power station, at Guthega, came into service in April, 1955. Additional generating capacity is scheduled to become available progressively.

By the end of 1959 the Snowy Scheme will supply the Murrumbidgee River with approximately 530,000 acre feet per annum of additional water, by diversions from the Eucumbene and the Upper Tooma Rivers. Ultimately the scheme will provide approximately 1,818,000 acre feet per annum of additional regulated water of which 1,020,000 acre feet will go to the Murrumbidgee and 798,000 acre feet per annum to the Murray.

The Department of Public Works, New South Wales, is constructing the Adaminaby Dam and the Department of Main Roads, New South Wales, and the Snowy River Shire are reconstructing over 70 miles of existing roads. Construction is now in progress on the 14 mile Eucumbene-Tumut Tunnel, Tumut Pond Dam, the 8,000 feet pressure tunnel leading to Station T1, and on Station T1 itself. Designs are in progress for the Tooma-Tumut Diversion, construction of which should begin about the end of 1956, and also for the T2 Project, construction of which will commence about one year later.

## B. STATES AND TERRITORIES.

### § 1. Australian Local Pattern of Water Conservation and Use.

The foregoing sections deal generally with water conservation and irrigation in Australia and with national and interstate projects. The following survey indicates 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 for the stock industries (mainly underground sources), 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 appertains to hydro-electric generation almost exclusively. The Northern Territory is primarily concerned with stock supplies and the safeguarding of long stock routes.

### § 2. New South Wales.

1. *General.*—(i) *Rainfall and History.* In issue No. 37 of this publication (p. 1110) information on the pattern of rainfall and the history of irrigation in New South Wales preceded the description of water conservation and use in that State, but it has now been omitted. (See also Chapter II.—Physiography, p. 30 of this issue.)

(ii) *Administration.* Under an amendment of the Irrigation Act, made by the Conservation Authority of New South Wales Act 1949, the Water Conservation and Irrigation Commission of New South Wales now consists of three members appointed by the Governor, one of whom is appointed as Chairman. The operations of the Commission cover water conservation, control of irrigation areas, 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 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 428 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 and Lake Brewster on the Lachlan, another tributary. 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 head storages have been commenced on the Macquarie, Namoi and Hunter Rivers. 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 five Irrigation Areas :—The Murrumbidgee Irrigation Areas consisting of 403,256 acres served with water through a channel system stemming from the river at Berembend Weir; the Coomealla Irrigation Area of 35,432 acres, served by pumping from the Murray; the Curlwaa Irrigation Area of 10,209 acres, supplied from the Murray by pumping; the Hay Irrigation Area of 6,806 acres, supplied with water pumped from the Murrumbidgee; and the Tullakool Irrigation Area of 16,305 acres supplied from the Edward River at Stevens Weir. All these areas are administered by the Commission, and details of the various schemes are given in subsection (iii) below.

(ii) *Works.* The capacities of the main storages (in acre feet) are :—

*Murray* :—Half share of Hume Reservoir, weirs and locks to Wentworth (736,420); Stevens Weir, Edward River (7,165).

*Murrumbidgee* :—Burrinjuck Dam (652,200); Berembend Weir (10,000); Maude Weir (6,740); Redbank Weir (7,360).

*Lachlan* :—Wyangala Dam (303,900); Lake Cargelligo (29,435); Jemalong Weir (2,200); Lake Brewster (108,000).

Water from the Hume Reservoir is used for domestic and stock purposes, to provide bulk supplies for country towns, for the irrigation of vines, fruits and fodder in the Curlwaa and Coomealla areas, for rice and other cereals and for pastures in the Tullakool Irrigation Area, for domestic and stock supply and irrigation in the Berrigun, Wakool and Denimein Districts, and for water trusts for domestic and stock purposes and/or irrigation.

The Wyangala Dam is 30 miles upstream from Cowra in the Central West. It has a catchment of 3,200 square miles. Water from the dam, supplemented by the unregulated flow of the Belubula River, provides for domestic and stock purposes along the full length of the river (over 700 miles) and also for irrigation by land holders operating licensed pumps. The towns of Cowra, Forbes, Condobolin, Hillston and Booligal are supplied. Balance storages at Lake Cargelligo and at Lake Brewster conserve water during periods of high flow for release as required. Water from the Lachlan, diverted at Jemalong Weir, supplies the districts of Jemalong and Wylde's Plains, serving an area of 224,556 acres. Wyangala is now producing hydro-electric power. Proposals for future development include provision of a head storage on the Belubula River.

The approximate total length of channels (including main canals) in New South Wales is 2,890 miles. The approximate length of drains and escape channels is 983 miles, and the approximate total length of pipe lines is 68 miles, making a grand total of 3,941 miles of channels and pipe lines, etc.

(iii) *Extent of Systems and Nature of Irrigated Culture.* The following table shows the areas of the various irrigation systems and the areas under irrigated culture in New South Wales during 1954-55, the latter according to the nature of irrigated culture.

## AREAS OF SYSTEMS AND OF LAND UNDER IRRIGATED CULTURE : NEW SOUTH WALES, 1954-55.

(Acres.)

System, etc.	Total Area.	Area under Irrigated Culture.										Total.
		Rice.	Other Cereals Grown for Grain.	Lucerne. (a)	Other Fodder Crops.	Pastures.		Vineyards.	Orchards. (c)	Vegetables.	Fallow Land and Miscellaneous.	
						Sown. (b)	Natural.					
Irrigation Areas—												
Murrumbidgee (within the Areas)	403,256	23,316	22,801	3,721	2,024	72,448	2,804	5,621	11,032	2,709	33,256	182,732
Lands adjacent supplied under agreement	(d)	..	500	82	21	3,324	25	3	85	9	..	4,030
Coomaalla ..	35,432	..	..	14	..	..	..	4,046	684	8	..	4,752
Curlwaa ..	10,209	..	..	23	66	..	..	647	1,030	5	..	1,771
Hay ..	6,806	..	..	62	106	1,097	31	..	..	..	..	1,296
Tullakool ..	16,305	1,793	941	95	120	5,570	..	..	..	..	1,500	10,019
Total ..	472,008	25,109	24,242	3,997	2,318	82,439	2,860	10,317	15,831	2,731	34,756	204,600
Irrigation Districts—												
Benerembah ..	134,921	3,312	9,740	1,039	1,125	24,257	2,020	..	..	..	11,584	53,077
Tabbita ..	10,745	..	250	150	190	2,080	20	..	..	..	790	3,480
Wah Wah ..	572,904	..	1,400	1,085	150	7,000	450	..	..	..	2,820	12,905
Berrigun ..	779,564	..	4,824	26,804	2,496	122,511	1,445	..	..	41	3,401	161,522
Wakool ..	495,430	8,300	4,370	2,000	2,920	57,510	3,330	..	..	24	1,020	79,474
Denimain ..	224,556	1,953	2,060	1,214	720	9,001	3,450	..	12	..	108	18,518
Jemalong and Wyld's Plains ..	147,005	..	4,825	4,885	623	4,919	1,157	..	..	..	25	16,434
Gumby ..	345	..	..	63	..	..	33	..	19	32	..	174
Deniboota(f) ..	304,321	..	..	..	..	834	645	..	..	..	40	1,519
Total ..	2,669,791	13,565	27,496	37,240	8,224	228,112	12,550	..	31	97	19,788	347,103
Flood Control Districts—												
Lowbidgee ..	375,000	..	..	..	..	..	(g)94,118	..	..	..	..	(g)94,118
Medgun ..	272,800	..	..	..	..	..	(g)61,760	..	..	..	..	(g)61,760
Total ..	647,800	..	..	..	..	..	g155,878	..	..	..	..	g155,878
Irrigation Trusts—												
Pomona ..	1,580	..	..	..	..	..	..	770	130	..	..	900
Blairmore ..	315	..	..	..	..	..	..	..	..	..	..	(d)
Brangan ..	4,933	..	100	195	..	200	725	..	50	2	..	1,272
Bungunyah-Koraleigh ..	1,810	..	..	..	20	..	..	1,132	..	40	..	1,192
Glenview ..	661	..	20	22	..	20	336	..	71	..	..	469
Goodnight ..	1,167	..	..	..	6	..	..	593	2	5	..	606
Bama ..	3,446	..	..	..	..	..	..	..	..	..	..	(d)
Total ..	13,912	..	120	217	26	220	1,061	2,495	253	47	..	4,439
Water Trusts—Domestic and stock supplies	2,914,831	..	..	..	..	..	..	..	..	..	..	..
Licensed Diversions(h)—												
To irrigate ..	(d)	..	..	13,933	7,073	17,544	3,336	755	3,897	13,228	(i) 356	60,122
Grand Total(e) ..	(d)	38,674	51,858	55,387	17,641	328,315	175,685	13,567	20,012	16,103	54,900	j 772,142

(a) Includes grazing and cutting. (b) Perennial and annual self-seeding. Perennial amounted to 23,449 acres. (c) Citrus and deciduous. Deciduous amounted to 8,435 acres of which 7,587 acres were in the Murrumbidgee Irrigation Area. (d) Not available. (e) Incomplete. (f) Works incomplete. (g) Area irrigable; details of area actually irrigated are not available. (h) Excludes domestic and stock supplies for which particulars are not available. (i) Tobacco. (j) Includes Flood Control Districts—see (g).

3. **Murrumbidgee Irrigation Areas.**—(i) *Description.* These areas comprise about a third of the State's irrigated acreage and in 1954-55 received 280,920 acre feet of the total water allocated for stock, domestic supply and irrigation (1,043,552 acre feet). They are served by the Burrinjuck Dam (capacity 652,200 acre feet), 40 miles north-west of Canberra, on the Murrumbidgee. The catchment above the dam is 5,000 square miles. The river rises on the high plateau north of Mount Kosciusko where rainfall exceeds 60 inches. Flow for the irrigation districts is supplemented by unregulated flow below the dam from the Tumut River. 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 for 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 and spring freshets, fed by melting snows, and is released during the September-April irrigation season. It passes along the river channel to Berembd Weir, 240 miles westward, where it is diverted to the main canal with an off-take capacity of 1,600 cubic feet per second. The main canal has been completed to beyond Griffith, 96½ miles from the off-take. Reticulation channels aggregate approximately 870 miles and drainage channels 828 miles.

In addition approximately 413 miles of supply channels run through adjacent irrigations districts in which the water supply is operated and maintained by the Commission, but land transactions are not under its control. The land on which the Murrumbidgee Irrigation Areas are situated originally comprised large sheep stations with a sparse population.

Population was 12,000 in 1923, 15,000 in 1929, 20,000 at the 1947 Census and 24,000 at the 1954 Census. At the 1954 Census the population of the Yanco district (with Leeton as the centre) was 10,000; and the population of the Mirrool Area (with Griffith as the centre) was 14,000.

(ii) *Administration.* The Water Conservation and Irrigation Commission controls land transactions and water supplies for the Murrumbidgee Irrigation Areas, also the distribution of electricity throughout those areas. Other local government services, including town water supply, are provided by Shire Councils. Land is disposed of by the Commission under freehold or perpetual lease tenure or leased for short terms for grazing or cultivation. The area under occupation at 30th June, 1955 was 356,558 acres, including 41,570 held for short lease grazing, agriculture, etc.

(iii) *Production.* Since the inauguration of the scheme in 1911 the volume of production from the area has greatly increased. Numbers of new crops are grown while the volume of the major products of the area prior to the scheme, such as wool and livestock for slaughtering has expanded considerably. The principal products to-day are: wool, livestock (sheep, cattle and pigs) for slaughtering, rice, citrus fruits, peaches and nectarines, grapes, tomatoes, peas, beans and root vegetables.

Rice growing was initiated on the Murrumbidgee Irrigation Areas in 1924. Since then, aggregate production from those areas and from the other localities mentioned hereunder has been approximately 1,348,000 tons. In 1954-55 total area sown was 38,674 acres, including 26,628 acres on the Murrumbidgee Irrigation Areas and adjoining districts, 8,300 acres at Wakool, 1953 acres at Denimein and 1,793 acres at Tullakool. The total quantity of water delivered for the rice crops during the 1954-55 season was 207,855 acre feet. Water supplied for rice represents about one-half of the total delivered on the Murrumbidgee Irrigation Area and slightly less than a quarter of the water artificially supplied for irrigation in New South Wales. During and after the 1939-45 War the area planted was increased to the limit of water available.

Co-operation is a prominent feature in the Murrumbidgee Areas. Co-operative organizations in the Mirrool section handle about 300,000 bushels of fruit per year (compared with 54,600 in 1927-28). The annual sales turnover of the Leeton cannery in recent years has been over £1,000,000. Settlers and government agencies co-operate extensively in all matters relating to irrigation practice.

4. **Other Irrigation Areas.**—The Curlwaa, Coomealla, Hay and Tullakool 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 also is responsible for operation and maintenance of works to supply water at rates determined by the Commission.

Curlwaa Area, on the Murray near Wentworth, consists of 10,209 acres of which 2,242 acres at 30th June, 1955, comprised irrigated holdings. Production consists of dried vine fruits, deciduous fruits and fodder crops.

Coomealla Area, 9 miles upstream from Curlwaa, comprises 35,432 acres of which 6,031 acres at 30th June, 1955 comprised irrigated holdings. Other land in the undeveloped part is leased for grazing. Production consists of vine and citrus fruits. An extension of the Coomealla Irrigation Area has been undertaken in recent years to provide irrigation farms for ex-servicemen. As a result, 100 ex-servicemen have now been placed on these new farms.

Hay Area, on the lower Murrumbidgee, consists of 6,806 acres, of which 1,164 acres are occupied as irrigated holdings. Production comprises dairy products, fat lambs, sheep, wool and fodders.

5. **Irrigation Districts.**—These Districts are set up under the Water Act 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. The following are the districts or provisional districts constituted and the areas of land benefited:—*Murray River*—Wakool District (completed) 495,430 acres, Berriquin Provisional District (completed) 779,564 acres, Deniboota Provisional District (first section completed) 304,321 acres, Denimein Provisional District (completed) 147,005 acres, Jernargo Provisional District (certain portions of which have been included in Berriquin District) 4,505 acres, Barramein Provisional District (domestic and stock supply only—works not yet commenced) 88,651 acres; *Murrumbidgee River* (completed)—Bencrembah District 134,921 acres, Tabbita District 10,745 acres, Wah Wah Provisional District 572,904 acres, Gumly Provisional District 345 acres; *Lachlan River* (completed)—Jemalong and Wyldes Plains District 224,556 acres.

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 and Wakool Districts is diverted through a main canal which will be 100 miles long when completed. At 30th June, 1955, the total length of completed canal and channels was 836 miles, including Mulwala Canal 75 miles, Berriquin channel 22 miles, subsidiary channels 697 miles, escape channels 33 miles and cross drainage channels 9 miles. Off-take capacity of the Mulwala Canal is 5,000 acre feet per day. Ultimately the water will serve Deniboota and other districts for which works have yet to be completed.

Wakool, with 361 miles of channel, contains 289 holdings and it is expected that the area developed by irrigation will comprise about one acre in 13 of the total area. The total area irrigated in 1954–55 was 79,474 acres and water supplied was 146,747 acre feet. Crops comprised fodders, pastures, rice, cereals and vegetables, but sheep raising is the main industry.

Considerable subdivision has occurred within the Berriquin District and it is expected that the proportion of total area to be developed for irrigation will be considerably higher than in the case of Wakool. Total irrigated acreage was 161,522 at 30th June, 1955.

Sheep and wheat growing are the main industries. The fat lamb industry is well developed and expanding. Dairying is making headway, and a butter factory has been established at Finley.

In the Benerembah, Tabbita and Wah Wah Districts, supplied from the channels of the Murrumbidgee Irrigation Areas, the quantity of water supplied during the 1954-55 season for irrigation, etc. was 77,412 acre feet, and the area irrigated was 69,492 acres, including rice and other cereals, pastures and fodder crops.

For the same season 12,935 acre feet of water were supplied from the Lachlan River to irrigate a total area of 16,434 acres within the Jemalong and Wylde's Plains Districts.

6. **Water Trust Districts, Irrigation Trusts and Flood Control and Irrigation Districts.**—The Water Act 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 parentheses)—*Murray River*—Tuppal Creek (78,080), Bullatale Creek (68,320), Little Merran Creek (157,440), Poon Boon (32,980), Minnie Bend Flood Prevention (2,190); *Murrumbidgee River*—Yanco, Colombo and Billabong Creeks (1,001,210); *Lachlan River*—Torriganny, Muggabah and Merrimajoele Creeks (170,240) Condobolin West Weir (4,480), Marrowie Creek (292,640), Ulonga (71,655), Micabil Weir (11,500); *Miscellaneous*—Algudgerie Creek (9,760), Nidgerly Weir (46,880), Great Ana Branch of Darling River (967,339), Collarenebri town water supply (117)—making in all a total area of 2,914,831 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 following are the Trust Districts (area in acres is shown in parentheses):—*Hunter River*—Blairmore (315); *Murray River*—Bama (3,446), Goodnight (1,167), Bungunyak—Koraleigh (1,810), Glenview (661), Bringan (4,933); *Darling River*—Pomona (1,580)—making in all a total area of 13,912 acres.

The Lowbidgee Provisional Flood Control and Irrigation District (375,000 acres), 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. There are 48 holdings. Another district, Medgun (272,800 acres) near Moree in the North-West is also now in operation. There are 20 holdings in the district and the area benefited by controlled floodings is approximately 61,800 acres.

7. **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 lean months. There has also been a considerable increase along the Murrumbidgee and Lachlan.

The Farm Water Supplies Act was passed in 1946. Technical advice and assistance, and also financial assistance, are made available to aid 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.

8. **Underground Water.**—Extensive use is made of artesian, sub-artesian, and shallow underground water. Eighty thousand square miles in the northern and western portions are covered by the Great Artesian Basin. Eighty-one Bore Water Trusts and twelve Artesian Wells Districts have been constituted. The Bore Trusts are administered in the same way as Water Trusts, but in Artesian Wells Districts settlers maintain the drains. Bore Trusts and Artesian Districts cover about 5 million acres and water is

distributed through 3,368 miles of open earth drains. The number of artesian bores giving a flowing or pumping supply at 30th June, 1955, was 1,012 and the estimated total daily flow from 575 flowing bores was 60 million gallons. The estimated flow in 1914-15 was 99 million gallons per day for 372 bores. The deepest bore is Boronga No. 2 (4,570 feet), which also has the greatest flow, namely, 1,115,000 gallons per day. Of the total number of bores sunk, 224 have been installed by the Government in connexion with public watering places, Bore Water Trusts or Artesian Wells Districts.

Since 1912 the Government has assisted settlers in shallow boring operations for which repayments are required over a period. To 30th June, 1955, the total constructed by the Commission's plants was 4,504 and their average depth was 304 feet.

**9. Future Programme.**—The programme of post-war development already in hand includes the provision of eighteen dams and storages, eight diversion weirs and flood mitigation and river protection works in various parts of the State. Construction has been commenced on head storages at Keepit on the Namoi, Glenbawn on the Hunter and Burrendong on the Macquarie, while legislation has been passed authorizing the construction of a flood control dam at Warkworth in the Hunter Valley and a storage dam at Blowering on the Tumut River. In the case of Burrendong Dam work has been temporarily suspended in order to enable the Water Conservation and Irrigation Commission to concentrate its available resources on the speedy completion of works having higher priority. The Menindee Lakes storage project—part of the scheme for conserving the waters of the Darling River has been commenced, but as in the case of Burrendong Dam, work has been temporarily suspended. The Hunter River development 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. Total estimated capacity of all proposed new storages is 5,500,000 acre feet.

**10. Hydro-electricity.**—A survey of the use of water for power generation in New South Wales may be found in the previous chapter (*see* page 399).

### § 3. Victoria.

**1. General.**—(i) *Rainfall.* Particulars of the rainfall pattern of Victoria were given on page 1117 of Official Year Book No. 37. (*See also* Chapter II.—Physiography, p. 30 of this issue.)

(ii) *Administration.* The passage of the Irrigation Act of 1886 put the control of surface waters under the Crown, provided for the establishment of Irrigation Trusts and marked the beginning of irrigation development. In 1905, the Water Act 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 and the various Waterworks Trusts and local governing bodies, as well as the various Sewerage Authorities which control sewerage undertakings in country towns, are also subject to general supervision by the Commission.

**2. Systems Summarized.**—(i) *Works.* Since 1902, when a great drought emphasized the need for a concerted attack on water problems, the total capacity of water storages has increased from 172,000 to 4,808,950 acre feet (including Victoria's share of the Hume Reservoir. By means of channels, bores, etc., one-fourth of the State is artificially supplied for stock and domestic purposes. Large areas, which would be largely unproductive without water, are now contributing to the State's wealth. The area actually irrigated has increased from 105,000 acres in 1906 to 864,000 in 1954-55 and irrigation channels command 2,150,000 acres.



The Commission controls 37 large reservoirs and 240 subsidiary storages. The capacities of the storages in acre feet within the various systems at 30th June, 1955 were as follows:—

*Goulburn System*:—Eildon Reservoir, 2,750,000; Goulburn Weir, 20,700; Waranga Basin, 333,400; *Murray-Loddon System*:—Half share of River Murray Commission storages including Hume, Yarrawonga, Torrumbarry, Euston, Mildura and Wentworth, 802,420; Kow Swamp, Laanecoorie, Kerang-North-West Lakes, Lake Boga and Lake Cullulleraine, 148,210; Total, 950,630; *Wimmera-Mallee*:—538,900; *Maffra-Sale*:—106,040; *Coliban*:—62,730; *Werribee*:—34,900; *Mornington Peninsula*:—5,800; *Otway*:—1,080; *Miscellaneous*:—4,770; *Total*:—4,808,950.

Irrigation channels extend 5,000 miles, domestic and stock channels 9,500 miles and drainage and flood protection channels 2,000 miles, a total of 16,500 miles. In addition, the Commission controls 1,200 miles of piping, comprising 250 miles of mains and 950 miles of reticulation. Farm holdings served with water total 44,000. Urban districts with a reticulated water supply number 275, of which 130 are served by the Commission's channels and pipelines and 145 are supplied by Trusts under the supervision of the Commission. The total number of persons served by a reticulated water supply is 685,000 or 70 per cent. of the State's population outside Greater Melbourne.

To 30th June, 1955, the net capital expenditure on irrigation, rural water supply, country town water supply, and flood protection and drainage works amounted to £83,779,000, two-thirds of which was in respect of irrigation.

Of this net capital liability, at 30th June, 1955, £74,533,000 was borne by the State and £9,246,000 was borne by the water users. Waterworks Trusts and local governing bodies had a net capital liability of £7,845,000 at 30th June, 1955, of which £3,677,000 was borne by the State and £4,168,000 by the Authorities.

(ii) *Extent of Systems and Nature of Irrigated Culture.* Although the area irrigated is less than 2 per cent. of the State, it yields approximately 15 per cent. of Victoria's rural production. The following table shows the areas of the various irrigation systems and the areas under irrigated culture during 1954-55.

AREAS OF SYSTEMS AND OF LAND UNDER IRRIGATED CULTURE: VICTORIA.  
1954-55.  
(Acres.)

System	Total Area.	Area under Irrigated Culture.									Total.
		Cereals.	Lucerne. (a)	Other Fodder Crops.	Pastures.		Vineyards.	Orchards.	Market Gardens.	Fallow and Miscellaneous.	
					Sown.	Natural.					
Goulburn .. ..	1,257,830	14,716	20,932	6,164	287,984	23,125	353	18,386	3,010	4,812	379,782
Murray—											
Torrumbarry Weir ..	377,586	10,312	5,134	3,365	111,496	16,187	5,808	1,666	708	4,221	209,227
Yarrawonga Weir ..	267,069	789	15,092	602	62,393	2,192	60	3,388	513	4	85,933
By Pumping .. ..	35,334	113	170	266	246	53	23,431	1,564	230	..	26,073
Total .. .. .	679,989	11,214	21,596	4,233	204,135	38,432	29,2	6,648	1,451	4,225	321,233
Loddon and other Northern Systems ..	(b) 19,736	2,670	1,578	797	13,931	4,212	7	3,925	953	6,010	34,086
Southern Systems ..	147,866	99	1,682	354	34,280	860	..	562	4,950	1,084	43,871
Mildura and Private Diversions ..	(c) 45,000	3,200	5,405	2,124	35,670	8,079	15,526	6,156	4,305	4,126	84,591
Grand Total ..	2,150,421	31,899	51,193	13,972	576,003	74,708	45,185	35,677	14,669	20,257	863,563

(a) Includes lucerne for both hay and pasture.  
Mildura Irrigation Trust only.

(b) Area of Campaspe District only.

(c) Area of First

(iii) *Production.* The influence of irrigation on Victorian production has been considerable, the value of production from irrigation districts as estimated by the Commission having risen from £500,000 in 1905-6 to about £40 million in 1953-54. The major products of irrigated farms are : livestock for slaughtering (cattle, sheep and pigs), dairy products, wool, vine fruits, fresh and canning orchard fruits and vegetables.

3. *Goulburn System.*—This comprises the Eildon and Waranga Reservoirs, the Goulburn Weir and over 2,570 miles of distributory channels. The total capacity of these storages was 3,104,100 acre feet at 30th June, 1955. The Eildon Reservoir (capacity 2,750,000 acre feet) which was completed in June, 1955 is the largest dam in Australia and the largest earthen dam in the Southern Hemisphere. The enlargement of Eildon means that when the necessary distributory works are completed, the area at present irrigated from the Goulburn River can be practically doubled to 600,000 acres.

Water from Eildon Reservoir flows down the Goulburn for 150 miles to the Goulburn Weir, which raises the summer level of the river about 45 feet to 408 feet above sea level, and where water is diverted to two main channels. The eastern main channel conveys water to four irrigation districts surrounding Shepparton and the western main channel fills Waranga Basin in addition to supplying the eastern portion of the Rodney Irrigation District.

Two main outlet channels issue from the Waranga Reservoir ; one serves the Western part of the Rodney district, while the other serves districts as far west as Boort, and continuing to Beulah East, about 230 miles by channel from Waranga Basin or some 400 miles from Eildon, supplements the Wimmera-Mallee system.

Districts served comprise 196,000 acres east of the Goulburn ; 602,000 acres between the Goulburn and Campaspe ; 380,000 acres between the Campaspe and Loddon ; and 80,000 acres west of the Loddon—a total of 1,258,000 acres.

The main products of the Goulburn districts are dairy products, fruit and wool and fat lambs. The development of the fruit canning industries is an index of the results of irrigation policy. Annual production from the Shepparton, Kyabram and Mooropna canneries, together with that of city canneries—from Goulburn Valley fruit—amounts to an aggregate which represents about 65 per cent. of Australia's total production of canned peaches, pears and apricots.

4. *Murray River System.*—The waters of the River Murray are used to supply an area of more than 700,000 acres between Yarrawonga and Merbein, and channels totalling 1,450 miles are in service. The districts between Yarrawonga and Swan Hill, except Tresco, are supplied by gravitation and those down the river (Red Cliffs, Merbein, Nyah and Mildura) are supplied by pumping.

The Murray Valley Irrigation District, supplied from Yarrawonga, will serve 280,000 acres when completed. At 30th June, 1955, 550 miles of main and distributory channels were completed and supplied 267,000 acres west of Yarrawonga.

The gravitation system based on Torrumbarry Weir (52 miles downstream from Echuca) serves an area of 377,600 acres with 846 miles of supply channels. The weir raises the level of the river some 16 feet and enables water to be diverted throughout the year.

Red Cliffs Irrigation District comprising 13,600 acres, of which, at present, 11,650 acres are irrigated, ranks first in importance among Victoria's pumping schemes. A system of main and distributory channels commands every holding in the district. The district, originally for soldier settlement, has been subdivided into 700 blocks. The area planted is composed mainly of vines and citrus. The first harvest (1924) returned 570 tons of dried fruit in addition to table grapes. The average harvest is now 18,000 tons of raisins, currants and sultanas as well as large quantities of grapes for dessert and distillation.

Merbein Irrigation District comprises 9,200 acres and contains over 300 holdings averaging about 30 acres each. A reticulated pipe system supplies the town of Merbein, and the pumps also supply 51,200 acres forming part of the Millewa Waterworks District.

Nyah Irrigation District is supplied with water diverted from the Murray by a high-lift pumping plant, serving 3,840 acres in about 200 holdings devoted mainly to vineyards.

5. *First Mildura Trust District.*—The First Mildura Irrigation Trust—which is the only Irrigation Trust operating in Victoria—controls an area of 45,000 acres, of which

15,000 acres are irrigated. This area irrigated includes 12,000 acres of vines, 950 acres of fruit trees and small areas of apricots, peaches, prunes, figs, almonds, olives, lucerne and other fodder. It produces approximately 15,000 tons of raisins, currants and sublimates each year. The irrigation water is pumped from the River Murray and distributed through 163 miles of channels.

6. *Wimmera-Mallee System.*—The Wimmera-Mallee scheme is regarded as the most extensive domestic and stock supply system in the world. The main supply is drawn from the Campians storages with a capacity of 538,900 acre feet. Supplementary water is drawn from the Goulburn channels and the Loddon River. The system serves an area of 10,000 square miles or nearly one-eighth of the State, which is largely devoted to wheat and pastoral industries. Without the artificial supply of water, development would be meagre.

Once a year, in the winter or spring, a volume of 72,000 acre feet of water is distributed through 6,500 miles of open channels and some 3,000 miles of farm channels. It is the responsibility of farmers to provide storages sufficient in size to meet their stock and domestic requirements for the ensuing year. About 10,000 farmers' tanks are served. In addition, forty-seven towns with a total population of 40,000 obtain their water from the system. A total population of 80,000 depends upon the scheme. In the vicinity of Hensham and Murtoa, near the main storage, 3,500 acres are irrigated for soft fruits and pastures. With the completion of the Rocklands Reservoir, this irrigation area is being extended to 7,000 acres.

The northern part of the system is affected by sand drifting into the channels, particularly in years of dry weather conditions, and the Commission is involved in substantial annual expenditure to remove this sand drift before the annual water distribution can be made. This expenditure can be reduced by better farming methods, and efforts in this direction such as the sowing of rye-corn, and including the use of compulsory powers to prohibit the fallowing of land or burning of stubble within three chains of channels in light sandy country, have resulted in marked savings in maintenance costs.

7. *Farm Water Supplies.*—The Rural Finance Corporation Act 1949 gave farmers assistance in establishing or improving domestic and stock water supplies on their farms. Water may be obtained from underground sources, from catchment and gully dams by diversion from existing streams and channels, by storage of sufficient water to meet a year's requirements and by installation of windmills or hydraulic rams.

A Farm Water Supplies Branch has been set up by the State Rivers and Water Supply Commission to advise farmers on farm water supply matters even if finance is not required. Comprehensive booklets entitled "Farm Water Supplies for Domestic and Stock Purposes" and "Farm Irrigation and Drainage" prepared by this Branch have been widely circulated to landholders.

8. *Underground Resources.*—Due to inadequate information, the underground waters of Victoria have not yet been utilized to any great extent. The first stage of a comprehensive survey of these resources by the Victorian State Rivers and Water Supply Commission, which is responsible for the location, investigation and development of subterranean waters, has been completed and published recently. It provides records of bores in the Mallee, Wimmera and Glenelg regions, and a description of the Murray Artesian Basin. Investigations have also been made into the underground water resources of local areas such as Orbost Flats, Llowalong Estate on the Avon River and elsewhere.

The Murray Artesian Basin underlies an area of 107,250 square miles, of which 26,808 square miles are in Victoria, 28,269 square miles in South Australia and 52,173 square miles in New South Wales. The quality of the water varies from suitable for domestic purposes in much of the South-western part of the basin to saline and suitable for stock in the rest of the basin. Over 300 bores exist in Victoria, with an average daily flow of 3,000,000 gallons. Bores range in depth from 50 to 3,000 feet.

9. *Future Programme.*—With the completion of the Eildon Reservoir, storage capacity in Victoria has risen from 172,000 acre feet in 1902 to nearly 5,000,000 acre feet in 1955. In the near future there will be a further increase of 727,000 acre feet in storage

capacity. Cairn Curran, to be completed before July, 1956, will add 120,000 acre feet to the existing capacity, while a further 607,000 acre feet will be available as a result of the enlargement of the Glenmaggie and Hume Reservoirs.

The most important work at present facing the Commission is the enlargement of the Goulburn Channel System to enable full advantage to be taken of the additional water now available from Eildon Reservoir. The total cost of the work to be carried out is estimated at £10 million. Major works involve the duplication of the Goulburn Weir—Waranga Reservoir Main Channel (nearly completed) and enlargement of the Waranga Western and East Goulburn Main Channels. However, it will be possible to develop the present districts progressively before the whole operation is completed and in the meantime, the water already stored in the Eildon Reservoir will provide a valuable safeguard against any possible drought.

10. *Hydro-electricity*.—Details of hydro-electricity potential and utilization in Victoria may be found in the previous chapter (see page 401).

#### § 4. Queensland.

1. *General*.—(i) *Rainfall*. Particulars of the rainfall pattern of Queensland were given in Official Year Book No. 37, page 1122. (See also Chapter II.—Physiography, p. 30 of this issue.)

(ii) *Administration*. The first comprehensive Water Act in Queensland was the Water Act of 1926 which vested in the Crown the right to the use and flow of all streams, lakes, watercourses, etc. which flowed through or were within the boundaries of two or more occupiers, and also vested in the Commissioner of Irrigation and Water Supply the bed and banks of all boundary streams. The Irrigation Act of 1922 provided for the establishment of Irrigation Areas in approved localities. From 1922 to 1931 the Commissioner of Irrigation and Water Supply administered the Acts, but in 1931 the Land Administration Board was appointed to act as the Commissioner and continued to act until the Irrigation and Water Supply Commission Act of 1946 was proclaimed in 1947. Under this Act the Corporation of the Commissioner of Irrigation and Water Supply was reconstituted. The Commissioner is responsible for carrying out the provisions of the Irrigation Acts 1922 to 1949 and the Water Acts 1926 to 1942. He is also responsible for investigations into, and the planned development of, water resources of Queensland under the Land and Water Resources Development Acts 1943 to 1946. For particulars of the New South Wales—Queensland Border Rivers Agreement ratified by Acts of both States in 1947 see page 428.

(iii) *Water Utilization in Queensland*. Queensland's predominant interest in the field of water conservation has in the past been the provision of stock and domestic water supplies in its great pastoral areas which contain nearly half of the Commonwealth's cattle, a seventh of the sheep and a third of the horses. Nearly half the value of the State's rural production is derived from cattle and sheep. The cattle are distributed throughout the State, but most thickly between the east coast and the 20-inch isohyet. Sheep are mainly pastured on the inland areas west of this isohyet whilst dairying is concentrated in the south-eastern quarter of the State. In addition to the stabilization of water supplies in the pastoral areas and the provision of water along stock routes for travelling stock, the development of irrigated pastures on the eastern seaboard for fattening stock adjacent to meat works and markets has lately received much attention.

The State's agricultural crops differ from those of other States in that a large proportion are tropical. Sugar-cane is the greatest individual crop, representing in value some 50 per cent. of total agricultural production. Approximately 16 per cent. of the sugar-cane acreage is irrigated and represents some 45 per cent. of the total irrigated area in Queensland. Queensland is Australia's major tobacco-producing State, and plans are in hand to increase annual production of this crop greatly by means of development under irrigation.

2. *Great Artesian Basin*.—(i) *General*. Western Queensland beyond the 20 inch rainfall 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, but excluding the Cloncurry Mineral Field and the Barkly Tableland. It comprises 430,000 square miles of the total State area of 670,500 square miles. Statistics of bores and flow as at 30th June, 1955 are:—Artesian bores drilled, 2,427; artesian bores still flowing, 1,533; total depth drilled, 3,480,160 feet; deepest bore, 7,009 feet; total estimated flow, 209,000,000 gallons per day. Artesian pressure and flow are both steadily diminishing despite new bores drilled. The rate of diminution varies widely throughout the basin. Present general average rates of diminution are:—pressure, 1·2 feet/head, total flow, 1½–2 per cent. per annum.

The greater part of the artesian discharge is distributed by open earth channels totalling some 16,000 miles in length. The greater part of the water flowing along these channels is lost by soakage and evaporation and less than 10 per cent. is actually used by stock. The amount of soakage depends largely on the permeability of the earth and the rate of evaporation varies from season to season, but the shape and maintenance of the drains constitute further factors. The effective utilization of this water can be increased by the use of piping to overcome the loss by soakage and evaporation occurring in open earth channels.

Although artesian beds underlie such a large area of the State, only 80,000 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 are not economical watering facilities, because of depth, limited area to be watered, and difficult terrain for distribution of water by drains. High costs have restricted deep drilling. Very few new bores exceed 2,000 feet in depth, and a new bore greater than 3,000 feet in depth is exceptional.

Shallow sub-artesian supplies, of variable quality and volume, are available at depths less than 1,000 feet over a large area of the basin. These beds are not connected with the artesian beds. An essential practical consideration is that the main artesian beds are continuous and the sub-artesian beds are not continuous.

Though 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 per day was recorded in 1914. By 1938 the flow was only 230 million gallons per day. The decline gave rise to the fear that supplies were giving out and that the basin was seriously threatened. In 1939 the Queensland Government appointed a committee to ascertain the nature and structure of the Great Artesian Basin with particular reference to the problem of diminishing supply. In its final report presented in 1954 the majority of the Committee found that the output would continue to decline during the next sixty years when the flow from the remaining flowing bores will be of the order of 110 million gallons per day. At this stage the discharge from windmills, springs and other leakages and the underflow past the Queensland borders will be of the order of 20 million gallons per day. The total discharge of the order of 130 million gallons per day will be in equilibrium with the recharge of the basin. Numbers of bores on higher ground will cease to flow during the next sixty years and the area served by flowing bores will contract by perhaps 20 per cent.

From its investigation of the problem the majority of the Committee found against a general programme of strict conservation of flows from existing artesian bores. Apart from the high cost the gradual increase in the recharge rate consequent on the depletion of surplus water in the basin would be greater if such a programme was not undertaken.

In the past, many excavated tanks failed in dry seasons, because of insufficient original depth and capacity, and subsequent silting. Mechanical plant is now almost exclusively in use and much larger tanks are being excavated, even in areas where artesian water may be obtained at a reasonable depth. New tanks with capacities of 20,000 cubic yards and depths of 25 feet are not uncommon. Two tanks with capacities of 65,000 cubic yards each, and depths of 42 feet and 46 feet respectively have been completed for watering stock in an area where a good artesian flow may be obtained at a depth less than 2,000 feet.

(ii) *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 the 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 1954-55 are:—Areas constituted, 64; administered by Commissioner, 54; administered by Local Boards, 10; area benefited, 4,756,116 acres; average rate per acre, 1.04d.; number of flowing bores, 61; total flow, 26,361,000 gallons per day; drains served, 3,317 miles.

3. **Stock Route Watering.**—During 1935 a scheme was inaugurated to water stock routes adequately in the western portion of the State including main trunk routes connecting Eromanga to Burketown, Charleville to Normanton, and Clermont to Einalleigh, with branches to railheads, a total distance of 3,117 miles. Watering facilities were also provided on subsidiary routes. Under the Stock Routes and Rural Lands Protection Act of 1944 a co-ordinating board was constituted, representative of Government departments and pastoral interests, under the direction of the Minister for Lands, and with an officer of that Department as superintendent, whose duty was, *inter alia*, to investigate and implement a long-range, co-ordinated plan for adequate watering of all stock routes throughout the State. Natural waters are being supplemented by artificial facilities at intervals of about 9 miles. Construction is supervised by the Irrigation and Water Supply Commission and by local authorities. Completed facilities are vested in local authorities for control and maintenance. From 1935 to 30th June, 1955, 352 facilities had been completed and at 30th June, 1955, 154 facilities were under construction or investigation.

4. **Irrigation.**—(i) *General.* Irrigation as a means of stabilizing and increasing agricultural production is receiving growing attention in Queensland. In addition to the Theodore Irrigation Area on the Dawson River, orthodox projects served by a channel system are being developed at Clare, Millaroo and Dalbeg, all on the Burdekin River, Gibber Gonyah on the Dawson River and St. George on the Balonne River. Construction of the Clare and Millaroo Irrigation Areas is nearing completion whilst at Dalbeg, Gibber Gonyah and St. George construction is well advanced. A start has been made in construction of part of the main channel system within the Mareeba-Dimbulah Irrigation Area. Because of the large variations in both monthly and annual river flows, major developments cannot be undertaken until large storage works are provided. Most irrigation in Queensland is performed by private farmers operating under licence, and obtaining water by pumping from streams or from natural underground storages. Where available, electricity is the most popular source of power for pumping; the principal areas supplied with electricity comprise the Burdekin Delta and the Lockyer Valley.

Furrow irrigation is used for cotton, sugar cane, most tobacco and some other crops. Spray irrigation is adopted to a considerable extent for fruit, vegetables, fodder crops and a small part of the tobacco. Spraying is well suited to the application of water on deep soils by small pumping plants, particularly when the quantity of water available is limited. Experimental use of the border check method in the irrigation of pasture and fodder crops has proved successful and may supersede other methods.

The following table shows for each division of the State the number of irrigators and the areas under irrigated culture for the year ended 31st March, 1955.

AREA OF LAND UNDER IRRIGATED CULTURE : QUEENSLAND. 1954-55.(a)

Division.	No. of Irrigators.	Area under Irrigated Culture (Acres).							Total.
		Vegetables.	Fruit.	Sugar-cane.	To-bacco.	Cotton.	Other Crops.	Pastures.	
Southern Queensland ..	3,759	14,359	3,061	11,020	1,500	21	23,596	20,995	74,592
Central Queensland ..	326	567	126	23	..	346	3,047	282	4,391
Northern Queensland ..	1,441	3,909	714	51,280	2,993	36	632	867	60,431
<b>Total ..</b>	<b>5,526</b>	<b>18,835</b>	<b>3,901</b>	<b>62,323</b>	<b>4,533</b>	<b>403</b>	<b>27,275</b>	<b>22,144</b>	<b>139,414</b>

(a) Year ended 31st March, 1955.

The growth of irrigation is illustrated by the following figures for the total area of irrigated land :—1906, 9,922 acres ; 1916, 10,886 acres ; 1926, 24,250 acres ; 1936-37 44,509 acres ; 1946-47, 79,030 acres ; 1954-55, 139,414 acres.

The pattern of irrigation in Queensland is unlike that in southern States ; the more important developments in tropical and sub-tropical areas are therefore discussed briefly in the sub-sections following. It should be noted that the spring to autumn " irrigation season " of the temperate southern irrigated lands is not applicable, and that 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.

(ii) *Lockyer Valley.* West of Brisbane and within 50 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 rainfall of 30 inches the variation is great, and irrigation is necessary for continuous agricultural production. Surveys suggest that some 60,000 acres of land highly suitable for irrigation are available. Of this area only about 30 per cent. is under irrigation, the number of pumps operating from wells and open water exceeding 550 and 600 respectively. Over 60 per cent. 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 which serves the Valley. The Irrigation and Water Supply Commission has constructed a number of small weirs on Lockyer Creek with a total storage of 1,370 acre feet. These also tend to augment and conserve underground supplies. To study local problems, an Irrigation Research Station was established at Gatton in 1946 by the Bureau of Investigation.

The Lockyer Valley produces a substantial proportion of Queensland's onions, potatoes, pumpkins, lucerne, hay, green fodder, maize and dairy products.

(iii) *Burdekin River.* The Burdekin River, which joins 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 disabilities. 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 projected irrigation, hydro-electric and flood mitigation scheme, together with the high-level railway bridge at present under construction, will change the Burdekin from a mixed blessing to one of the Commonwealth's greatest resources for agricultural and industrial production. Present development is confined to the Delta Area. 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 irrigated crop, though citrus, pineapples, vegetables and tobacco are also irrigated. The irrigated area is in excess of 30,000 acres, 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 adopted in place of the individual internal combustion engines previously used. 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 has recently been established to study the development of pastures and irrigated crops under local conditions.

A major multi-purpose scheme, involving irrigation, flood control and hydro-electric power generation, is being investigated by the various interested Government Departments under the general supervision of the Burdekin River Authority. The development envisaged would include a dam storing 6,584,000 acre feet, which would make water available for the irrigation of at least 250,000 acres. The principal industries anticipated are tobacco-growing, dairying and cattle fattening, with sorghum, sunflowers, peanuts, cotton and sugar-cane as other possible forms of production.

The Clare Irrigation Area, constituted in 1949, and the Millaroo Irrigation Area, constituted in 1952, are at present being developed for tobacco production. Located from 25 to 65 miles upstream from the mouth of the Burdekin, these areas comprise 12,000 acres and will obtain irrigation waters from central pumping stations drawing initially on the unregulated flow of the Burdekin. A temporary storage of 6,700 acre feet capacity has been constructed about 79 miles upstream from the mouth of the Burdekin. To 30th June, 1955, 70 farms had been opened for selection in the Clare Area and 56 farms in the Millaroo Area.

(iv) *Dawson Valley.* The Dawson River, a 392-mile long tributary of the Fitzroy River, rises in the Carnarvon Range and joins the Mackenzie River to form the Fitzroy 50 miles west of Rockhampton. Lands bordering the river in its northerly course of about 170 miles before its confluence with the Mackenzie River are commonly termed the Dawson Valley. A scheme for the development of the Dawson Valley under irrigation was inaugurated in 1923, providing for the irrigation of 70,000 acres. Storage for the scheme was to be provided by a dam at Nathan Gorge of 2,000,000 acre feet capacity. 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 this work. However, the initial step in construction had been 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 9,000 acre feet. Pasture, vegetables, cotton, fruit and dairying products are the principal produce. Attention has recently been given to the former plans for the Valley and earlier work is now under close scrutiny as a prelude to future development. Construction of works to serve some 2,400 acres at Gibber Gunyah, adjacent to the existing Theodore Area, is in progress.

(v) *Mareeba-Dimbulah Area.* The existence of large areas of sandy soils suitable for tobacco production in the valleys of the Walsh and Barron Rivers in the neighbourhood of Mareeba and Dimbulah has led to large-scale investigations into possible irrigation development in the area. Surveys indicate that 40,000 acres of land suitable for irrigated culture, including 32,000 acres suitable for tobacco, are available. In 1954 55 some 2,775 acres of high-grade tobacco were grown. Seven weirs of combined capacity of 2,600 acre feet have been completed on a number of streams to store water for irrigation.

During 1952 a report on the utilization of waters of the Barron and Walsh Rivers was prepared and establishment of an irrigation undertaking approved by the Queensland Government. The projected undertaking provides for construction of a major storage at Tinaroo Falls on the Barron River to store 320,000 acre feet, and construction of irrigation works to serve 78,000 acres commanded by this storage. Further development by construction of a second storage at Nullinga on the Walsh River has been deferred for the present. Tobacco will be the basic crop while peanuts, vegetables, maize, cotton and stock fattening also appear suitable.

(vi) *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 428.

(vii) *Balonne River.* The St. George Irrigation Area has been constituted and construction of works to serve some 11,000 acres is in progress. Water supply for the area will be obtained by pumping from the combined weir and road bridge on the Balonne River at St. George.

5. **Bureau of Investigation.**—Under the Land and Water Resources Development Act of 1943 a Bureau of Investigation has been set up for the co-ordinated investigation of land and water resources development.

The Bureau consists of representatives from the authorities controlling water resources, lands and agriculture, under the chairmanship of the Co-ordinator-General of Public Works. Among notable works carried out by the Bureau of Investigation since its inception has been the trial planting of irrigated pastures with a view to developing mixtures suited to the special conditions of each part of the State. Other valuable work has included the mapping of the ultimate land uses of the State and the detailed investigation of the agricultural and pastoral potentialities of many regions.



6. **Channel Country.**—Extensive investigations of the Channel Country fed by inland rivers in the south-western corner of the State have been made by the Bureau of Investigation. This country is intersected by shallow and irregular flood channels through which huge volumes of flood waters pass in favourable seasons; consequent on the flooding, a heavy growth of natural pastures is produced on the flooded lands, providing feed in quantities far in excess of that required for the normal stock population of the area. If the occurrence of flooding could be made more reliable by means of storages to create artificial floods, the pastoral resources of the area would be enormous. However, inquiries directed on these lines have revealed that little can be done to increase or stabilize the turn-off of fat cattle by artificial storage.

At 30th June, 1952, 41 watering facilities, at an estimated cost of £277,000, had been proposed under a Federal-State agreement for stock routes through, and in the approaches to, the Channel Country. By 30th June, 1955, fourteen had been completed. In addition, nine large excavated tanks and two bores were finished, but still required equipping with windmills, tanks and troughs.

7. **Hydro-electricity.**—An outline of Hydro-electricity Schemes operating in Queensland is given in the previous chapter (*see* page 411).

## § 5. South Australia.

1. **General.**—(i) *Rainfall.* Brief particulars of the climatic conditions in South Australia were given on page 1129 of Official Year Book No. 37. (*See also* Chapter II.—Physiography, p. 30 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 governing the supply of water through mains in water districts for townships and farm lands. The Water Conservation Act provides for the construction of storages in non-reticulated areas and authorizes the Minister 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 steps were taken to vest all running streams, springs and “soaks” in the Crown. Since the Water Conservation Act was passed in 1886 more than 550 dams, tanks and “rainsheds” have been built or acquired by the State, in addition to 460 wells and 340 bores, at a total cost of £1,476,878. The rainsheds comprise timber frameworks roofed with galvanized iron to catch precipitation which is delivered to storage tanks. Rainshed catchments vary from a few hundred square feet to four acres, discharging water into tanks ranging in capacity from 2,000 to 500,000 gallons. Over most of the State extraordinary precautions are taken to counter-act evaporation. Pipelines in preference to open channels are used to reduce seepage and evaporation. Meters are attached to practically all services to check usage by individual consumers.

2. **Irrigation.**—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 on to the land or gravitated from the river. The upper Murray of South Australia and the Mildura area of Victoria formed the cradle of Australian irrigation. 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. Including land allotted for War Service Land Settlement purposes, the Department of Lands administers in the Murray Valley an area of 32,659 acres of irrigable high land together with 9,432 acres of reclaimed swamp and 167,090 acres of non-irrigable land in the irrigation areas and 29,898 acres of land temporarily leased and reserved for common-age or other purposes, amounting in all to 239,079 acres. In addition, the Renmark

Irrigation Trust controls 20,557 acres, of which more than 9,000 are irrigated. Water used for irrigation purposes in 1954-55 in the high land irrigation areas controlled by the Department of Lands, excluding War Service Land Settlement areas in course of development, was approximately 100,000 acre feet, in addition to which approximately 60,000 acre feet were used on reclaimed areas by gravitational watering. In the Renmark area 28,490 acre feet of water were used for irrigation in 1954-55. The production of the upper Murray areas is almost exclusively fruit and vines. Principal crops are sultanas, currants, lemons, apricots, peaches, nectarines, pears and figs (mainly for dried fruit), wine grapes and citrus fruits. Before irrigation, these semi-arid lands were of little productive value. The following tables show the acreage devoted to various crops in the government-controlled and Renmark Irrigation Trust areas on the upper Murray, and in the government-controlled reclaimed swamp districts near the mouth of the Murray, which are devoted to dairying.

**IRRIGATION AREAS ADMINISTERED BY THE DEPARTMENT OF LANDS AND THE RENMARK IRRIGATION TRUST, SOUTH AUSTRALIA : AREA OF LAND UNDER IRRIGATED CULTURE, 1954-55.**

(Acres.)

Area.	Vine Fruits.	Tree Fruits.	Citrus Fruits.	Lucerne.	Other Fodders.	Total.
<b>Orchard Land—</b>						
Berri .. ..	5,971	918	1,238	..	..	8,127
Cadell .. ..	606	141	109	..	..	856
Waikerie .. ..	1,966	497	1,095	..	..	3,558
Cobdogla .. ..	3,972	147	178	..	..	4,297
Moorook .. ..	374	119	175	..	..	668
Kingston .. ..	230	84	226	..	..	540
Mypolonga .. ..	..	300	493	..	..	793
Chaffey—Ral Division .. ..	920	49	16	..	..	985
Total .. ..	14,039	2,255	3,530	..	..	19,824
<b>War Service Land Settlement—</b>						
Cooltong Division .. ..	381	244	483	..	..	1,108
Loxton area .. ..	3,051	1,016	1,982	..	..	6,049
Loveday Division .. ..	235	47	22	..	..	304
Total .. ..	17,706	3,562	6,017	..	..	27,285
Renmark Irrigation Trust .. ..	7,330	740	1,010	..	..	9,080
<b>Reclaimed Swamp Land—</b>						
Monteith .. ..	..	..	..	56	1,000	1,056
Mypolonga .. ..	..	..	..	79	1,312	1,391
Wall .. ..	..	..	..	10	478	488
Burdett .. ..	..	..	..	8	104	112
Mobilong .. ..	..	..	..	12	364	376
Long Flat .. ..	..	..	..	82	332	414
Neeta .. ..	..	..	..	..	683	683
Pompoota .. ..	..	..	..	..	418	418
Cowirra .. ..	..	..	..	18	423	441
Jervois .. ..	..	..	..	83	3,543	3,626
Total .. ..	..	..	..	348	8,657	9,005

The expenditure incurred by the State Government to 30th June, 1955, in purchase of land, reclamation of swamps, preparation of irrigable lands for fruit growing, and purchase of pumping plants for drainage and water supply was approximately £5,600,000. Further irrigation development is being undertaken as a part of the Commonwealth-wide War Service Land Settlement Scheme. South Australia's share of horticultural plantings under the scheme is 13,000 acres, comprising citrus 3,500 acres, vines 8,300

acres, and deciduous tree fruits 1,200 acres. Schemes already approved and under construction will absorb between 7,500 and 8,000 acres, and a further area of 3,000 acres has been selected by the State and submitted to the Commonwealth Government for consideration. The area of 13,000 acres would provide holdings for about 500 settlers, from which, if developed, the estimated production would be :—Citrus, 750,000 bushels; deciduous tree fruits—fresh, 6,000 tons; dried vine fruits, 2,500 tons; wine grapes, 11,000 tons. On present-day prices, the value of this production would approximate £1,500,000.

Renmark Irrigation Trust is administered 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, self-contained and self-controlled. Every settler is entitled to vote for the election of Trust members. The Trust maintains 100 miles of channel for reticulation to 9,080 acres.

3. **Water Supply Schemes.**—(i) *Summary.* Water conservation and distribution works in South Australia have cost £42,467,000 (exclusive of river control and irrigation works on the River Murray which are dealt with above). A summary of statistical information concerning country supplies in 1954–55 is as follows :—Length of water mains, 5,814 miles; capacity of storages, 35,092 acre feet; approximate population served, 254,000; area served, approximately 4,500,000 acres; and total capital cost, £23,815,000.

Areas extending for a distance of 90 miles north of Adelaide are supplied from the Warren and Barossa Reservoirs in the Barossa Ranges. Further developments currently being undertaken include the construction of a main pipeline and pumping stations for pumping water from the River Murray to Adelaide and, by means of a branch pipeline, to Warren Reservoir. Another reservoir (South Para Reservoir), to supplement the Warren and Barossa Reservoirs, is also being constructed on the South Para River. Agricultural towns and areas further north are supplied from Beetaloo, Bundaleer and Baroota Reservoirs, with a connexion to the Warren system. Eyre Peninsula has, up to the present, been supplied from the Tod River Reservoir (9,167 acre feet) and three small reservoirs near the Franklin Harbour District, but demands have increased to such an extent in recent years that further sources of supply are necessary, and with this end in view a water-bearing area known as the Uley-Wanilla Basin has been developed, and water from it is now being used in the Tod River system.

(ii) *Morgan-Whyalla Water Supply Scheme.* For particulars of the construction and works of the main 223-mile pipe line bringing water from the Murray at Morgan to Whyalla on Spencer Gulf see Official Year Book No. 37, page 1132. A 19-mile branch-line has also been constructed to Jamestown. The Morgan-Whyalla Water Supply Scheme forms part of the South Australian Country Water Supply system referred to above.

4. **Underground Water.**—The occupied portion of South Australia is, on the whole, well endowed with underground water. The extent of the several artesian basins is tolerably well known. There are also considerable areas, notably in the south-east of the State, in which ground water occurs. Quality varies widely, but a great deal is at least useful for watering stock, the major use to which it is put. Apart from numerous boreholes and wells tapping underground water for farms, stations and towns, two basins are being developed on Eyre Peninsula—one at Flinders (Streaky Bay) and the other at Uley-Wanilla, near Port Lincoln.

The deepest portion of the Great Artesian Basin (in the north-east) is not extensively developed because development costs are large in proportion to the carrying capacity of the arid land. Deep boreholes have been drilled by the Government, however, to provide watering places along stock routes, and pastoralists rely largely on supplies from non-pressure aquifers at shallower depths.

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, but also for township supplies to Mount Gambier, Naracoorte, Bordertown and Pinnaroo. The deepest township borehole is 357 feet.

Pastoralists, farmers, market gardeners and others have been assisted with expert advice on drilling, for which the Government maintains about 30 drills. The whole of the Murray River Basin has been examined critically to ascertain the extent of land which could be used for lucerne, and an examination of a large part of Kangaroo Island

and Southern Eyre Peninsula has been completed in connexion with Soldier Settlement schemes. Examination of large areas in the Upper South-East has been undertaken in connexion with land development schemes.

The results of comprehensive surveys of underground supplies undertaken by geologists of the South Australian Government have been published in the State's geological survey bulletins in recent years. Bulletin 23, published in 1946, gives a comprehensive general statement for the whole of the State.

5. **Farm Water Schemes.**—While the Department of Mines and the Engineering and Water Supply Department give assistance to individual farmers in the provision of supplies from underground sources, a great part of the farming areas derive water supply under pressure from the extensive distribution systems connected to various reservoirs on the Murray River.

6. **South-Eastern Drainage.**—For some information on the drainage schemes necessary for the disposal of surplus water in areas in the south-east of South Australia see Official Year Book No. 37, page 1133.

## § 6. Western Australia.

1. **General.**—(i) *Rainfall.* Brief particulars of the climatic conditions in Western Australia were given on page 1133 of Official Year Book No. 37. (See also Chapter II.—Physiography, p. 30 of this issue.)

(ii) *Administration.* Irrigation districts are administered under the Rights in Water and Irrigation Act 1914–1951 and the Government is advised by an Irrigation Commission representing the local irrigationists and government technical and financial branches. The Goldfields Water Supply is administered by a branch of the Public Works Water Supply Department and its responsibilities include control of water from this scheme for country towns, mining and agricultural purposes. The metropolitan water supply is controlled by a separate department under the control of the Minister for Water Supply, Sewerage and Drainage. Under the Water Boards Act 1904–1953 twelve towns are administered by local water boards and 45 are under direct Ministerial control. The Minister also controls three District Farming Schemes. Water rights over water flowing in streams and water courses are vested in the Crown unless specifically appropriated for irrigation purposes under the irrigation legislation.

2. **Irrigation.**—The main irrigation districts—Harvey, Waroona and Collie—are along the south-west railway line between Waroona (70 miles from Perth) and Dardanup (116 miles from Perth). The total area irrigated in these districts during 1954–55 was 25,342 acres and the total water used was 74,317 acre feet. The total acre waterings (i.e., the number of acres watered multiplied by the average number of waterings) were 122,550. Investigations are being carried out with a view to irrigating a further 30,000 acres south of the existing Collie Irrigation District.

Harvey Districts (Nos. 1 and 2—32,663 acres) are supplied from the Harvey Weir (8,300 acre feet) and Stirling Dam (44,344 acre feet), Waroona District (10,325 acres) from Drakesbrook Dam (1,855 acre feet) and Samson Brook Dam (6,540 acre feet), and Collie District (28,762 acres) from Wellington Dam (31,800 acre feet).

The following table, which shows acre waterings supplied to crops in the irrigation districts of Harvey, Waroona and Collie during the seasons 1938–39 and 1950–51 to 1954–55 illustrates the growth of these irrigation schemes.

IRRIGATION, WESTERN AUSTRALIA : ACRE WATERINGS(a).

Year	Pasture.	Fodder.	Potatoes.	Vegetables.	Orchard.	Flax, Broom Millet, and Preparation of Ground.	All Crops.
1938–39 ..	31,049	934	3,142	692	922	..	36,739
1950–51 ..	76,431	793	2,946	4,090	1,180	..	85,440
1951–52 ..	88,091	1,417	2,793	2,442	1,088	..	95,831
1952–53 ..	95,491	2,235	4,185	2,588	1,070	536	106,105
1953–54 ..	98,645	3,435	4,405	3,003	1,072	115	110,675
1954–55 ..	112,659	3,268	2,363	3,294	845	121	122,550

(a) Number of acres watered multiplied by average number of waterings.

3. *Water Supply Schemes.*—(i) *Goldfields Scheme.* 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 Official Year Book No. 37, and an account in greater detail on page 576 of Official Year Book No. 6. Mundaring reservoir on the Helena River, 26 miles from Perth, is the source of water supplied to the goldfields, and has a capacity of 55,460 acre feet and a catchment of 569 square miles. The water now passes through 350 miles of main, mostly steel and 30 inches in diameter, aided by seven pumping stations and one booster station, involving a total net lift of 1,280 feet.

Maximum pumping capacity from No. 1 Pumping Station at Mundaring is now 11.7 million gallons per day. The total capacity of all receiving and regulating tanks, etc., along the pipe line is 154 million gallons, which includes two standby reservoirs at Kalgoorlie having a combined capacity of 36 million gallons.

Hundreds of miles of branch mains and pipes have been laid to mining districts, towns and farming districts, the most important being the Norseman extension of 101 miles. The system serves 54 towns and water is reticulated to 1,800,000 acres of farming lands. Total length of mains is 1,850 miles and the population served is 68,000. Total quantity of water pumped from Mundaring in 1954-55 was 2,810 million gallons. Total cost of the system to the end of 1954-55 was £9,417,014.

(ii) *South-West Scheme (Comprehensive).* The Commonwealth Government has agreed to assist a scheme to extend water for agricultural areas and towns in the south-west of Western Australia, which will be administered by the State Government. Twenty-three towns and over 4 million acres of agricultural country will benefit. The original estimated cost of this scheme was £4,300,000 of which the Commonwealth Government agreed to contribute 50 per cent., £2,150,000. The revised estimate in 1955 is £10 million. These estimates exclude the cost of the raising of Mundaring and Wellington Dams, the works of which form the headworks of the scheme and are financed solely by the State Government.

The work of raising Mundaring Weir 32 feet in height, giving a total capacity of 55,460 acre feet, was completed in 1951 and preparations are well in hand for commencing work in the raising of Wellington Dam 50 feet in height, increasing storage to 149,860 acre feet capacity. Sixty-two miles of 30-inch pipe line from Wellington Dam to Narrogin have been laid, i.e., over half the total distance. The new electric pumping station at Mundaring, having an ultimate capacity of 16 million gallons per day, was opened in December, 1953 and construction of two electric stations on the Wellington Dam-Narrogin pipe line with a maximum capacity of nearly 7 million gallons per day is nearing completion.

(iii) *Rock Catchments.* An interesting feature of the State's conservation system is found in the Barbalin, Narembeen and Kondinin District Farming Land Schemes in the wheat belt, where extensive granite outcrops have been used as catchments. The rain is caught at the foot of the rocks, and pumped to tanks from which the water is reticulated to farms and to a number of small towns. For further particulars see Official Year Book No. 37, page 1135.

4. *Underground Water.*—Individual farmers, orchardists, market gardeners and others derive water from wells using windmills or, where power is available, pumps and motors are used to tap such supplies. The Department of Public Works has twelve hand-boring plants which are lent out to farmers to facilitate boring operations to an average depth of 150 feet, also eight power-boring plants which are hired to local authorities. The Department also contracts with private firms to bore for communal farm supplies. During the past 62 years 341 artesian and sub-artesian bores have been sunk, in 290 of which fresh or stock water was struck. The total daily flow of all recorded bores in Western Australia is 90,872,000 gallons, and the average depth at which water is struck is 791 feet. Maximum depth of any bore is 4,006 feet and minimum 21 feet. Outside the artesian and sub-artesian basins over 5,000 bores have been sunk for water supplies.

5. *Ord River Scheme.*—The Ord River in the north-west 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 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 to conserve 2,000,000 acre feet of water, equipped with hydro-electric plant, which might supply irrigation water for an area of 100,000 acres, if investigations show that the climate and soil conditions are suitable for vegetables, tropical fruits and rice. The economic production of these and other crops, as well as the possible use of such irrigation areas for interim fattening of cattle, is being examined at the Kimberley Research Station on the Ord River.

## § 7. Tasmania.

1. *General.*—(i) *Rainfall.* Brief particulars of the rainfall pattern in Tasmania were given on page 1136 of Official Year Book No. 37. (*See also* Chapter II.—Physiography, p. 30 of this issue.)

(ii) *Main Purposes of Conservation and Utilization.* Owing to Tasmania's fortunate rainfall position, scarcity of water is not a serious problem in normal seasons. Conservation of water for hydro-electric generation is the predominant interest, and conservation for domestic and industrial purposes is more important than irrigation. Conservation of water on farms is not practised to the same extent as on the mainland, probably because running streams and good rainfall are on a more generous scale. Provision of artificial storages (apart from house tanks) is rare, but progressive landowners are beginning to take advantage of modern plant, such as bulldozers, to provide small excavated storages on their properties. Underground water is of poor quality, but a small quantity which has been exploited to a limited extent only by bores and windmills exists over an area in the Midlands. Geological conditions do not appear to favour the utilization of underground water except on a minor scale. There is only one known flowing bore—at Spreyton—which yields 1,690 gallons per hour.

(iii) *Administration.* The State does not own all natural waters, and consequently the subject of water rights is a difficult one. The Mines Department has power to grant certain rights for mining operations, and the Hydro-Electric Commission must approve the abstraction of water from any stream or lake of potential value for power generation. Under the provisions of an Act passed in 1944, the Water, Sewerage and Drainage Board was constituted to consider the financial and technical practicability of all water supply schemes constructed by local authorities, other than the cities of Hobart and Launceston. Legislation was also enacted during 1952 empowering Local Authorities to take water from specific sources of supply and to construct waterworks. The Act does not cover irrigation, which is practised to a limited extent only by private interests. Provision has been made in the Act for the protection of riparian rights, but there is no general legislation for the control of water courses.

2. *Hydro-electricity.\**—Tasmania depends entirely on water for power development. 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 geophysical exploration. Although the survey is not yet conclusive it is considered that at least 1,300,000 kW of continuous power can be economically developed. At present only 447,100 kW of generating plant is in commission, but plant under construction will raise this total to 569,000 kW by 1960.

Most of the water potential is located on the Central Plateau with an area of about 1,500 square miles at an altitude of from 2,000 to 4,000 feet and subject to rainfall of from 30 inches a year in the east to 80 inches on the western perimeter. On the plateau are a large number of lakes which provide the means for storage at low cost. These include Great Lake with an area of 58 square miles, Lake St. Clair and Lake Echo, each more than 12 square miles, and others of smaller area.

The Derwent River and its tributaries which flow south-easterly carry off by far the greater part of the water which falls on the plateau and these rivers are therefore the most abundant source of power. They have been the cheapest to develop to date and most of the existing generating stations are located on them.

The three main rivers running westerly from the plateau—the Arthur, Pieman and Gordon—have only a small portion of their catchment areas at high level, but they run

\* *See also* Chapter X.—Electric Power Generation and Distribution, p. 416.

through regions of high rainfall and their power potentials are considerable. However, because of inaccessibility and climate, development of these rivers may be rather expensive and has been deferred in favour of more convenient schemes.

Rivers draining from the plateau towards the north and north-west coast, including the Emu, Forth and Mersey, have small catchments at high levels and no natural storages.

Two other important water power sources, independent of the Central Plateau, are the South Esk River in the north and the Huon River in the south. A power station at Trevallyn, near Launceston, utilizes water from the South Esk. The Huon has a large low-level catchment in the high-rainfall area near the west coast. Storage could be provided on it at a reasonable cost and because of the proximity to Hobart of a future power station, it has considerable value for peak load development.

3. **Industrial.**—Three principal industrial schemes have been installed privately. Australian Newsprint Mills Ltd. pump approximately 6 million gallons a day from the Derwent River at Lawitta for the Boyer Mills. Associated Pulp and Paper Mills Ltd. pump several million gallons a day from the Emu River at Burnie, and Titan Products Pty. Ltd. reticulate water from Chasm Creek to their factory at Heybridge. In addition the State has constructed a regional water scheme to serve the Australian Aluminium Production Commission's plant at Bell Bay on the River Tamar. 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, at present largely unsettled. Diversion to the eastern side of the watersheds is not regarded as practicable.

4. **Irrigation.**—There are no State irrigation projects, but preliminary inquiries as to the possibility of establishing one in the Coal River Valley have been made. 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. Irrigation, as practised in Tasmania, was applied in 1954-55 to 13,761 acres devoted to : hops (1,286 acres) ; fruit (1,148 acres) ; pastures (8,879 acres) ; green fodder, etc. (1,289 acres) ; and other crops (1,159 acres).

## § 8. Northern Territory.

1. **Climate and Topography.**—Some particulars of the climate and main topographical features of the Northern Territory were given on page 1138 of Official 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) 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 conditions prescribed.

3. **Underground Water.**—Artesian water is found mainly in the south-east where the Great Artesian Basin enters the Territory. Pastoral (beef) production accounts for the bulk of the Territory's income, and the marked seasonal conditions affect the industry's economy. During the wet summer season there is adequate water, but during the winter most natural watering points disappear, and pastures dry. Bores supplement the permanent watering points, which are mainly along river frontages. The cattle industry is concentrated in the area in which the feed retains an appreciable nutritive value during the winter despite the dry conditions. This area is not in the wetter coastal regions, but in the inland belt of 15 to 25 inch rainfall and to the north of Alice Springs. Lack of bores is a limiting factor in the industry's economy, as cattle are able to thrive only within certain distances of reliable water.

In 1954-55 some 985 equipped bores were recorded, comprising 786 on pastoral properties (54 provided by the Government by way of assistance to pastoralists), 163 established by the Government on stock routes, 18 on Native Affairs Settlements, 11 on mining fields, 6 for town water supplies and one maintained by the Postmaster-General's Department. Latest details of bores on pastoral properties in the various districts relate to 1952 and understate the present position. They are :—Alice Springs, 357; Barkly Tableland, 288; Victoria River Downs, 87; Total, 732.

The number of stock route bores, watering some 2,500 miles of stock routes, has increased by approximately 53 per cent. in the period 1947-1955, and the present figure of 163 bores represents on the average approximately one per 15 miles.

Regional surveys by the Bureau of Mineral Resources and the Commonwealth Scientific and Industrial Research Organization from 1947 to 1955 have established the existence of the valuable Barkly Basin of 57,000 square miles in the eastern part of the Territory and extensions of the Gulf Basin in the north-western part.

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. A small area (151 acres) was irrigated in the year ended 31st March, 1955, mainly for growing fruit and vegetables. For particulars of potentialities see p. 1138 of Official Year Book No. 37.

## § 9. Papua and New Guinea.

1. **Rainfall.**—Rainfall in Papua and New Guinea varies considerably from approximately 250 inches near Lindenhafen (New Britain) and 231 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 130, 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 main water conservation interest in New Guinea at present is the hydro-electric potential.

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 (a description of which is given in Chapter XXVI. of Year Book No. 40), the Sepik (700 miles), the Ramu (450 miles), the Purari (300 miles) and the Markham (110 miles).

It is known that the opportunities for production of hydro-electric power are extensive. However, present investigations have been limited to those areas where an early demand for power is likely to arise.



## CHAPTER XII.

### EDUCATION.

#### § 1. Evolution of Educational Systems in Australia.

An account of the development of the Australian school system up to 1929 is to be found in Official Year Books Nos. 1, 2, 17 and 22, and in Official Year Book No. 40 a reasonably complete review of changes which had occurred up to 1951 and of the practices then current was presented from material furnished in the main by the Commonwealth Office of Education.

In the sections which follow, the information relating to the educational programme applies mainly to the year 1955. The statistics given in the tables, however, relate to 1953 for schools and technical colleges and to 1954 for universities.

#### § 2. Government Schools.

1. *Administration.*—Education is the responsibility of the State Governments. The Commonwealth is, however, empowered to provide financial assistance to students and meets the full cost of education in Commonwealth Territories, although this is largely provided by State education authorities.

Although there is a tendency towards regional administration, State educational administration is centralized. The permanent head of the Department of Education or Public Instruction in each State is responsible to the Minister for Education (or Public Instruction). Contact with the schools is maintained principally through Inspectors, called Superintendents in Western Australia and Tasmania. Departments are usually divided into primary, secondary and technical divisions. Some technical colleges are, however, in a large measure autonomous. Universities are independent foundations although much of their income is derived from State and Commonwealth grants.

Examination Boards, representative of the universities, the Education Departments and non-government schools, control public examinations and syllabuses, and curriculum committees prepare primary and secondary curricula. State Ministers for Education meet periodically as the Australian Education Council, to discuss matters of common interest, and Directors of Education meet annually as a Standing Committee of this Council.

2. *The School System.*—(i) *Compulsion.* In all States, there is legislation for compulsory school attendance. The original Victorian Education Act was passed in 1872, followed by similar Acts in Queensland (1875), South Australia (1878), New South Wales (1880), and Tasmania and Western Australia (1893).

In 1955 the ages between which children were legally required to attend school were as follows:—New South Wales, 6 to 15 years; Victoria, 6 to 14 years; Queensland, 6 to 14 years; South Australia, 6 to 14 years (children may not leave school until the end of the term during which they reached the age of 14 years); Western Australia, 6 to 14 years; and Tasmania, 6 to 16 years.

In Victoria, South Australia and Western Australia amendments to the Acts have provided for the raising of the school leaving age to 15 years, but to date this legislation has not been implemented.

Schooling may be given in government schools (including correspondence and special schools) or non-government schools and in a small minority of cases by private tuition.

The employment of children of school age is prohibited by law.

(ii) *Beyond compulsion.* In recent years, the development of large-scale industry and scientific farming has demanded a diversity of skills and a general raising of the educational level of the population. The raising of the school leaving age in two States

and the tendency everywhere for children to stay longer at school have been expressions of public realization of this. In recent years less than half of all children left school when they reached the age limit for compulsory attendance. Indeed, almost half now proceed to some form of further education beyond secondary school, either as full-time students, as part-time apprentices or trainees released during the day by their employers, or as part-time evening students.

In the early years of government provision of education, the main emphasis was on the primary school, which catered for children under compulsion and offered a course largely confined to the tool subjects, reading, writing and arithmetic. However, a process of extension and differentiation both at the bottom—infants' schools and kindergartens—and at the top—secondary schools—was well under way during the early years of this century.

3. **The Educational Ladder.**—(i) *Infants' Schools.* It is now customary, although not compulsory, for children to begin school when they are five years old. In larger primary schools they enter the infants' school, and in smaller schools "infants' classes", which occupy two or three years, the first year in some States being called "Kindergarten" or "Preparatory". The emphasis in the infants' classes is very much on general development, on play activities and on the informal aspects of the educational processes. In some cases the first two grades of primary education, together with any "Preparatory" or "Kindergarten" classes, are to be found in separate infants' schools or departments. But whether in a separate establishment or as a part of a primary school, there is a gradual move towards formal instruction. At the end of the period most children are able to read with some fluency, carry out simple arithmetical operations founded on the basic number facts, and can write in pencil. In addition, they have acquired skills with art materials and the like. A good deal of the instruction is carried on through activity methods, involving, for example, dramatic work, puppetry, and school "shops". Children then pass at about the age of 8 or 9 to the more formal primary school, in which they normally spend four or five years.

(ii) *Primary Schools.* The main emphasis in the primary school as distinct from the infants' school still lies on the tool subjects (reading, writing and arithmetic) and, in more recent years, on oral language, but the methods of teaching have undergone considerable changes. Changes in the purpose and outlook of educationists, and the raising of the professional standards of teachers, have made for greater freedom for pupils and teachers, some departure from the methods of mass instruction, and the closer linking of the curriculum with the child's social environment.

In general, it is true to say that there is now less emphasis on results, and that basic skills are taught at a somewhat later stage. At the same time, the curriculum has been broadened. More individual instruction has led to a reduction of minimum standards of achievement for the less able and a stress on curriculum enrichment for the bright. Retardation, i.e., the repeating of grades, has been considerably reduced, the aim being for each child to remain with his age group. In all States "opportunity classes" exist for backward children, and in one State "opportunity classes" are provided for the especially bright.

(iii) *Secondary Schools.* At the age of 12 or 13 (in Queensland, 14) children transfer to a secondary school course. In the cities and larger country centres this is provided in a separate school, but in less densely populated areas secondary classes share the same buildings as primary classes. In rural areas secondary pupils may share teachers or classrooms with primary pupils, and even in one-teacher schools a few secondary students may carry out correspondence assignments under the supervision of the primary teacher-in-charge.

Secondary curricula have developed from the matriculation requirements of the universities. English grammar and literature, mathematics, including algebra, geometry and trigonometry, were the core. Languages, chiefly Latin and French, or science, chiefly physics and chemistry, and history had an important place. Geography and drawing were often taken in the first two or three years.

As a result of changes in the academic course for matriculation, greater emphasis has been placed on oral language and written expression in the English course; Latin has waned in popularity and modern languages other than French and German are being taught in a few schools. A general science course has been introduced in some States, and social studies, a synthesis of history, geography and civics, is a subject to third-year level. More emphasis has been placed on art, music and physical education. In recent years the provision of a secondary education for all has gained ground rapidly, although the entrance requirements of tertiary institutions are still provided for.

Consequently, alongside the academic course, other courses have grown up. In country areas they may be offered in the same school or the academic course may even be largely abandoned. In the city, it is usual to offer non-academic courses in separate schools. The academic schools and multi-lateral country schools are usually known as High Schools, while the other types are generally distinguished by such names as Junior Technical Schools and Home Science Schools.

Particular mention should be made of the recent development of the all-age consolidated school sometimes with an agricultural bias, found under various names in different States. Tasmania and South Australia adapted the idea of the English village area schools to Australian conditions and established "Area Schools", some of which have farms attached.

The courses followed in the non-academic schools are in general broader than in the academic schools. There is less concentration on establishing an academic discipline and method peculiar to each subject, but more attention to correlation between fields of knowledge, sometimes expressed by projects involving them all. Less time is generally devoted to mathematics and the formal sciences, more time to practical work and to art and musical appreciation. In English, oral language is emphasized rather more and grammar much less than in the academic schools.

(iv) *State Details.* Very brief particulars of the position in each of the States were given on pp. 432-3 of Official Year Book No. 40.

4. *Examinations and Accrediting.*—(i) *Examinations.* In earlier years most States had three examinations for school children. The first came at the end of primary school and was variously known as the "Qualifying Certificate" or "Scholarship". These examinations were regarded as a qualification for secondary education. The third came at the end of the secondary course, at the age of sixteen or seventeen, and was known as the "Leaving" or "Senior Public" Examination, which qualified students for university matriculation. Between these came the "Intermediate Certificate" or "Junior Public Certificate", usually one or two years before the end of the full course of secondary schooling. A pass in this examination was a useful entrance qualification for clerical occupations, nursing, some Public Service positions, and other callings requiring academic training.

The entrance examination for secondary schools was administered by the Education Departments, although students from private schools also sat for it. The two higher examinations were generally under the control of a board, on which universities, Education Departments and non-government schools were represented.

The external examination for secondary school entrance has now been abolished in every State except Queensland, where the age of transition is fourteen and the "Scholarship" Examination must be passed to entitle the student to free secondary education and, if necessary, boarding allowances. The external Intermediate Examination has declined in importance, some States substituting internal examinations in some, or all, schools, other States providing a variety of internal certificates from different types of schools. The Leaving Certificate in most States has not been supplanted, but has been modified to provide a greater variety of subjects and, as for example in mathematics, the opportunity of choosing several specialized courses or a broad course.

The length of the secondary course has been increased in two States from two to three years for the Intermediate Certificate and from a further one to a further two for the Leaving. South Australia has a further year beyond the Leaving Certificate for a separate

examination known as "Leaving Honours". Only the "Leaving Certificate" is necessary for matriculation, but good results—credits as distinct from passes—in the Leaving Honours Examination may carry exemption from some subjects of the first-year university course. In Victoria the optional Leaving Honours year has been replaced by adding a further year after the Leaving Examination for a course leading to a special matriculation examination. Separate matriculation examinations also exist in New South Wales, Western Australia and Tasmania, but successful Leaving candidates are not required to sit.

(ii) *Accrediting.* The system of granting certificates, or credit for subjects passed, without external examination is a major development and now operates in four States. Credit is assessed mainly on the student's record of work for the year, although some internal examinations are generally given. Syllabuses can be less rigidly controlled and can be more freely adapted to local conditions, although standards are maintained by the supervision of the central authority.

(iii) *State Details.* The details of accrediting in each State were given on pp. 433-4 of Official Year Book No. 40.

5. *Health Services to Schools.*—Information relating to school medical and dental services is given in Chapter XIV.—Public Health and Related Institutions.

6. *Guidance.*—Each of the Australian States has now a comprehensive system of educational guidance administered by trained and experienced educational psychologists and backed by a system of school record cards. In general, the functions of these services are:—selection and differentiation for secondary education, diagnosis and guidance of atypical children, preliminary vocational guidance and, in some States, research. The weight given to each of these functions varies considerably from State to State, but the aim is the provision of thorough educational guidance services for all children.

The Vocational Guidance Division of the Commonwealth Employment Service co-operates 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.

7. *Research.*—(i) *State Education Departments.* All State Education Departments have set up research branches which function as integral parts of head offices. In several States the officer who directs research is also responsible for the guidance service offered by his Department. The research undertaken is directed towards departmental activities and the findings of research are examined carefully in the determination of policy and procedures; in addition, many problems of immediate importance are handled. In the majority of States, too, the Research Branch supervises the collation of statistics; it also plays an important part in curriculum revision and modification of examinations.

(ii) *Australian Council for Educational Research.* Research in education is also carried out by a non-governmental body called the Australian Council for Educational Research. It is engaged on educational research in a wide variety of fields, ranging from tertiary to pre-school education. It conducts surveys and enquiries, makes grants to approved educational investigators, serves as a centre to disseminate 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 some financial support to it.

8. *Atypical Children.*—Pupils who, for one reason or another, cannot progress to their best advantage in an ordinary school are catered for by special schools or classes. Among groups given special attention are the mentally backward, the gifted, the physically handicapped, the blind, deaf and dumb, the epileptic, the cerebral palsied, the partially sighted, the hard of hearing and the delinquent. The provision of special schools and classes has involved the appointment of departmental specialists, special training courses and close liaison with school health services. In some States, special clinics attached

to hospitals or functioning as an independent child-welfare service handle cases of personality maladjustment ; they work in co-operation with the psychological services of the Education Departments.

9. *Education of Migrant Children.*—At 30th June, 1954, the number of children of post-war migrants who were of school age was approximately 129,000 or 7 per cent. of the total school age population, more than half being alien and non-English speaking on arrival. During this period the impact of the increased birth rate of the Australian population in the mid 1940's also contributed to the heavy burden placed on State education resources.

It is generally considered desirable for migrant children to attend schools with Australian children, although some purely migrant schools have been built, with Commonwealth assistance, in hostels, etc., and in some States, schools or classes exclusively for alien migrant children assist the children until they can take their place in their age group classes in the normal schools. As is to be expected, alien children find little difficulty in learning the English language, which is the language of instruction in all schools in Australia. Non-government schools absorb a significant proportion of migrant children.

The major problems have been those of staffing and accommodation. The Commonwealth assists by providing school buildings in migrant centres and in some residential hostels. Some States have relieved the staffing position by employing suitably qualified English-speaking migrants as teachers in schools exclusively used by migrant children, although the policy of teaching migrant children in schools with Australian children is adhered to wherever possible. Where it is not possible, particularly in large migrant centres, parents are encouraged to move into Australian communities. In almost all cases children of secondary school age are accommodated in existing Australian secondary schools.

10. *Education of Native Children in Australia.*—The Commonwealth Government is responsible for the education of full-blood native children in the Northern Territory. Each State has responsibility for the welfare and education of native children within its boundaries.

Native children are admitted to government schools in all States except in areas where separate facilities are provided for the natives. In those States where natives are more numerous special schools are located at or near aboriginal reserves, settlements and stations. The schools are for the most part staffed by teachers from the Education Departments, and the curriculum is similar to that in ordinary government schools with a bias towards handicrafts. Numbers of native children also attend the mission schools conducted in several States by the various denominations. The standard of education in these schools generally is similar to that in the government schools.

11. *Provision for Rural Areas.*—(i) *General.* The population of Australia is so scattered that there is a problem in providing primary, and more especially secondary, education for all eligible pupils. One method of meeting this problem was the establishment of a wide network of one-teacher primary schools, staffed in the main with trained teachers. The practice of sending itinerant teachers to outlying areas is still in force in the far north of Western Australia, and mobile railway cars are used for technical and agricultural education in New South Wales and domestic science in Queensland. However, in general, it has been the practice to bring the child to the educational facilities rather than vice versa.

(ii) *Subsidized Schools.* Where there is a group of children too few in number to warrant the establishment of a one-teacher school, 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.

(iii) *Consolidation.* As early as 1904, the policy of transporting pupils to larger and more central schools began to come into operation. Trains, bicycles and horses were first employed, but the use of buses has led to a very great development of school transport systems. This policy, known as "consolidation", has been responsible for a substantial reduction in the number of small schools, and is one of the most striking developments of the past twenty years. The consolidated school is usually not merely a larger primary or secondary school; it generally provides a curriculum specially adapted to the needs of the rural area it serves. Organized transport for children attending country primary and secondary schools has been developed considerably.

(iv) *Special Assistance.* Another way of bringing children and schools together has been the provision of financial assistance for children who have to live away from home in order to attend school. Most of these board in private homes but there are six government hostels and 56 private ones (excluding private boarding schools) which cater for more than 1,500 children of secondary school age and a small number of primary school children also. Special scholarships for country children, giving allowances for living away from home, and substantial fare concessions for vacation travel are provided by all States.

(v) *Correspondence.* For those who are still unable to attend school, correspondence tuition has been established in every State. Technical Correspondence Schools, which grew out of the Commonwealth scheme of technical training, were established in each State by 1942, and have grown under State administration since. An interesting development in 1947 was the appointment of a liaison officer for correspondence school pupils in Tasmania. The activities have been made more effective by his personal contact with pupils and parents and his practical aid in supervision.

12. *School Broadcasting in Australia.*—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 School and Youth Education Department of the A.B.C. is responsible for the broadcasting of the programmes, but it draws freely on the advice and services of teachers and maintains permanent liaison officers with the Education Department. More than two-thirds of Australian schools are equipped with radio receivers.

School broadcasts are presented as part of the regular A.B.C. programmes without separate stations or wave lengths. Special efforts are made, however, to relate the broadcasts to the actual work in the schools 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. The "Kindergarten of the Air", begun in 1942 as a service to children unable to attend kindergarten, has proved popular in both town and country. Children are encouraged to take part in the programme in response to suggestions made by the broadcaster. Radio lessons have been designed to supplement those being done by means of correspondence.

13. *Teacher Training and Recruitment.*—(i) *General.* The training of government school teachers is carried out by the State Education Departments, but in most States persons who wish to train for teaching in private schools may attend government training colleges on payment of a fee. Many non-government school teachers have been drawn from the government teaching services; others have been recruited at the university graduate level. Private training institutions also provide some teachers.

An account of the early growth of teacher training systems is to be found in *Official Year Book No. 22* and subsequent developments were reviewed extensively in *Official Year Book No. 40*. Under the pupil-teacher system, the student spent one or two years, or even longer, teaching in school under supervision, studying and receiving instruction from the headmaster in the art of teaching. In some States, at the end of that period

he passed into a teachers' college. After emerging as a trained teacher, he often continued his studies to obtain a series of graded certificates which were necessary for promotion. The pupil-teacher system has, however, been abandoned as the chief method of training teachers and teacher students are now recruited at matriculation level and given a professional course of training at colleges controlled by Education Departments or by University Departments of Education. The raising of entrance standards and prolongation of training has led to a close association between the Education Departments and universities. The trend has been towards placing teacher training on the same basis as other professional training.

There is at present a shortage of teachers in Australia. Measures taken to overcome this shortage include publicity drives to attract recruits, increased allowances to student teachers amounting in some States to more than £200 per annum, substantial increases in teachers' salaries and liberalization of promotion systems.

Despite increased training facilities and higher teachers' college enrolments in the post-war period, the supply of teachers throughout Australia has done little more than replace wastage, and has not kept pace with the rising enrolments. Difficulty is being experienced in staffing small schools in remote areas, while the shortage of secondary teachers is reported to be acute in some States.

(ii) *Training Colleges.* Every State maintains at least one teachers' training college. Most students are trained at colleges in the capital cities, although there has been a movement towards the establishment of colleges in the country. In 1953 there were in Australia twenty teachers' colleges conducted by Departments of Education and professional training for teachers was provided by five universities.

The entrance standard is generally at the Leaving Certificate level at about the age of seventeen. In some States intending teachers can obtain a scholarship at the Intermediate Certificate level to enable them to complete teachers' college entrance requirements. In return they are required to enter into a bond of service additional to that normally required of teachers' college trainees.

(iii) *Training of Primary Teachers.* In most States, teachers for government primary schools are trained in teachers' training colleges controlled and administered by the State Education Departments. Colleges are conducted on a co-educational basis, and departmental trainees are given a monetary allowance while in training and are required to enter into a bond to serve for a specified period or to repay all or portion of the cost of training.

In general, the duration of courses is two years for primary teachers, including infants' teachers. There is a variety of subject detail in training courses in the different States. The basic subjects taken in the various courses are principles, history and general methods of teaching, special methods of teaching primary school subjects and educational psychology. In addition, students undertake courses in physical education, art, music, school hygiene and handicrafts as well as lectures designed to widen their own cultural background. In Tasmania teacher training is provided by the university and in South Australia student teachers attend lectures in normal degree courses at the university to complete the academic part of their training.

(iv) *Training of Secondary Teachers.* Prospective secondary teachers are generally required to undertake a degree course, and then are required to undertake a course of professional training of one year's duration. This normally qualifies trainees for a Diploma in Education. The year's professional training in education includes lectures and seminars on subjects associated with educational theory and practice, study of methods and techniques appropriate to secondary school subjects, periods of practice teaching and the observation of classroom techniques in the teaching of special subjects.

(v) *Training of Specialist Teachers.* Teachers of specialist subjects such as music, art, manual arts, physical education and domestic science receive from two to five years' training. Physical education courses are generally conducted at teachers' colleges

or at a university ; use is made of technical colleges and conservatoria of music for other specialist training. Teacher trainees attending the institutions, however, are regarded as being in attendance at a teachers' training college and are normally required to spend a portion of each week at the teachers' college.

(vi) *Training of Technical Teachers.* Teachers of general subjects in technical schools and colleges generally receive their training either as primary or as secondary teachers and after some experience in either or both fields are transferred to a technical institution.

Teachers of specialist subjects in technical schools are in the main recruited from the ranks of qualified tradesmen engaged in either industry or commerce. Upon appointment teachers of technical subjects usually receive instruction in classroom teaching techniques and procedures. A Technical Teachers' Training Centre has been established in Victoria.

(vii) *In-service Training.* As almost all teachers now enter the profession by way of teachers' training colleges, 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. Education Departments have always encouraged practising teachers to pursue university courses, which are free to approved applicants in some States, and facilities have been made available for teachers to obtain the academic qualifications for higher certificates where such exist.

Efforts are also made to keep teachers informed of new ways of meeting classroom problems. District Inspectors are usually responsible for the conduct of meetings where professional topics are discussed and for the arrangement of visits to other schools where special work is being done. Official publications of the Education Departments contain articles dealing with both educational theory and practice. In most States, the teachers' organizations publish magazines containing, among other material, articles dealing with educational theory. These reach the great majority of government teachers.

(viii) *State Details.* The details of teacher training in the States were given on pp. 442-3 of Official Year Book No. 40.

(ix) *Sex and Status of Teachers.* Although about one half of the teachers in State schools in Australia are men, the ratio varies considerably from State to State. The increase in the proportion of men in recent years is the result of the difficulty of recruiting females at a rate rapid enough to replace their greater "wastage" rate. Only women teachers are employed in the infants' schools and generally in girls' departments. However, men predominate in the senior positions, both because of their greater preponderance amongst those with long service and because the higher promotion positions are generally reserved for men, except for some in infants' schools and girls' schools which are reserved for women.

14. *School Buildings and Grounds.*—In 1930, school building programmes were seriously cut because of the financial difficulties of the depression. The 1939-45 War intervened before school building could be resumed on a large scale. During the post-war period the building of schools has been given a high official priority in order to obtain labour and materials. Most schools are therefore either quite new or more than 25 years old.

The post-war buildings fall into two groups, portable and permanent. In primary schools, in particular, some Education Departments favour a mixture of both kinds of classrooms, thus enabling them to cope with the changing age-composition of different areas. Prefabricated classrooms have been imported or locally produced in very large numbers—the Bristol aluminium dual units being especially popular. Generally, these have been used to extend existing schools, although in a few cases entire schools have been composed of them. To meet the very acute shortage all kinds of emergency measures have been taken, including the hiring of halls, and the use of cloak-rooms,



weather sheds and verandahs for class instruction. However, a considerable number of modern and imposing new secondary schools have been built and equipped with special facilities for the varied activities of the pupils.

15. *Equipment.*—(i) *Text Books and Materials.* All equipment regarded as essential by the Education Department in each State, including equipment for manual training and home arts, is provided free of charge, except for text books for pupils.

The more widespread application in recent years of activity and play-way methods in the infants' schools has been stimulated by the provision of a greater volume of free materials such as blocks, counters, peg-boards and modelling clay.

Secondary schools are almost always provided with laboratories, but these are not found in primary schools, with the exception of the larger all-age schools in the country.

(ii) *Furniture.* There has been considerable development in this field. Originally most schools were equipped with long desks and benches, seating six to eight pupils, but these were later replaced by the standard dual desk with tip-up seat, and in infant classes by individual chairs and small tables. In the post-war period considerable research was undertaken on posture and the physical measurement of children. The dual desk is now being replaced in some States by the individual table and chair, provided in a range of sizes suitable to each class. In some States tubular steel is used. The new type of furniture is more suitable for flexible arrangements of the class in line with modern educational practice.

(iii) *Visual Aids.* In the past 20 years there has been a remarkable growth in the use of visual aids in education. After some resourceful pioneering work had been done by individuals the Departments of Education between 1936 and 1939 appointed special committees and teacher demonstrators to guide the development of the new educational medium. Production units to produce film strips suitable for use in schools were set up in five States and an Australian-produced film-strip projector was manufactured. After the war, the emphasis moved from the strip projector to the 16 mm. sound machine and the National Film Board, set up by the Commonwealth Government to promote the use of educational films, became the main producer of these films. Film companies are also designing films primarily for class-room use and several manufacturers have produced 16 mm. sound projectors. Education Departments have their own film libraries to distribute films to schools and borrow largely from the National Library which is the main distributing centre for non-technical films in Australia.

16. *Parent and Citizen Organizations.*—In Australia, where all government schools are administered by central Departments, there is little opportunity for local administration of education. Public interest is expressed through parent and citizen organizations. Although the names of these bodies differ in the various States they have similar aims which are:—to promote the interests of the school by bringing parents, pupils and teaching staff together; to help provide teaching aids not supplied by the Department; to provide recreational materials; to assist in the regular attendance of children at school; to help find accommodation for teachers.

In all States the parent and citizen organizations have affiliated to become State-wide bodies. These, in turn, are the members of the Australia-wide body, the Australian Council of School Organizations.

17. *Statistics of Government Schools.*—(i) *General.* The government schools shown in the following tables include primary, secondary, junior technical, correspondence and subsidized schools, but exclude senior technical colleges, evening schools and continuation classes.

Particulars relating to senior technical colleges are given in § 5 following.

(ii) *Year 1953.* (a) *General.* The following table shows for 1953 the number of government schools, together with the teachers employed, teachers in training and the number of individual children enrolled.

## GOVERNMENT SCHOOLS(a), 1953.

State or Territory.	Schools open at end of year.	Teachers Employed (excluding Teachers in Training).	Teachers in Training.	Net Enrolment.
New South Wales(b) .. ..	2,533	14,989	2,678	478,546
Victoria .. ..	2,000	10,267	2,305	295,825
Queensland .. ..	1,563	6,101	1,442	182,572
South Australia .. ..	685	4,042	416	113,492
Western Australia .. ..	482	2,948	696	(c) 82,590
Tasmania .. ..	322	1,822	250	51,377
Northern Territory(d) .. ..	10	68	..	1,632
Australia .. ..	7,595	40,237	7,787	1,206,034

(a) Excludes Senior Technical Colleges.  
weekly enrolment.(b) Includes Australian Capital Territory.  
(d) Year ended 30th June, 1954.

(c) Average

(b) *Average Enrolment and Attendance.* The methods of calculating enrolment are not identical throughout the States. The unit in South Australia is the daily enrolment, while New South Wales, Victoria, Western Australia and Tasmania employ the weekly enrolment. In Queensland no average enrolment is compiled, and the August census enrolment figure has been taken.

As with enrolments, there is not complete uniformity in arriving at the average attendance, but the matter of securing uniformity in these respects has been under consideration for some time. Most of the States aggregate the attendances for the year and divide by the number of school sessions. New South Wales and Western Australia, however, employ averages of term averages. The average enrolment and attendance in each State and the Northern Territory during 1953 are shown below :—

## GOVERNMENT SCHOOLS(a) : AVERAGE ENROLMENT AND ATTENDANCE, 1953.

State or Territory.	Average Weekly Enrolment.	Average Daily Attendance.	Percentage of Attendance to Enrolment.
New South Wales(b) .. ..	448,914	401,679	89.48
Victoria .. ..	283,041	257,784	91.08
Queensland .. ..	(c) 176,300	155,974	88.41
South Australia .. ..	108,846	100,724	92.54
Western Australia .. ..	82,590	76,032	92.06
Tasmania .. ..	48,592	43,907	90.36
Northern Territory (d) .. ..	1,632	1,541	94.42
Australia .. ..	1,149,915	1,037,641	90.24

(a) Excludes Senior Technical Colleges.  
enrolment at 1st August, 1953.(b) Includes Australian Capital Territory.  
(d) Year ended 30th June, 1954.

(c) Census

Recurring epidemics of contagious diseases, minor illnesses and bad weather are all serious factors which affect the full attendance of pupils at school.

The average attendance at government schools in Australia is shown in the following table for the year 1891 and at varying intervals to 1953.

## GOVERNMENT SCHOOLS(a) : AVERAGE ATTENDANCE, AUSTRALIA.

Year.	Total Population. (b)	Average Attendance.	Year.	Total Population. (b)	Average Attendance.
	'000.	No.		'000.	No.
1891 .. ..	3,421	350,773	1941 .. ..	7,144	73,116
1901 .. ..	3,825	450,246	1948 .. ..	7,792	770,554
1911 .. ..	4,574	463,799	1949 .. ..	8,066	810,800
1921 .. ..	5,511	666,498	1950 .. ..	8,307	844,123
1931 .. ..	6,553	817,262	1951 .. ..	8,528	899,514
1933 .. ..	6,657	805,334	1952 .. ..	8,710	974,314
1939 .. ..	7,005	744,095	1953 .. ..	8,903	1,037,641

(a) Excludes Senior Technical Colleges.

(b) At 31st December.

(c) *Schools in the Australian Capital Territory.* During 1953 eleven government schools were in operation in the Australian Capital Territory; enrolment numbered 3,439; and average attendance was 3,052. By arrangement with the Commonwealth Government these schools are conducted by the New South Wales Education Department with provision for primary and secondary education, the Department being recouped for expenditure. The cost of the teaching staff in 1953-54 was £167,623, while the cost of general maintenance amounted to £93,650. The figures quoted exclude enrolment, etc., at the Canberra Technical College and the Evening Continuation School. For further particulars of education facilities in the Australian Capital Territory see Chapter V.—The Territories of Australia, Australian Capital Territory, p. 124.

(iii) *Expenditure.* (a) *Maintenance—All Schools (except Senior Technical Colleges).* The net expenditure on maintenance in all grades of schools, except senior technical colleges and, in Victoria and (in 1939) Tasmania, junior technical schools, and the cost per head of average attendance for 1939 and each of the years 1949 to 1953 are shown in the following table. The figures do not include expenditure on buildings, which is shown separately in a subsequent table. In all expenditure tables the figures for Victoria, Queensland and Western Australia relate to the financial year ended six months later than the calendar year.

## GOVERNMENT SCHOOLS(a) : NET EXPENDITURE ON MAINTENANCE.

Year.	N.S.W. (b)	Vic. (c)	Q'land.	S. Aust.	W. Aust.	Tas.	N.T.	Total.
TOTAL (INCLUDING SECONDARY SCHOOLS).								
(£.)								
1939 .. ..	4,598,376	2,667,094	1,481,390	854,937	730,500	(c) 320,616	6,802	10,658,824
1949 .. ..	9,426,879	6,302,596	3,385,274	1,953,121	1,801,259	928,291	35,322	23,832,742
1950 .. ..	10,830,086	7,763,962	3,963,736	2,135,007	2,283,666	1,082,758	40,578	28,399,793
1951 .. ..	13,222,509	9,776,957	4,813,837	3,050,624	3,285,769	1,367,236	57,156	35,574,088
1952 .. ..	17,844,140	11,930,560	5,630,480	3,767,881	3,897,881	1,916,383	88,176	45,075,501
1953 .. ..	19,716,929	12,993,461	6,353,251	4,106,697	4,381,933	2,211,116	101,893	49,865,280
PER HEAD OF AVERAGE ATTENDANCE.								
(£ s. d.)								
1939 .. ..	15 12 2	14 1 4	13 0 9	12 18 4	14 5 7	11 7 6	11 3 9	14 6 7
1949 .. ..	29 9 10	32 4 11	26 6 0	27 2 7	29 15 5	27 14 10	34 13 3	29 7 11
1950 .. ..	33 0 6	37 11 1	29 17 11	31 14 8	36 0 8	30 6 3	39 14 1	33 12 11
1951 .. ..	37 16 1	44 12 4	33 14 8	36 18 9	49 2 10	36 11 10	52 6 10	39 11 0
1952 .. ..	47 8 11	49 19 3	36 8 1	41 0 9	54 8 0	45 16 5	72 10 3	46 3 7
1953 .. ..	49 1 9	50 8 1	40 14 8	40 15 5	57 12 8	50 7 2	66 2 5	48 1 2

(a) Excludes Senior Technical Colleges.

(b) Gross figures, receipts not being available

(c) Excludes Junior Technical Schools.

(b) *Maintenance—Secondary Schools.* The figures shown in the preceding table refer to expenditure on maintenance of all government primary and secondary schools, excluding senior technical colleges. It has been the practice of the State Education Departments to give separate information in regard to the cost of secondary education. The difficulty of making any satisfactory allocation of the kind, however, will be understood, when it is realized that both elementary and higher education are in some instances given in the same school and by the same teacher. Unfortunately, too, the term "secondary" has not the same meaning in all States. It might be mentioned here that similar difficulties arise in connexion with the apportionment amongst the various branches of expenditure on administration, inspection and the training of teachers. The figures quoted hereunder in regard to cost have been extracted mainly from the Reports of the State Education Departments, and are subject to the above qualifications.

#### GOVERNMENT SECONDARY SCHOOLS(a) : EXPENDITURE ON MAINTENANCE.

State.	1952.		1953.	
	Cost.	Cost per Head of Population.	Cost.	Cost per Head of Population.
	£	£ s. d.	£	£ s. d.
New South Wales .. ..	5,102,176	1 10 6	5,747,866	1 13 11
Victoria .. ..	3,084,780	0 6 1	3,377,023	1 7 11
Queensland .. ..	602,682	1 9 8	735,821	0 11 4
South Australia .. ..	898,831	1 4 4	982,065	1 5 4
Western Australia .. ..	900,998	1 9 5	1,118,198	1 15 5
Tasmania(b) .. ..	364,126	1 4 5	396,503	1 5 11

(a) Excludes Senior Technical Colleges.

(b) Includes High and Junior Technical Schools.

The figures in all cases exclude the cost of buildings. In Queensland, the figure quoted excludes the cost of the Agricultural High School and College, which amounted in 1952-53 to £198,876 and in 1953-54 to £214,080.

(c) *Buildings.* Expenditure on government school buildings, excluding senior technical colleges, for the years 1939 and 1949 to 1953 was as follows :—

#### GOVERNMENT SCHOOLS(a) : EXPENDITURE ON BUILDINGS.

(Including Loan Fund Expenditure.)

(£.)

Year.	N.S.W.	Vic.	Q'land.	S. Aust.	W. Aust.	Tas.	N.T.	Total.
1939 .. ..	411,720	206,481	174,725	85,539	56,994	60,011	539	996,009
1949 .. ..	1,277,015	2,015,972	442,753	355,494	454,207	288,057	12,522	4,846,020
1950 .. ..	2,163,917	2,364,674	633,149	544,859	676,742	402,080	13,723	6,799,144
1951 .. ..	3,531,351	3,118,637	854,761	911,036	916,515	721,740	96,729	10,150,769
1952 .. ..	4,845,271	3,009,502	644,008	1,667,480	2,006,093	599,338	116,735	12,980,017
1953 .. ..	4,170,103	4,061,455	811,867	896,922	1,037,832	668,252	59,721	11,706,152

(a) Excludes Senior Technical Colleges.

The totals for the various States in 1953 include the following amounts expended from loan and other funds :—New South Wales, £2,631,944 ; Victoria, £3,864,707 ; Queensland, £607,046 ; South Australia, £673,126 ; Western Australia, £840,495 ; and Tasmania, £596,376.

(d) *Net Total Cost.* The net total cost of education in government schools, including buildings, during the years 1939 and 1949 to 1953 was as follows:—

## GOVERNMENT SCHOOLS(a) : NET TOTAL COST.

(£.)

Year.	N.S.W. (b)	Vic. (c)	Q'land.	S. Aust.	W. Aust.	Tas.	N.T.	Total.
1939 ..	5,010,096	2,873,575	1,656,124	939,576	787,491	(c)380,627	7,341	11,654,833
1949 ..	10,703,894	8,318,568	3,828,027	2,308,615	2,255,466	1,216,348	47,844	28,678,762
1950 ..	12,994,003	10,128,636	4,596,885	2,979,866	2,960,408	1,484,838	54,301	35,198,937
1951 ..	16,753,860	12,895,594	5,668,598	3,961,660	4,202,281	2,088,976	153,885	45,724,857
1952 ..	22,680,411	15,030,062	6,275,478	5,435,361	5,904,676	2,515,721	204,011	58,055,620
1953 ..	23,887,032	17,054,916	7,165,118	5,003,619	5,419,765	2,879,368	161,614	61,571,432

(a) Excludes Senior Technical Colleges.

(b) Gross figures, receipts not being available.

(c) Excludes Junior Technical Schools.

The figures in this and the preceding tables refer to all grades of government schools with the exception of senior technical colleges, and in Victoria and (in 1939) Tasmania, junior technical schools. Including buildings, the net cost per scholar in average attendance for the whole of the government schools in Australia amounted in 1953 to £59 6s. 9d., compared with £4 9s. 3d. in 1901.

(e) *School Banking.* Particulars of School Savings Banks are included in Chapter XIX.—Private Finance.

## § 3. Non-Government Schools.

1. *Public Authority and the Non-Government Schools.*—In all States education is compulsory for all children between certain ages. It must be received in a government school, unless the child is under “regular and efficient” instruction elsewhere. This may be at home, or in a non-government school. The provision for control over the regularity and efficiency of instruction in the non-government schools varies considerably from State to State. In Queensland and South Australia it is possible under the present regulations for schools to exist without inspection. In New South Wales and Western Australia provision is made for an initial inspection when a new school starts, and for inspections thereafter as the Minister requires, to ensure efficiency. In Victoria and Tasmania, registers are kept of teachers and schools, and both teachers and schools must satisfy the administering authority that they are efficient before registration is granted. Without such registration, neither a teacher nor a school can operate. Provision is made, too, for inspections at any time by the registering authority.

Public authority over schools or institutions having scholars above the compulsory ages is generally less direct. It is effected directly by the registration procedures in Victoria and Tasmania, and in all States there is a measure of indirect control through provisions governing the awards of State scholarships for secondary education, which can be taken only in government or in approved non-government schools.

The eight State-subsidized grammar schools in Queensland are the only non-government schools in Australia for which an annual inspection is prescribed by statute.

In all States, non-government schools are required, under the authority of either the Education Acts or Statistics Acts, to furnish certain returns. The form of these returns may be prescribed in the Acts or may be subject to alteration by the Minister's consent.

2. Numbers of Non-Government Schools, Teachers and Enrolments, 1953.—The numbers of non-government schools, teachers and enrolments for 1953 are shown in the following table :—

### NON-GOVERNMENT SCHOOLS, 1953.

Denomination.	N.S.W. (a)	Vic.	Q'land.	S. Aust.	W. Aust.	Tas.	N.T.	Total.
NUMBER OF SCHOOLS.								
Church of England ..	41	35	15	14	9	5	..	119
Presbyterian ..	12	15	4	2	3	2	..	38
Methodist ..	6	4	(b) 5	3	3	1	..	22
Roman Catholic ..	625	366	230	102	138	40	2	1,503
Other Denominational ..	20	22	7	19	5	4	..	77
Undenominational ..	56	47	10	8	71	7	..	199
Total ..	760	489	271	148	229	59	2	1,958
TEACHERS.								
Church of England ..	729	632	243	177	101	86	..	1,968
Presbyterian ..	264	281	54	52	52	11	..	714
Methodist ..	157	149	(b) 111	74	37	27	..	555
Roman Catholic ..	4,431	1,937	1,434	562	530	212	13	9,119
Other Denominational ..	69	127	30	82	20	52	..	386
Undenominational ..	455	323	103	110	141	30	..	1,162
Total ..	6,105	3,449	1,975	1,057	881	418	13	13,898
ENROLMENTS.								
Church of England ..	9,726	11,967	3,846	3,161	2,079	1,366	..	32,145
Presbyterian ..	4,064	5,679	568	1,004	1,101	188	..	12,604
Methodist ..	2,330	3,306	(b) 1,648	1,202	830	318	..	9,634
Roman Catholic ..	122,301	79,932	42,752	15,319	19,009	6,585	409	286,307
Other Denominational ..	943	2,538	434	1,331	236	866	..	6,348
Undenominational ..	6,016	6,185	1,921	1,614	2,750	562	..	19,048
Total ..	145,380	109,607	51,169	23,631	26,005	9,885	409	366,086

(a) Includes Australian Capital Territory.

(b) Presbyterian and Methodist Schools' Association.

3. Growth of Non-Government Schools.—The enrolment and average attendance at non-government schools in 1891 and at varying intervals to 1953 were as follows :—

### NON-GOVERNMENT SCHOOLS : ENROLMENT AND ATTENDANCE.

Year.	Enrolment.	Average Attendance.	Year.	Enrolment.	Average Attendance.
1891 ..	124,485	99,588	1948 ..	281,354	251,092
1901 ..	148,659	120,742	1949 ..	293,306	264,164
1911 ..	160,794	132,588	1950 ..	309,673	275,562
1921 ..	198,688	164,075	1951 ..	326,258	293,429
1931 ..	221,387	189,665	1952 ..	347,831	315,796
1939 ..	247,482	219,171	1953 ..	366,086	337,156

4. The Organization of Roman Catholic Education.—There is, in each State capital, an official who acts under the Archbishop as a Director of Catholic Education for the area. Each diocese within the area is, however, autonomous and manages its own educational affairs subject to the local episcopal authority. The State Director has, in addition to possible inspectorial functions within his own diocese, the duty of co-ordination of educational matters within his area, and of liaison with other educational authorities, particularly the State Education Department.

The system includes kindergartens, sub-primary, primary, academic secondary, home science, commercial, agricultural and technical schools, juniorates and minor

seminaries, schools for the mentally and physically handicapped, orphanages and a variety of special schools of a charitable nature for under-privileged or socially handicapped children.

With the exception of a small number of permanent lay teachers and a number of visiting teachers—usually specialists in such matters as physical education, sport, speech, etc.—teaching is done by members of religious orders.

5. **The Organization of Other Non-Government Education.**—(i) *General.* Within each State, although the other non-Government schools may be organized into loose forms of association for purposes such as sports, conferences, uniform conditions, etc., there is no system corresponding in size, detail or organization with the Roman Catholic Schools.

(ii) *Church of England.* In certain schools under direct church control the appointment of a majority of Council members rests with the Synod. More frequently perhaps the appointment of such Council members lies in the hands of the diocese or even the parish. The ecclesiastical head of the area, the archbishop or bishop, is typically *ex-officio* chairman of the school Council. The church may appoint all members or on the other hand it may appoint a majority or only one or two. The other members are secured in many ways; some may be nominated by parents, some by "old boys," some by the "school association," some by co-option by the existing Council. Many combinations of these forms of membership occur.

(iii) *Other Denominations.* In general the pattern is similar to that described above, with appointments usually controlled by the State authority of the Church concerned, either alone or acting in conjunction with the local congregation. In Queensland there are five schools operated under the joint auspices of the Presbyterian and Methodist Churches.

(iv) *Undenominational.* There are three main groups of such schools; firstly, those partly controlled by State action, such as those grammar schools for which some members of the controlling body are appointed under Act of Parliament; secondly, those operated under the auspices of corporate bodies, usually in the form of limited liability companies which may be affiliated with particular churches; and, thirdly, a number of privately-owned schools, many of which are small and restricted to kindergarten or primary schooling.

## § 4. Pre-school Education.

1. **Types of Pre-school Centres.**—Nursery-kindergartens under trained teachers provide daily sessions for children aged three to six, while play groups or play centres provide shorter periods for smaller groups. Day nurseries or crèches care for the children of mothers in employment and Lady Gowrie Child Centres are special centres set up in each State capital city by the Commonwealth Government to demonstrate a child development programme. There are also some private and denominational nursery schools which vary considerably in standard.

Free kindergartens were originally established and financed mainly in congested industrial areas, by voluntary effort, but over the years State Governments and some municipal councils have provided an increasing amount of financial assistance.

2. **The Training of Teachers.**—Since the development of this work depends on the availability of trained teachers, nearly all kindergarten unions now have teacher training colleges providing three-year courses. The minimum entrance age is seventeen, and the Leaving Certificate is usually required before admission.

The New South Wales Department of Education gives a two-years' course at the Teachers' College, covering such subjects as biology, physiology, child development, psychology, mental hygiene, child welfare, home science, English, world history, current affairs, sociology, art, crafts, physical education, music and early child development (which embraces principles and methods, play activities, children's literature, music for children, art and other creative experiences, and curriculum planning). A considerable amount of time is also spent in all colleges in practice teaching.

Financial help, such as free training, bursaries provided by the Government or voluntary bodies and living allowances, is provided for teachers, but there is a considerable shortage of trained pre-school teachers.

The six kindergarten unions in 1938 united to form the "Australian Association for Pre-School Child Development", a federal body whose aim is to promote the continuous advancement of the pre-school movement throughout Australia.

3. **Kindergarten of the Air.**—Daily kindergarten sessions of half an hour are now broadcast in all States by the Australian Broadcasting Commission in collaboration with kindergarten unions.

4. **Kindergarten Unions.**—The following information regarding kindergarten unions has been compiled from particulars supplied by the principals of the chief institutions or the organizing secretary in each State, except in the case of Western Australia where the details were furnished by the Education Department. It refers to kindergarten unions or associations, and excludes the kindergarten branches in the government schools of the various States.

#### KINDERGARTEN UNIONS, 1954.

State.	No. of Schools.	Average Attendance.	Permanent Instructors.	Student Teachers.	Voluntary Assistants.
New South Wales ..	37	1,538	103	43	..
Victoria(a) ..	47	970	91	..	..
Queensland ..	4	186	11	..	..
South Australia(b) ..	83	2,757	211	..	9
Western Australia ..	33	1,016	40	..	..
Tasmania ..	5	222	10	..	..
Total ..	209	6,689	466	43	9

(a) Year 1953. (b) Includes affiliated suburban and country centres.

In 1954 only 25 of these 209 kindergartens were located outside metropolitan areas, mainly in the larger provincial cities. In each capital city except Hobart there is a training college and the number of students in training during 1954 was 113 in Sydney, 132 in Melbourne, 24 in Brisbane, 50 in Adelaide, and 16 in Perth.

### § 5. Technical Education.

1. **General.**—In this section technical education refers to that branch of education which is concerned with the preparation for entry to skilled occupations, including trades and professions. In the main this education is vocational and is chiefly part-time, being carried out by the student while he is engaged in his occupation. The work of technical high schools, junior technical schools and other schools of this nature which provide courses with a bias towards technical handwork has been excluded, as they provide a form of education which is more properly regarded as secondary education.

The chief institutions for vocational training other than the universities are the senior technical colleges. These offer training not only in industrial skills, but also in commercial, agricultural and pastoral occupations, the plastic arts and homecrafts. There are, in addition, agricultural colleges and a substantial number of private business colleges.

Although, as in other branches of education, the main lines of technical education were determined many years ago, expansion and development in the past 20 years has perhaps been greater in this field than in any other. The following table gives some indication of the growth of technical education in the years 1939 and 1949 to 1953.

#### TECHNICAL EDUCATION: AUSTRALIA.

Year.	No. of Colleges.	No. of Students.	No. of Teachers.(a)	Total Expenditure.
				£
1939 .. ..	94	89,215	3,276	1,359,800
1949 .. ..	131	153,547	6,530	4,081,331
1950 .. ..	141	161,564	6,409	5,096,563
1951 .. ..	146	158,179	6,179	5,930,370
1952 .. ..	141	170,325	6,408	7,145,402
1953 .. ..	141	178,301	6,688	7,826,645

(a) Includes both full-time and part-time teachers.



Technical education is the field most sensitive to changing material needs and has expanded to meet the requirements of new industries and techniques. The desire for the comparative economic security of skilled jobs during the period of economic depression and the increasing demand for skilled workers due to the development of more advanced techniques in industry stimulated public interest in all States.

A characteristic feature of technical education is the close co-operation between the Commonwealth and the States. This is understandable as the technical colleges were able to play an important part in meeting two crises with Australia-wide implications. During the years of the economic depression in the 1930's States sought means to provide technical training for the young unemployed and this led, in 1936, to the Youth Employment Scheme, in which the States and the Commonwealth participated. During the 1939-45 War the Commonwealth and the States worked together in the Commonwealth Technical Training Scheme to meet the war-time need for technicians; after the war this type of training was continued in the technical colleges in the States as a part of the Commonwealth Reconstruction Training Scheme. In addition, during the period 1940 to 1944 technical correspondence schools were founded in each State in conjunction with the Commonwealth and these have become an important part of the system of technical education in the Australian States.

The expansion of technical education in the last two decades has paralleled the growth of secondary production from predominantly scattered small-scale and light industry to more concentrated large-scale heavy industry utilizing advanced techniques. Technical colleges have always been linked with the industries from which they draw staff and students, but whereas formerly they produced skilled craftsmen they now also accept the responsibility for turning out persons capable of adapting themselves to swift technological changes and able to assume responsibilities of management and leadership. Furthermore, rapid changes in industrial methods call for a close connexion between college curricula and workshop practice in order that they may keep in step and so that applied research can make available to industry the results of pure research. The introduction of day training classes for apprentices is an indication of the development of this relationship between technical education and industry.

The history of the development of technical education is one of increasing government support and control, increasing financial commitments by both State and Commonwealth Governments as well as considerable financial support and greater participation by industrial undertakings in the work of the colleges, increasing enrolments and facilities and the development of curricula and courses to meet new needs, and the growing realization of the need to recruit and train teaching staff in a systematic way.

2. *Teacher Training.*—Another important feature of technical education relates to the training of teachers. Prior to the 1939-45 War technical colleges were staffed chiefly by men (and a few women) drawn from two sources. They were either trained teachers in the employment of the Education Department or technicians drawn from industry. Although some of the latter were highly qualified, the great majority had not been trained as teachers. In order to remedy this, there has been a move to develop schemes of training technical college teachers without breaking the important link provided by recruiting specialist tradesmen to teach in the colleges. For example, since the 1939-45 War, New South Wales has extended a system whereby tradesmen-instructors receive a course of teacher training in both general educational theory and teaching method. After appointment a teacher in a large centre attends classes for six hours each week during his first year of service and two hours weekly thereafter until he has completed the training course. Correspondence courses and itinerant teachers care for the newly appointed teacher-instructor in country colleges. Modifications of this aspect are in operation in other States. Many technical teachers, principally of academic, commercial and domestic science subjects, hold trained teachers' certificates from teachers' colleges.

3. Colleges, Teachers and Students.—The numbers of colleges, teachers and enrolments of individual students during the years 1939 and 1950 to 1953 are given in the following table :—

TECHNICAL EDUCATION : COLLEGES, TEACHERS AND ENROLMENTS.

State.	Colleges.	Teachers.			Individual Students Enrolled.		
		Full-time.	Part-time.	Persons.	Males.	Females.	Persons.
New South Wales—							
1939.. ..	24	301	894	1,195	27,403	9,861	37,264
1950.. ..	42	1,038	1,320	2,358	(a)48,310	(a)20,775	69,085
1951.. ..	44	935	947	1,882	(a)42,513	(a)20,652	63,165
1952.. ..	40	984	1,032	2,016	(a)44,161	(a)22,820	66,981
1953.. ..	40	994	1,036	2,030	(a)45,226	(a)23,252	68,478
Victoria—							
1939.. ..	30	817	456	1,273	21,158	7,686	28,844
1950.. ..	36	1,238	1,030	2,268	30,879	11,152	42,031
1951.. ..	36	1,280	1,071	2,351	29,220	12,217	41,446
1952.. ..	36	1,338	1,090	2,428	32,517	13,993	46,510
1953.. ..	37	1,497	1,147	2,644	35,511	14,304	49,815
Queensland—							
1939.. ..	13	94	108	202	5,125	1,272	6,397
1950.. ..	12	135	346	481	12,350	4,551	16,901
1951.. ..	12	135	346	481	12,654	5,425	18,079
1952.. ..	12	137	354	491	13,849	5,953	19,802
1953.. ..	12	143	361	504	14,574	6,732	21,306
South Australia—							
1939.. ..	17	104	212	316	6,390	3,331	9,721
1950.. ..	27	173	447	620	10,270	6,829	17,099
1951.. ..	28	195	482	677	10,512	6,893	17,405
1952.. ..	27	203	498	701	11,033	7,195	18,228
1953.. ..	27	209	494	703	11,439	6,863	18,302
Western Australia—							
1939.. ..	5	36	119	155	3,843	1,830	5,673
1950.. ..	15	131	264	395	7,424	3,925	11,349
1951.. ..	17	145	325	470	8,101	4,703	12,804
1952.. ..	17	150	321	480	7,995	5,284	13,279
1953.. ..	16	173	286	459	8,987	5,736	14,723
Tasmania—							
1939.. ..	5	41	94	135	936	380	1,316
1950.. ..	9	25	262	287	2,960	2,139	5,099
1951.. ..	9	34	284	318	3,356	1,924	5,280
1952.. ..	9	37	275	312	3,085	2,440	5,525
1953.. ..	9	56	292	348	3,382	2,295	5,677
Total—							
1939 .. ..	94	1,303	1,883	3,276	64,855	24,360	89,215
1950 .. ..	141	2,740	3,669	6,409	112,193	49,371	161,564
1951 .. ..	146	2,724	3,455	6,179	106,365	51,814	158,179
1952 .. ..	141	2,858	3,570	6,428	112,640	57,685	170,325
1953 .. ..	141	3,072	3,616	6,688	119,119	59,182	178,301

(a) Partly estimated.

4. Expenditure.—The expenditure on technical education in each State for 1953 is shown below :—

TECHNICAL EDUCATION : EXPENDITURE, 1953.

(Including Loan Fund Expenditure.)

(£.)

State.	Salaries and Maintenance.	Equipment.	Buildings.	Total Expenditure.	Receipts—Fees, etc.	Net Expenditure.
New South Wales ..	1,954,916	91,305	519,808	2,570,420	468,531	2,101,889
Victoria (a) ..	2,326,373	40,062	889,306	3,455,160	245,283	..
Queensland ..	362,890	154,018	129,752	646,660	38,575	608,085
South Australia ..	427,944	(b)	126,740	555,034	66,507	488,527
Western Australia ..	400,430	(b)	19,146	419,576	20,828	398,748
Tasmania ..	104,439	32,568	42,588	179,795	575	179,220
Total ..	5,576,992	317,953	1,727,340	7,826,645	840,299	..

(a) Includes expenditure on Junior Technical Schools.

(b) Included with salaries and maintenance.

Fees and other receipts are paid into Consolidated Revenue in all States except Victoria, where they are retained and spent by the Technical School Councils. The expenditure on buildings is financed largely from loan moneys, the sums provided from this source in 1953 being :—New South Wales, £431,191 ; Victoria, £853,700 ; Queensland, £117,288 ; South Australia, £101,811 ; Western Australia, £2,501 ; and Tasmania, £37,978.

The net expenditure on maintenance (including salaries) for technical education in Australia in 1953 amounted to 12s. 8d. per head of the mean population, as compared with £5 13s. 1d. per head expended on the net maintenance (including salaries) for primary and secondary education.

## § 6. Commonwealth Activities.

Although the primary responsibility for education rests with the Australian States, the Commonwealth Government is committed to a number of educational activities related to its other functions. For example, it maintains officer training colleges and education services for each of its Defence Services, a School of Pacific Administration for training administrators for Papua-New Guinea and a School of Forestry. In each of the Australian Territories there is an education programme which provides for both the native and white children who live there. References to education in the Territories appear in Chapter V.—The Territories of Australia.

The Commonwealth Office of Education, established in 1945, acts as the Commonwealth's educational adviser, undertakes research work as Commonwealth activities require, and is the channel for liaison between Commonwealth and State educational authorities. This Office has responsibilities with regard to the education of migrants, the education of natives in the Northern Territory, the provision of scholarships at the tertiary level under the Commonwealth Scholarship Scheme and the Reconstruction Training Scheme, international relations including the association of Australia with the aims and activities of the United Nations Educational, Scientific and Cultural Organization and the provision of scholarships and fellowships for selected students under the Commonwealth Technical Co-operation Scheme, the UNESCO Fellowship Scheme and the South-East Asian Scholarship Scheme.

The Australian Broadcasting Commission features school broadcasts and other educational broadcasts as part of its daily programmes. The Commonwealth Scientific and Industrial Research Organization undertakes research, the results of which are made available to educational institutions. In 1951 the Commonwealth Government introduced a free-milk scheme for school children. This extended a service which some State authorities were already providing for a proportion of the school population. Under the Commonwealth Reconstruction Training Scheme many ex-servicemen and women have received the training which has enabled them to enter many different trades and professions.

The Commonwealth also assists a number of other bodies concerned with education. Besides grants to organizations such as the Australian Council for Educational Research and the National Fitness Council, Australian universities have received grants for specific purposes through the Universities Commission.

## § 7. Australia and International Relations in Education.

Despite its isolation, Australia has always been responsive to educational developments in overseas countries, particularly those in the United Kingdom, but it is only recently that it has begun to make any considerable impact on educational thought overseas.

In this connexion there have been important developments since the 1939–45 War. For instance there has been a remarkable increase in the volume of information on educational matters exchanged between Australia and South-East Asia, and Australia has participated in the Commonwealth Technical Co-operation Scheme and the United Nations Technical Assistance programme.

Perhaps the most important single factor behind the quickening of Australian interest in international cultural affairs has been membership of the United Nations Educational, Scientific and Cultural Organization. Australia has been a member since 1946. Some eleven expert committees in Australia are responsible for a wide and varied programme of activities on behalf of UNESCO. Their advice has helped to make Australia's contribution to UNESCO International Conferences and Seminars highly effective. Other work undertaken by these committees has included the supervision of studies relating to community attitudes towards international affairs, and to the assimilation of migrants, the conducting of seminars in Australia, arranging for exhibitions and displays in Australia, and the publication of handbooks and brochures to assist teachers and other persons in meeting the problems involved in educating for international understanding.

The Australian National Advisory Committee for UNESCO, on which all the other committees are represented, advises the Commonwealth Government and co-ordinates the work of the specialist committees.

## § 8. Universities.

1. **General.**—The last quarter of a century has seen a marked increase in the number of students and staff, the establishment of three new universities and two new university colleges, and the provision in the older universities of additional courses. In spite of difficulties due, in some measure, to the economic depression of the 1930's and a World War, this period has been one of significant development.

2. **University Expansion.**—(i) *The Establishment of New Universities.* The three new universities represent new departures in the Australian university tradition.

(a) *The Australian National University.* By the Australian National University Act 1946, provision was made for the establishment of a university in the Australian Capital Territory. The university is required by the Act to provide facilities for post-graduate research including:—The School of Medical Research to be known as "The John Curtin School of Medical Research"; The Research School of Physical Sciences; The Research School of Social Sciences; and The Research School of Pacific Studies.

The Act also provides for the incorporation of the Canberra University College. In the first instance the Council has decided to concentrate on the establishment of the four Research Schools mentioned in the Act.

The government of the university is vested in a Council consisting of two representatives each of the Senate and the House of Representatives, up to eight nominated by the Governor-General, up to nine elected by Convocation, two elected by the students, and three elected by the academic staff; up to three members may be co-opted and the Vice-Chancellor is an *ex officio* member.

The senior academic body in the university is the Board of Graduate Studies of which all professors are members. The Board deals with questions affecting education, learning and research in the university.

The Act provides for a statutory grant of £325,000 per annum and in addition a supplementary grant is made to meet the running costs. A separate vote is made for capital works.

An area of 204 acres at Acton has been vested in the university. University House, a residential college for single members of the staff and the student body, was opened in February, 1954. University House also acts as the social centre for the whole university community.

The laboratories and office block for the Research School of Physical Sciences have been completed. The John Curtin School of Medical Research (with the exception of the Department of Medical Chemistry which is at present located in the Wellcome Foundation, London) is housed in temporary laboratories on the university site. The construction of the permanent building has been commenced and it is expected that it will be completed in 1956. The Research Schools of Social Sciences and Pacific Studies and the library are housed in existing buildings on the site.

Fifteen professors and 77 other members of the academic staff have been appointed.

Each department of the Research Schools accepts a small number of graduate students. Each student is assigned to a supervisor and pursues a course of research. Subject to certain conditions, the following degrees may be awarded by the University:— Master of Arts (M.A.); Master of Science (M.Sc.); Doctor of Philosophy (Ph.D.); Doctor of Letters (Litt.D.); Doctor of Science (D.Sc.); and Doctor of Laws (LL.D.). The Right Honourable Viscount Bruce of Melbourne is Chancellor of the University and Mr. L. G. Melville, C.B.E., is the Vice-Chancellor. Mr. R. A. Hohnen is the Registrar.

Each of the Research Schools will eventually be headed by a Director. Professor M. L. Oliphant, F.R.S., is Director of the Research School of Physical Sciences and until further appointments can be made the following Deans have been appointed to act: Professor A. H. Ennor, Dean of the School of Medical Research; Professor J. W. Davidson, Dean of the School of Pacific Studies, and Professor G. Sawyer, Dean of the Research School of Social Sciences. In 1955 seventy-eight students were enrolled in the University.

(b) *The New South Wales University of Technology.* Officially incorporated by the Technical Education and the New South Wales University of Technology Act of the New South Wales Parliament in April, 1949, the New South Wales University of Technology was established to provide facilities for training and research in the fields of applied science and technology and to ensure a more adequate supply of highly skilled scientists and technologists to the expanding industries of Australia.

The university is governed by a Council consisting of not more than 39 members representing Parliament, industry, commerce, the trade unions, technical education, professional bodies, the University of Sydney and the teaching staff and the graduate and under-graduate members of the University of Technology. The Chancellor of the Council is Mr. Wallace C. Wurth, C.M.G., Chairman of the New South Wales Public Service Board. The Vice-Chancellor of the university, who is also a member of the council, is Professor J. P. Baxter, O.B.E.

The Council may provide courses in applied science, engineering technology, commerce, industrial organization, and such related courses as it deems fit, and may after examination confer the several degrees of Bachelor, Master and Doctor, and such other degrees and such certificates in the nature of degrees or otherwise as it thinks fit.

The Council is empowered to establish and maintain branches, departments or colleges of the university at Newcastle, Wollongong, Broken Hill or such other places in the State of New South Wales as it may approve. Under this authority, a college of the university was established at Newcastle in December, 1951.

Under the guidance of a Developmental Council established on 8th July, 1947, the first courses leading to the degree of Bachelor of Engineering were instituted in 1948 in Civil, Electrical, Mechanical and Mining Engineering. Courses leading to the degree of Bachelor of Science were introduced in Applied Chemistry and Chemical Engineering in 1949, and in Applied Physics and Wool Technology in 1951. A first degree course in Architecture was established in 1950. In 1954, first degree courses in Food Technology, Metallurgy, and Applied Geology were established, and part-time degree courses in Applied Psychology were instituted in 1955. During 1954, part-time degree courses were introduced in Applied Biology, Applied Chemistry, Applied Geology, Chemical Engineering, Civil Engineering, Electrical Engineering, Food Technology, General Science, Industrial Chemistry, Leather Chemistry, Mechanical Engineering and Metallurgy.

Two features are emphasized in the planning of first degree courses of the University of Technology, namely, the inclusion of industrial experience as an essential part of the courses to supplement the laboratory and lecture-room work at the university, and the study, in all faculties, of humanities and social science subjects.

By mutual agreement of the Council of the university and of the New South Wales Department of Technical Education the following diploma courses, formerly provided by the Department of Technical Education and requiring matriculation standard for admission, are now administered by the University of Technology : Aeronautical Engineering, Applied Biology, Applied Chemistry, Architecture, Building, Chemical Engineering, Civil Engineering, Electrical Engineering, Food Technology, Leather Chemistry, Mechanical Engineering, Metallurgy, Mining Engineering, Naval Architecture, Optometry, Physics, Production Engineering, Quantity Surveying, Radio Engineering, Science and Secondary Metallurgy.

In general, the full-time courses for the degree of Bachelor extend over four years. In some courses (e.g., Chemical Engineering) the Honours course requires a further year. The degree course in Architecture, Pass or Honours, is of six years' duration. Part-time degree courses extend over six or seven years with an additional year for Honours. The diploma courses generally are of five stages of one year each.

Special investigations may be carried out on problems of technology or applied science on request, and in respect of any special investigation the Council may charge an appropriate fee.

*Arts Courses.*—In conjunction with the establishment of the University of New England in February, 1954, as an autonomous body with authority to confer degrees, arrangements were made to provide Arts courses at Newcastle University College in co-operation with the University of New England. Under these arrangements, the syllabuses of study are prescribed by the University of New England, which is also the examining body, and instruction is provided by members of the School of Humanities and Social Sciences of the University of Technology.

*Staff.*—The academic appointments are as follows :—*Faculty of Applied Science*—nine professors, three associate professors, 42 senior lecturers, 80 lecturers and 21 teaching fellows. *Faculty of Engineering*—four professors, two associate professors, 26 senior lecturers, 83 lecturers and 7 teaching fellows. *Faculty of Architecture*—one professor, one associate professor, four senior lecturers and nine lecturers. *Faculty of Humanities and Social Sciences*—two professors, one associate professor, 10 senior lecturers, 15 lecturers and two teaching fellows. *Faculty of Commerce*—one professor.

*Library.*—The number of volumes in the library in 1954 was 57,000. (This figure covers the collections at the University Library at Kensington, at Newcastle University College Library, Tighes' Hill, and university publications in the joint libraries of the university and the Department of Technical Education.)

*Buildings and Sites.*—Pending completion of its new buildings, the university has had at its disposal the facilities of the New South Wales Department of Technical Education. The first permanent building on the university site of 71 acres at Kensington, near Sydney, was officially opened on 16th April, 1955 and is now occupied by the Schools of Architecture and Building, Humanities and Social Sciences, Applied Physics, Textile Technology and Mining Engineering and Geology and the university administration. The Schools of Metallurgy and Chemical Engineering occupy eleven light frame buildings on the Kensington site. The Schools of Applied Psychology and Commerce were transferred to Kensington early in 1956.

*Student Hostel.*—The university conducts a student hostel at the university site at Kensington, where single room accommodation is available for approximately 200 students.

(c) *University of New England.* The New England University College was established as a branch of the University of Sydney on 1st January, 1938 by the Senate of the University of Sydney. It was established in accordance with the expressed wish of the people of northern New South Wales and for the purpose of providing education at university level for country students particularly. New England thus became the first experiment in university decentralization in Australia.

The original gift to the University of Sydney in 1937 by the late T. R. Forster, of "Abington", comprised the old homestead of "Booloominbah", together with several other buildings and 183 acres of land. The New South Wales Government bore the cost of converting the property to its present use and of providing additional buildings. The Commonwealth Government made funds available under the Commonwealth Reconstruction Training Scheme for the erection of another large building to provide additional lecture rooms, laboratories and staff studies.

By virtue of the University of New England Act 1953, the New England University College was incorporated as the University of New England. It came into legal existence as an independent university on 1st February, 1954, and, in addition to fulfilling its previous functions, is now entitled to examine its own students and grant degrees and diplomas. The university is authorized by the Act to co-operate with the New South Wales University of Technology in the provision of degree courses at the Newcastle University College.

There are at present four Faculties in the University of New England—The Faculty of Arts, which was established in 1938; the Faculty of Science, established in 1939; and the Faculties of Rural Science and Agricultural Economics, established in 1955.

The university offers correspondence courses to external students in an adequate range of subjects leading to the degree of Bachelor of Arts.

(ii) *Canberra University College.* Particulars were given in Official Year Book No. 39, pp. 227-8, concerning the Canberra University College, which was created in 1930 mainly to establish courses of lectures for degrees in co-operation with the University of Melbourne.

(iii) *Expansion within the Universities.* An important administrative development in all universities has been the appointment of full-time salaried Vice-Chancellors or Principals. This has given much greater effectiveness to university administration.

Within the past twenty years the appearance of some of the universities has altered to a striking extent. New permanent buildings and some temporary ones have been erected and new wings have been added. An impressive expansion has been that taking place in Queensland where, since 1937, building has been proceeding upon a new site at St. Lucia, and, beginning with the transfer of some of the Engineering School in 1947, the university is being gradually moved into its new quarters.

This very considerable building activity has been made necessary primarily by the vast expansion in student numbers from 9,000 in 1929 to 29,374 in 1954. There was a continued increase in university enrolments from 1929 to 1940 followed by a slight recession. In the closing year of the war, however, the number of students had risen beyond any previous figure, and rapid post-war expansion was responsible for a peak enrolment of 32,453 students in 1948. After 1948 the numbers decreased each year as ex-service personnel completed their training under the Commonwealth Reconstruction Training Scheme, but it is anticipated that by 1960 some 40,000 students will be enrolled in Australian universities.

3. *Courses.*—The post-war period has seen a noticeable expansion in the ranges of courses offered, particularly in the younger and smaller universities. New Faculties of Education were established in Western Australia and Queensland. Two new Faculties of Dentistry, two of Commerce (Economics), three of Architecture and one each of Medicine, Law, Veterinary Science, Applied Science, and Engineering also came into being.

Within existing faculties, many new departments were set up. In Engineering, specialist departments of Chemical and Aeronautical Engineering, Civil, Electrical, Mechanical, Mining and Metallurgical Engineering and Surveying have been instituted.

In Medicine the most notable development has been the establishment of specialist courses leading to graduate diplomas in Radiology, Anaesthesia, Clinical Pathology, Ophthalmology, Laryngology, Gynaecology, Tropical Medicine, Dermatology and Psychological Medicine at Melbourne and Sydney.

In Science the smaller universities followed the development of those in Melbourne and Sydney by breaking up departments such as Biology into Zoology and Botany, etc., and adding new departments such as Bacteriology and Biochemistry. Melbourne and Sydney also introduced some new courses and a new degree in Forestry was introduced in each University.

In Arts the same processes can be observed. New departments in Semitic Studies, Fine Arts, Music and Statistics were opened in various universities, and other departments were divided or sub-divided. The most prominent addition was the rapid development of Psychology departments which, in the post-war period, expanded into one of the biggest of the Arts departments.

In the smaller faculties, similar innovations and expansions, reflecting an increasing demand for specialized study, have taken place. Examples are the development of departments of Oriental Studies, Physical Education, Social Studies, Town and Country Planning and Criminology.

In addition, however, there were several attempts to provide integrated general education courses within the faculties of Arts and Science.

4. *Research.*—Australian universities have long been criticized for their lack of provision for graduate students, but in recent years a notable feature of student enrolments has been the steady increase in the number of higher degree students. Factors contributing to the extension of research and the training of graduate students have been :—

- (a) The Commonwealth Government grant begun in 1936 for the prosecution of research and the training of research workers in universities ;
- (b) the enlistment of university staffs on extensive research projects in connexion with the 1939-45 War ;
- (c) the establishment of research schools like the Departments of Experimental Medicine and Metallurgical Research in Melbourne and the Australian National University in Canberra ;
- (d) the institution of the Ph.D. degree requiring two years of full-time graduate research ; and
- (e) the development of four-year honours courses for the degrees of B.A. and B.Sc.

5. *Services.*—(i) *General.* The traditional division of the function of universities into teaching and research seems no longer applicable. A third function has been added in recent times, that of community service. The university has long been responsible for providing an important service to the community in the form of professional training in many fields and in a number of other intangible ways, but in recent years there has been



a noticeable increase in the performance by university departments of direct and deliberate services to the community. This was most apparent in time of war when the universities whole-heartedly accepted the role given them by the Minister for War Organization of Industry when he said in 1942 to a meeting of the Vice-Chancellors, "the Government requires of the universities specific services, falling under two heads: (i) investigations and research into particular problems relating to the war effort; (ii) the training of personnel with special qualifications for the armed services, war production and other essential needs". The trend, however, was noticeable before the 1939-45 War and is still continuing. These services, which are of three main kinds, are dealt with hereunder.

(ii) *Service Research*. This is a form of applied research in which a university department applies itself to the solution of a problem of immediate practical importance to the community. The development of producer-gas units for use on motor vehicles during the 1939-45 War, research on poliomyelitis, tropical food plants, bovine mastitis, and mosquito control are examples of work of this type recently undertaken in various university departments.

(iii) *Applied Research*. Closely associated with the kind of research just mentioned are the projects which are requested of the university by outside bodies and are usually in the field of applied research. Services of this kind are most frequently rendered by the engineering faculty. Testing work for government departments and private industry is carried out in almost every engineering department. In Melbourne, a large number of reports on problems associated with ores and concentrates submitted from all over Australia have been issued by the Department of Mining. Research on servomechanisms for the Department of Supply, aeriels for the R.A.A.F., the stability of power systems for the Electrical Research Board and studies on the site, materials and design for the Warragamba Dam are some of other tasks that have been undertaken. However, services of this kind are by no means confined to the technological field. They have been rendered by almost all university departments and not least by workers in the social sciences who have been called upon to investigate matters such as colour-vision tests for the Civil Aviation Department, the teaching of English to foreign-born immigrants and anthropological problems encountered in the administration of New Guinea.

(iv) *Advisory Services*. Consultant and advisory services have come to occupy much of the time of the staff of many departments. There has been a long tradition of service in this field by members of the Departments of Agriculture and Medicine, and almost equally prominent have been the economists whose services were sought by governments and businesses in the depression period of the 1930's. The 1939-45 War saw an increase in demand for expert advice from university faculties and the seconding of personnel to government departments in considerable numbers. In the post-war period much of this demand has continued. Problems of land utilization have called for advice from agriculturalists, geographers and economists. Personnel and training problems in industry have required the services of psychologists and educationists. Scripts of school broadcasts have been written by scientists, and lecturers in English history, modern languages and political science. University physicists, chemists and medical staff have played an important role in recent defence programmes. Developmental schemes have needed the services of engineers, geologists and architects.

**6. The Commonwealth and the Universities.**—(i) *General*. Commonwealth financial support for university activities may be regarded as having developed in three phases. Firstly, in the period up to 1939, Commonwealth interest in research projects carried out by or in collaboration with the universities led to the granting of increasing sums for this purpose. Secondly, during and after the 1939-45 War the Commonwealth extended assistance to university students, at first with the object of increasing the number of highly qualified people available for the war effort, then with the object of rehabilitating ex-servicemen and finally as a social service of benefit to the community. Thirdly, since 1951, the Commonwealth has made special grants to the States for university purposes.

(ii) *Grants for Research.* The Commonwealth had given some support to research prior to 1926, chiefly through the Institute of Science and Industry, but the amount spent did not exceed £25,000 per annum. In 1926 the Institute was replaced by the Council for Scientific and Industrial Research (known since 1949 as the Commonwealth Scientific and Industrial Research Organization) with an annual appropriation of £250,000. It has since worked in close association with the universities. Both kinds of research, fundamental and applied, have at times occupied the attention of both the universities and the Commonwealth Scientific and Industrial Research Organization but, in general, the preliminary training of graduates in research work has been left to the universities.

In 1936 the Commonwealth Government made a grant of £30,000 per annum for five years to Australian universities for research in physical and biological sciences. This figure rose over the years to £100,000 in 1950 and was subsequently absorbed in the larger general grant which was then made available by the Commonwealth to the States for universities. These research grants, together with other Commonwealth payments for research purposes, totalled more than £3½ million in 1950–51, compared with less than £500,000 in 1939–40.

(iii) *Assistance to Students.* The Commonwealth Government in 1942 set up the Universities Commission to ensure that the flow of trained professional personnel from the universities would be sufficient to meet the needs of the nation during the war and post-war periods. Selected university students were reserved from war service and were eligible for supplementary assistance of £104 per annum if living at home and £143 if living away from home.

Financial assistance to students was continued for five years after the end of the 1939–45 War with some increases in living allowances and in 1951 the Commonwealth Scholarship Scheme was planned by the Universities Commission.

Under this scheme 3,000 scholarships are allocated annually to the States on a population basis, 2 per cent. of them being reserved for students over the age of 25 years. Awards are made on merit to students completing secondary courses and no regard is paid to the income of the students or their parents. Scholarship holders have their fees paid and, subject to a means test, are eligible for a maximum allowance of £169 per annum (£240 10s. for a student living away from home) and married scholars receive additional family allowances. At 30th June, 1954, there were 7,917 scholars in training at universities and 1,298 at other institutions.

In addition to the above eligible ex-service personnel receive training at universities and similar institutions at Commonwealth expense under the Reconstruction Training Scheme. A general description of the scheme is to be found on page 240 of Official Year Book No. 39. The Commonwealth Government made available to the training institutions approximately £1 million for buildings and £500,000 for equipment and also paid all tuition fees and subsidies designed to meet the cost to the universities of the Reconstruction Trainees.

At 30th June, 1954, 25,205 full-time and 19,519 part-time students had been selected for training under this scheme and more than 21,000 had successfully completed their courses.

(iv) *Commonwealth Grants to the States for University Purposes.* Following a report submitted by a committee of inquiry appointed to report on university finances and requirements the Commonwealth passed the States Grants (Universities) Acts in 1951, 1953 and 1955 to enable grants to be made to the States for their universities.

The States Grants (Universities) Act No. 28 of 1955 (assented to 15th June, 1955) repealed the 1953 Act. Notwithstanding the repeal, a condition subject to which an amount of financial assistance was paid to a State under the 1953 Act continues to have effect in relation to that payment. The main provisions are summarized below :—

Section 4 (1).—If the sum of the fees and State grants received by a university during the year 1955 exceeds the amount specified in column 2 of the table below, the grant to the State for that year is—

- (a) an amount equal to one-third of the excess, and
- (b) the amount shown in column 3 of the table.

Section 4 (2).—The maximum amount payable under Section 4 (1.) (a) above is shown in column 4.

Section 5.—The State will, in the year in which payment is received, pay to the university concerned an amount equal to the grants received and will ensure that—

- (a) the grant under Section 4 (1.) (a) is applied for expenditure, not being capital expenditure, on university purposes ;
- (b) of the grant under Section 4 (1.) (b), the amount shown in column 5 is applied towards the teaching and administrative costs of the residential colleges of the university and the remainder for expenditure, not being capital expenditure, on university purposes.

#### COMMONWEALTH GRANTS TO THE STATES FOR UNIVERSITY PURPOSES.

(£.)

University. (1)	Amount of Fees and State Grants. (2)	Amount of Financial Assistance under Section 4 (1.) (b). (3)	Maximum Amount Payable under Section 4 (1.) (a). (4)	Amount for Teaching and Adminis- trative costs of Residential Colleges. (5)
New South Wales—				
University of Sydney .. ..	783,369	271,623	222,000	10,500
New South Wales University of Tech- nology .. ..	605,805	83,204	92,500	3,675
University of New England .. ..	64,164	13,229	14,800	350
Victoria—				
University of Melbourne .. ..	655,159	222,249	192,400	9,100
Queensland—				
University of Queensland .. ..	309,269	94,528	101,750	4,375
South Australia—				
University of Adelaide .. ..	272,394	95,173	101,750	4,375
Western Australia—				
University of Western Australia .. ..	183,531	63,714	70,300	2,537
Tasmania—				
University of Tasmania .. ..	106,319	33,410	33,300	788
	2,980,010	877,130	828,800	35,700

7. Teaching and Research Staff.—The following table shows the number of professors, readers, associate and assistant professors, lecturers in charge, lecturers including senior lecturers and assistant lecturers (full-time and part-time), demonstrators (full-time) and tutors (full-time and part-time), and honorary lecturers and demonstrators, on the teaching and research staffs of the universities during the year 1954.

## UNIVERSITIES : TEACHING AND RESEARCH STAFF, 1954.

University or College.	Pro- fessors.	Readers, Asso- ciate Pro- fessors, Assistant Pro- fessors, Lec- turers in Charge.	Lecturers.(a)		Demonstrators and Tutors.(b)		Honor- ary Lec- turers and Demon- strators.	Total
			Full-time.	Part-time.	Full-time.	Part-time.(b)		
Sydney .. ..	51	29	294	234	106	111	57	882
Melbourne .. ..	43	36	214	115	83	91	3	585
Queensland (Brisbane) ..	30	21	149	171	40	22	(c) 25	458
Adelaide .. ..	31	30	109	82	13	64	..	329
Western Australia (Perth)	16	17	70	25	10	9	..	147
Tasmania (Hobart) .. ..	15	4	47	14	8	..	..	88
N.S.W. University of Tech- nology (Sydney) .. ..	13	8	237	421	21	..	..	700
New England (Armidale, N.S.W.) .. ..	5	11	34	16	6	..	(c) 1	73
Canberra University Col- lege .. ..	6	1	17	21	2	4	..	51
Total .. ..	210	157	1,171	1,099	289	301	86	3,313

(a) Includes senior lecturers and assistant lecturers.

(b) Excludes part-time demonstrators.

(c) Department of External Studies.

The Conservatorium of Music in Sydney is attached to the Education Department, but in Melbourne and in Adelaide the Conservatorium of Music is under the control of the university.

8. Students.—(i) *Total.* The number of students (of whom 510 males and 7 females were Commonwealth Reconstruction Training Scheme students), enrolled for courses at the universities for the year 1954 is shown in the following table :—

## UNIVERSITIES : TOTAL STUDENTS ENROLLED, 1954.

University or College.	Degree Courses.	Diploma Courses.		Certificate Courses.	Miscellaneous Subjects.	Total.(a)
		Post-Graduate.	Sub-Graduate.			
Sydney .. ..	6,021	80	767	..	166	6,983
Melbourne (b) .. ..	6,097	21	222	136	412	6,888
Queensland (Brisbane) ..	3,045	22	419	386	279	4,112
Adelaide .. ..	2,431	135	693	..	856	4,115
Western Australia (Perth) ..	1,762	..	..	..	95	1,852
Tasmania (Hobart) .. ..	513	33	24	60	79	699
N.S.W. University of Tech- nology (Sydney) .. ..	913	..	2,953	95	199	4,159
New England (Armidale, N.S.W.) .. ..	212	24	..	..	3	239
Canberra University College	219	..	15	..	93	327
Total .. ..	21,213	315	5,093	677	2,182	29,374

(a) Adjustment made for students enrolled for more than one course.

(b) Includes six students enrolled but attending Canberra University College.

Of the total students in 1954, 23,113 were males and 6,261 females. Included in those enrolled for degrees were 73 enrolled for higher degree courses in Sydney, 213 in Melbourne, 79 in Queensland, 193 in Adelaide, 86 in Western Australia, 14 in Tasmania, 165 at the New South Wales University of Technology, 5 at the New England University and 22 at the Canberra University College.

(ii) *New Students Enrolled.* The number of new students (of whom 15 males were Commonwealth Reconstruction Training Scheme students) enrolled for courses at the universities during the year 1954 is shown in the following table :—

## UNIVERSITIES : NEW STUDENTS ENROLLED, 1954.

University or College.	Degree Courses.	Diploma Courses.		Certificate Courses.	Miscellaneous Subjects.	Total.(a)
		Post-Graduate.	Sub-Graduate			
Sydney .. .. .	1,587	1	245	..	56	1,889
Melbourne .. ..	1,261	4	55	25	135	1,480
Queensland (Brisbane) ..	651	3	167	89	153	1,060
Adelaide .. .. .	529	29	202	..	290	1,050
Western Australia (Perth) ..	454	..	..	..	20	474
Tasmania (Hobart) .. ..	147	..	10	23	27	207
N.S.W. University of Technology (Sydney) .. ..	282	..	581	38	113	1,014
New England (Armidale, N.S.W.) .. .. .	68	..	..	..	3	71
Canberra University College	82	..	5	..	59	144
Total .. .. .	5,061	37	1,265	175	856	7,389

(a) Adjustment made for students enrolled for more than one course.

Of the total new students enrolled in 1954, 5,364 were males and 2,005 females. Included in those enrolled for degrees were 2 enrolled for higher degree courses in Sydney, 10 in Melbourne, 5 in Queensland, 43 in Adelaide, 5 in Western Australia, 2 in Tasmania, 33 at the New South Wales University of Technology, 2 at the New England University, and 8 at the Canberra University College.

9. *University Income for General Activities.*—The income of the universities is derived principally from State and Commonwealth Government grants (including capital grants), students' fees, and income from private foundations, etc. From all sources other than new bequests the income during 1954 for general university functions was as shown in the table below. In South Australia, Government grants and income from private foundations include amounts in respect of the Waite Agricultural Research Institute.

## UNIVERSITIES : INCOME FOR GENERAL ACTIVITIES, 1954.

(£.)

University or College.	Government Grants.	Students' Fees.	Interest, Rent, Dividends and Donations.	Other.	Total.
Sydney .. .. .	1,045,089	524,546	59,791	35,472	1,664,898
Melbourne .. ..	916,961	428,330	47,423	22,226	1,414,940
Queensland (Brisbane) ..	622,328	135,612	19,618	17,018	794,576
Adelaide .. .. .	677,134	60,336	51,397	14,228	803,095
Western Australia (Perth) ..	441,553	21,827	8,705	32,293	504,378
Tasmania (Hobart) .. ..	213,238	26,619	621	4,568	245,046
N.S.W. University of Technology (Sydney) .. ..	1,557,524	50,367	..	3,356	1,611,247
New England (Armidale, N.S.W.) (a) .. .. .	450,477	9,316	396	33,576	493,775
Australian National University (Canberra) .. ..	1,499,000	453	22,776	41,475	1,563,704
Canberra University College	65,750	6,725	..	813	73,288
Total—Revenue .. .. .	5,889,536	1,264,141	210,727	205,025	7,569,429
Capital .. .. .	1,599,518	..	..	..	1,599,518

(a) Period 1st February to 31st December, 1954.

10. **Principal University Benefactions.**—In earlier issues of the Official Year Book information was given in some detail in regard to the extent to which the universities have benefited from private munificence. (See Year Book No. 40, pages 467–8).

11. **University Expenditure for General Activities.**—The principal item of disbursements from revenue under the general university activities consists of the maintenance of the teaching and research staff, representing 69.3 per cent. of the total in 1954 compared with 70.4 per cent. in 1953.

The following table shows the expenditure including capital expenditure during the year 1954 :—

**UNIVERSITIES : EXPENDITURE FOR GENERAL ACTIVITIES, 1954.**  
(£.)

University or College.	Adminis- tration.	Maintenance of—			Other including Buildings.	Total.
		Teaching and Research Depart- ments.	Premises and Grounds.	Libraries.		
Sydney .. .. .	184,197	1,141,298	153,581	53,026	84,421	1,616,523
Melbourne .. .. .	124,131	1,001,954	140,508	54,317	106,069	1,426,979
Queensland (Brisbane) .. .. .	55,882	639,992	61,935	37,187	29,092	824,088
Adelaide .. .. .	71,426	512,170	74,989	39,852	30,689	729,126
Western Australia (Perth) .. .. .	38,372	318,868	59,925	23,725	76,867	517,757
Tasmania (Hobart) .. .. .	25,890	175,201	20,914	17,420	9,903	249,328
N.S.W. University of Tech- nology (Sydney) .. .. .	104,806	953,474	90,450	39,580	422,937	1,611,247
New England (Armidale, N.S.W.)(a) .. .. .	26,141	97,169	18,444	8,465	84,144	234,363
Australian National Uni- versity (Canberra) .. .. .	84,300	476,704	71,955	40,857	824,334	1,458,150
Canberra University College .. .. .	12,592	48,785	1,890	9,273	3,358	75,898
Total—Revenue .. .. .	724,919	5,166,092	658,715	323,702	577,313	7,450,741
Capital .. .. .	2,818	199,523	35,876	..	1,094,501	1,332,718

(a) Period 1st February to 31st December, 1954.

12. **Funds for Special Purposes.**—(i) *General.* The tables shown in paragraphs 9 and 11 relate to general university activities while the following show the financial position of the Special Purpose Funds which in the main are for special research purposes.

(ii) *Income for Special Purposes.* The following table shows the main items of income for the year 1954 :—

**UNIVERSITIES : INCOME FOR SPECIAL PURPOSES, 1954.**  
(£.)

University or College.	Govern- ment Grants.	Interest, Rent, and Dividends and Donations.	Public Examina- tion Fees.	Special Research Grants.	Other.	Total.
Sydney .. .. .	355,000	59,558	..	264,337	53,069	731,964
Melbourne .. .. .	176,751	251,140	68,103	59,227	44,564	599,794
Queensland (Brisbane) .. .. .	8,250	40,403	39,620	15,548	15,063	118,884
Adelaide .. .. .	13,495	9,735	17,712	33,174	8,200	82,316
Western Australia (Perth) .. .. .	..	23,879	23,989	31,191	2,677	81,736
Tasmania (Hobart) .. .. .	5,513	3,390	4,120	16,222	443	29,688
N.S.W. University of Tech- nology (Sydney) .. .. .	135,971	1,196	..	18,332	10,213	165,712
New England (Armidale, N.S.W.)(a) .. .. .	..	3,008	..	919	..	3,927
Australian National Uni- versity (Canberra) .. .. .	..	1,781	..	2,801	860	5,442
Canberra University College .. .. .	12,495	228	..	1,350	..	14,073
Total—Revenue .. .. .	214,538	213,252	153,544	435,601	128,689	1,145,624
Capital .. .. .	492,937	181,075	..	7,500	6,400	687,912

(a) Period 1st February to 31st December, 1954.

(iii) *Expenditure for Special Purposes.* The following table shows the main items of expenditure for the year 1954 :—

## UNIVERSITIES : EXPENDITURE FOR SPECIAL PURPOSES, 1954.

(£.)

University or College.	Special Purpose Funds (Research).	Other Special Purposes.	Public Examination Expenses.	Scholarships, Bursaries, etc.	Other, including Buildings.	Total.
Sydney .. .. .	134,287	83,123	..	16,856	15,673	249,939
Melbourne .. .. .	111,266	112,629	60,479	6,327	119,925	410,626
Queensland (Brisbane) .. .. .	23,445	26,266	43,956	5,834	3,973	102,574
Adelaide .. .. .	52,290	5,967	19,389	2,057	..	79,703
Western Australia (Perth) .. .. .	30,902	265	22,335	11,741	4,047	69,290
Tasmania (Hobart) .. .. .	11,058	..	2,459	2,086	..	15,603
N.S.W. University of Technology (Sydney) .. .. .	10,453	17,676	..	5,995	..	34,124
New England (Armidale, N.S.W.)(a) .. .. .	996	..	..	265	126	1,387
Australian National University (Canberra) .. .. .	..	..	..	..	3,254	3,254
Canberra University College .. .. .	1,047	5,855	..	2,615	..	9,517
Total—Revenue .. .. .	362,628	242,713	148,618	53,776	37,303	845,038
Capital .. .. .	13,116	9,068	..	..	108,795	130,970

(a) Period 1st February to 31st December, 1954.

13 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 year 1954 :—

## UNIVERSITIES : DEGREES CONFERRED, AND DIPLOMAS AND CERTIFICATES GRANTED, 1954.

Course	Sydney.		Melbourne.		Queensland.		Adelaide.		Western Australia.		Tasmania.		N.S.W. Univ. Tech.		Aust.	
	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.
<b>Degrees—</b>																
Arts .. .. .	171	137	165	121	44	32	39	26	50	37	20	17	..	..	489	370
Law .. .. .	59	5	48	4	6	..	9	2	9	..	3	..	..	..	134	11
Commerce or Economics .. .. .	65	1	118	16	27	3	9	..	..	..	8	1	..	..	227	21
Education .. .. .	4	1	16	..	1	..	..	..	7	2	..	..	..	..	28	3
Science .. .. .	136	45	123	36	53	17	75	21	51	8	18	2	28	..	424	129
Medicine(a) .. .. .	429	77	150	18	68	8	80	6	..	..	..	..	..	..	727	109
Engineering .. .. .	87	..	92	..	52	..	52	..	22	..	6	..	53	..	304	..
Agriculture .. .. .	28	1	23	2	11	..	8	..	9	1	..	..	..	..	72	4
Veterinary Science .. .. .	37	3	1	..	11	..	..	..	..	..	..	..	..	..	49	3
Dentistry .. .. .	79	4	44	4	38	..	5	2	12	1	..	..	..	..	128	11
Music .. .. .	..	..	8	15	..	..	..	..	..	..	..	..	..	..	8	15
Architecture .. .. .	16	3	30	1	6	..	..	..	..	..	..	..	..	..	52	4
<b>Total .. .. .</b>	<b>1,111</b>	<b>277</b>	<b>818</b>	<b>217</b>	<b>317</b>	<b>60</b>	<b>277</b>	<b>57</b>	<b>160</b>	<b>49</b>	<b>55</b>	<b>20</b>	<b>81</b>	<b>..</b>	<b>2,819</b>	<b>680</b>
<b>Diplomas (Post-Graduate)—</b>																
Education .. .. .	68	57	40	11	22	10	22	6	1	..	11	7	..	..	164	91
Medicine .. .. .	20	3	20	1	..	..	..	..	..	..	..	..	..	..	40	4
Other .. .. .	1	..	1	3	..	..	..	..	..	..	..	..	..	..	4	7
<b>Total .. .. .</b>	<b>89</b>	<b>60</b>	<b>60</b>	<b>13</b>	<b>25</b>	<b>10</b>	<b>22</b>	<b>6</b>	<b>1</b>	<b>..</b>	<b>11</b>	<b>7</b>	<b>..</b>	<b>..</b>	<b>208</b>	<b>96</b>
<b>Diplomas (Sub-Graduate) .. .. .</b>	<b>130</b>	<b>71</b>	<b>21</b>	<b>23</b>	<b>55</b>	<b>16</b>	<b>71</b>	<b>45</b>	<b>..</b>	<b>..</b>	<b>..</b>	<b>..</b>	<b>..</b>	<b>..</b>	<b>277</b>	<b>155</b>
<b>Certificates .. .. .</b>	<b>..</b>	<b>..</b>	<b>..</b>	<b>..</b>	<b>75</b>	<b>8</b>	<b>..</b>	<b>..</b>	<b>16</b>	<b>7</b>	<b>10</b>	<b>8</b>	<b>..</b>	<b>..</b>	<b>101</b>	<b>23</b>

(a) Separate degrees for M.B. and B.S. are conferred at the Sydney University; this fact has to be taken into account to arrive at the number who qualify to practise as medical practitioners.

### § 9. Further Education.

1. **General.**—Beyond the schools, colleges and universities there are agencies engaged in less direct educational work which cannot be readily assessed and described. Among them are the mass media of communications (press, film and radio) which are powerful educational forces—whether they are used specifically to disseminate information such as new agricultural techniques or preventive health measures, or on the other hand in a much more general way to exert a powerful influence on the cultural level of the population. There are also bodies such as adult education authorities, libraries, art galleries and museums which aim at catering for the educational requirements of particular groups.

2. **Adult Education.**—(i) *New South Wales.* *University Department of Tutorial Classes.* In 1914 the University Senate established a Department of Tutorial Classes to provide classes and study groups along the lines of similar work in England. The Department conducts tutorial classes in a variety of subjects, grouped under the broad headings of social, political and economic studies; history and international affairs; psychology; philosophy; literature and drama; foreign languages; child study; music and art. Courses range from 9 to 28 lectures, and some go on from first to second and sometimes fourth year.

Since 1938 the Department has conducted a discussion group scheme, designed to provide country people in particular with opportunities for group study of the same type of subjects as are studied in its tutorial classes, and in 1946 made provision in the "kits" scheme for groups of people interested in activities such as play reading and performance, writing, public speaking, painting and music-making, rather than discussion. In all the Department enrolled 6,140 students for continuous work in classes and groups in 1955. The Department also produced the Current Affairs Bulletin which is issued fortnightly and distributed widely to educational bodies, groups, business organizations and individual subscribers in Australia and overseas.

A library service is provided to all students in classes and groups by the Adult Education Section of the Public Library of New South Wales, and finance for the Department's activities is provided by university appropriation (£15,237 in 1955), Government Adult Education Extension Grant (£21,488 in 1955) and from other fees.

(ii) *Victoria.* The Council of Adult Education is a statutory body, with a basic annual grant of £25,000. Its expenditure was £64,000 in 1953-54. The Council organizes evening classes, summer and week-end schools, public lectures, sends drama and music to the country centres through its Travelling Theatre and Music Tours, co-operates with the National Gallery of Victoria in the organization of a Travelling Art Exhibition, operates an extensive system of discussion groups in Victoria and provides service for country dramatic and music societies.

(iii) *Queensland.* Facilities for adult education are provided by the State Government, working through the Board of Adult Education. Attendance at all courses is free. In 1954 courses were provided in 56 towns and film screenings were conducted in many of these as well as in 66 other places, arrangements being made from Brisbane and the five country towns where centres are established. The total attendance recorded at 5,098 lectures, group meetings, etc., was 138,715. Subjects most in demand were English literature, English expression, psychology, travel talks, music and art appreciation, handicrafts and photography.

Three thousand students were enrolled in Brisbane and about four times that number attended country courses. The total expenditure of £36,695 in 1953-54 was borne by the Government.

(iv) *South Australia.* Since 1917 the University of Adelaide, through the Joint Committee for Tutorial Classes, has provided each year in the metropolitan area series of tutorial classes, lecture classes and study circles on a wide range of subjects of cultural and current interest, for people who have no intention of proceeding to a degree or diploma and are unable to attend the ordinary university courses. The fee is £1 15s. a course and is paid to the Workers' Educational Association, which accepts the responsibility for organizing the classes. The enrolment for these classes in 1953 was 1,238. The Joint Committee extends its activities into the larger country centres by sending art exhibitions and plays on tour, lending boxes of books and arranging lectures and film screenings.



(v) *Western Australia.* In Western Australia the policy of the Adult Education Board is to provide men and women of varying educational attainments in country districts as well as in the metropolitan area with facilities for the constructive use of leisure by use of head or hands and in such a way as to stimulate in the individual a sense of citizenship and to encourage community activities among groups.

The Board organizes lecture classes, summer schools and discussion groups, sends music, drama and ballet companies to country towns, and encourages the activities of local organizations. The Board was principally responsible for the commencement of the Festival of Perth, which is now in its fourth year. The Festival is held during the summer months of January, February and March and consists of high quality orchestral and dramatic presentations and the screening of films. The Festival is held in open-air theatres and other locations in the metropolitan area.

(vi) *Tasmania.* Although some form of adult education has existed since 1913 it was not until 1948 that provision was made by legislation for the formation of an Adult Education Board to plan and develop adult education in Tasmania and to assist other bodies actively engaged in adult education.

The executive officer of the Board is the Director of Adult Education, at Hobart, under whose direction three Regional Officers organize adult education in areas each covering approximately one-third of the State, and a fourth is organizer for Hobart. In Hobart and Burnie there are also Deputy Regional Officers.

In 1955 there were 519 courses in all subjects, with an enrolment of approximately 6,000 students. The State Government grant in 1955-56 was £33,500 and additional income amounted to about £6,000. Subjects taught include crafts, drama, public speaking, languages, psychology, world affairs, geology, economics and painting. One hundred recitals of music, 50 theatrical performances, 65 showings of documentary films and 60 lectures by visitors from overseas were given for the most part in the smaller communities of the State under the auspices of the Board. Each January a summer school is held which is attended by about 120 students; to this parents are encouraged to bring their children, who are cared for separately. Subjects studied at the summer school include international affairs, literature, drama, music and crafts.

3 *Workers' Educational Associations.*—In 1913, Workers' Educational Associations were formed in all the States of Australia, and later in New Zealand. The movement has for its object the bringing of the university into closer relationship with the community in general, and providing for the higher education of the workers in civic and cultural subjects.

In Victoria the Association has been superseded by the Council of Adult Education, a statutory body appointed by the Government. A Statutory Board has also been appointed in Queensland. Direct grants are made by the Governments of New South Wales and South Australia. Grants in 1952, for classes and discussion groups organized by the Association and serviced by their respective State universities in these two States, were as follows:—New South Wales, £32,590, 110 tutorial classes, 120 discussion groups (taking 181 separate courses) and 57 kit groups; South Australia, £5,000, 34 tutorial classes and extension lectures at country centres.

Grants from fees from the Tutorial Classes amounting to £10,850 were made to the Association in New South Wales for both organizing work and a teaching service. The teaching service in 1952 included 25 classes, 5 summer schools (two each of 10 days, one of 7 days, and 2 of 5 days), 24 week-end schools, 37 public lectures (mainly in short courses of 3 lectures), 63 lectures to various organizations, and 35 broadcast talks. In South Australia the Association receives a grant of £812 for general organizing purposes. In Tasmania the Association received a grant of £1,000 from the Adult Education Board and 108 lectures were organized in 1952, mostly in short series from 3 to 12. The Association's primary interest has been in subjects related to social change such as industrial history, economics, political science and sociology. In recent years, however, there has been a substantial increase in the number of classes studying psychology, history, literature, music, drama and popular science.

4. *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.

One of its principal functions is the organization of periodic conferences, to which leading overseas educators are invited. Sessions are usually held in each of the capitals and in various country centres, thus enabling overseas leaders of educational thought to influence considerable numbers of Australian teachers and others. Conferences of this type were held in 1937, 1946, 1949 and 1951.

### § 10. 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 in all States, all of which have now passed legislation to increase library services, and in 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, its functions now including 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 National Library, Canberra, and the Public Libraries at Sydney and Melbourne.

2. *Commonwealth.*—(i) *Commonwealth National Library.* This library grew directly from the Library of the Commonwealth Parliament established in 1901. Whilst providing, as a primary responsibility, for the general reading and reference needs of the Members of the Parliament, it has developed into a central source of information for the Government and its departments and other agencies. The close association of the National Library with the Central Government follows the pattern of the Library of Congress at Washington, U.S.A. Like the latter, it has also inherited the basic elements of the national library concept of the older countries of Europe: 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 the most profound scholars may turn with confidence for what is most significant in the literature of other countries.

Through its Legislative Reference Branch the National Library aims to provide for the Parliament and the Government an up-to-date reservoir of fact and opinion on public issues both domestic and foreign. In addition to assembling material, the staff compiles bibliographies and reference guides to the literature on special subjects and in 1954 handled 1,347 inquiries involving special search. A further service to the Government flows from the activities of the Archives Division, a central element in the Government machinery for the management and preservation of its records. Archival repositories for Commonwealth records are maintained in Canberra, Sydney, Melbourne, Brisbane and Adelaide, and one is to be opened shortly in Perth.

As well as the governmental record of national life and development the National Library systematically collects and preserves Australian books, periodicals, newspapers, government publications, pictures, prints, manuscripts, maps, moving-picture films and sound recordings. It is assisted by the Copyright Act 1912–1950, which requires one copy of all material printed in Australia to be deposited in the Library and has 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, and the Ferguson sociological collection now being transferred to the Library. A special feature of the Library's Australian work is the copying on microfilm of all important unique material overseas relating to Australia, including more than a million pages in the Public Record Office in London.

The Library fulfils its obligations to make Australian publications widely known, both at home and abroad, through a series of select lists which include *Australian Public Affairs Information Service* (monthly) and *Australian Books* (annual) and full bibliographies in the monthly *List of Australian Government Publications and Books Published in Australia*, cumulated as the *Annual Catalogue of Australian Publications*. Collections of Australian books are maintained by the Library at all posts at which Australia is officially represented abroad. In London and New York the National Library maintains and staffs Australian Reference Libraries.

The Library is the central library of documentary and educational films and the non-theatrical film-distributing agency in Australia for the Australian National Film Board, and its film collection contains nearly 5,000 titles, together with Australian historical films and a great number of film strips. Special efforts are being made to discover and preserve samples of early Australian film-making.

Local library services are provided by the Library for the residents of the Australian Capital Territory, the Northern Territory, the Territory of Papua-New Guinea, Norfolk Island and Nauru.

The National Library's collections contain more than 400,000 volumes, together with very extensive holdings of pamphlets, pictures, prints, maps, manuscripts and microfilm, and about 3½ million feet of moving-picture films and its permanent and temporary holdings of archives were, in 1955, approximately 100,000 cubic feet. Special features of the Library's book collections are its strong holdings of Australiana, materials relating to the Pacific area and to East and South-East Asia, the publications of foreign governments and of international organizations, works in the social services and in particular in political and economic science.

(ii) *Patent Office Library.* The library of the Commonwealth Patent Office, Canberra, contains over 56,000 volumes. Patent specifications of inventions are received from the principal countries of the world, and a wide range of technical literature and periodicals is available.

(iii) *The Australian War Memorial Library.* In the War Memorial library are housed the documentary and pictorial records of Australia's fighting Services, collected during and after both world wars. This mass of material is constantly being augmented by the addition of books, periodicals and other records covering contemporary trends and events in the field of military history and science, as well as records of earlier wars in which Australian troops participated.

The printed records section contains approximately 50,000 volumes, a large collection of military maps, newscuttings and newspapers, sound recordings of war leaders and personalities, 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.

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 existence.

The collection of official war photographs covering the 1914-18 and 1939-45 Wars numbers over 250,000, and a similar collection of official motion picture film depicting Australia at war totals about 4 million feet.

Facilities for public research are not yet fully developed, but all requests for information are met where practicable.

(iv) *Other Departmental Libraries.* The following Commonwealth authorities in Canberra have specialized collections in their own fields, and in addition draw largely on the National Library:—Attorney-General's Department, Commonwealth Bureau of Census and Statistics, Commonwealth Forestry and Timber Bureau, Department of Trade, Department of Primary Production, Department of External Affairs, Department of Territories, Department of Health, Department of National Development, Commonwealth Public Service Board, Department of Customs and Excise, Department of Works and News and Information Bureau of the Department of the Interior.

The Department of Labour and National Service has its main library in Melbourne, and branch libraries in Sydney and Adelaide. Other departmental libraries in Melbourne are those of the Department of Air, Department of Defence, Department of Social Services, Repatriation Commission and Postmaster-General's Department. The library of the Commonwealth Office of Education is in Sydney.

(v) *Commonwealth Scientific and Industrial Research Organization.* The head office in East Melbourne maintains a library covering all branches of science except the medical sciences. In addition, each division and section of the Organization has its own library;

together, these form a series of specialist libraries covering such subjects as food preservation, horticulture, fisheries, entomology, botany, agriculture, veterinary science, animal husbandry, building research, dairy products, etc. There are 22 such branches, each with its own staff varying in number from one to sixteen, and also smaller collections under the care of research officers aided by visiting librarians. Ten of the branches are in Victoria, eight in New South Wales, two in South Australia, and one each in the Australian Capital Territory and Queensland. The head office library maintains a union catalogue of the holdings of all C.S.I.R.O. libraries, and small union catalogues are being developed among groups of branch libraries with similar interests. The collections are particularly strong in the publications of overseas scientific and technical research institutions, with many of which exchange relations exist. The general public may have access to these materials for reference purposes.

3. States.—(i) *Metropolitan 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, 1954 :—

**METROPOLITAN PUBLIC LIBRARIES, 30th JUNE, 1954.**

City.	Number of Volumes in—			Total.
	Reference Branch.	Ordinary Lending Branch.	Country Lending Branch.	
Canberra (a)	400,000	..	(b)	400,000
Sydney ..	(c) 487,496	(d)	160,197	(e) 647,693
Melbourne ..	617,675	90,944	39,226	747,845
Brisbane ..	115,546	..	29,236	144,782
Adelaide ..	175,919	34,369	(f) 56,870	267,158
Perth ..	196,357	..	3,027	199,384
Hobart ..	51,233	29,463	(g) 161,831	242,527
Darwin ..	200	..	(h) 20,300	20,500

(a) Commonwealth National Library, including Parliamentary Section. (b) Books are lent to libraries or students throughout Australia whenever necessary for research work. (c) Includes 155,885 volumes in the Mitchell Library. (d) The maintenance and control of the ordinary lending branch of the Public Library at Sydney were transferred in 1908 to the Municipal Council. In 1954, books in this library numbered 135,890. (e) Includes 10,000 volumes in the Dixon Library and 2,069 in the Model School Library. (f) Includes 8,308 volumes in the Children's Branch. (g) Includes 97,301 volumes in the Children's Branch. (h) Ordinary and Country Lending Branch and 300 volumes in the Children's Branch.

(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 1930, which was fully proclaimed as from 1st January, 1944. The Library Board was fully constituted in 1944, and came into effective operation in September of that year. One hundred and thirty-eight Councils have adopted the Library Act and during 1953–54 spent £275,135 on their libraries from rates, as well as £132,560 received in subsidy. There are 130 libraries of which 5 are in Sydney, 22 in suburbs of Sydney, 5 in Greater Newcastle and 98 in country municipalities and shires. These libraries contain 1,002,500 volumes.

New South Wales departmental libraries are staffed by officers seconded from the State Library, which also provides a central book-buying and master cataloguing service for departmental libraries, and for municipal and shire libraries constituted under the 1939 Act. The State Library also manages the libraries of the University Tutorial Classes and the Workers' Educational Association.

The Country Circulation Department forwards books on loan to State schools, to Schools of Arts and to individual students. During 1953–54, 111,101 books were lent to small State schools, 38,199 to Schools of Arts and small country libraries, 306 to the Far Western Division, and 11,007 on special loan for extended periods to shire and municipal libraries and to Lord Howe Island, while 29,340 reference works were lent to individual country students.

The Mitchell Library in Sydney, of more than 60,000 volumes and pamphlets and 300 paintings, principally relating to Australasia and the Southern Pacific, and then valued at £100,000, was bequeathed to the trustees of the Public Library in 1907 by Mr. D. S. Mitchell, together with an endowment of £70,000. The testator stipulated that the regulations of the British Museum were to be adopted as far as possible, hence the library is the resort of specialists. There are now 155,885 volumes in the library, in addition to valuable manuscripts, collections of Australian postage and fiscal stamps, and various pictures, coins, etc.

In Newcastle the collection given by Dr. Roland Pope, worth £10,000, is housed at the School of Arts.

Other important libraries in New South Wales are the Australian Museum, 31,268 volumes; Teachers' Colleges, 141,998; Technical Education Branch, 59,504; Public Schools, 1,384,201; Railways Institute, 136,498; Road Transport and Tramways Institute, 50,900; Cooper Library of the New South Wales Public School Teachers' Federation, 17,467; and the Library at the National Herbarium, 10,000 volumes. At 30th June, 1955, the Parliamentary Library contained 116,808 volumes.

(iii) *Victoria*. Until the establishment of the Free Library Service Board in 1947, the only public library facilities available in Victoria except from the State Public Library and one or two Metropolitan Municipal Libraries were those offered by about 200 out-moded Mechanics' Institute Libraries situated in country areas all over the State. The Board's policy has been to substitute for these inadequate services an efficient system of adequately stocked, modern public libraries controlled by local Municipal Councils and subsidized by the Board. Since the Board's inception 65 municipalities, comprising 1,189,898 of the State's population, have established libraries. Of these, 17 are in the city, serving 782,248 people, and 49 in the country, serving 401,650 people. The amount of £137,000 was paid to the Councils in library subsidy for the year 1954-55 and a total of £253,213 was expended in Municipal Library Service for the same year. There are 589,900 books available to the communities in which libraries are established and combined circulation figures were 3,700,000 as at 30th September, 1954.

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 8, comprising a total of 28 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.

(iv) *Queensland*. Prior to 1945 Queensland's library needs were met by the State Public Library, established in 1902 and administered by the Chief Secretary's Department, and by Schools of Arts or similar libraries in metropolitan and country districts supported by members' subscriptions. The Libraries Act 1943 constituted a Library Board "to attain efficient co-ordination 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 throughout the State".

The control and management of the Public Library has been entrusted to the Board, which had built up the book collection to 144,782 volumes in 1953-54. The Libraries Act Amendment Act of 1949 provides for the deposit in the Public Library of a copy of all books, pamphlets, maps and other printed material published in Queensland. A country extension service for people residing outside the metropolitan area is now operating on a limited scale. Its book collection numbered 29,236 in 1953-54.

The Board endeavours to encourage the establishment of new library services and the extension of existing facilities by subsidizing local bodies on a £1 for £1 basis for the purchase of books and the cost of library space and equipment. The number of local bodies subsidized was 98 in 1953-54.

The Act empowers local authorities to establish library facilities. In 1955, 32 local authorities were conducting library services, and several others have indicated that they will do so in the near future. The Brisbane City Council has established nine libraries, of which five have separate children's collections, and hopes to increase the number to 28.

The Oxley Memorial Library was established in 1926 to promote the study of Australian literature, literature relating to Australia and Queensland historical material. Since 1946 it has been administered as a department of the Public Library, and the

collection kept segregated. During the year 1953-54 its holdings in volumes increased from 16,710 to 17,168. A valuable addition in 1950 was the L'Estrange collection of Queensland stamps.

The Library of the Parliament of Queensland was established in 1860. At 30th June, 1955, the library held 81,206 books and pamphlets, consisting of official publications and books devoted largely to history and the social sciences. The cataloguing and reclassification of the library commenced in 1948. The library is entitled to a copy of every book published in Queensland.

(v) *South Australia.* Following the Price Report of 1937, the Public Library of South Australia was separated from the Museum and Art Gallery early in 1940 and became a government department, administered by a Principal Librarian and a Libraries Board.

In the reference department there are about 176,000 volumes and seating for 300 readers. Most of the books may be borrowed. Over 3,000 periodicals are filed, and the collection of newspapers includes every newspaper printed in South Australia. There are 34,400 volumes in the lending department available to persons living in the metropolitan area, and the Country Lending Service has 48,560 volumes, of which more than half are suitable for children.

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, 1955.

The Institutes Association in 1954 comprised 231 suburban and country libraries with 746,661 volumes.

(vi) *Western Australia.* In 1955 the Library Board of Western Australia was made responsible for all forms of public library services throughout the State, to which the State Government contributes funds.

The Board has the following major functions :—

- (a) 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 ;
- (b) To administer for a limited period a former scheme of monetary grants of up to £50 per annum to local authorities which maintain public libraries ;
- (c) To administer the State Library ;
- (d) To advise the Government on all matters relating to libraries ;
- (e) 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.

Books are provided on a minimum basis of one volume per head of the population of the district concerned, and if the cost of so doing exceeds the local costs of the local authority a balancing payment is made to the Board to equalize the expenditure. All books throughout the State are available at any library, on request to the Board. All cataloguing is done by the Board. The first library under this scheme was opened in August, 1954 and at 31st December, 1955, 14 libraries had been established. The Board's book stock at that date was 42,000.

Prior to the establishment of the Library Board, in 1944 the Government appointed a Country Free Lending Libraries Committee to make small grants to local authorities for library purposes. That Committee has now been merged with the Board and its activities will cease in about 1962, and will be replaced by the full service of the Board.

The State Library was established in 1887 in commemoration of Queen Victoria's Jubilee. At present it contains some 200,000 bound volumes. It is now the reference division of the State library service and, in addition to providing the normal facilities of a reference library for the metropolitan area, extends its service throughout the State through local public libraries. The Local History section of the State Library is wholly responsible for the custody and management of the State archives and contains much of

the historical material of the Western Australian Historical Society. Many of the early newspapers of the State, private diaries and other articles are being microfilmed for permanent preservation.

The University of Western Australia, through its Adult Education Board, manages the Adult Education Library of some 12,000 volumes of general reading and fiction. Books are sent to country readers by post.

There are some 40 to 50 special libraries in government departments and industrial firms.

(vii) *Tasmania.* Library service in Tasmania has expanded rapidly during the past few years. Under the Libraries Act 1943 the Tasmanian Library Board was constituted, and the State Library of Tasmania was established on 1st January, 1944. The Board, in addition to administering the State Library headquarters in Hobart, is responsible for the extension of library services throughout the State and for the control of State aid. Municipalities adopting the Act spend the proceeds of local rates on library premises, salaries and maintenance, and books for permanent retention. State aid is provided in the form of books of a value equal to the amount collected in rates, which are exchanged at intervals. In Launceston State aid is given in cash. In 1953-54 the Launceston City Council contributed £6,079 and £6,168 was received in State aid.

Of the 49 municipalities in the State, 36 have adopted the Act and seven libraries have been established with the support of the Hydro-Electric Commission.

The State Library provides lending and reference services for the people of Hobart and operates a reference service for people throughout the State. In addition, it conducts screenings of documentary films, recitals of recorded music, summer schools, 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 session, and undertakes to catalogue all new books added to the library as well as supplying recreational reading.

4. *University Libraries.*—The libraries of the Australian universities provide material not only for the education of graduates and undergraduates, but also for scholars, 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 professional staff. In size, the library of the University of Sydney is the fourth library in Australia, and the libraries of the Universities of Melbourne and Adelaide are respectively seventh and ninth. The following table shows the sizes and rates of growth and expenditure of the Australian university libraries; it is impossible to give borrowing statistics, as they differ too widely to be comparable without much explanation.

UNIVERSITY LIBRARIES, 1954.

University or College.	Volumes.	Accessions during year.	Expenditure.
			£
Sydney .. .. .	358,333	8,650	53,026
Melbourne .. .. .	205,601	9,179	51,317
Queensland .. .. .	124,004	6,489	37,187
Adelaide .. .. .	190,784	7,963	39,852
Western Australia .. .. .	121,561	6,407	23,725
Tasmania .. .. .	83,000	3,716	17,420
New South Wales University of Technology	57,000	11,512	39,580
New England .. .. .	27,591	2,432	8,465
Australian National University .. .. .	100,588	8,886	40,857
Canberra University College .. .. .	19,539	3,306	9,273

The first books were bought for the library of the University of Sydney as early as 1851; only since 1910, however, has it possessed a building of its own. It is named after the principal benefactor, Thomas Fisher, who bequeathed to it in 1885 the sum of £30,000. It contains an up-to-date bookstack of glass and steel and a fine reading room in which, since the beginning of 1941, about 18,000 volumes of the collection have been made available on open access shelves. In addition, members of the teaching staff and certain classes of undergraduates are admitted to the bookstacks; all readers are encouraged to borrow freely. The library possesses a large number of periodicals, especially scientific, valuable collections of seventeenth-century pamphlets and Elizabethan translations from the classics, and an extensive collection of Australian literature. Besides medical and law branches, there are a number of departmental libraries.

Early in 1854 the University of Melbourne made its first allocation for books, but the library was housed in temporary quarters for a number of years. In recent years the university authorities have treated the library generously, and there have been some welcome benefactions, but accommodation is insufficient and a new library building is a pressing need of the university. The W. L. Baillieu Trust has made available the first instalments of a £100,000 gift for building purposes. All the books are accessible on open shelves, and though the library is intended primarily for reference purposes, borrowing, except of text-books and certain valuable volumes, is made as easy as possible. The library is administered from the centrally situated general library; there is a large medical branch library specially rich in periodicals, and smaller branch libraries in some of the science departments.

The library of the University of Queensland, founded in 1911, began with £3,000 worth of books, £2,000 having been raised by public subscription and £1,000 granted by the Government. The main library is now in its own building in the new University at St. Lucia.

The Adelaide University library bears the title of its original benefactor, Robert Barr Smith, who, with members of his family in and after 1892, gave the university about £50,000 for library purposes. Some 20,000 volumes are shelved in the reading room and are available to the ordinary student. Up-to-date steel bookstacks provide accommodation for about 100,000 volumes. Borrowing facilities are available to all matriculated students, to country students and to graduates. There are medical and law departmental libraries. The medical library has on permanent loan the collection of the Institute of Medical and Veterinary Science, and also incorporates the library of the British Medical Association (South Australian Branch).

In the University of Western Australia the first permanent library staff was not appointed until 1927. Provision of permanent library accommodation was not possible when the university moved to its present site, and space and facilities have consequently been inadequate. Extensions to the temporary quarters were made in 1946. The whole collection, consisting of about 122,000 volumes, is accessible on open shelves, and there are several departmental libraries. A special feature is the use made of students' co-operation.

The library of the University of Tasmania was founded in 1893, but for many years it comprised little more than a collection of text-books. In 1913 a substantial increase of funds was allotted and important gifts were received. In 1919 it was organized for the first time in accordance with modern library practice. A full-time librarian was appointed for the first time at the end of 1945, and the staff has increased from two to ten. The library is now providing a cataloguing service for the library of the Royal Society of Tasmania.

The New England University library was founded in 1938, and bears the name of its first benefactor, Sir William Dixson. At the end of 1954 it contained 27,591 volumes, mainly on open shelves.

The Canberra University College library was established in 1938. At the end of 1954 it contained 19,539 volumes, which are on open shelves; reference books may be borrowed.



The library of the Australian National University is unique in that it is designed to serve the research staff of a wholly post-graduate institution. It specializes in the fields of the physical and medical sciences, excluding clinical materials. In the social sciences and Pacific studies consideration is given to the holdings of the Commonwealth National Library to avoid unnecessary duplication. The library was established in 1948 and operated in Melbourne until December, 1950, when it was transferred to Canberra. In 1954 the collection comprised 100,588 volumes, including a special collection of 25,000 volumes in Oriental languages.

5. *Children's Libraries and School Libraries.*—(i) *General.* A survey conducted early in 1946 revealed that only a small proportion of children was being catered for by adequate library service. The effective use made of the few existing children's libraries is proof that the growing interest in this branch of library work will be well rewarded.

(ii) *New South Wales.* Children's libraries are being developed as departments of municipal and shire libraries. Three formerly independent children's libraries at Mosman, Wollongong and Moss Vale are now departments of municipal and shire libraries and have greatly increased budgets.

School library work is fostered by the State Library in co-operation with the Education Department. A "Model School Library" has been established, and vacation classes for teacher-librarians are held.

(iii) *Victoria.* Since 1943-44 children's libraries have shared an annual grant of £500 between them, the number participating in 1950 being 34.

The Education Department is making provision for libraries in new schools being erected. Where accommodation is available in existing schools, grants of up to £4 for £1 are provided to furnish and equip libraries. In addition, the Government subsidizes the purchase of approved books on the basis of £1 for £1, or £2 for £1, according to the size of the school, to a maximum grant of £60 per annum.

With the assistance of school committees and municipalities, subsidized by the Department, many country districts have established circulating group libraries. Boxes of books are circulated to all schools in the group, changes being made at the commencement of each school term. Financed by a bequest from the late William Gillies, a scheme of circulating libraries for small schools, particularly in remote areas, has been operating for some years.

The Department has a Library Services Officer with a small staff to advise and assist schools in the organization of libraries. A number of Education Department teachers have been trained at the Library School of the Public Library of Victoria, and an increasing number of schools have well-equipped library rooms with trained teacher-librarians in charge.

(iv) *Queensland.* The purchase of books in State school libraries in Queensland is financed by school committees and parents' associations, with a subsidy from the Department of Public Instruction on a £1 for £1 basis.

In 1937 a system of Circulating Supplementary Readers was commenced. Books are graded for age levels and are moved from school to school, sufficient copies of each book for a whole class being sent, and reading being done in school. There are 96,000 such books now in use, the distribution at present being confined to primary schools.

(v) *South Australia.* A Children's Library of 8,300 volumes is used by school classes and individual children living in the metropolitan area. Books of fiction are lent to children of fourteen years and over, while other books may be borrowed by children of any age.

(vi) *Western Australia.* For schools with more than two teachers, including high schools and technical schools, a £1 for £1 subsidy up to £50 is granted each year. New primary schools are provided with a room for a library, while high schools and some technical schools have a teacher acting as librarian.

For schools with one or two teachers there are two services. Through the Small Schools Fixed Library Service reference books up to the value of £15 are supplied annually to be kept permanently in the school. The Charles Hadley Travelling Library provides recreational reading, and operates 320 boxes which can be exchanged every three months through a local school acting as distributing centre for a district. The Government grants £250 per annum for this service, and the participating schools contribute the commission received from the Commonwealth Savings Bank for the teachers' services—about £200.

Children in isolated country areas are catered for by books sent out by the State Correspondence Schools Library. The children are kept in touch with the library by means of radio talks and leaflets issued periodically. There is as yet no general scheme to serve children in the metropolitan area.

The Federation of Police and Citizens Boys' Clubs of Western Australia aims at establishing a system of circulating boxes of books at an estimated cost of £10,000. Books are in circulation to 44 centres, of which 15 are Police Boys' Clubs, 24 State schools, and 5 children's libraries.

Western Australian Children's Book Council Inc. was incorporated in 1948 and receives a government grant to assist its work of interesting local authorities in establishing children's free libraries.

(vii) *Tasmania.* The Lady Clark Memorial Children's Libraries, at the State Library, Hobart, aim to serve all children in Tasmania with books. They work through the municipal authorities; at 30th June, 1954, 55 children's libraries had been established in 49 municipalities, including Hobart, and in six special Hydro-electric districts, children's books being provided on a population basis.

Practically all State secondary schools in Tasmania have libraries, with full-time librarians in four of them. The libraries of the Friends' School, Hobart, and the Hobart High School are among the foremost of their kind in Australia.

A Schools' Library Service assists with loans of curriculum books, and provides advice and guidance in the use of books. In 1953 the number of schools receiving service was 115 and the number of books issued was 7,924. The majority of primary schools have libraries; most area schools, in particular, have good ones.

The Education Department sends, each year, selected students or teachers to the Library School in Sydney.

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 specialist or other staff. These libraries, which are most numerous in Sydney and Melbourne, are being increasingly staffed 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), Commonwealth National Library (PM), C.S.I.R.O. (M); *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).

## § 11. Public Museums.

The Australian Museum in Sydney, founded in 1836, is the oldest institution of its kind in Australia. In addition to possessing fine collections of the usual objects found in kindred institutions, the Museum contains a very valuable and complete set of specimens of Australian fauna. The cost of construction of the building to 30th June, 1954 was £87,660. The number of visitors to the institution during 1953-54 was 259,773, and the average attendance on week-days 602, and on Sundays 1,373. The expenditure for 1953-54 amounted to £57,881. A valuable library containing 33,551 volumes is attached to the Museum. Courses of evening popular lectures are delivered and lecturers also visit distant suburbs and country districts, and afternoon lectures for school children are provided. Nature talks are also broadcast by radio. Representative collections illustrative of the natural wealth of the country are to be found in the Agricultural and Forestry Museum and the Mining and Geological Museum. The latter institution prepares collections of specimens to be used as teaching aids to country schools. The "Nicholson" Museum of Antiquities, the "Macleay" Museum of Natural History and the Museum of Normal and Morbid Anatomy attached to the University, and the National Herbarium and Botanical Museum at the Sydney Botanic Gardens, are all accessible to the public. There is a Museum of Technology and Science in Sydney with branches in four country centres. Expenditure during the year 1953-54 was £51,616. Valuable research work is being performed by the scientific staff in connexion with oil and other products of the eucalyptus and the gums, kinos, tanning materials, and other economic products of native vegetation generally.

The National Museum at Melbourne, devoted to natural history, geology and ethnology, is located in the eastern section of the Public Library Building. The National Art Gallery is situated in the same building. The Museum of Applied Science, also housed under the same roof, contained at 30th June, 1951, 23,423 exhibits which covered applied and economic aspects of all branches of science. There is a fine Museum of Botany and Plant Products in the Melbourne Botanic Gardens. In addition to the large collection in the geological museum attached to the Mines Department in Melbourne, well-equipped museums of mining and geological specimens are established in connexion with the School of Mines in the chief mining districts.

The Queensland Museum, founded in 1855, comprises exhibited and reference collections of zoology, geology and ethnology. It is maintained entirely by the State Government, and the cost of the building at 30th June, 1954 was £42,638. Expenditure for the year 1953-54 was £21,304. The collections are principally, but not exclusively, Australian; there is, for example, the excellent series of ethnological material formed by Sir William McGregor in New Guinea. The publication is *Memoirs of the Queensland Museum* which was preceded by the *Annals of the Queensland Museum*. The library is extensive and valuable, and of great assistance to research workers in the State.

The Queensland Geological Survey Museum has branches in Townsville, opened in 1886, and in Brisbane, opened in 1892.

The South Australian Museum has considerable collections of most branches of natural history and was attended by 150,000 visitors in 1953-54. Cost of construction of the museum building was £65,000. In 1953-54 expenditure was £36,100.

The Western Australian Museum and Art Gallery contains altogether 214,413 specimens, of an estimated value of £107,750. The Museum, Art Gallery and Library are housed in one building. At 30th June, 1954, the structure was valued at £65,500.

There are two museums in Tasmania—the Tasmanian Museum at Hobart, and the Victoria Museum and Art Gallery at Launceston—both of which contain valuable collections of botanical, mineral and miscellaneous products. The museums received aid from the Government during 1953–54 to the extent of £14,000. The cost of construction in each case is included in that of art galleries given below.

## § 12. Public Art Galleries.

The National Art Gallery of New South Wales originated in the Academy of Art founded in 1871. Cost of construction of the present building amounted to about £96,000. At the end of 1953 its contents comprised 1,162 oil paintings, 749 water colours, 1,986 black and white, 239 statuary and bronzes, and 1,304 ceramics, works in metal and miscellaneous. Since 1895, loan collections of pictures have been forwarded regularly for exhibition in important country towns.

The National Gallery at Melbourne at 30th June, 1953 contained 970 oil paintings, 7,200 objects of statuary, bronzes, ceramics, etc., and 7,440 water colour drawings, engravings and photographs. The Gallery is situated in the same building as the Museum and Public Library, the total cost of construction being £439,000. The expenditure on the Public Library, Art Gallery and Museum in 1953–54 was £232,786. Cost of purchases during 1952–53 was £7,286. Several munificent bequests have been made to the institution. That of Mr. Alfred Felton, given in 1904, amounts to about £8,000 per annum. In 1913, Mr. John Connell presented his collection of art furniture, silver, pictures, etc., the whole being valued at £10,000. There are provincial art galleries at Ararat, Bendigo, Castlemaine, Shepparton, St. Arnaud and Warrnambool, and periodically, pictures are sent on loan from the National Gallery.

The Queensland National Art Gallery, Brisbane, maintained by the State Government, was founded in 1895. A Director was appointed in 1950, in which year the interior of the Gallery was remodelled. More recently an Art Museum and a Print Room have been opened. At 30th June, 1954, there were on view 340 oil paintings, 190 water colours, 298 black and white, and 50 pieces of statuary, together with 151 various prints, mosaics, and miniatures. Exclusive of exhibits on loan, the contents are valued at about £25,160. Visitors during the year averaged 1,154 on Sundays and 367 on week-days.

The Art Gallery at Adelaide dates from 1880, when the Government expended £2,000 in the purchase of pictures, which were exhibited in the Public Library Building in 1882. The liberality of private citizens caused the Gallery rapidly to outgrow the accommodation provided for it in 1889 at the Exhibition Building, and on the receipt of a bequest of £25,000 from the late Sir Thomas Elder, the Government erected the present building, which was opened in April, 1900. The Gallery also received bequests of £16,500 in 1903 from the estate of Dr. Morgan Thomas, and valuable prints and £3,000 in 1907 from Mr. David Murray. In 1935 Mr. Alex Melrose gave £10,000 for the extension of the building. At 30th June, 1954 there were in the Gallery 1,545 paintings in oil and water colours, 572 drawings and black and white, and 105 items of statuary, the contents being valued at £102,000. The cost of construction of the Art Gallery amounted to £48,000. The expenditure during 1953–54 was £18,500.

The foundation stone of the present Art Gallery at Perth in Western Australia was laid in 1901, and the Public Library, Museum and Art Gallery are all situated in the one structure. The collection comprises 246 oil paintings, 163 water colours, 419 black and white, 277 statuary, and 1,497 ceramic and other art objects, the whole being valued at £35,000. Cost of construction of the building amounted to £10,000.

In Tasmania, the Art Gallery at Hobart was opened in 1887. At June, 1954 the contents consisted of 152 oil paintings, 127 water colours, 114 black and white, 3 statuary and 132 etchings, engravings, etc. The cost of construction of the building was £4,500. Expenditure in 1953–54 was £16,065.

The Art Gallery at Launceston was erected in 1888 at a cost of £6,000, and opened on 2nd April, 1891. Only a small proportion of the contents belongs to the gallery, the bulk of the pictures being obtained on loan. At June, 1954 there were on view 53 oil paintings, 25 water colours, 4 black and white, and 3 miscellaneous exhibits. Expenditure in 1953-54 was £8,656.

### § 13. Scientific Societies.

1. **Royal Societies.**—In earlier issues of the Official Year Book an outline was given of the origin and progress of the Royal Society in each State. The accompanying table contains the latest available statistical information regarding these institutions, the headquarters of which are in the capital cities.

ROYAL SOCIETIES, 1954.

Particulars.	Sydney.	Mel- bourne.	Bris- bane.	Ade- laide.	Perth.	Hobart.	Can- berra.
Year of foundation .. ..	1866	1854	1884	1880	1914	1843	1930
Number of members .. ..	354	252	250	174	198	486	139
Volumes of transactions issued .. ..	88	99	65	77	37	88	..
Number of books in library .. ..	30,000	23,100	47,968	19,600	4,500	30,070	..
Societies on exchange list .. ..	404	355	270	215	202	303	..
Income .. ..	£ 2,177	1,573	643	2,800	152	1,251	68
Expenditure .. ..	£ 2,509	2,212	451	3,100	174	1,250	56

2. **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 meetings are held at intervals of approximately eighteen months within the various States and in the Dominion of New Zealand. The next meeting is scheduled to take place in Dunedin in January, 1957.

3. **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. Two fellowships were awarded in 1955. The library comprises some 18,000 volumes. Eighty 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 1955 was 236.

The British Astronomical Society has a branch in Sydney, and in each of the States the British Medical Association has a branch.

In addition to the societies enumerated above, there are various others in each State devoted to branches of scientific investigation.

### § 14. State Expenditure on Education, Science and Art.

The expenditure in each State on education, science and art during the year 1953-54 is shown in the following table. Owing to the details not being available in all States, the figures exclude officers' pensions and superannuation, pay-roll tax, and interest and sinking fund on capital expended on buildings. The cost of the medical and dental inspection of school children is also excluded, as this service is more appropriately classified under Public Health, etc..

**STATE EXPENDITURE ON EDUCATION, SCIENCE AND ART, 1953-54.**  
(£'000.)

State.	Expenditure from—				Receipts.	Net Expendi- ture.
	Revenue.	Loan.	Other Funds.	Total.		
New South Wales ..	27,807	5,281	..	33,088	675	32,413
Victoria ..	17,506	4,867	..	22,373	(a) 244	22,129
Queensland ..	8,231	855	335	9,421	243	9,178
South Australia ..	5,993	840	..	6,833	285	6,548
Western Australia ..	5,574	853	..	6,427	126	6,301
Tasmania ..	2,771	837	..	3,608	11	3,597
Total ..	67,882	13,533	335	81,750	1,584	80,166

(a) In addition, fees in respect of technical education amounting to £245,283 were received and spent by the School Councils.

## CHAPTER XIII.

### PUBLIC JUSTICE.

#### § 1. Introduction.

Each State has its own separate judicial system, the Commonwealth jurisdiction being confined to the High Court of Australia (largely a Court of Appeal intermediate to the Privy Council although it has also original jurisdiction), the Commonwealth Court of Conciliation and Arbitration and the Federal Court of Bankruptcy. Full particulars regarding the judicial power of the Commonwealth will be found in Chapter III. of the Commonwealth Constitution which appears on page 17 of this volume.

In considering the crime statistics of the various States, due allowance must be made for certain factors, such as the relative powers of the higher and lower courts. In the case of lower courts, the actual number of laws in each State whose breach renders a person liable to fine or imprisonment must be taken into account. Again, the attitude of the magistracy and police towards certain classes of offences is a factor, for in the case of liquor laws or laws connected with vagrancy or gaming, the views of the magistrates, and instructions issued to the police, may be responsible for considerable variations in the numbers. The strength and distribution of the police forces, and the age-constitution and distribution of the population of the States, also influence the results. Due weight should be given also to the prevalence of unsolved crime, but information on this point is not available.

#### § 2. Lower (Magistrates') Courts.

1. Powers of the Magistrates.—(i) *New South Wales*. There is no general limit to the powers of the magistrates in regard to offences punished 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 £50 before a court constituted by a stipendiary magistrate. The amount in actions of debt before two or more Justices of the Peace is limited to £30 and in actions of damage 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 and 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 £50, and to actions arising out of torts or contracts. No definite limit is fixed to the powers of the magistrates on the criminal side, and for some offences sentences up to two years may be imposed. The proportion of long sentences is, however, comparatively small.

(iii) *Queensland*. Generally speaking, the maximum term of imprisonment which justices can inflict 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 illegally 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.

Magistrates have no power to deal with habitual offenders, but there are such powers vested in the Supreme Court.

(iv) *South Australia.* In South Australia the power of special magistrates to impose fine and imprisonment is defined by the special act creating the offence and conferring jurisdiction. In the case of minor indictable offences, triable summarily, a maximum penalty of £100 fine or 2 years' imprisonment is fixed by the Justices Act 1921-1943. Magistrates also have power to hear certain civil actions in which the amount claimed is less than £750.

(v) *Western Australia.* The powers of magistrates and justices in regard to offences triable 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 magistrates and courts is restricted in general to £250, but disputed actions, the subject matter of which exceeds £100, must be tried by a judge. 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 Courts of Session. They may be appointed as Commissioners of the Supreme Court.

On the goldfields, the magistrate is also the warden.

(vi) *Tasmania.* Magistrates may hear and determine in Courts of Petty Sessions all offences other than those punishable on indictment. Stealing and analogous crimes where the property involved does not exceed £10 in value may be dealt with by magistrates unless the defendant objects.

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. Generally speaking, sentences which justices can impose are limited to six months, although in several cases sentences of up to two years may be imposed. The aggregate term of cumulative sentences cannot exceed two years.

The civil jurisdiction of magistrates is divided into two categories. A Commissioner of the Court of Requests, who must be a legal practitioner, and is invariably a police magistrate, may hear actions for the recovery of debts and damages not exceeding £100. The jurisdiction of these courts may be increased by proclamation to £250, and this has been done in five instances. Courts of General Sessions, constituted by at least two justices, exercise similar powers, but the jurisdiction cannot exceed £50. Only one court has the maximum jurisdiction, the others being limited to £30.

2. *Cases Tried at Magistrates' Courts.*—The total number of arrest and summons cases tried at Magistrates' Courts in each State is given below for 1939 and for the years 1949 to 1953 :—

#### CASES TRIED AT MAGISTRATES' COURTS.

State or Territory.	1939.	1949.	1950.	1951.	1952.	1953.
New South Wales ..	144,848	205,817	214,894	242,165	269,197	276,566
Victoria ..	82,858	80,511	97,201	109,066	129,091	134,912
Queensland(a) ..	32,501	40,503	43,932	49,849	44,868	46,482
South Australia ..	22,776	(a)28,349	(a)31,964	(a)30,953	(a)33,688	(a)28,757
Western Australia ..	24,111	27,373	29,521	31,985	40,674	43,495
Tasmania ..	9,498	11,713	12,403	14,649	16,964	20,381
Northern Territory(a)	1,494	1,199	1,269	1,178	1,657	2,077
Aust. Cap. Territory ..	284	1,018	1,237	1,500	1,610	1,294
Total ..	318,370	396,483	432,421	481,345	537,749	553,964

(a) Year ended 30th June following.



Investigation of the returns shows that considerable variations in the figures for single States are occasioned by breaches of new Acts, or the more stringent enforcement of the provisions of existing Acts. Any deductions drawn from the total returns as to the increase or decrease of criminality should, therefore, be based upon a careful analysis of the detailed list of offences.

3. **Convictions at Magistrates' Courts.**—The figures given in the previous table include a number of people who were charged without sufficient reasons, and, statistically, are not of general importance. A classification of convictions of persons who appeared before the lower courts in each State during 1953 is given in the following table :—

**CONVICTIONS AT MAGISTRATES' COURTS, 1953.**

Class of Offence.	N.S.W.	Vic.	Qld.(a)	S.A.(a)	W.A.	Tas.	N.T.(a)	A.C.T.	Aust.
Against the Person ..	2,838	1,111	479	245	348	220	49	31	5,321
Against Property ..	14,491	5,794	2,747	1,493	3,284	962	122	15	28,878
Forgery and Offences against the Currency	373	..	..	6	..	3	24	7	413
Against Good Order ..	108,755	26,818	23,359	6,809	7,945	1,670	899	380	176,635
Other Miscellaneous ..	131,155	87,774	16,005	16,929	29,066	14,850	821	708	297,308
<b>Total ..</b>	<b>257,522</b>	<b>121,497</b>	<b>42,590</b>	<b>23,482</b>	<b>40,643</b>	<b>17,705</b>	<b>1,915</b>	<b>1,141</b>	<b>508,495</b>

(a) Year ended 30th June following.

The following table shows the number of convictions in 1939 and in each year from 1949 to 1953 :—

**CONVICTIONS AT MAGISTRATES' COURTS.**

State or Territory.	1939.	1949.	1950.	1951.	1952.	1953.
New South Wales ..	126,353	189,955	199,619	224,514	249,845	257,522
Victoria ..	72,186	72,416	87,873	98,369	115,534	121,497
Queensland(a) ..	28,920	38,691	41,492	46,436	41,266	42,590
South Australia ..	20,429	(a)25,496	(a)28,675	(a)27,432	(a)30,229	(a)25,482
Western Australia ..	22,539	25,388	27,315	29,763	38,109	40,643
Tasmania ..	8,722	10,206	10,961	12,765	15,032	17,705
Northern Territory(a)	1,394	1,127	1,145	980	1,411	1,915
Aust. Cap. Territory ..	260	917	1,151	1,442	1,441	1,141
<b>Total ..</b>	<b>280,803</b>	<b>364,196</b>	<b>398,231</b>	<b>441,701</b>	<b>492,867</b>	<b>508,495</b>

(a) Year ended 30th June following.

4. **Convictions for Serious Crime at Magistrates' Courts.**—(i) *General.* While the figures given in the preceding table refer to the entire body of convictions, the fact must not be overlooked that they include a large proportion of offences of a technical nature, many of them unwittingly committed, against various Acts of Parliament. Cases of drunkenness and minor breaches of good order, which, if they can be said to come under the heading of crime at all, at least do so in a very different sense from some other offences, also help to swell the list. The following table has therefore been prepared for the purpose of showing the convictions at magistrates' courts, for what may be regarded as the more serious offences, i.e., against the person and property, either separately or conjointly, and forgery and offences against the currency. Owing to the smallness of the population, the rates for the Northern and the Australian Capital Territories are subject to considerable variation.

(ii) *Number and Rates, Years 1939 and 1949 to 1953.*—The following table shows the number and rates of convictions for serious crime at magistrates' courts for the years 1939 and 1949 to 1953 :—

### CONVICTIONS FOR SERIOUS CRIME AT MAGISTRATES' COURTS.

State or Territory.	1939.	1949.	1950.	1951.	1952.	1953.
NUMBER.						
New South Wales ..	12,724	12,983	14,141	15,632	17,858	17,612
Victoria ..	5,727	4,675	5,204	6,495	7,602	6,905
Queensland(a) ..	2,402	2,481	2,699	3,041	2,916	3,226
South Australia ..	1,224	(a) 1,488	(a) 1,654	(a) 1,926	(a) 1,945	(a) 1,744
Western Australia ..	2,614	2,320	2,901	3,115	3,446	3,632
Tasmania ..	959	940	810	829	1,126	1,185
Northern Territory(a)	44	112	43	144	149	195
Aust. Cap. Territory ..	59	145	183	171	173	53
Total ..	25,753	25,144	27,635	31,353	35,215	34,552
Rate per 10,000 of population ..	36.91	31.66	33.67	37.12	40.64	39.08

(a) Year ended 30th June following.

(iii) *Rate of Convictions, 1881 to 1951.* The rate of convictions at ten-yearly intervals over a period of seventy years is shown below ; only the more serious offences particularized on the preceding page have been taken into consideration.

### RATE OF CONVICTIONS FOR SERIOUS CRIME AT MAGISTRATES' COURTS : AUSTRALIA.

Year .. .. .	1881.	1891.	1901.	1911.	1921.	1931.	1941.	1951.
Convictions per 10,000 persons	69.3	44.8	29.1	24.6	29.2	37.1	33.6	37.1

5. *Committals to Higher Courts.*—(i) *General.* In a previous paragraph it has been pointed out that comparisons of criminality based on a consideration of the total returns from magistrates' courts are somewhat inadequate, inasmuch as the figures include numbers of cases which are merely technical breaches of laws having in some instances a purely local significance. The committals to higher courts give a better basis of comparison, although even in this connexion allowances must be made for the want of uniformity in jurisdiction. A classification of the offences for which persons appearing in the lower courts were committed to higher courts in each State and Territory for the year 1953 is shown in the following table :—

### COMMITTALS TO HIGHER COURTS, 1953.

Class of Offence.	N.S.W.	Vic.	Qld.(a)	S.A.(a)	W.A.	Tas.	N.T.(a)	A.C.T.	Aust.
Against the Person ..	1,158	355	247	133	111	77	23	12	2,116
Against Property ..	2,818	1,451	352	240	250	224	1	7	5,343
Forgery and Offences against the Currency ..	115	208	..	20	5	34	21	..	403
Against Good Order ..	83	9	1	2	3	..	1	..	99
Other Miscellaneous ..	89	48	9	27	15	2	..	..	190
Total .. .. .	4,263	2,071	609	422	384	337	46	19	8,151

(a) Year ended 30th June following.

The following table shows the number of committals in 1939 and in each year from 1949 to 1953, with the rate of such committals per 10,000 of population :—

### COMMITTALS TO HIGHER COURTS.

State or Territory.	1939.	1949.	1950.	1951.	1952.	1953.
NUMBER.						
New South Wales .. ..	2,288	3,776	3,513	3,706	4,504	4,263
Victoria .. ..	1,777	1,751	1,638	1,650	1,671	2,071
Queensland(a) .. ..	359	414	521	434	605	609
South Australia .. ..	259	(a) 393	(a) 362	(a) 480	(a) 554	(a) 422
Western Australia .. ..	129	186	211	209	373	384
Tasmania .. ..	82	137	195	197	224	337
Northern Territory(a) ..	12	12	9	28	35	46
Australian Capital Territory	18	24	38	30	23	19
Total .. ..	4,924	6,693	6,487	6,734	7,989	8,151
Rate per 10,000 of population	7.1	8.4	7.9	8.0	9.2	9.2

(a) Year ended 30th June following.

(ii) *Rate of Committals, 1881 to 1951.* The rate of committals for serious crime at ten-yearly intervals since 1881 is shown below :—

### RATE OF COMMITTALS TO HIGHER COURTS : AUSTRALIA.

Year .. ..	1881.	1891.	1901.	1911.	1921.	1931.	1941.	1951.
Committals per 10,000 persons	12	11	8	6	7	8	5	8

6. *Drunkenness.*—(i) *Cases and Convictions.* The number of arrest and summons cases of drunkenness and the convictions recorded during the year 1939 and the years 1950 to 1953 are given in the following table :—

### DRUNKENNESS : CASES AND CONVICTIONS.

State or Territory.	1939.		1950.		1951.		1952.		1953.	
	Cases.	Convictions.	Cases.	Convictions.	Cases.	Convictions.	Cases.	Convictions.	Cases.	Convictions.
New South Wales	32,472	32,405	78,727	78,477	83,178	82,837	79,217	79,058	72,765	72,647
Victoria .. ..	11,609	11,421	21,248	21,003	23,151	22,834	21,751	21,526	19,424	19,226
Queensland(a) .. ..	11,202	11,118	26,914	26,855	28,176	28,141	22,994	22,932	21,257	21,199
South Australia .. ..	2,607	2,597	(a) 5,861	(a) 5,846	(a) 5,902	(a) 5,890	(a) 6,317	(a) 6,307	(a) 5,531	(a) 5,509
Western Australia	2,681	2,658	6,113	6,046	6,035	5,974	6,107	6,042	6,274	6,210
Tasmania .. ..	411	407	655	639	718	693	834	816	800	763
Northern Terr.(a)	686	677	652	644	564	524	434	424	707	699
Aust. Cap. Terr.	114	114	430	426	477	476	545	541	381	378
Total .. ..	61,782	61,397	140,600	139,936	148,201	147,422	138,199	137,676	127,136	126,631
Rate per 10,000 of population ..	88.0		170.5		174.5		158.9		143.2	

(a) Year ended 30th June following.

Under the heading "drunkenness" are included cases of ordinary drunkenness, drunkenness and disorderliness, and habitual drunkenness.

The number of convictions, as might naturally be expected, is almost identical with the number of cases.

(ii) *Convictions per 10,000 of Population.* In the twenties the convictions for drunkenness averaged approximately 100 per 10,000 of population, but the rate fell away considerably during the following years and was only 57.1 in 1931. Following that year, the average rose steadily to 84.1 in 1936 while the annual average for the period 1936 to 1939 was 82.7 and that for the years 1940 to 1945 was 90.8. Following an appreciable increase in the previous year the convictions per 10,000 rose very steeply in 1946 to 132.1 and increased to 174.5 in 1951, but declined to 143.2 in 1953.

The convictions for drunkenness taken by themselves are not altogether a satisfactory test of the relative sobriety of the inhabitants of each State as several important factors must be taken into consideration. The age and sex constitution of the people, for example, are by no means identical in all the States. Another factor is the distribution of the population. Arrest or summons for drunkenness obviously is more likely in the regions densely populated than in those sparsely populated. In addition, allowance must be made for the attitude of the magistracy, the police and the general public in regard to the offence.

(iii) *Consumption of Intoxicants.* The following table shows the consumption of spirits, wine and beer per head of population in Australia during the years 1938-39 and 1949-50 to 1953-54 :—

CONSUMPTION OF INTOXICANTS IN AUSTRALIA PER HEAD OF POPULATION.

Year.				Spirits.	Wine.	Beer.
				Proof Gals.	Gals.	Gals.
1938-39	..	..	..	0.22	0.65	12.47
1949-50	..	..	..	0.32	1.50	18.83
1950-51	..	..	..	0.38	1.61	20.41
1951-52	..	..	..	0.32	1.80	21.19
1952-53	..	..	..	0.20	1.36	21.80
1953-54	..	..	..	0.25	1.39	23.01

(iv) *Remedial Treatment of Drunkenness.* Legislation has been passed in each State providing for the commitment of inebriates to special Government institutions. The laws in the various States are as follows :—New South Wales, Inebriates Act 1912 amended in 1949; Victoria, Inebriates Act 1928; Queensland, Inebriate Institutions Act 1896; South Australia, Inebriates Act 1908-1934, Convicted Inebriates Act 1913-1934; Western Australia, Inebriates Act 1912-1919; Tasmania, Inebriates Act 1885, Inebriate Hospitals Act 1892 and 1941. Curative work was first undertaken by the Government of New South Wales in 1907. In most cases the institutes are connected with the gaols, and, naturally, custodial measures are still a strong feature in their management; nevertheless, the results of remedial measures have been encouraging.

7. *First offenders.*—In all the States, statutes dealing with first offenders have been in force for many years. Existing legislation is as follows :—New South Wales, Crimes Act 1900 amended in 1924 and 1929, First Offenders (Women) Act 1919 as amended in 1929; Victoria, Crimes Act 1928; Queensland, Criminal Code Acts 1899 to 1945; South Australia, Offenders Probation Act of 1913-1953; Western Australia, Criminal Code Act 1913-1942; Tasmania, Probation of Offenders Act 1934. The method of procedure is practically the same in all cases, i.e., with regard to most first offenders convicted of a minor offence the magistrate or judge is empowered to allow the offender to go free on

recognizances being entered into for his good behaviour for a certain period. In practice, this humane law has been found to work excellently, very few of those convicted under it having been found to relapse into crime.

8. **Children's Courts.**—Special courts for the trial of juvenile offenders have been established in New South Wales, Victoria, Queensland, Western Australia and Tasmania, while Children's Courts, although not under that title, are provided for by the Maintenance Act 1926-1952 in South Australia. The object of these courts is to avoid, as far as possible, the unpleasant associations of the ordinary police court.

### § 3. Higher (Judges') Courts.

1. **Convictions at Higher Courts.**—The following table shows for each State and Territory during 1953 and in Australia as a whole in that and the previous year, the number of convictions at Higher Courts for each of the principal offences.

CONVICTIONS AT HIGHER COURTS, 1953.

Offence.	N.S.W. (a)	Vic.	Qld. (a)	S.A.	W.A.	Tas.	N.T. (a)	A.C.T.	Australia.	
									1953.	1952.
<b>I. OFFENCES AGAINST THE PERSON.</b>										
Murder ..	8	7	9	2	3	..	2	..	31	24
Attempted Murder ..	6	..	6	..	1	1	1	..	15	6
Manslaughter ..	16	1	11	3	2	..	4	..	37	31
Rape ..	10	1	6	..	..	2	2	1	22	21
Other Offences against Females ..	132	56	35	45	15	35	3	..	321	263
Unnatural Offences ..	98	41	42	13	19	8	2	..	223	227
Abortion and Attempts to Procure ..	..	..	..	4	..	2	..	..	6	6
Bigamy ..	38	18	14	4	10	3	..	..	87	96
Suicide, Attempted ..	..	..	..	..	..	..	..	..	..	10
Assault, Aggravated ..	132	44	49	8	12	7	6	..	258	151
Assault, Common ..	24	10	11	5	5	..	1	4	60	56
Other Offences against the Person ..	3	7	3	(b) 15	(c) 13	..	3	..	44	45
<b>Total</b> ..	467	185	186	90	80	58	24	5	1,104	936
<b>II. OFFENCES AGAINST PROPERTY.</b>										
Burglary and House-breaking ..	557	418	186	114	74	49	4	3	1,405	1,457
Robbery and Stealing from the Person ..	40	22	16	2	4	52	..	1	137	165
Embezzlement ..	36	6	8	7	4	..	1	..	62	92
Larceny, Other ..	151	108	38	36	43	..	6	1	383	464
Receiving ..	32	60	14	14	7	9	1	..	137	150
Fraud and False Pretences ..	60	22	13	..	5	14	..	..	114	150
Other Offences against Property ..	59	34	18	26	7	3	8	..	155	113
<b>Total</b> ..	935	670	293	199	144	127	20	5	2,393	2,591
<b>III. FORGERY AND OFFENCES AGAINST THE CURRENCY</b> ..	11	44	3	24	4	12	3	..	101	53
<b>IV. OFFENCES AGAINST GOOD ORDER</b> ..	9	8	14	1	..	2	..	..	34	46
<b>V. OTHER MISCELLANEOUS</b> ..	27	11	6	7	13	4	4	..	72	59
<b>Grand Total</b> ..	1,449	918	502	330	241	203	51	10	3,704	3,685

(a) Year ended 30th June, 1954. (b) Includes one conviction for causing death by dangerous driving. (c) Includes 2 convictions for causing death by negligent driving.

2. **Convictions at Higher Courts, Years 1939 and 1949 to 1953.**—The number of convictions at higher courts and the rate per 10,000 of population for these years are given below.

## CONVICTIONS AT HIGHER COURTS.

State or Territory.	1939.	1949.	1950.	1951.	1952.	1953.
NUMBER.						
New South Wales(a) ..	982	1,352	1,299	1,388	1,629	1,449
Victoria .. ..	690	669	722	761	883	918
Queensland(a) .. ..	214	313	346	336	419	502
South Australia .. ..	179	205	207	307	328	330
Western Australia .. ..	71	110	149	141	213	241
Tasmania .. ..	39	109	148	163	171	203
Northern Territory(a) ..	11	39	44	44	26	51
Australian Capital Territory	14	23	49	33	16	10
Total .. ..	2,200	2,820	2,964	3,173	3,685	3,704
Rate per 10,000 of population	3.2	3.5	3.6	3.8	4.3	4.2

(a) Year ended 30th June following.

3. **Habitual Offenders**—In most States judges have power to declare as habitual criminals persons who have a certain scheduled number of previous convictions. A summary of the methods adopted in each State was given on pp. 497-8 of Official Year Book No. 40.

4. **Capital Punishment**.—There were fifteen executions in Australia during the period 1939 to 1953. One took place in New South Wales (in 1939), six in Victoria (two in 1939, one in 1942 and three in 1951), four in South Australia (one in 1944, one in 1946, one in 1950 and one in 1953), one in Western Australia (in 1952), one in Tasmania (in 1946), and two in the Northern Territory (in 1952).

Under the Criminal Code Amendment Act 1922 capital punishment was abolished in Queensland.

In the early days of the history of Australia the penalty of death was attached to a large number of offences, many of which at the present time would be dealt with in the lower or magistrates' court. With the growth of settlement and the general improvement in social and moral conditions, the list was, however, considerably curtailed, and the existing tendency is practically to restrict death sentences to cases of murder. It may be stated that in cases of rape, which is a capital offence in some of the Australian States, the penalty has been but sparingly inflicted in recent years. Juries are reputed to be loath to convict on this charge, owing to the uncertainty whether sentence of death will be carried out.

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; and from 1941 to 1950, 0.5.

## § 4. Civil Courts.

1. **Lower Courts**.—The total number of plaints entered and the amounts awarded to plaintiffs during the year 1953 are shown in the following table. The figures represent the returns from the Small Debts Courts in New South Wales, Courts of Petty Sessions in Victoria, Magistrates' Courts in Queensland, Local Courts of South Australia and Western Australia, Courts of Requests in Tasmania, Courts of Summary Jurisdiction in Northern Territory and Court of Petty Sessions in the Australian Capital Territory.

## CIVIL CASES AT LOWER COURTS, 1953.

Particulars.		N.S.W.	Vic.	Q'land. (a)	S. Aust.	W. Aust.	Tas.	N. T. (a)	A.C.T.	Total.
Cases ..	No.	48,827	59,388	5,969	25,196	19,643	17,504	830	543	177,900
Amount ..	£	288,932	598,315	222,174	350,788	187,777	126,079	20,071	4,869	1,799,005

(a) Year 1953-54.

2. **Higher Courts.**—The following table shows the transactions on the civil side in the Higher Courts during the year 1953. The particulars given below include the number and amount of judgments entered by default or confession, or agreement, and differ from those in issues of the Official Year Book prior to No. 29, which related in most States only to causes actually tried during the year.

The New South Wales returns refer to judgments in the District Courts only, and exclude 3,276 judgments signed in the Supreme Court.

## CIVIL CAUSES AT HIGHER COURTS, 1953.

Particulars.		N.S.W.	Vic.	Q'land. (a)	S. Aust.	W. Aust. (b)	Tas.	N.T. (a)	A.C.T.	Total.
Cases ..	No.	11,655	9,917	1,287	120	378	587	6	55	24,005
Amount ..	£	(c)	1,358,665	309,574	103,088	215,987	144,841	(c)	30,932	(c)

(a) Year 1953-54.

(b) Judgments signed and entered.

(c) Not available.

3. **Divorces and Judicial Separations.**—(i) *Number of Petitions and Divorces granted.* The following table shows the number of petitions for divorce, nullity of marriage and judicial separation filed in each State during 1954, and the number of divorce and nullity of marriage decrees made absolute and judicial separations granted during the year :—

## PETITIONS FOR DIVORCE, ETC., AND DIVORCES, ETC. GRANTED, 1954.

State or Territory.	Petitions for Divorce, Nullity of Marriage and Judicial Separation.			Decrees made Absolute for—		Judicial Separations Granted.
	By Husband.	By Wife.	Total.	Divorce.	Nullity of Marriage.	
New South Wales ..	1,765	2,335	4,100	2,816	28	7
Victoria ..	831	969	1,800	(a) 1,519	(a) 20	..
Queensland ..	362	352	714	710	4	..
South Australia ..	340	499	839	594	4	2
Western Australia ..	331	265	596	530	2	1
Tasmania ..	146	172	318	235	2	1
Northern Territory ..	14	10	24	20	..	..
Aust. Cap. Territory ..	11	30	41	33	..	..
Total ..	3,800	4,632	8,432	6,457	60	11

(a) Dissolution of marriage granted.

(ii) *Number of Divorces, etc., granted, Years 1939 and 1950 to 1954.* The number of divorces and judicial separations in each State and Territory for these years is shown in the following table. The figures refer, in the case of divorces, to decrees made absolute in each year and include decrees for nullity of marriage.

## DIVORCES AND JUDICIAL SEPARATIONS.

State or Territory.	1939.		1950.		1951.		1952.		1953.		1954.	
	Divorces.	Judicial Separations.	Divorces.	Judicial Separations.	Divorces.	Judicial Separations.	Divorces.	Judicial Separations.	Divorces.	Judicial Separations.	Divorces.	Judicial Separations.
N.S.Wales ..	1,545	8	3,450	6	3,328	4	3,362	7	3,746	6	2,844	7
Victoria(a) ..	801	4	1,602	2	1,729	1	1,613	3	2,127	1	1,539	..
Queensland ..	6224	..	791	1	707	1	711	..	730	..	714	..
S. Australia ..	243	..	664	2	641	1	584	1	636	2	598	2
W. Australia ..	244	..	724	..	683	..	585	..	539	..	532	1
Tasmania ..	80	..	152	..	194	..	217	..	210	..	237	1
Nor. Territory ..	(b) 2	..	6	..	13	..	6	..	12	..	20	..
Aust. Cap. Ter.	6	1	25	..	25	..	17	..	31	1	33	..
Total ..	3,145	13	7,414	11	7,320	7	7,095	11	8,031	10	6,517	11

(a) Dissolution of marriage granted.

(b) Year ended 30th June following.

(iii) *Average Annual Number of Divorces granted, Years 1871 to 1950.* The average annual number of divorces and judicial separations in Australia for each decennial period from 1871 to 1950 was as follows :—

## DIVORCES AND JUDICIAL SEPARATIONS : AUSTRALIA.

Year 1871-80.	1881-90.	1891-1900.	1901-10.	1911-20.	1921-30.	1931-40.	1941-50.
Average 29	70	358	399	744	1,699	2,521	6,192

(iv) *Grounds of Decree on which Divorce, etc., granted, Year 1954.* The grounds on which divorces, including nullity of marriage, were made absolute and judicial separations granted during 1954 in each State and Territory are shown in the following table :—

## DIVORCES AND JUDICIAL SEPARATIONS : GROUNDS ON WHICH GRANTED, 1954.

Grounds on which Decrees were Granted.	N.S.W.		Vic.(a)		Qld.		S.A.		W.A.		Tas.		N.T.		A.C.T.		Aust.	
	Divorces.	Judicial Separations.	Divorces.	Judicial Separations.	Divorces.	Judicial Separations.	Divorces.	Judicial Separations.	Divorces.	Judicial Separations.	Divorces.	Judicial Separations.	Divorces.	Judicial Separations.	Divorces.	Judicial Separations.	Divorces.	Judicial Separations.
Adultery ..	647	3	409	..	209	..	216	..	224	1	60	..	9	..	13	..	1,787	4
Adultery and Desertion ..	..	..	57	..	1	..	..	..	..	..	..	..	..	..	..	..	58	..
Bigamy ..	11	..	..	..	2	..	..	..	2	..	..	..	..	..	..	..	16	..
Cruelty ..	114	2	10	..	..	..	113	1	..	..	2	..	1	..	5	..	245	3
Cruelty and Drunkenness ..	109	..	16	..	..	..	..	..	..	..	..	..	..	..	1	..	126	..
Desertion ..	1,901	2	1,011	..	489	..	242	1	152	..	168	..	10	..	14	..	3,987	3
Drunkenness ..	35	..	4	..	..	..	6	..	3	..	5	..	..	..	..	..	53	..
Gaol for Crime ..	10	..	16	..	..	..	1	..	1	..	..	..	..	..	..	..	15	..
Impotency ..	16	..	..	..	4	..	4	..	3	..	..	..	..	..	..	..	40	..
Insanity ..	..	..	7	..	7	..	4	..	3	..	..	..	..	..	..	..	21	..
Maintenance ..	..	..	..	..	..	..	3	..	16	..	..	..	..	..	..	..	19	..
Non-Consummation ..	..	..	..	..	..	..	..	..	8	..	..	..	..	..	..	..	8	..
Separation for over 5 years ..	..	..	..	..	..	..	6	..	123	..	..	..	..	..	..	..	129	..
Other ..	1	..	3	..	2	..	3	..	..	..	2	..	1	..	..	..	11	1
Total ..	2,844	7	1,539	..	714	..	508	2	522	1	237	1	20	..	33	..	6,517	11

(a) Dissolution of marriage granted.

(v) *Ages of Husband and Wife at Time of Divorce.* The following table shows, in each age group at the time when the divorce decree was made absolute, the number of husbands and wives who were divorced during 1954.



## DIVORCES : AGES OF PARTIES AT TIME OF DIVORCE, AUSTRALIA, 1954.

(NOTE.—Excludes nullity of marriage.)

Ages of Husbands (Years).	Ages of Wives (Years).											Total Husbands
	Under 21.	21 to 24.	25 to 29.	30 to 34.	35 to 39.	40 to 44.	45 to 49.	50 to 54.	55 to 59.	60 and over.	Not stated.	
Under 21 ..	2	1	..	..	..	..	..	..	..	..	..	3
21 to 24 ..	26	105	21	1	1	..	..	..	..	..	..	154
25 to 29 ..	14	298	604	79	10	2	2	..	..	..	..	1,009
30 to 34 ..	1	85	564	599	102	21	7	..	..	..	1	1,350
35 to 39 ..	..	18	170	434	427	95	18	2	..	1	..	1,168
40 to 44 ..	..	3	47	164	374	329	61	5	3	..	1	990
45 to 49 ..	..	1	9	35	150	289	201	36	7	1	..	729
50 to 54 ..	..	2	3	19	45	108	153	116	24	7	..	477
55 to 59 ..	..	..	1	3	15	29	56	87	71	16	..	276
60 and over ..	..	..	..	..	5	14	15	43	89	..	..	212
Not stated ..	..	1	1	2	1	..	..	..	46	..	52	57
Total Wives ..	43	514	1,420	1,336	1,130	887	516	289	153	114	55	6,457

(vi) *Divorces Granted—Duration of Marriage and Issue of Persons Involved.* The following table shows the number of divorce decrees made absolute in 1954, 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 the issue involved. In respect of 42 per cent. of the divorces finalized in that year the marriages had been celebrated within the previous 10 years. Of the couples divorced, 35 per cent. had no children, 29 per cent. had one child, 21 per cent. had two children, 9 per cent. had three children and 6 per cent. had four or more children.

## DIVORCES : DURATION OF MARRIAGE AND ISSUE OF PARTIES, AUSTRALIA, 1954.

(NOTE.—Excludes nullity of marriage.)

Duration of Marriage (Years).	Number of Children.												Total Divorces made absolute.	Total children.
	0	1	2	3	4	5	6	7	8	9	10	Over 10		
Under 1 year ..	3	..	..	..	..	..	..	..	..	..	..	..	3	..
1 and under 2 ..	17	5	..	..	..	..	..	..	..	..	..	..	24	9
2 " " 3 ..	64	18	..	1	..	..	..	..	..	..	..	..	83	21
3 " " 4 ..	102	42	4	1	..	..	..	..	..	..	..	..	149	53
4 " " 5 ..	204	88	23	2	..	..	..	..	..	..	..	..	317	140
5 " " 6 ..	257	140	32	6	..	..	..	..	..	..	..	..	435	222
6 " " 7 ..	240	153	58	10	1	..	..	..	..	..	..	..	462	303
7 " " 8 ..	194	167	80	17	3	1	..	..	..	..	..	..	462	395
8 " " 9 ..	158	167	83	26	4	1	1	..	..	..	..	..	440	438
9 " " 10 ..	110	116	79	16	7	1	..	..	1	..	..	..	330	363
10 " " 11 ..	115	110	63	18	5	3	..	..	..	..	..	..	314	325
11 " " 12 ..	104	124	71	25	9	2	..	1	..	..	..	..	336	394
12 " " 13 ..	90	116	95	39	14	2	..	..	..	..	..	..	356	489
13 " " 14 ..	88	72	70	32	10	4	..	..	..	..	..	..	276	366
14 " " 15 ..	77	74	74	39	10	2	..	..	..	..	..	..	275	386
15 " " 16 ..	48	65	57	25	12	..	1	..	..	..	..	..	208	308
16 " " 17 ..	53	53	65	26	9	5	2	..	..	..	..	..	213	334
17 " " 18 ..	35	54	53	31	10	4	..	..	..	..	..	..	187	313
18 " " 19 ..	41	37	49	27	12	3	4	..	..	..	..	..	174	303
19 " " 20 ..	31	49	41	24	11	8	3	1	..	..	..	..	159	303
20 " " 21 ..	30	41	39	18	15	3	3	..	..	..	..	1	150	277
21 to 24 years ..	68	9	135	67	34	17	10	1	2	2	1	..	432	916
25 to 29 " ..	58	72	111	59	28	21	7	4	1	1	..	1	363	788
30 to 34 " ..	42	27	38	38	30	11	4	1	2	1	..	..	194	448
35 to 39 " ..	12	11	26	11	9	5	4	3	2	..	..	..	77	206
40 to 44 " ..	2	1	10	5	6	2	2	2	1	..	..	..	31	164
45 years and over ..	1	..	..	1	..	..	1	..	..	..	..	1	4	21
Not stated ..	1	..	1	..	..	..	..	1	..	..	..	..	3	0
Total Divorces ..	2,246	1,885	1,453	563	239	95	42	17	9	4	1	3	6,457	..
Total Children ..	..	1,885	2,706	1,680	956	475	252	119	72	36	10	30	..	12,219

(vii) *Number of Divorced Persons at Censuses 1901 to 1954.* The following table shows the number and proportions of divorced males and females in Australia at each Census from 1901 to 1954. A classification of these persons by age appeared in earlier issues of the

Official Year Book (see No. 39, page 269). Prior to 1911 no record was made of divorced persons in South Australia, so comparisons cannot be made to extend beyond that date.

### DIVORCED PERSONS AT CENSUS DATES : AGE DISTRIBUTION, AUSTRALIA.

Sex.	Number.						Proportion per 10,000, 15 years of age and over.					
	1901. (a)	1911.	1921.	1933.	1947.	1954.	1901. (a)	1911.	1921.	1933.	1947.	1954.
Males ..	1,234	2,368	4,233	10,298	25,052	32,389	10	15	23	42	89	100
Females ..	1,149	2,140	4,304	10,888	27,516	36,650	10	15	24	46	96	115

(a) Excludes South Australia.

4. **Bankruptcies.**—Particulars relating to bankruptcy in each State up to the end of 1927 were incorporated under this heading in issues of the Official Year Book prior to No. 23. Under the terms of the Bankruptcy Act 1924–1955 jurisdiction in bankruptcy and insolvency was taken over by the Commonwealth from 1st August, 1928. The Act made provision for the declaration of districts, and each State (except Queensland) and the Northern Territory have been declared bankruptcy districts. The bankruptcy district of New South Wales includes the Australian Capital Territory. Queensland has been divided into three districts corresponding to the three Supreme Court districts in that State. Operations under the Act for the year ended 31st July, 1954 are shown in the following table. For purposes of comparison, annual averages for the five-yearly period 1948–49 to 1952–53 are appended to the table.

### FEDERAL BANKRUPTCY ACT : OPERATIONS, 1953–54.

Particulars.	N.S.W.	Vic.	Qld.	S. Aust.	W. Aust.	Tas.	Nor. Terr.	Aus- tralia.
Sequestration Orders and Orders for Administration of Deceased Debtors' Estates	Number.. 282 Liabilities £ 730,793 Assets .. £ 487,011	124 338,308 101,950	127 370,218 293,232	65 133,306 79,126	52 120,815 83,087	37 69,694 35,424	..	687 1,763,134 1,079,830
Compositions without Bankruptcy Part XI.	Number.. 1 Liabilities £ 1,214 Assets .. £ 1,534	4 11,179 3,856	1 3,736 2,122	13 70,425 38,873	13 198,745 263,607	..	..	40 285,299 309,992
Deeds under Part XI.	Number.. .. Liabilities £ .. Assets .. £ ..	1 5,338 1,931	.. .. ..	3 18,619 17,123	1 10,491 5,399	..	..	5 34,448 24,453
Deeds of Arrangement, Part XII.	Number.. 47 Liabilities £ 489,346 Assets .. £ 479,911	46 242,265 178,117	17 63,165 46,452	1 7,634 12,500	.. .. ..	2 27,175 17,396	..	113 829,585 734,376
Total, 1953–54	Number.. 330 Liabilities £ 1,221,353 Assets .. £ 968,456	175 597,090 285,854	145 437,119 341,806	82 229,984 147,622	74 330,051 352,093	39 96,869 52,820	..	845 2,912,466 2,148,651

### FIVE YEARLY AVERAGE 1948–49 TO 1952–53.

Sequestration Orders and Orders for Administration of Deceased Debtors' Estates	Number.. 158 Liabilities £ 305,662 Assets .. £ 189,363	71 131,437 58,581	61 174,206 106,914	41 86,719 55,402	26 70,374 45,718	22 23,822 11,357	..	392 793,416 469,623
Compositions without Bankruptcy Part XI.	Number.. 1 Liabilities £ 2,426 Assets .. £ 342	2 22,669 12,571	1 1,666 1,683	13 47,797 44,172	15 67,557 63,761	..	..	32 142,725 123,550
Deeds under Part XI.	Number.. .. Liabilities £ .. Assets .. £ ..	1 3,214 4,077	.. .. ..	5 38,021 28,006	3 12,752 11,947	..	..	9 53,987 44,030
Deeds of Arrangement, Part XII.	Number.. 25 Liabilities £ 185,120 Assets .. £ 170,537	21 129,104 98,668	10 53,387 47,137	.. .. ..	.. 395 203	1 2,970 2,005	..	57 370,976 318,550
Total ..	Number.. 184 Liabilities £ 493,208 Assets .. £ 360,242	102 286,420 173,897	78 229,257 155,734	59 172,537 127,586	44 151,078 121,629	23 26,792 13,362	..	490 1,361,104 955,753

It is pointed out that the procedure in certain States has been influenced largely by the procedure in force prior to the passing of the Commonwealth Act, and that therefore, no particular significance attaches to the large number of compositions, etc., in South Australia and Western Australia.

The Bankruptcy Act 1930 created a Federal Court of Bankruptcy and provided for the appointment of a Judge or two Judges thereto. In 1930 a Commonwealth Judge in Bankruptcy was appointed, in addition to the State Judges, to deal with bankruptcy work in New South Wales and Victoria, as the Courts in these States were unable to cope with the business. All the bankruptcy cases in these States are now heard in the Federal Court which sits in Sydney and Melbourne alternately.

5. **High Court of Australia.**—Under the provisions of Section 71 of the Commonwealth Constitution, the judicial power of the Commonwealth is vested in a Supreme Court called the High Court of Australia, and in such other courts as the Parliament creates or invests with federal jurisdiction. The High Court of Australia possesses both original and appellate jurisdiction. The powers of the Court are defined in the Commonwealth Constitution, and in the Judiciary Act 1903-1955. The Court consists of a Chief Justice and six other judges. Sittings of the Court are held in the capitals of the various States as occasion may require. The High Court functions as a Court of Appeal for Australia. The following statement shows the transactions of the High Court for 1953 and 1954.

#### TRANSACTIONS OF THE HIGH COURT OF AUSTRALIA.

Original Jurisdiction.	1953.	1954.	Appellate Jurisdiction.	1953.	1954.
Number of writs issued	173	250	Number of appeals set down for hearing ..	124	131
Number of causes entered for trial ..	48	51	Number allowed ..	35	46
Judgments for plaintiffs	67	56	Number dismissed ..	64	60
Judgments for defendants	16	10	Otherwise disposed of	18	34
Otherwise disposed of ..	10	18			
Amount of judgments	£1,006,978	£68,019			

During 1953 and 1954 respectively the High Court dealt also with the following : Appeals from Assessments under Taxation Assessment Act, 68, 49 ; Special cases stated for the opinion of the Full Court, 13, 8 ; Applications for Prohibitions, etc., 47, 28. The fees collected amounted to £8,633 in 1953 and £3,202 in 1954.

6. **Commonwealth Court of Conciliation and Arbitration.**—Information regarding this Court, which was established under the Conciliation and Arbitration Act 1904-1955, will be found in Chapter VI.—Labour, Wages and Prices, of this volume and in the *Labour Report* issued by this Bureau.

### § 5. Police and Prisons.

1. **General.**—Early issues of the Official Year Book (*see* No. 4, p. 918) contain a *résumé* of the evolution of the police force in Australia up to the passing of the Police Act 1862 (25 Vic. No. 16) in New South Wales.

2. **Duties of the Police.**—In addition to the ordinary employment attaching to their office, the police are called upon to perform many duties which in other countries are carried out by other officials. Much of the time of the several forces is taken up in extraneous duties not connected with the protection of life and property, while the cash value of the services rendered to other Government departments is considerable.

3. **Strength of Police Force.**—The strength of the police force including probationers, cadets, special constables and women police, in each State and Territory at the end of 1939 and the years 1949 to 1953 is shown in the following table.

The police forces (with the exception of the small body of Commonwealth police maintained in the Northern Territory and in the Australian Capital Territory) are entirely under State control, but, by arrangement, the Commonwealth Government utilizes their services in various directions, such as acting as aliens registration officers, and policing the various regulations, etc.

#### STRENGTH OF POLICE FORCES.

State or Territory.	Area of State in Sq. Miles.	No. of Police.					
		1939.	1949.	1950.	1951.	1952.	1953.
New South Wales	309,433	3,907	4,382	4,449	4,527	4,688	4,661
Victoria..	87,884	2,333	2,597	2,751	2,879	2,992	3,047
Queensland(a) ..	670,500	1,460	2,040	2,220	2,455	2,449	2,403
S. Australia(a) ..	380,070	905	996	972	1,055	1,091	1,107
W. Australia(a) ..	975,920	600	759	787	877	929	936
Tasmania(a) ..	26,215	296	363	392	420	418	438
Nor. Territory(a) ..	523,620	48	58	61	48	50	56
Aust. Cap. Terr. ..	939	17	43	45	57	58	57
Total ..	2,974,581	9,566	11,238	11,677	12,318	12,675	12,705
Population to each Police Officer ..	..	733	720	715	695	692	703

(a) 30th June of year following.

The figures for New South Wales for 1953 exclude 7 black trackers and cadet trackers (i.e., natives employed in detection of offenders chiefly in outlying districts) and 4 matrons, while the Victorian returns exclude one black tracker. For Queensland the figures exclude 24 black trackers, for South Australia 4 wardresses, for Western Australia 18 black trackers and 6 female searchers, and for the Northern Territory 28 black trackers. Women police are employed in all the States, the respective numbers for 1953 included in the table above being :—New South Wales 36, Victoria 28, Queensland 9, South Australia 20, Western Australia 9, Tasmania 5 and Australian Capital Territory 2. Their work is mainly preventive, relating particularly to females and neglected children. They also carry out escort duties in respect of female prisoners.

4. Prison Accommodation and Prisoners, 1953.—The table below shows the number of prisons in each State, the accommodation therein, and the number of prisoners under sentence at the end of 1953 :—

#### PRISON ACCOMMODATION AND PRISONERS, 1953.

Particulars.	N.S.W. (a)	Vic.	Qld. (a)	S. Aust.	W. Aust. (a)	Tas. (a)	N.T. (a)	Total.
No. of Prisons ..	15	10	7	16	19	2	2	71
Accommodation in—								
Separate cells ..	2,295	1,263	597	681	669	154	31	5,690
Wards ..	..	347	239	203	207	1	28	1,025
Prisoners at end of year ..	2,155	1,173	617	401	360	152	47	4,905

(a) Year ended 30th June following.

The figures refer to prisoners under sentence and exclude aborigines and debtors. There are no gaols in the Australian Capital Territory, but there is a lock-up consisting of five cells attached to the police station at Canberra, and a similar lock-up at Jervis Bay, where offenders are held while awaiting trial or serving short sentences not exceeding one week imposed by the Magistrate's Court.

5. Prisoners in Gaol, 1939 and 1949 to 1953.—The number of prisoners in gaol at 31st December in each of the years 1939 and 1949 to 1953 and the proportion per 10,000 of the population are shown in the following table. The figures refer to prisoners under sentence and exclude aborigines and debtors.

## PRISONERS IN GAOL.

State or Territory.	1939.	1949.	1950.	1951.	1952.	1953.
NUMBER.						
New South Wales(a)	1,355	1,853	1,885	2,070	2,135	2,155
Victoria ..	1,144	993	981	1,048	1,248	1,173
Queensland ..	261	(a) 406	(a) 454	(a) 472	(a) 538	(a) 617
South Australia ..	199	234	261	316	437	401
Western Australia(a)	244	333	342	362	374	360
Tasmania(a) ..	108	122	114	142	154	152
Northern Territory ..	23	(a) 41	(a) 52	(a) 34	(a) 44	(a) 47
Total ..	3,334	3,982	4,089	4,444	4,930	4,905
Per 10,000 of population ..	4.8	4.9	4.9	5.2	5.6	5.5

(a) 30th June of year following.

In recent years the proportion of prisoners in gaol to the total population has remained about 5 per 10,000. This figure compares very favorably with that obtaining in 1891, when the proportion was a high as 16 per 10,000.

## § 6. Cost of Administration of Justice.

1. Expenditure by the States.—The table below shows the expenditure from Consolidated Revenue during 1953-54 in connexion with the administration of justice in each of the States.

Net costs are shown instead of gross expenditure as it is difficult to obtain comparable figures of the total costs of the various services under this heading. It will be noted that in South Australia the receipts for legal fees and registrations exceed the actual expenditure under "Justice".

## NET EXPENDITURE ON ADMINISTRATION OF JUSTICE, 1953-54.

State.	Net Expenditure.			Per Head of Population.		
	Justice.	Police.	Prisons.	Justice.	Police.	Prisons.
	£	£	£	s. d.	s. d.	s. d.
New South Wales ..	928,903	5,066,266 <sup>7</sup> / <sub>8</sub>	832,467	5 6	29 10	4 11
Victoria ..	531,319	3,603,610	443,273	4 4	29 9	3 8
Queensland ..	192,128	2,657,407 <sup>5</sup> / <sub>8</sub>	181,844	3 0	40 11	2 10
South Australia ..	— 3,846	1,254,112	169,928	— 0 1	31 11	4 4
Western Australia ..	34,068	1,159,918	151,165	1 1	36 10	4 9
Tasmania ..	125,613	502,374	73,998	8 2	32 5	4 9
Total ..	1,808,185	14,243,687	1,852,675	4 2	32 2	4 2
1952-53 ..	1,890,836	13,478,847	1,723,190	4 4	31 0	4 0
1951-52 ..	1,599,109	12,011,760	1,560,028	3 9	28 4	3 8
1950-51 ..	979,263	9,361,578	1,177,452	2 5	22 7	2 10
1938-39 ..	315,881	3,499,202	417,679	0 11	10 1	1 2

2. **Commonwealth Expenditure.**—The expenditure shown in the previous table is that incurred by the State Governments only, and does not include expenditure of the Commonwealth Attorney-General's Department which is shown hereunder for the years 1938-39 and 1949-50 to 1953-54.

**EXPENDITURE OF THE COMMONWEALTH ATTORNEY-GENERAL'S DEPARTMENT.**

(£.)

Year.					Gross Expenditure.	Receipts.	Net Expenditure.
1938-39	..	..	..	..	281,497	111,036	170,461
1949-50	..	..	..	..	820,560	183,398	637,162
1950-51	..	..	..	..	1,096,274	204,362	891,912
1951-52	..	..	..	..	1,348,721	238,676	1,110,045
1952-53	..	..	..	..	1,438,139	286,746	1,151,393
1953-54	..	..	..	..	1,549,991	321,683	1,228,308

The expenditure for each year includes that in connexion with patents and copyright which amounted in 1953-54 to £381,122. The Commonwealth took over jurisdiction in bankruptcy in August, 1928, and the expenditure thereon in 1953-54 amounted to £112,788. Revenue of the Attorney-General's Department for the year 1953-54 amounted to £321,683, comprising £186,684 for patents, copyright, trade marks and designs, £48,856 for bankruptcy and £86,143 miscellaneous, including fees and fines.

In addition to the foregoing, during 1953-54, £108,726 was expended in the Northern Territory for the upkeep of the police force and prison services.

Expenditure in connexion with the Australian Capital Territory police in 1953-54 amounted to £86,413.

## CHAPTER XIV.

### PUBLIC HEALTH AND RELATED INSTITUTIONS.

#### A. PUBLIC HEALTH.

##### § 1. State 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 for administrative purposes.

There is also a Director-General of Public Health and Chief Medical Adviser to the Government, who is *ex-officio* President of the Board of Health and Chairman of the Nurses' Registration Board. He is assisted by a Deputy Director-General.

The Inspector-General of Mental Hospitals is responsible for the administration of that part of the Lunacy Act relating to the care and treatment of mental patients. There is also a Deputy Inspector-General.

The following statutory authorities are constituted under Acts administered by the Minister for Health:—Board of Health (Public Health Act), Hospitals Commission of N.S.W. (Public Hospitals Act), Milk Board (Milk Act), Dental Board (Dentists Act), Pharmacy Board (Pharmacy Act), Medical Board (Medical Practitioners Act), Board of Optometrical Registration (Opticians Act), N.S.W. State Cancer Council (N.S.W. State Cancer Council Act), Ambulance Transport Service Board (Ambulance Transport Service Act), Physiotherapists Registration Board (Physiotherapists Registration Act) and Nurses Registration Board (Nurses Registration Act).

The Department's activities extend over the whole of the State and embrace all matters relating to public health and the greater part of the general medical work of the Government. These include the following:—(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, Noxious Trades Act and Pure Food Act; (b) Scientific Divisions (Government Analyst, Microbiological Laboratory, and Division of Industrial Hygiene); (c) Tuberculosis and Social Hygiene Divisions; (d) Medical Officers of Health at Sydney, Broken Hill, Newcastle, Wollongong, Bathurst and Lismore; (e) State Hospitals and Homes and State Sanatoria; (f) Mental Hospitals; (g) Public Hospitals (Hospitals Commission); (h) Maternal and Baby Welfare (Baby Health Centres); (i) School Medical and Dental Services; and (j) Publicity, Nutrition and Library Services.

2. **Victoria.**—The Ministry of Health Act 1943 created the position of Minister of Health and made the Minister holding that position responsible for all Acts formerly administered by the Minister of Public Health as well as all other legislation, including the Mental Hygiene Acts and the Hospitals and Charities Acts, which related to the health and well being of the people of the State.

The original Department of Public Health became the General Health Branch of the Department of Health controlled by a Chief Health Officer. Subsequently various functions were taken from that Branch to form the Maternal and Child Hygiene Branch and the Tuberculosis Branch. With the Mental Hygiene Branch these three make up the four branches of the Department.

At the end of 1951, an Authority was established under the Mental Hygiene Authority Act 1950 to take charge of the Mental Hygiene Branch. The Authority consists of three members of whom one, an expert in psychiatry, is Chairman. Although the Authority is Head of the Branch, detailed administration can be carried out by its officers leaving the Authority free to deal with major problems relating to the improvement of

treatment and accommodation for the mentally ill. The efforts of the Authority at the present time are principally concerned with improving existing hospitals and providing additional accommodation made necessary by the increase in population in the State and with developing preventive out-patient psychiatric services designed to reduce the need for in-patient beds.

The General Health Branch, in collaboration with local government health authorities, is actively carrying on its fight against infectious diseases. The success of this campaign may be illustrated by the following figures concerning diphtheria, 3,254 cases with 93 deaths in 1927 and only 107 cases with 4 deaths in 1954.

New legislation, the Infectious Diseases Hospitals Act 1954, was introduced late in 1954. This Act repealed all previous legislation relating to infectious diseases hospitals and made the State Government, through the Hospitals and Charities Commission, responsible from 1st October, 1954 for the whole of the cost of treating cases of infectious disease.

Work in regard to the treatment and prevention of venereal disease and improvements in methods of treatment have resulted in a very marked advance. It is now no longer necessary to maintain a special hospital unit in this State for the treatment of cases of venereal disease. Special clinics for prophylaxis and treatment are attached to several public hospitals in the State and treatment may be obtained at all public hospitals.

The Poliomyelitis Division which has been operating since 1949 provides a consultant diagnostic service and maintains an aftercare treatment service for the whole of the State. Three medical officers and a number of visiting physiotherapists and nurses provide such treatment for a great number of patients mainly in their own homes.

The Industrial Hygiene Division staffed by medical and scientific officers with a number of specially trained inspectors supervises the working conditions of the 325,000 persons employed in industry in this State.

The Tuberculosis Branch under the control of a Director of Tuberculosis carries on work aimed at preventing as far as possible the spread of tuberculosis. Using improved diagnostic facilities and better methods of treatment, it has been possible to reduce greatly the incidence of this disease. No longer is there a waiting list for entry into a sanatorium, in fact, the closure of one of the State sanatoria at an early date is contemplated.

The Maternal and Child Hygiene Branch has been largely responsible for the reduction of Victoria's infant mortality rate to a point where it is now probably the lowest in the English-speaking world. This Branch is also concerned with pre-natal hygiene, the development of pre-school services generally and the school medical and dental services.

The Cancer Institute, set up in 1949, under the provisions of the Cancer Institute Act 1948, is now operating a very active out-patients treatment centre as well as a small in-patient unit. Facilities provided at the Institute for radiation therapy are being extended by installing a 4 m.e.v. linear accelerator. It will be the first of this type of machine to operate in Australia.

Legislation which is the concern of the Minister of Health includes the following :—Anti-Cancer Council Act, Births Notification Acts, Cancer Institute Act, Cemeteries Acts, Dietitians Registration Act, Part V. of the Goods Act, Hairdressers Registration Acts, Health Acts, Hospitals and Charities Acts, Infectious Diseases Hospitals Act, Masseurs Acts, Medical Acts, Mental Deficiency Act, Mental Hygiene Acts, Midwives Act, Nurses Acts, Opticians Registration Act, Poisons Acts and Venereal Diseases Act.

3. *Queensland.*—(i) *General.* The Health Acts 1937 to 1949 are administered by the Director-General of Health and Medical Services subject to the Minister for Health and Home Affairs. 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 environmental sanitation, food and drug control, enthetic (venereal) diseases, hookworm control and Hansen's disease control. Qualified full-time officers are in charge of each



section. Free treatment of venereal diseases is offered at the Department's male and female clinics in Brisbane, and at any public hospital. Two institutions (one at Peel Island in Moreton Bay for white patients and one at Fantome Island near Townsville for aboriginal patients) are maintained for the treatment of Hansen's disease. Modern therapy with sulphone drugs has caused a dramatic decline in numbers of patients at these institutions. Free immunization against diphtheria, whooping cough and tetanus is offered by most of the Local Authorities. A recent survey showed that 94 per cent. of school children in the Greater Brisbane area and 90 per cent. in the rest of the State had been immunized against diphtheria.

(b) *Division of Tuberculosis.* The Director, assisted by medical officers and nurses, exercises control of patients with tuberculosis. A central chest clinic in Brisbane offers Mantoux tests, X-ray examinations, and inoculations of Mantoux negative reactors free of charge and this service is extensively used. A mobile X-ray unit visits country districts. Children in the final grade of primary schools are now being Mantoux tested and given B.C.G. vaccine.

(c) *Division of Industrial Medicine.* This Division exercises supervision over the health of workers in both primary and secondary industries, including control of leptospirosis (Weil's disease) scrub typhus and other fevers of occupational origin in the sugar-cane growing districts north of Ingham.

(d) *Division of Maternal and Child Welfare.* The Director, assisted by full-time and part-time health officers and a staff of qualified nurses, offers supervision and advice on the rearing and health of infants and pre-school children at 217 baby health 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 medical officers, dentists and visiting school nurses. Every child has a medical examination at least once in three years.

(f) *Division of Mental Hygiene.* The Director is responsible for the care and treatment of mentally sick patients in the State's four mental hospitals, at Brisbane, Toowoomba, Ipswich and Charters Towers.

(g) *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 country hospitals and private medical practitioners.

(ii) *Hospitals.* All public hospitals operate under the district system, which provides for the constitution of Hospitals Districts and Hospitals Regions and a Hospitals Board for each district. The State is divided into 11 Hospitals Regions with a base hospital for each region which comprises a number of Hospitals Districts. The purpose of the regional scheme is to co-ordinate the public hospitals in the region with the base hospital. The administration of the hospitals services, including public dental services, in each Hospitals District is vested in the Hospitals Board which comprises not less than four members nor more than eight members appointed by the Governor-in-Council and one member elected by the component Local Authorities. There are 54 Hospitals Boards controlling 130 public hospitals.

4. *South Australia.*—The Department of Public Health embraces the activities of the Central Board of Health, the School Medical Services, and the public health aspect of the control of tuberculosis, including the State X-ray Health Survey, under the control of the Director of Tuberculosis.

The Central Board of Health consists of five members, three of whom (including the chairman) are appointed by the Governor while one each is elected by metropolitan local boards and all other local boards. The Central Board of Health administers the Health, Food and Drugs, Dangerous Drugs, Noxious Trades, Bakehouses Registrations and Early Notification of Birth Acts. 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, 1935-1954 constitutes every municipal council and every district council a local board of health for its municipality or district. There are 143 of these 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.

The medical staff of the Department includes the Director of Tuberculosis, a Senior Medical Officer and the Principal Medical Officer for Schools, six full-time medical officers, one temporary medical officer and seven part-time medical officers. Two dentists, one dental assistant and seven nurses are engaged in connexion with the School Medical Services. There are seven full-time and fourteen part-time inspectors directly responsible to the Board. There is also a nurse inspector employed to advise and assist local boards in connexion with infectious diseases. A consulting radiologist, three radiographers and three nurses are engaged in the State X-ray Health Survey and one nurse in B.C.G. vaccination. The inspectors appointed under the Health and Food and Drugs Acts periodically visit the local districts and see, generally, that the local boards are performing their duties.

5. *Western Australia.*—The legislation in this State is the Health Act 1911-1954. This was consolidated and reprinted in 1948 and amended in 1950, 1952 and 1954. The Central Authority is the Department of Public Health, controlled by a Commissioner, who must be a qualified medical practitioner. The State is covered by Local Authorities which are constituted as Municipalities or Road Boards.

It is provided that a Local Board of Health may be set up in lieu of a Road Board, but this method of control is no longer used. In any emergency the Commissioner may exercise all the powers of a Local Health Authority in any part of the State.

Interesting features of recent legislation are as follows:—(a) Act No. 70 of 1948 gave compulsory power to control sufferers from tuberculosis and established a Tuberculosis Control Branch; (b) Act No. 11 of 1952 gave wide powers to regulate the sale and use of pesticides; (c) Act No. 34 of 1954 provides for the licensing of manufacturers of therapeutic substances. The Act has not yet been proclaimed; and (d) Act No. 45 of 1954 requires every medical practitioner who attends a child which dies within 28 days of birth to notify the Commissioner.

6. *Tasmania.*—The Department of Public Health is under the jurisdiction of the Minister for Health, and the administration of the various services is controlled by the permanent head of the Department, the Director-General of Medical Services, who is also responsible for the administration of the Hospital and Medical section. Associated with the permanent head are the Director of Public Health, the Director of Tuberculosis, and the Director of Mental Hygiene.

The Hospital and Medical Services section is responsible for administration of the laws relating to hospitals and nurses' registration, and the following services: Government Medical Service, Cancer Clinics, Bush Nursing Service, and Institutions for the Aged and Infirm at St. John's Park and Cosgrove Park.

Public Health functions comprise administration of laws relating to public health, food and drugs, places of public entertainment, cremation, and the following services: School Medical and Dental, Maternal and Child Welfare, Infectious and Venereal Disease control, Analytical Laboratory, and Mothercraft Home.

The Tuberculosis section is responsible for administration of the laws relating to tuberculosis, for conducting a continuous State wide X-ray survey and for the management of chest clinics in four centres in the State and of the chest hospitals at New Town and Evandale.

The Mental Hygiene section is responsible for administration of the laws relating to mental hospitals and mental defectives, and for the management of Lachlan Park Hospital (Mental Hospital) and Millbrook Psychopathic Home.

## § 2. The Commonwealth Department of Health.

1. **General.**—The Commonwealth Department of Health was created by an Order-in-Council of 3rd March, 1921. This Order specified the functions to be performed by the Department in addition to Quarantine. 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.

As part of the National Health Service the following benefits and services are provided under the National Health Act 1953: a free general practitioner medical service to pensioners and their dependants, and pharmaceutical, hospital and medical benefits to the community generally.

Assistance to sufferers from tuberculosis is provided under the Tuberculosis Act 1948 and free milk for school children under the States Grants (Milk for School Children) Act 1950. Details of these services are provided in the following paragraphs.

The functions of the Department, apart from the National Health Service, are very widespread. They include Quarantine (Human, Animal and Plant), the fostering of medical research through the National Health and Medical Research Council, the provision of hospital and medical services in the Northern Territory, the manufacture of a large number of sera and pharmaceuticals by the Commonwealth Serum Laboratories, and the maintaining of fourteen Health Laboratories throughout Australia to provide X-ray, pathological and other services to the surrounding communities. A short description of these and other activities is provided below. (For additional information see Official Year Book No. 40, p. 515.)

2. **The National Health Service.**—(i) *Pharmaceutical Benefits.* Since September, 1950, under the provisions of the Pharmaceutical Benefits Act 1947–1952 and the National Health Act 1953, certain life-saving and disease-preventing drugs have been provided free of charge to the general community. Such drugs are supplied free if they have been duly prescribed by a medical practitioner registered within Australia.

The number of drugs listed as available as general pharmaceutical benefits has steadily increased and at present 251 separate preparations are supplied. Before a drug is listed as being available it must first be approved by the Pharmaceutical Benefits Advisory Committee, a body appointed by the Minister for Health.

All drugs listed in the British Pharmacopœia and other drugs as specified, are supplied free to eligible pensioners (i.e., those receiving age, invalid, widows' and service pensions and persons receiving a tuberculosis allowance) and their dependants.

Total expenditure on pharmaceutical benefits in the year 1954–55 was £10,739,467.

(ii) *Hospital Benefits.* The payment of hospital benefits to the States is authorized under Part V. of the National Health Act 1953. This Act continues the agreements entered into with the various States under the Hospital Benefits Act 1951. Under these agreements the Commonwealth pays the States certain sums of money which vary according to the number of occupied beds in public hospitals.

The rates of payment for occupied beds in public hospitals are determined by the category into which patients are grouped. Payment of 12s. per day is made for a patient who is a pensioner or a dependant of a pensioner. The rate of 8s. per day is paid for all other qualified patients.

A payment of 8s. per day is made also for patients in approved private hospitals. This payment is made to the proprietor of the private hospital.

An additional benefit of 4s. per day is paid in the case of patients who are members of an approved hospital benefit fund. This payment is made through the benefit organization and is normally paid to the patient with the amount payable by the organization.

Australian residents who are temporarily living overseas and their dependants who receive hospital treatment are eligible to receive the benefit of 8s. a day.

Total payments made for all types of hospital benefits (excluding patients in mental hospitals) in 1954–55 were £9,320,603.

(iii) *Medical Benefits.* A Medical Benefits scheme commenced to operate as from July, 1953, being authorized under the National Health (Medical Benefits) Regulations. These regulations were superseded by the National Health Act 1953. The basic principle of the scheme is the support of voluntary insurance against the costs of medical attention. The scheme provides for the payment of benefits by the Commonwealth, through medical insurance organizations that have been registered for the purpose. The Commonwealth benefits supplement the benefits paid by the registered organizations in respect of medical expenses incurred by members of those organizations and their dependants.

In 1954-55 Commonwealth expenditure on medical benefits was £4,209,495.

(iv) *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 Service Act 1948-1949. The service has been continued under the provisions of the National Health Act 1953.

Under this scheme pensioners and their dependants, as defined in the section above describing pharmaceutical benefits, are provided with a free general practitioner service. Specialist services are not provided. A small fee may be charged by practitioners who attend qualified patients outside normal surgery or visiting hours. Practitioners in the scheme are remunerated on a fee-for-service basis by the Commonwealth.

At the 30th June, 1955 there were 4,567 medical practitioners enrolled in the Pensioner Medical Service to provide medical services to approximately 640,200 eligible persons. More than 97 per cent. of eligible persons have now been enrolled in the scheme and more than 80 per cent. of general practitioners are participating.

In the year ended 30th June, 1955 medical practitioners in the scheme made 4,721,481 visits or surgery consultations to persons enrolled in the scheme. For these services they were paid a sum of £2,516,077. The average number of medical services rendered by practitioners to enrolled persons in this period was 7.5.

(v) *Tuberculosis Act.* The main provisions of this Act, which was assented to on 25th November, 1948, are as follows :—(a) Section 5, which authorizes the Commonwealth to enter into an arrangement with the States for an effectual national campaign against tuberculosis ; (b) Section 6, which empowers the Commonwealth to take over or provide specified facilities for the diagnosis, treatment and control of tuberculosis ; (c) Section 8, which 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, which authorizes the Commonwealth to pay allowances to sufferers from tuberculosis and their dependants to enable sufferers to give up work and undergo treatment, and thus minimize the spread of infection.

The Commonwealth has completed an arrangement with each State, whereby each State is required to conduct an effectual campaign against tuberculosis and to provide adequate facilities for that purpose. In consideration of this, the Commonwealth undertakes to reimburse the State for all approved capital expenditure in relation to tuberculosis on and after 1st July, 1948, and for net maintenance expenditure to the extent that it is in excess of net maintenance expenditure for the base year 1947-48. Thus, the States are required to carry out the actual physical or field work of the national campaign with the Commonwealth acting 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 and has already held seven meetings. There are eleven members under the chairmanship of the Commonwealth Director-General of Health. The 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 the Chief Administrative Officer of the Commonwealth Department of Health.

A system of tuberculosis allowances has been drawn up and is an important factor in the campaign against the disease. Payments under the scheme were commenced on 13th July, 1950. The rates of allowance from 27th October, 1955 were £9 12s. 6d. a week for a married sufferer with a dependent wife, £6 2s. 6d. a week for a sufferer without dependants (reducible to £4. when maintained free of charge in an institution), and 10s. a week for each dependent child under the age of sixteen (which is additional to child endowment). There is a means test, generous to the sufferer, which has regard only to income and not to property.

(vi) *Free Milk for School Children Scheme.* In 1950 the States Grants (Milk for School Children) Act was passed. The object of this Act was to improve 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 public or private primary schools, including nursery schools, kindergartens, crèches and aboriginal missions, are eligible to receive this issue. Wherever practicable the milk is given to the children in one-third of a pint bottles. The cost of the milk plus half the capital or incidental costs, including administrative expenses incurred in administering the scheme is reimbursed by the Commonwealth to the States. All States are now participants in the scheme, and at 30th June, 1955 approximately one million children were receiving free milk.

In the years 1953-54 and 1954-55 the following amounts were reimbursed to the various States and Territories:—1953-54, New South Wales £881,600, Victoria £429,000, Queensland £204,600, South Australia £156,000, Western Australia £107,138, Tasmania £219,580, Northern Territory £552, Australian Capital Territory £6,891, Total £2,005,361. 1954-55, New South Wales £980,589, Victoria £498,000, Queensland £323,349, South Australia £156,000, Western Australia £127,015, Tasmania £145,695, Northern Territory £921, Australian Capital Territory £10,760, Total £2,242,320.

3. *Other Activities of the Commonwealth Department of Health.*—(i) *Human Quarantine.* All passengers and crews arriving in Australia from overseas, either by air or sea are subjected to a medical inspection by quarantine officers 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 use is made of local medical practitioners acting as part-time quarantine officers. In each State quarantine activities are controlled by a medical officer of the Commonwealth Department of Health with the title of Commonwealth Director of Health.

The main concern of the examining officers is to detect cases of quarantinable diseases smallpox, cholera, yellow fever, plague and typhus fever. These are not endemic in Australia and it becomes a matter of extreme moment to prevent their entry. In addition, infectious diseases such as chicken pox, mumps, scarlet fever and measles discovered on vessels are directed to appropriate care and placed in isolation where necessary.

For the quarantinable diseases quarantine stations are provided at the major ports and at Darwin, Thursday Island and Townsville. These are kept ready for occupation at all times and in them a case is kept until it is no longer a danger to the community.

The increasing use of air travel has created particular quarantine problems. Before the use of air transport Australia was some ten days travelling time from the nearest overseas port, e.g. Colombo. Persons suffering from an infectious or quarantinable disease would show the rash or other signs on arrival and before disembarkation. Passengers travelling by air, however, can arrive well within the incubation period, even from as far as England, which is only four days away by air.

It is for this reason that all intending passengers are required to be vaccinated against smallpox before departure and those from an area infected with cholera or yellow fever are in addition required to be inoculated against the particular disease. Passengers arriving by air are required to report any sickness which they might suffer within the fourteen days after arrival. All passengers 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.

It will be seen that the security given to Australia for many years by its isolated geographic position is no longer complete and increasing reliance needs to be placed on a vigilant and flexible quarantine organization.

(ii) *Animal Quarantine.* Animal quarantine is authorized by the provisions of the Quarantine Act 1908-1950 and has as its objective the prevention of the introduction or spread of diseases of animals. This legislation covers the importation of all animals, raw animal products, biological cultures, etc., associated with animal diseases and goods associated with animals.

Domesticated animals, i.e., horses, cattle, pigs, sheep, goats, 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 somewhat similar manner, animals for scientific purposes are imported to approved laboratories. All of these premises are kept under constant surveillance. Raw animal products such as hair, special types of wool, skins, hides, etc., are subjected to special treatment under quarantine control, whilst 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, ship's refuse, etc., are appropriately treated to destroy possible infection.

The Division of Veterinary Hygiene was created in 1926 to deal with the administration of animal quarantine: formerly the full responsibility for this administration fell on the Director of Quarantine. The organization of the Division provides an excellent example of Commonwealth and State co-operation. The Central Administration is situated within the Health Department at Canberra, with a Director, an Assistant Director and Veterinary Officers. By provision in the Quarantine Act and by arrangement with the States, the Principal Veterinary Officer of the Department of Agriculture in each State is appointed Chief Quarantine Officer (Animals) of the State and members of his staff Quarantine Officers (Animals). These State officers, acting in their Commonwealth capacity, carry out the quarantine policy formulated by the Central Administration. Quarantine accommodation is provided at 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, straw, etc., being the subject of combined control.

In each alternate year the Director of the Division convenes the Biennial Conference of Principal Commonwealth and State Veterinarians which meets under the aegis of the Australian Agricultural Council. At this Conference problems of animal health and disease control are discussed from a national point of view and consideration is given to Animal Quarantine matters. A report is made to the Agricultural Council.

In the Australian Capital Territory the control of animal disease, dairy and piggyery hygiene, advice to stockowners and management of the Canberra abattoir are carried out by veterinary officers of the Division.

(iii) *Plant Quarantine.* Since 1st July, 1906, 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 1908-1950 general powers are held by which the quarantine inspectors are required to examine all plant material at the first port of entry and to release only such material as is 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 deliberately 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 the treatment be impracticable, may be destroyed. Such treatments are paid for by the importer. Air transport has created many new problems in maintaining effective control. It is impossible in this summary to give details of regulations governing the different types of plants, but the following will indicate certain broad principles in them:—(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; (c) Many commodities such as hops, cotton, peanuts in shell, nursery stock, potatoes, certain crop seeds, vines and specified plants may only be imported by approved importers under special conditions; (d) Certain plant products such as bulbs and timber (in logs or sawn), from specified areas may only be imported if accompanied by certificates showing that prescribed treatment has been given in the country of origin.

The regulations are constantly being amended in the light of experience, with the object of maintaining for Australia the freedom from a large number of serious diseases and pests of plants which ravage crops in other lands.

(iv) *The Commonwealth Serum Laboratories.* The laboratories were established in 1916 under the administration of the Quarantine Branch, Department of Trade and Customs (later the Commonwealth Department of Health, Order-in-Council, March, 1921). Work began in temporary quarters, but new buildings were erected and occupied in 1918 at Royal Park, Melbourne, where the Commonwealth had acquired 23 acres. In 1936, a farm of 325 acres was purchased for experimental and other purposes at Broadmeadows, 9 miles from Melbourne. The laboratories function as a Public Health Institute and are part of the Commonwealth Department of Health, conducting research and training of laboratory personnel. In addition, biological products are prepared on a large scale for use in the diagnosis, prevention and treatment of human and animal diseases.

Since their foundation 39 years ago, the laboratories have been greatly extended in size and scope. The number and variety of biologicals available for issue have thus been increased to the extent that Australia is practically independent of overseas supplies.

Continuous research is being conducted into all relevant aspects of Bacteriology and Immunology and related fields of work. New kinds of biological agents are prepared and tested as the growth of medical or scientific knowledge provides fresh means of diagnosis, prevention and treatment. Investigations are also made into other aspects of public health work. For the past 30 years the production of veterinary biologicals has been a feature of the work, and in recent years extensive development has occurred in this direction.

The result of increasing employment of veterinary products in the prevention of diseases of domestic animals and stock is reflected in the diminution of incidence of certain infectious diseases amongst stock with economic benefit to the community.

The laboratories also serve as a national centre for the maintenance in Australia of the International Standards of the Permanent Commission on Biological Standards (World Health Organization), and act as the regional reference centre for the World Health Organization in collating reports of prevalence of certain infectious diseases in Australia, and at the same time conduct laboratory investigations for the identification of diseases thus reported.

(v) *The Commonwealth Health Laboratories.* The fourteen health laboratories of the Department are situated at strategic points throughout Australia. They are located at Canberra, Darwin, Cairns, Townsville, Rockhampton, Toowoomba, Bendigo, Launceston, Hobart, Port Pirie, Kalgoorlie, Lismore, Tamworth and Albury. These laboratories were established as an essential part of the quarantine system but were also to undertake research into local health problems and to provide medical practitioners 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 hand, is essential to the efficient investigation of disease and the effective operation of control measures.

From this standpoint, the laboratories have already proved their value in the determination of leptospirosis and endemic typhus in North Queensland, in the investigation of special local problems at Darwin, of undulant fever throughout Australia, of silicosis and tuberculosis at Kalgoorlie and of plumbism at Port Pirie. In these investigations close co-operation has existed with State and local health and hospital services; especially is this so 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.

(vi) *The School of Public Health and Tropical Medicine.* 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 as from 4th March, 1930, 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 work of the school comprises both teaching and investigation. Courses are held for the University post-graduate diploma of public health and the diploma of tropical medicine and hygiene. Lectures are given in public health and preventive medicine as prescribed for the fifth year of the medical curriculum. Other classes include students in architectural, social and school hygiene, lay officers and nurses in the tropical services, and missionaries, while training is also provided to certain personnel of the Armed Services, to sister tutors, and laboratory workers from various services and institutions.

Investigational work covers a wide field of public health and medical subjects, both in the laboratory and in the field. Field work has been carried out not only in Australia but in co-operation with the local administrations in Papua, New Guinea, Norfolk Island and Nauru and with the South Pacific Commission. Sections of Child Health, Occupational Health and Medical statistics have been recently added.

(vii) *Commonwealth Acoustic Laboratories.* The Department of Health established the first of the series of Acoustic Laboratories in January, 1947, in Sydney. The laboratory continued and expanded the work of the Acoustic Research Laboratory which was sponsored by the National Health and Medical Research Council during the years



1942-46 for the purpose of investigating problems of noise and difficulties of intercommunication in aircraft and tanks. After the 1939-45 War the Acoustic Research Laboratory directed its attention to the problem of deafness in children, particularly the group whose affliction was caused by the mothers contracting rubella in the early months of pregnancy.

The taking over of the Acoustic Research Laboratory by the Department of Health was influenced by a request from the Repatriation Commission for technical assistance in the matter of providing hearing aids for deafened ex-servicemen. Arrangements for this purpose were completed and branch laboratories were established in all other State Capital Cities.

During 1948 the Acoustic Laboratories Act was passed to allow the expansion of activities on the following lines :—(1) To carry out the requirements of the Repatriation Commission for deafened ex-Service personnel and to provide a similar service for the Commonwealth Department of Social Services in respect of deafened ex-Service personnel whose disability was not caused by war service ; (2) to assist the Education Departments of the States in measuring deafness, by providing and maintaining portable audiometric equipment ; (3) to act on behalf of various State and other authorities who desire to have independent tests made before assisting financially in the purchase of hearing aids for people under their care ; (4) to investigate problems associated with noise in industry ; (5) to make hearing tests on Civil Aviation aircrew as required by International agreement ; (6) to give advice to the Armed Services on noise problems as required ; and (7) to provide hearing aids to school children.

The laboratory in Sydney is responsible for the training of personnel for the whole Acoustic Service, the production of equipment, the calibration of hearing aids and audiometers and the technical administration of the branch laboratories.

(viii) *Commonwealth Bureau of Dental Standards.* The National Health and Medical Research Council sponsored the Dental Materials Research Laboratory during the years 1939-46, for the purpose of assisting the Defence Services, the Medical Equipment Control Committee and other Government Departments in the selection and purchase of suitable dental equipment and materials. Valuable assistance was also given to Australian manufacturers of dental materials in relation to improvement of their products and the development of new materials.

Much of the work was of a routine nature and after the 1939-45 War the National Health and Medical Research Council decided to cease its sponsorship, but recommended that the Department of Health should take over the laboratory as it was serving a good purpose. This was done in January, 1947, and the laboratory was renamed the Commonwealth Bureau of Dental Standards and is at present situated in the grounds of the University of Melbourne.

The functions of the Bureau are as follows :—(1) Original research into dental equipment, materials, techniques and processes ; (2) the development, through the Standards Association of Australia, in consultation with a committee representative of the Commonwealth Department of Health, of the Australian Dental Association and of manufacturers and distributors, of specifications for dental materials and equipment ; (3) regular systematic surveys of dental materials on sale to the profession in Australia, and the reporting of the results of such investigations in recognized Australian scientific journals ; and (4) the provision of a consultative service and testing facilities for local manufacturers and distributors of dental materials with the view to assisting them in the improvement of existing products and the development of new materials.

(ix) *Commonwealth X-ray and Radium Laboratory.* The persistent increase in cancer mortality has led to the development in Australia of a national organization directed towards the control of this disease. The Commonwealth Department of Health has actively participated in this movement. Annual cancer conferences, convened by the Department from 1928 onward, provided an opportunity each year for those actively engaged in the campaign against the disease to meet for the discussion of problems and

the determination of lines of action for further development. The tenth conference in this series met in New Zealand in February, 1939 and so marked an association which had been maintained between Australia and the Dominion since the inception of the conferences.

Cancer Conferences were not held during the war years and have not been revived, primarily because facilities for the discussion of the various aspects of the treatment of cancer have been provided by the regular Congresses of the British Medical Association and of the different specialist Colleges and Associations. The Department has, however, continued to maintain liaison in the general programme against cancer and in March, 1955, convened a conference in Canberra of representatives of the Commonwealth and States to discuss the co-ordination of anti-cancer activities. This conference recommended that an annual Conference of State-sponsored Anti-Cancer Organizations should be convened by the Commonwealth Government and that consideration should be given to the formation of a nation-wide Anti-Cancer Organization comprising representatives of the Statutory Anti-Cancer Organizations.

A total of 10 grams of radium, purchased in 1928 by the Commonwealth Government for use in treatment and research, has been distributed on loan to treatment centres throughout Australia. Under the terms of this loan, treatment at well-equipped clinics is available to all requiring it, irrespective of ability to pay. This work is co-ordinated by the Department. From time to time portions of the original radium holding have been remounted by the Department in forms more suitable for the more modern techniques which have been developed.

Realizing the essential importance of accuracy in determining the quality of radiation used in the treatment of cancer and in measuring the dosage of this radiation actually delivered to the tumour, and the need for the investigation of physical problems in connexion with the utilization of X-rays and radium in the treatment of disease, the Commonwealth Department of Health in 1935 extended the work of the Commonwealth Radium Laboratory, established in 1929, to include the investigation of the physical problems of radiation therapy generally. This laboratory, known as the Commonwealth X-ray and Radium Laboratory, is situated by agreement with the University of Melbourne within the University grounds, and is maintained, controlled, and staffed by the Commonwealth Department of Health. It is accommodated in a building specially designed for work with X-rays and radium, and is amply provided with all necessary equipment for research work, including a 500,000 volt high tension generator.

The laboratory co-operates closely with the local 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 radiation exposure of X-ray and radium workers. The laboratory has continued to repair radium containers. It also undertakes investigations into physical problems arising in the use of X-rays and radium in treatment.

During the year 1954-55, a total of 94,774 millicuries of radon was prepared and issued from the laboratory in the form of implants, needles and tubes for use in Victoria, Tasmania, South Australia and Western Australia. A further 30,663 millicuries were issued by the associated centres in Sydney and Brisbane. The corresponding figures for 1953-54 were 99,454 and 34,423 millicuries respectively. The issue of radon from a few centres to serve hospitals all over the continent is a unique Australian development and enables a very efficient use to be made of the radium available.

The development of atomic energy programmes overseas has made available supplies of artificial radio-isotopes which can be used either as an alternative to natural isotopes such as radium and radon, or may be applied internally when they are selectively secreted in a particular organ. All radio-isotopes in use in Australia in medicine, research and industry are subject to the approval of the laboratory and are imported by the laboratory. Regular supplies of radio-phosphorus and radio-iodine are obtained and are distributed free of charge for the treatment of patients throughout Australia according to a policy developed by the Committee on Radio-isotopes of the National Health and Medical

Research Council. The laboratory has been responsible for the development of a scheme of physical measurements required in the use of radio-iodine which can be readily carried out in individual hospitals.

Supplies of radio-gold and radio-chromium have also been obtained when required, while applicators for special purposes, containing radio-strontium and radio-cobalt have been purchased and issued to some hospitals.

Close co-operation is maintained between the medical men engaged in the clinical investigation and treatment of cancer and research workers, physicists, and biochemists, so that problems are mutually investigated and treatment applied with the highest obtainable degree of scientific accuracy.

(x) *The Northern Territory Medical Service.* The Commonwealth Department of Health is responsible for the administration of hospital health and medical services in the Northern Territory.

Four general hospitals have been established. The Darwin Hospital has accommodation for 187 in-patients, Alice Springs Hospital, 90, Katherine Hospital, 25, and Tennant Creek Hospital, 25. A modern institution for the treatment of leprosy, known as the East Arm Settlement, was opened in August, 1955. A full range of ancillary services is available at the Darwin Hospital which serves as a base hospital for the Territory.

Dental clinics, which provide a fine service have been set up at Darwin and Alice Springs. Medical and dental services to outback areas are fully developed and are provided either by road or air.

Two Drovser aircraft are stationed at Darwin and one is stationed at Alice Springs. These 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 Northern Territory provide the medical services to the Flying Doctor Service (South Australian) Base.

A section of the Department undertakes continuous investigation of native health.

School Medical and Dental Officers move throughout the area providing diagnostic and treatment facilities. Public Health Services are provided and health inspectors periodically visit all settlements.

Darwin as a first port of entry for overseas aircraft and shipping is provided with a quarantine station.

(xi) *National Fitness.* A national fitness movement was launched in Australia in 1939 following the world-wide movement for the advancement of physical fitness which preceded the last world war. In 1938, arising from a recommendation of the National Health and Medical Research Council, the Commonwealth Government agreed to appoint a Commonwealth Council for National Fitness, under the Commonwealth Minister for Health, to effect collaboration of Commonwealth, State and Local Government authorities in the movement. Meetings of this Council are held at regular intervals, and an annual report submitted to Parliament. Autonomous State National Fitness Councils operate in all States, each sending one representative to the Commonwealth Council meetings. Following the recommendations of the first Commonwealth 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. In July, 1941 a National Fitness Act was passed by the Commonwealth Parliament to ensure greater permanence to the movement, and in June, 1942, the Commonwealth grant was increased to £72,500 to include grants to State Education Departments and for the work in the Australian Capital Territory. In 1951 the total grants were extended for a further period of three years. The movement continues to develop and to gain public interest and support throughout Australia, particularly through its physical and recreational activities with voluntary youth organizations and amateur sports organizations.

(xii) *The Pre-school Child.* Sessions of the National Health and Medical Research Council and the reports of the Commonwealth Advisory Council on Nutrition have called attention to the need for greater effort throughout Australia directed towards the care of the growing child, especially during the pre-school period. Movements for the welfare of the school child and the care of the infant are already developed by State authorities as recorded in §§ 7 and 8 below. The Commonwealth Government felt that more could be done for the child of pre-school age, and it was decided to give a lead by making it possible to demonstrate what could be done and the practical methods which could be applied.

The Commonwealth Government therefore decided to establish in each capital city a pre-school demonstration centre, known as the Lady Gowrie Child Centre, and in order to achieve the best results in association with those who have had experience in this field, it has secured the co-operation of the Federal Organization of Kindergarten Unions, which is operating under the title of "The Australian Association for Pre-school Child Development". A suitable site was secured in each capital city and the necessary school structure was built. Formerly the administration of these centres was under the direction of the local Kindergarten Union and the employment of staff was made with the approval of the Commonwealth Department of Health. Recently the local Lady Gowrie Child Centre Committees were given a greater degree of autonomy, so that while the technical supervision still rests with the Australian Association for Pre-school Child Development, the management of each centre, including staffing, is in the hands of the local Committee. This development is associated with a change in the method of financial control. An annual grant is made to each Committee towards the cost of the centre, the disbursement of these funds being at the discretion of the local Committee, subject to the general supervision of the Australian Association for Pre-school Child Development. This applies in so far as the educational side is concerned, and in this field advantage is being taken of the opportunity to try new methods and to make systematic records of observations with the object of securing reliable knowledge of the educational technique of this pre-school period.

Along with this educational practice there proceeds also the study of physiological requirements of the child and of the interaction between physical and mental health under varying conditions. The children at these centres provide a considerable mass of human material for control and study, which is of great value in view of the importance of the study of growth and of nutrition of their age-period. Not only are routine measurements made of height, weight and other bodily data, but problems of nutrition are studied in detail. The medical work at each State centre is conducted on a uniform basis, according to a scheme formulated at, and directed from, the Australian Institute of Anatomy, Canberra, where parallel investigations on the laboratory side are being undertaken.

An annual grant of £30,000 is paid by the Department to the Australian Association for Pre-school Child Development to assist this body in its work.

(xiii) *The Australian Institute of Anatomy.* The Australian Institute of Anatomy, situated in Canberra, occupies a monumental building erected by the Commonwealth Government under the Zoological Museum Agreement Act of 1924 on a site which adjoins that of the Australian National University. 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. Comparative anatomy is the basis of medical science, and while the importance of a study of Australian animals in the solution of various medical problems had for years been recognized by other countries and steps taken by them to procure specimens for their museums, national effort in this direction was neglected in Australia. The late Sir Colin MacKenzie, the first Director of the Institute of Anatomy, however, very kindly presented to the Commonwealth Government his entire private collection, and this magnificent gift was acquired and provision was made for its proper housing under special legislation

by the Commonwealth Government. In 1931 the Institute became an integral part of the Commonwealth Department of Health, and the original collection has been greatly augmented. A list of gifts to the Australian nation may be found in Official Year Book No. 39, p. 1277. In addition to these donations of material, there have been several endowments for orations and lectures, particulars of which are shown in previous issues of the Official Year Book.

The Institute consists of two separate and distinct entities: A museum section and a laboratory section. In the museum section there is displayed a portion of the original collection of anatomical specimens assembled by the late Sir Colin MacKenzie, together with ethnological collections which have been added since the foundation of the Institute. The materials in the museums, which are open to the general public, has been arranged so as to present simple lessons in human hygiene, to display the anatomical features and peculiarities of the Australian fauna, and to display interesting aspects of the character of Australian Aborigines and Natives of Papua and New Guinea.

A number of Health Department units are now concentrated within the Institute. These include the Museum and Medical Artistry Section; the Nutrition Section; the Diabetes and Enzyme Research Section; the Commonwealth Health Laboratory for the Australian Capital Territory; the Veterinary Laboratory; and the office of the Australian Pre-school Association.

The scientific research work of the Institute has now been concentrated on problems of nutrition. These take the form of field surveys of the dietary status of the Australian population and laboratory investigations into the biochemistry of nutrition and metabolism. For further information concerning the Institute see Year Book No. 32 pp. 919-21.

### § 3. The 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 Commonwealth and State Health Authorities". This Council held sessions each year except in 1932. 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 upon medical research and on projects of medical research generally.
- To advise Commonwealth and State Governments upon the merits of reputed cures or method 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 officers of his Department, the official head of the Health Department in each State, together with representatives of the Federal Council of the British Medical Association, the Royal Australasian College of Surgeons, the Royal Australasian College of Physicians, the Australian Regional Council of the Royal College of Obstetricians and Gynaecologists, the Australian Dental Association, and (jointly) the four Australian Universities having medical schools. A prominent layman and laywoman, appointed by the Commonwealth Government, also serve on the Council.

The first session of the National Health and Medical Research Council met at Hobart in February, 1937. The thirty-ninth session met at Sydney in May, 1955.

Under the Medical Research Endowment Act 1937, the Commonwealth Government has made an annual appropriation of funds to provide assistance :—(a) to Departments of the Commonwealth or of a State engaged in medical research ; (b) to Universities for the purpose of medical research ; (c) to institutions and persons engaged in medical research ; and (d) in the training of persons in medical research.

Approved research institutions under this system now number 51. During 1954 grants for projects numbered 55 in the following fields :—bacteriology, biochemistry, biophysics, clinical research, dental research, epidemiology, haematology, medical chemistry, neurology, neuro-physiology, obstetrics, pathology, physiology and pharmacology, tuberculosis and virus diseases. In certain instances, equipment and apparatus have been made available by the Council ; this has greatly facilitated some specialized lines of research. The wide scope of work being carried out is greatly assisted by the formation of committees which meet regularly and advise the Council in such subjects as industrial hygiene, public health, epidemiology, maternal and child welfare, radioactive isotopes, antibiotic distribution, tropical physiology and hygiene, tuberculosis, dental research and the latest developments in X-ray technology and application.

The research work being done under these grants is of a high standard, many of the individual investigators enjoying international reputation. Beyond this practical achievement, the original objectives of the Council are being attained in encouraging young graduates to take up research work and in securing a continuity and permanence of medical research in Australia.

An insurance benefit scheme for such medical workers on the lines of the Federated Superannuation System for Universities is now in operation.

#### § 4. Control of Infectious and Contagious Diseases.

1. *General*.—The provisions of the various Acts in regard to the compulsory notification of infectious diseases and the precautions to be taken against the spread thereof may be conveniently dealt with under the headings—Quarantine ; Notifiable Diseases, including Venereal Diseases ; and Vaccination.

2. *Quarantine*.—The Quarantine Act 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. (See pages 521 to 523 above.)

In regard to interstate movements of animals and plants, the Act becomes operative only if the Governor-General considers that Federal action is necessary for the protection of any State or States ; in general, the administration of interstate movements of animals and plants is left in the hands of the States.

The Commonwealth controls stations in each State for the purposes of quarantine of humans, animals and plants.

3. *Notifiable Diseases*.—(i) *General*. (a) *Methods of Prevention and Control*. Provision exists in the Health Acts of all the States for the observance of precautions against the spread and for the compulsory notification of infectious disease. When any

such disease occurs, the local authority must at once be notified, and in some States notification must be made also to the Health Department. The duty of making this notification is generally imposed, first, on the head of the house to which the patient belongs, failing whom on the nearest relative present, and, on his default, on the person in charge of or in attendance on the patient, and, on his default, on the occupier of the building. Any medical practitioner visiting the patient is also bound to give notice.

As a rule, the local authorities are required to report from time to time to the Central Board of Health in each State as to the health, cleanliness and general sanitary state of their several districts, and must report the appearance of certain diseases. Regulations are prescribed 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. Bacteriological examinations for the detection of plague, diphtheria, tuberculosis, typhoid and other infectious diseases within the meaning of the Health Acts are continually being carried out. Regulations are provided in most of the States for the treatment and custody of persons suffering from certain dangerous infectious diseases, such as small-pox and leprosy.

(b) *Diseases Notifiable and Cases Notified in each State and Territory.* The following table, which has been compiled by the Commonwealth Department of Health, shows for each State and Territory the diseases notifiable in 1954 and the number of cases notified. Diseases not notifiable in a State or Territory are indicated by an asterisk.

**DISEASES NOTIFIABLE IN EACH STATE AND TERRITORY OF AUSTRALIA AND NUMBER OF CASES REPORTED DURING THE YEAR ENDED 31ST DECEMBER, 1954.**

Disease.	N.S.W.	Vic.	Q'ld.	S.A.	W.A.	Tas.	N.T.	A.C.T.	Aust.
Acute rheumatism .. ..	208	128	128	..	60	*	2	..	526
Amoebiasis .. ..	*	2	1	3	14	1	2	..	23
Ankylostomiasis .. ..	295	1	16	1	2	..	63	..	378
Anthrax .. ..	*	..	..	..	..	..	..	..	..
Bilharziasis .. ..	*	..	..	..	..	..	..	..	..
Brucellosis .. ..	9	25	5	1	8	1	..	..	49
Chorea .. ..	20	28	*	..	6	*	..	..	54
Dengue .. ..	..	..	..	..	2	*	..	..	2
Diarrhoea, infantile .. ..	252	625	461	4	29	3	13	14	1,401
Diphtheria .. ..	366	107	82	5	119	4	4	17	704
Dysentery, bacillary .. ..	*	62	125	17	42	33	5	..	284
Encephalitis .. ..	33	29	5	26	..	..	2	4	99
Filaria's .. ..	*	..	1	..	..	..	..	..	1
Homologous serum jaundice .. ..	*	3	*	..	..	..	..	..	3
Hydatid .. ..	*	19	*	..	..	9	..	..	28
Infective hepatitis .. ..	1,610	1,235	*	..	165	2	15	46	3,073
Lead poisoning .. ..	*	36	27	..	2	*	..	..	65
Leprosy .. ..	..	1	6	..	47	..	23	..	77
Leptospirosis .. ..	8	1	79	..	..	*	..	..	88
Malaria .. ..	..	25	25	..	29	1	3	..	83
Meningococcal infection .. ..	198	149	52	22	48	21	4	3	497
Ophthalmia .. ..	*	1	*	..	52	..	..	..	52
Ornithosis .. ..	3	1	*	3	..	*	..	..	7
Paratyphoid fever .. ..	7	2	..	2	1	1	..	1	14
Polio-myelitis .. ..	555	569	134	176	436	10	..	26	1,906
Puerperal fever .. ..	17	3	26	2	2	..	..	..	51
Rubella .. ..	*	657	6	..	627	..	2	7	1,299
Salmonella infection .. ..	..	*	*	..	32	*	..	..	32
Scarlet fever .. ..	703	1,340	274	224	91	28	..	3	2,663
Tetanus .. ..	*	12	27	..	4	*	3	..	46
Trachoma .. ..	*	..	*	..	3,686	*	61	..	3,747
Trichinosis .. ..	..	*	*	..	..	..	..	..	..
Tuberculosis .. ..	2,159	1,143	717	308	378	185	58	4	4,952
Typhoid fever .. ..	24	13	8	7	12	3	..	..	67
Typhus—flea, mite or tick borne .. ..	3	..	34	7	19	..	..	..	63

\* Not notifiable.

NOTE.—No cases of cholera, plague, smallpox, epidemic typhus or yellow fever were notified.

(ii) *Venereal Diseases.* The prevention and control of venereal diseases are undertaken by the States. Each State has a Venereal Diseases Act, or provisions in the Health Act govern the working of the measures taken to combat these diseases. Under these Acts notification has been made compulsory in every State. Steps have been taken to ensure free treatment by medical practitioners or in subsidized hospitals and clinics. Registered pharmaceutical chemists are allowed to dispense prescriptions only when signed by medical practitioners. Clinics have been established and, in some cases, beds in public hospitals have been set aside for patients suffering from these diseases.

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 and the employment of an infected person in the manufacture or distribution of foodstuffs.

4. *Vaccination.*—There is statutory provision for compulsory vaccination in all States except New South Wales. Jennerian vaccine for vaccination against smallpox is prepared at the Commonwealth Serum Laboratories in Melbourne. There has been a considerable increase in the demand for vaccination, especially by people about to travel overseas by air, so that they may conform with the quarantine requirements of countries to which they are travelling.

### § 5. Inspection and Sale of Food and Drugs.

Public Health legislation in force in all States provides for the inspection of foods and drugs with the object of ensuring that all goods sold shall be wholesome, clean and free from contamination or adulteration; and that all receptacles, places and vehicles used for their manufacture, storage or carriage shall be clean. For further particulars in this connexion see § 1. State Public Health Legislation and Administration, p. 515.

### § 6. Supervision of Dairies, Milk Supply, Etc.

1. *General.*—In earlier issues of the Official Year Book (*see* No. 22, p. 498) reference was made to the legislation in force in the various States to ensure the purity of the milk supply and of dairy produce generally.

2. *Number of Dairy Premises Registered, 1954.*—The following table shows, so far as the particulars are available, the number of dairy premises registered and the number of cows in milk thereon. In some States registration is compulsory within certain proclaimed areas only.

DAIRY PREMISES REGISTERED, AND COWS IN MILK THEREON, 1954.

Particulars.	N.S.W. (a)	Victoria. (b)	Q'land. (a)	S. Aust. (c)	W. Aust. (c)	Tasmania. (a)
Premises registered ..	16,572	26,794	21,500	9,971	652	7,258
Cows in milk thereon	568,593	829,366	647,500	98,073	23,180	97,288

(a) March, 1954.

(b) Year 1954-55.

(c) Dairies registered with the Milk Board for whole milk or sweet cream for table use.

### § 7. Medical Inspection of School Children.

1. *General.*—Medical inspection of school children is carried out in all the States and the Australian Capital Territory. Medical staffs have been organized, and in some States travelling clinics have been established to deal with dental and ocular defects.



2. New South Wales.—(i) *School Medical Service.* A definite scheme of medical inspection of school children was established by the Department of Education during the years 1913-14. About the same time travelling Dental Officers were appointed, and inspection and treatment were carried out mainly in country districts.

The School Medical Services have gradually been extended since that time, additional services, such as child guidance clinics, speech therapy clinics and hearing clinics, having been introduced.

Up till the year 1946, the School Medical Service was attached to and under the control of the Department of Education, but since 1946 it has been under the control of the Department of Public Health. In 1947 the dental section was separated from the School Medical Service and a Division of Dental Services was formed.

*Establishment.* There are 32 permanent and 2 part-time medical officers; 5 psychiatrists; 2 part-time ear, nose, and throat surgeons; 5 psychologists; 29 nurses; 9 social workers; 10 speech therapists; 8 trainees in speech therapy; 13 clerical officers; and a telephonist.

The primary object of the service is the medical examination of children to discover any departure from normal in the health of a child, either physical or mental, and to notify the parent or guardian, in order that the child may be further investigated to determine the need for treatment. In many cases it is not possible to make a diagnosis of the conditions found at the time of the examination. This is due partly to the fact that only a limited time can be devoted to each individual examination, and also to lack of facilities within the Service for further investigation. Treatment is accepted as the responsibility of the practising medical profession.

The children attending all schools administered by the Department of Education are medically examined, as are also children attending the majority of other schools in the State. Medical officers visit schools annually in the metropolitan, Newcastle and Wollongong areas, and in five country towns (Armidale, Tamworth, Bathurst, Orange and Wagga), and examine children in kindergarten or 1st grade in primary schools and 1st and 4th years in secondary schools. Children in other classes are examined or reviewed, as necessary. The vision and hearing of pupils are re-tested in 4th grade.

In country areas the object is for medical officers to visit schools every three years, and for all children attending to be examined. Owing to insufficient staff, the country portion of the programme cannot be completed each year.

When an abnormal condition has been found by the examining medical officer and it is not under effective treatment, the parent is informed in writing by the medical officer. If possible, the parent is called in for interview, with the examining medical officer. In the metropolitan, Newcastle and Wollongong areas school nurses follow up these cases with the object of persuading parents to seek medical advice.

It is considered that the full medical examination on entrance to school, on entrance to secondary school, and in 4th year, together with the referral of children to the school medical officer by parent, teacher or school nurse, will provide sufficient cover so that the great majority of children with defects, either physical or mental, will be seen by the medical officer.

During 1954, medical officers of this service examined 152,138 children, compared with 164,845 examinations carried out in 1953. Of the total number, 108,806 children were fully examined, equalling 17.34 per cent. of the school population for the State. In addition, the cases of 43,332 children were reviewed during the year.

Defects of notifiable standard, including unhealthy mouths, were found in 27.2 per cent. of the children fully examined. It was found necessary to notify 52.0 per cent. of the total 29,633 defects recorded to parents or guardians, in order that further investigation and/or treatment could be effected.

Arrangements are made for oculists to visit schools in the more remote areas. As well as carrying out a full examination the oculist refracts the eyes of children found to have defective eyesight and prescribes glasses where necessary.

*Surveys.* Various surveys of school children are undertaken from time to time, e.g. hookworm survey, height-weight survey, nutrition surveys, and investigations to determine the incidence of enlargement of the thyroid gland, defective vision, postural defects, etc.

*Hearing Surveys.* In addition to the hearing tests carried out by the school nurses and medical officers in the course of the routine medical examination, audiometric surveys and follow-up tests are undertaken. Part-time ear, nose and throat specialists review the condition of children found to have any significant degree of deafness, give advice with regard to treatment, and, if necessary, advise whether the use of a hearing aid is indicated. Their suitability for admission to an opportunity deaf class or school for deaf children is also considered.

*Teachers' Colleges.* Medical officers of the School Medical Service are attached to Teachers' Colleges. They lecture in school health and other subjects to students in the colleges. These officers are also responsible for the health supervision of college students.

*Child Guidance Clinics.* Starting with the appointments of a psychiatrist and a psychologist in 1936, five child guidance clinics have now been established under the administration of the school medical service. They are all located in the metropolitan area. One clinic functions at the Yasmar Boys' Shelter and deals exclusively with cases before the Children's Courts.

Each clinic is now staffed by a psychiatrist, a psychologist and social workers.

*Speech Therapy Clinics.* The establishment provides for a staff of ten speech therapists. Treatment is undertaken in clinics in the metropolitan area.

*Bush Nursing Association.* An arrangement exists whereby bush nurses act as school nurses in schools at or near the Bush Nursing Centres and carry out a limited inspection for the detection of defects or unhygienic conditions.

(ii) *School Dental Service.* There are 21 School Dental Clinics. The aim of the School Dental Service is not only to provide dental treatment for children on school premises, but also to train them in the care of their teeth, and teach them the principles of dental health.

The visit of a dental clinic to a school is of educational value, and should be treated as part of the school routine. Teachers, parents and children become interested in the clinic and therefore in dental health.

Of the total number of children examined in both city and country schools, 32,974 were included in a Sound Mouth Survey. Of these 6.9 per cent. were found to have naturally sound mouths, whilst an additional 16.6 per cent. were found to have sound mouths as a result of treatment. 76.5 per cent. were in need of treatment.

In 1954, the clinic treated 19,362 children in 50,786 visits; 36,016 teeth were extracted; 36,727 permanent fillings and 46,816 other treatments were provided. There was a general increase in the work compared with 1953.

The number of clinics has never been sufficient to provide more than a limited service. It has been found necessary to restrict treatment to the ages 6-8 years in the metropolitan area, and 6-9 years in large country centres. In small outlying rural schools children of all ages are included.

In addition to the normal dental services in schools, treatment was carried out for the children at the Glenfield Special School.

3. *Victoria.*—The School Medical and Dental Services are gradually being extended throughout the State. The objective of the medical service is to ensure that each child is examined to ascertain any physical defects at least once in every three years of school life. Parents are informed concerning such defects and advised how treatment may best be obtained. In 1954, 117,154 children were examined, 70 per cent. of them being in the metropolitan area.

Nurses employed for the purpose perform valuable follow-up work in interviewing parents to ensure that as far as possible treatment recommended is carried out. There are at present 25 medical officers and 36 nurses employed in this service.

The School Dental Service affords dental treatment to children attending primary schools and resident in institutions in certain parts of the State. The districts included are progressively extending as facilities and staff increase.

Children from metropolitan schools in industrial suburbs are transported to the School Dental Centres by contract bus service. Country schools are visited by mobile dental units.

Six dental vans and five semi-trailer (two-surgery) units are operating in the mobile service.

The Dental Service has a staff of 35 dentists and 37 dental attendants. During 1954, 35,000 children attending 392 schools were examined and all necessary dental treatment carried out. This treatment included 40,129 extractions and 67,477 fillings.

4. Queensland.—During 1953-54 the School Health Services Branch employed 3 full-time and 1 part-time medical officers, 21 nurses, 19 dentists and 1 part-time dentist.

The medical officers and nurses examined school children regularly, referring children with defects to their own medical advisers. During 1953-54 76,801 medical examinations were conducted.

Advice is given on school sanitation, infectious diseases in schools and health education.

During 1953-54 school dentists gave treatment to 10,796 school children whose parents could not afford private treatment. The treatment was carried out at four Rail Dental Clinics and at schools with portable equipment. In addition school children are treated at Hospital Dental Clinics in the larger towns.

In Western Queensland local practitioners act as part-time Ophthalmic Officers.

In North Queensland two school sisters assist in the control of hookworm.

During 1953-54 the cost of the service was £76,878.

5. South Australia.—Children in State schools 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 or four years and all the children are examined. Students who wish to become teachers are examined on appointment as preliminary probationary students while still attending secondary schools, again immediately prior to entering the Teachers' College and finally when they leave the college to take up teaching duties. Courses of lectures in hygiene and in first aid are given to all college students and, in addition, domestic arts students are lectured on home nursing.

The medical staff consists of a principal medical officer, 3 full-time and 3 part-time medical officers and 7 trained nurses. One part-time senior dentist and one full-time dentist and his assistant are attached to the Branch.

During 1954, 26,482 children were examined by medical officers and of these 1,713 required notices for defective vision, 726 for defective hearing, and 940 for their tonsils and adenoids.

Expenditure for the year 1953-54 was £24,351.

The Psychology Branch consists of a senior psychologist, 2 psychologists, a senior guidance officer, 2 guidance officers, 2 social workers, an advisory teacher of opportunity classes, an advisory teacher of hard-of-hearing children, a part-time speech therapist, a part-time consultant psychiatrist and a part-time consultant neurologist. The work of the Branch may be divided into three sections—clinical, educational and vocational.

*Clinical.* The clinical work involves examining difficult children of many types, including those with such problems as backwardness, truancy, delinquency, etc. In addition, the parents of all children examined are interviewed and their co-operation is sought.

*Educational.* In addition to supervising opportunity and special classes for children backward in school work, the Branch advises on questions of placement and types of education for ordinary children in schools.

*Vocational.* The guidance officers test and advise all children about to leave school. The guidance officers are also responsible for the supervision of record cards where used in primary schools.

The Branch also lectures to students of the Teachers' College as well as to other interested organizations such as mothers' clubs.

6. **Western Australia.**—Under the Health Act 1911–1954 the medical officers appointed by the local authorities became medical officers of schools and of school children.

In the Health Department there are five full-time medical officers for schools. During 1955, 40,964 children were examined (metropolitan 20,150, country 20,814), of whom 20,189 were boys and 20,775 girls. There were 295 schools visited, comprising metropolitan, 43 State schools, 24 convents and 9 kindergartens, and country, 167 State schools, 45 convents and 7 kindergartens. The principle aimed at is to examine every school child once every two years.

During 1954 the 10 full-time dental officers employed visited 17 metropolitan schools, 86 country schools, and 9 metropolitan orphanages. The number of children examined was 6,938 of whom 4,222 were treated with their parents' consent. The cost of this service for 1953–54 was £38,865.

7. **Tasmania.**—During the year 1954, 2 full-time and 2 part-time medical officers were employed in the examination of school children. Some Government medical officers also performed routine examinations as part of their ordinary duties. One part-time and 12 full-time sisters visited homes and schools regularly. Of the 19,996 children examined by medical officers 10,222 were found to have defects, 7,347 requiring dental treatment.

There are static dental clinics at Hobart, Launceston and Devonport and six mobile clinics operated in various parts of the State. Each clinic has a full-time dental surgeon in charge. During the year 11,498 children were examined by school dentists.

The cost of the school medical and dental services for the year ended June, 1954 was £32,585.

8. **Australian Capital Territory.**—Education facilities are provided in the Australian Capital Territory, under agreement, by the Education Department of New South Wales. In 1930, however, the Commonwealth Department of Health took over from the State the medical inspection of school children and carried out examinations of entrants and those leaving in that year. From 1943 to 1951, all primary pupils of Government schools in the Territory had an annual medical examination.

During 1951, with the appointment of an Infant Welfare and Schools Medical Officer, a plan for triennial examinations of children in primary and secondary schools was introduced, more attention being paid to those children with defects who were marked for review.

In 1954, 775 school children were fully examined and 568 given review examinations. At the Pre-School Play Centres 578 were fully examined as entrants and 278 were given review or other special examination.

Diphtheria immunisation in schools was introduced in October, 1954. Initial treatments numbered 350. Reinforcing treatments numbered 1,220. Preliminary Schick testing was carried out for the majority of children over 8 years of age.

Infants and pre-school children numbering 228 were immunised at Infant Welfare Centres.

## § 8. Supervision and Care of Infant Life.

1. *General.*—The number of infant deaths and the rate of infant mortality for the five years 1950 to 1954 are given in the following table, which shows that during this period 23,446 children died in Australia (excluding Territories) before reaching their first birthday. Further information regarding infant mortality will be found in Chapter XVII.—Vital Statistics.

### INFANT DEATHS AND DEATH RATES.

State.	Metropolitan.					Remainder of State.				
	1950.	1951.	1952.	1953.	1954.	1950.	1951.	1952.	1953.	1954.

#### NUMBER OF INFANT DEATHS.

New South Wales	754	661	604	620	787	1,182	1,234	1,214	1,226	1,063
Victoria ..	511	549	610	544	576	490	594	588	589	479
Queensland ..	232	277	259	228	206	487	484	513	541	489
South Australia ..	235	218	210	196	199	181	210	203	179	189
Western Australia	180	185	179	180	153	206	240	205	198	206
Tasmania ..	52	56	50	51	58	120	140	122	126	128
Australia(a) ..	1,964	1,946	1,912	1,819	1,979	2,666	2,902	2,845	2,859	2,554

#### RATE OF INFANT MORTALITY.(b)

New South Wales	25.44	22.89	20.71	21.45	22.51	28.18	28.57	26.96	26.66	27.85
Victoria ..	19.13	20.66	21.69	19.56	18.26	21.20	24.78	22.96	22.88	20.72
Queensland ..	31.98	26.83	23.73	21.02	18.95	22.37	25.04	25.60	27.14	24.08
South Australia ..	24.68	22.45	21.29	19.71	19.82	23.25	27.09	25.31	21.79	23.08
Western Australia	25.41	26.38	23.52	23.28	19.59	28.83	30.84	26.27	24.36	25.37
Tasmania ..	23.29	26.37	21.62	22.16	25.45	23.96	26.75	21.77	23.18	23.31
Australia(a) ..	23.82	23.00	21.73	20.78	20.30	24.97	27.06	25.38	25.23	24.70

(a) Excludes Territories.  
registered.

(b) Number of deaths under one year of age per 1,000 live births

During recent years greater attention has been paid to the fact that the health of mothers and infants depends largely on pre-natal attention as well as after-care. Government and private organizations, therefore, provide instruction and treatment for mothers before and after confinement, while the health and well-being of mother and child are looked after by the institution of baby health centres, baby clinics, crèches, visits by qualified midwifery nurses, and special attention to the milk supply, etc.

2. *Government Activities.*—In all the States acts have been passed with the object of supervising and ameliorating the conditions of infant life and reducing the rate of mortality. Departments control the boarding-out to suitable persons of the wards of the State, and wherever possible the child is boarded out to its mother or 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. (*See also* in this connexion Chapter XV.—Welfare Services.) Under the provisions of the Maternity Allowances, Part V. of the Social Services Act 1947–1955, from 1st July, 1947 a sum of £15 is payable to the mother in respect of each confinement at which a living or viable child is born. 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. Detailed particulars regarding Maternity Allowances are given in Chapter XV.—Welfare Services.

3. *Nursing Activities.*—(i) *General.* In several of the States the Government maintains institutions which provide treatment for mothers and children, and, in addition, subsidies are granted to various associations engaged in welfare work.

(ii) *Details by States.* In earlier issues of the Official Year Book (*see* No. 22, pp. 515–6) information may be found concerning the activities of institutions in each State.

(iii) *Summary.* The following table gives particulars of the activities of Baby Health Centres and Bush Nursing Associations :—

**BABY HEALTH CENTRES AND BUSH NURSING ASSOCIATIONS, 1954.**

Heading.	N.S.W.	Vic.	Qld.(a)	S. Aust.	W. Aust.	Tas.	A.C.T. (a)	Total.
Baby Health Centres—								
Metropolitan .. No.	92	145	53	78	21	26	7	422
Urban-Provincial and Rural .. No.	223	(b) 370	164	149	24	66	..	996
Total .. No.	315	515	217	227	45	92	7	1,418
Attendances at Centres								
No.	1,063,357	1,096,907	362,008	200,402	190,463	126,254	23,575	3,062,966
Visits paid by Nurses								
No.	25,358	105,459	25,284	24,105	18,714	79,774	2,225	280,919
Bush Nursing Associations								
—Number of Centres ..	31	58	8	33	10	27	?	167

(a) Year ended 30th June, 1954.

(b) Includes eight mobile units.

In the last twenty years the number of attendances at the Baby Health Centres has more than trebled. The numbers of attendances, at five-yearly 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. During the year 1953 the number of attendances was 3,153,008.

### § 9. Disposal of the Dead by Cremation.

The disposal of the dead by cremation has been in existence in Australia for many years, as the first crematorium was opened in South Australia in 1903. The number of crematoria in New South Wales is five; the first was opened in 1925. There are two crematoria in Victoria; the first opened in 1905, but was closed in 1926 and re-opened in 1936, while the other one was opened in 1927. There are two crematoria in Queensland, the first being opened in 1934. In South Australia there is one crematorium which opened in 1903. In Western Australia there is one crematorium which opened in 1939. In Tasmania there are two crematoria; the first was opened in 1936.

The following table shows the number of cremations in each State for the five years 1950 to 1954 :—

#### CREMATIONS.

Year.	N.S.W.	Vic.	Q'land.	S. Aust.(a)	W. Aust.	Tas.	Aust.
1950 .. ..	9,170	4,425	(a) 2,155	225	726	421	17,122
1951 .. ..	9,815	4,808	(a) 2,377	280	874	485	18,639
1952 .. ..	10,165	5,338	2,569	347	929	532	19,880
1953 .. ..	10,556	5,533	2,723	348	924	538	20,602
1954 .. ..	10,962	5,593	2,879	309	1,007	573	21,323

(a) Year ended 30th June.

## B. INSTITUTIONS.

### § 1. General.

In Australia, institutions related to public health may be classified to three groups, (a) State; (b) public; and (c) private. To the first group belong those institutions wholly provided for by the State, such as the principal mental hospitals in the various States and the Government and leased hospitals in Western Australia. To the second group belong public institutions of two kinds, namely :—(i) those partially subsidized by the State or by State endowments for maintenance, but receiving also private aid, and (ii) those wholly dependent upon private aid. To the first of these two kinds belong such institutions as the principal metropolitan hospitals; in the second are included institutions established and endowed by individuals for the benefit of the needy generally. All institutions of a private character are included in the third group. A more or less accurate statistical account is possible in classes (a) and (b), but in regard to (c) general tabulation is impossible. Owing to differences in the dates of collection and tabulation it is impossible to bring statistics of some charitable institutions to a common year.

## § 2. Public Hospitals (other than Mental Hospitals).

1. General.—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 hospitals for infectious diseases, tubercular patients, women, children, chronic diseases, etc.

The particulars given herein refer to public hospitals at the latest available date and include all institutions affording hospital relief, whether general or special, with the exception of mental hospitals, repatriation hospitals and private hospitals conducted commercially. The particulars for New South Wales in the following tables relate to public hospitals operating under the control of the Hospitals Commission.

2. Number, Staff and Accommodation, 1953-54.—Details regarding the number of hospitals, staffs and accommodation for the year 1953-54 are given in the following table:—

**PUBLIC HOSPITALS : NUMBER, STAFF AND ACCOMMODATION, 1953-54.**

Particulars.	N.S.W.	Vic.(a)	Q'land.	S. Aust.	W. Aust.	Tas.	N.T.	A.C.T.	Total.
Number of Hospitals	259	114	138	62	95	26	4	1	699
Medical Staff—									
Honorary ..	3,083	1,274	167	400	264	87	..	24	5,299
Salaried ..	718	588	556	122	88	99	13	4	2,188
Total ..	3,801	1,862	723	522	352	186	13	28	7,487
Nursing Staff ..	10,015	6,460	4,291	2,023	2,095	1,046	94	92	26,116
Accommodation—									
Number of beds and cots ..	10,235	11,786	9,071	3,431	4,090	2,226	320	250	50,812

(a) Year ended 31st March, 1954.

The figures for accommodation shown in the table above include particulars, where available, of a considerable number of beds and cots for certain classes of cases in out-door or verandah sleeping places.

3. In-Patients (Cases) Treated.—The following table furnishes particulars of in-patients treated (newborn are excluded).

**PUBLIC HOSPITALS : IN-PATIENTS (CASES) TREATED, 1953-54.**

Particulars.	N.S.W.	Vic.(a)	Q'land.	S. Aust.	W. Aust.	Tas.	N.T.	A.C.T.	Total.
In-patients at beginning of year—									
Males ..	6,102	3,519	3,462	1,094	893	747	88	56	15,961
Females ..	8,178	4,655	3,622	1,316	997	807	97	84	19,756
Total ..	14,280	8,174	7,084	2,410	1,890	1,554	185	140	35,717
Admission and re-admissions during year—									
Males ..	150,308	72,042	81,630	25,926	32,863	12,135	2,595	1,602	379,011
Females ..	234,275	117,127	99,343	33,802	37,444	19,366	2,481	2,722	546,560
Total ..	384,583	189,169	180,973	59,728	70,307	31,501	4,986	4,324	925,571
Total in-patients (cases) treated—									
Males ..	156,410	75,561	85,092	27,020	33,756	12,882	2,593	1,658	391,972
Females ..	242,453	121,782	102,965	35,118	38,441	20,173	2,578	2,806	566,316
Total ..	398,863	197,343	188,057	62,138	72,197	33,055	5,171	4,464	961,288
Discharges—									
Males ..	143,393	68,498	78,497	24,417	31,184	11,541	2,422	1,531	361,483
Females ..	229,039	111,024	97,127	32,807	36,394	18,817	2,388	2,674	533,270
Total ..	372,432	189,522	175,624	57,224	67,578	30,358	4,810	4,205	894,753
Deaths—									
Males ..	6,690	3,749	3,029	1,385	1,263	574	74	55	16,819
Females ..	4,912	3,106	2,152	1,068	760	476	59	51	12,584
Total ..	11,602	6,855	5,181	2,453	2,023	1,050	133	106	29,403
In-patients at end of year—									
Males ..	6,327	3,314	3,566	1,218	1,309	767	97	72	16,670
Females ..	8,502	4,652	3,686	1,243	1,287	880	131	81	20,462
Total ..	14,829	7,966	7,252	2,461	2,596	1,647	228	153	37,132
Average daily number resident ..	13,961	7,291	6,768	2,352	2,511	1,351	212	141	34,587

(a) Year ended 31st March, 1954.

In addition to those admitted to the hospitals there are large numbers of out-patients. During 1953-54 there were 1,083,857 out-patients (cases) treated in New South Wales, 447,838 in Victoria, 544,795 in Queensland, 108,542 in South Australia, 104,986 (estimated) in Western Australia, 106,950 in Tasmania, 55,275 in the Northern Territory and 6,388 in the Australian Capital Territory, making a total for Australia of 2,458,631.

4. **Revenue and Expenditure.**—Details of the revenue and expenditure for the year 1953-54 are shown in the next table. The revenue includes the Commonwealth Hospital Benefits Scheme which operated in Victoria, Queensland, Western Australia and Tasmania from 1st January, 1946, in South Australia from 1st February, 1946, and in New South Wales and the Australian Capital Territory from 1st July, 1946.

**PUBLIC HOSPITALS : REVENUE AND EXPENDITURE, 1953-54.**  
(£'000.)

Particulars.	N.S.W. (a)	Vic.(b)	Q'land.	S. Aust.	W. Aust.	Tas.	N.T.	A.C.T.	Total.
<b>Revenue—</b>									
Government aid ..	14,054	8,466	7,631	2,170	2,845	1,283	..	199	42,775
Commonwealth Hospital Benefits, etc.		2,267	2,173	627	793	214	31	22	
Municipal aid ..	(c)	108	..	118	..	..	..	..	226
Public subscriptions, legacies, etc. ..	115	1,360	..	109	32	1	..	..	1,617
Fees ..	4,785	2,507	532	463	762	250	..	36	9,335
Other ..	293	194	72	206	88	8	..	1	862
<b>Total ..</b>	<b>19,247</b>	<b>14,902</b>	<b>10,408</b>	<b>3,693</b>	<b>4,520</b>	<b>1,756</b>	<b>31</b>	<b>258</b>	<b>54,815</b>
<b>Expenditure—</b>									
Salaries and wages	12,445	6,371	4,652	2,058	2,171	1,095	257	107	29,156
Upkeep and repair of buildings and grounds ..	697	339	169	167	217	29	88	8	1,714
All other ordinary	5,942	4,716	3,122	1,099	1,281	587	50	76	16,873
Capital(d) ..	(e)	3,479	1,624	369	592	..	12	66(f)	6,142
<b>Total ..</b>	<b>19,084</b>	<b>14,905</b>	<b>9,567</b>	<b>3,693</b>	<b>4,261</b>	<b>1,711</b>	<b>407</b>	<b>257</b>	<b>53,885</b>

(a) Excludes loan receipts and expenditure. (b) Year ended 31st March, 1954. (c) Included in "Other". (d) Includes such items as Purchases of Land, Cost of New Buildings and Additions to Buildings. (e) Not available. (f) Incomplete.

5. **Summary, 1938-39 and 1950-51 to 1953-54.**—A summary, for the years 1938-39 and 1950-51 to 1953-54, 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. The figures relate to both general and special hospitals.

**PUBLIC HOSPITALS : AUSTRALIA.**

Particulars.	1938-39.	1950-51.	1951-52.	1952-53.	1953-54.
Hospitals .. ..	563	664	675	694	699
Medical Staff .. ..	4,059	6,424	6,889	7,246	7,487
Nursing Staff .. ..	13,582	23,055	24,556	25,940	26,116
Beds and cots .. ..	35,711	46,417	47,328	50,076	50,812
Admissions during year ..	527,055	835,022	863,058	905,492	925,571
Total in-patients (cases) treated .. ..	552,051	867,721	896,020	939,856	961,288
Out-patients (cases) (a) ..	1,272,147	2,206,499	2,286,183	2,422,302	2,458,631
Deaths .. ..	23,372	28,648	28,746	28,604	29,403
Average daily no. resident ..	25,608	33,050	33,552	34,552	34,587
Revenue .. .. £	7,106,642	32,406,461	41,216,677	51,141,059	54,814,436
Expenditure .. .. £	6,351,055	32,582,450	43,327,700	50,541,100	53,884,574

(a) Partly estimated.



### § 3. Leper Hospitals.

Isolation hospitals for the care and treatment of lepers have been established in New South Wales (Little Bay); Queensland (Peel Island, near Brisbane, and Fantome Island, North Queensland); Western Australia (Derby); and the Northern Territory (East Arm Settlement, near Darwin). At the end of 1954 there were 6 cases in residence at Little Bay, 24 at Peel Island, 49 at Fantome Island, 245 at Derby, 195 at East Arm Settlement, 3 in Victoria and 6 cases at Wooroloo, Western Australia. Of the 528 cases, 472 were full-blood aborigines, 14 half-caste aborigines, 2 Asians and 40 Europeans.

### § 4. Mental Hospitals.

1. *General.*—The methods of compiling statistics of mental diseases are fairly uniform throughout the States, but there is an element of uncertainty about possible differences in diagnosis in the early stages of the disease. The figures for the States cannot be brought to a common year; consequently the following particulars relate to a combination of calendar and financial years. Licensed houses are included in all particulars excepting revenue and expenditure for New South Wales. The figures exclude those of reception houses and observation wards in gaols. In New South Wales the expenditure includes the cost of Broken Hill patients treated in South Australian mental hospitals.

2. *Hospitals, Staff, etc., 1953-54.*—Particulars regarding the number of hospitals, the medical and nursing staffs, and accommodation are given in the following table for the year 1953-54 :—

MENTAL HOSPITALS : NUMBER, STAFF, ACCOMMODATION, 1953-54.(a)

Particulars.	N.S.W.	Vic.	Q'land. (b)	S. Aust.	W. Aust.	Tas.	Total.
Number of Hospitals .. ..	13	10	4	2	4	1	34
Medical Staff—							
Males .. ..	36	64	{ 10 1	12	5	3	140
Females .. ..	9						
Total .. ..	(c) 45	64	11	12	5	3	140
Nursing Staff and Attendants—							
Males .. ..	984	873	496	191	187	106	2,837
Females .. ..	985	827	348	208	98	112	2,578
Total .. ..	1,969	1,700	844	399	285	218	5,415
Accommodation—							
Number of beds and cots ..	12,398	7,123	4,553	2,624	1,611	780	29,089

(a) The figures relate to years ended as follows :—New South Wales, Queensland, South Australia and Tasmania—30th June, 1954; Victoria and Western Australia—31st December, 1953. (b) Includes the Epileptic Home. (c) In addition there are 59 visiting specialists who are paid for their services.

3. *Patients, 1953-54.*—Information regarding patients treated, deaths, etc., for 1953-54 is given in the following table :—

MENTAL HOSPITALS : PATIENTS, DEATHS, ETC., 1953-54.(a)

Particulars.	N.S.W.	Vic.	Q'land. (b)	S. Aust.	W. Aust.	Tas.	Total
Number of distinct persons treated during year (c)—							
Males .. ..	7,306	4,283	2,916	1,515	1,109	523	17,682
Females .. ..	7,851	4,842	2,779	1,537	786	577	18,372
Total .. ..	15,157	9,125	5,695	3,082	1,895	1,100	36,054

(a) See footnote (a) to previous table.  
transfers to other institutions.

(b) Includes the Epileptic Home.

(c) Excludes

MENTAL HOSPITALS: PATIENTS, DEATHS, ETC., 1953-54(a)—*continued*.

Particulars.	N.S.W.	Vic.	Q'land. (b)	S. Aust.	W. Aust.	Tas.	Total.
Number of patients at beginning of year—							
Males .. .. .	6,334	3,553	2,321	1,268	987	343	14,806
Females .. .. .	6,645	4,154	2,233	1,266	679	407	15,384
Total .. .. .	12,979	7,707	4,554	2,534	1,666	750	30,190
Admissions and re-admissions (excluding absconders retaken and transfers from other hospitals)—							
Males .. .. .	972	730	595	277	122	180	2,876
Females .. .. .	1,206	688	546	271	107	170	2,988
Total .. .. .	2,178	1,418	1,141	548	229	350	5,864
Discharges (including absconders not retaken)—							
Males .. .. .	483	374	318	114	42	133	1,464
Females .. .. .	587	300	401	131	24	121	1,564
Total .. .. .	1,070	674	719	245	66	254	3,028
Deaths—							
Males .. .. .	421	257	188	102	61	27	1,056
Females .. .. .	497	258	167	91	47	48	1,108
Total .. .. .	918	515	355	193	108	75	2,164
Number of patients at end of year—							
Males .. .. .	6,402	3,652	2,410	1,329	1,006	363	15,162
Females .. .. .	6,767	4,284	2,211	1,315	715	408	15,700
Total .. .. .	13,169	7,936	4,621	2,644	1,721	771	30,862
Average daily number resident—							
Males .. .. .	5,448	3,256	2,259	1,309	947	359	13,578
Females .. .. .	6,160	3,713	2,068	1,223	635	411	14,210
Total .. .. .	11,608	6,969	4,327	2,532	1,582	770	27,788
Number of patients at end of year per 1,000 of population—							
Males .. .. .	3.72	3.01	3.56	3.29	3.08	2.31	3.37
Females .. .. .	3.97	3.56	3.44	3.34	2.34	2.69	3.57
Total .. .. .	3.85	3.28	3.51	3.32	2.72	2.50	3.47
Average number of patients resident in mental hospitals per 1,000 of population—							
Males .. .. .	3.18	2.71	3.38	3.29	2.95	2.28	3.04
Females .. .. .	3.64	3.11	3.27	3.15	2.11	2.71	3.26
Total .. .. .	3.41	2.91	3.33	3.22	2.55	2.49	3.15

(a) See footnote (a) to previous table.

(b) Includes the Epileptic Home.

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.

4. Revenue and Expenditure, 1953-54.—The revenue of Government mental hospitals is small in comparison with their cost, and consists chiefly of patients' fees, and mental

institution benefits. The agreements made between the Commonwealth and the States under the 1948 Mental Institution Benefits Act, lapsed in the latter half of 1954.

Under the State Grants (Mental Institutions) Act, No. 67, 1955, the Commonwealth is authorised to make payments to the States of amounts equal to one-third of the amounts expended by the States for or in connexion with the buildings or equipment of mental institutions on or after 1st July, 1955. The Commonwealth grants are limited to the following maximum amounts—

New South Wales, £3,830,000; Victoria, £2,740,000; Queensland, £1,460,000; South Australia, £895,000; Western Australia, £720,000; Tasmania, £355,000; Total, £10,000,000.

The proportion of expenditure borne by the State amounts to about 90 per cent. In New South Wales the expenditure includes the cost of Broken Hill patients treated in South Australian mental hospitals :—

MENTAL HOSPITALS : FINANCES, 1953-54.

(£.)

Particulars.	N.S.W.	Vic.	Q'land. (a)	S. Aust.	W. Aust.	Tas.	Total.
Revenue (excluding Government Grants)—							
Fees of patients .. ..	210,702	..	11,213	39,173	31,705	13,428	306,221
Mental Institution .. ..	..	..	..	..	..	..	..
Benefits .. ..	209,772	156,871	..	36,257	18,280	..	421,180
Other .. ..	(b) 88,798	19,315	4,133	40,420	7,789	825	161,280
Total .. ..	509,272	176,186	15,346	115,850	57,774	14,253	888,681
Expenditure—							
Salaries and wages .. ..	1,936,789	1,633,554	744,381	427,116	332,620	191,736	5,266,196
Upkeep and repair of buildings, etc. .. ..	192,762	282,098	12,611	45,168	30,781	6,010	569,430
All other .. ..	1,482,440	1,338,080	556,033	298,025	200,071	98,269	3,972,918
Capital (c) .. ..	562,390	1,015,262	93,490	152,955	49,255	..	1,872,452
Total .. ..	4,174,381	4,268,994	1,406,515	922,364	612,727	296,015	11,680,996
Expenditure per average daily resident .. ..	£359/12/3	£612/11/5	£325/1/1	£364/5/8	£387/6/3	£384/8/8	£420/7/3

(a) Includes the Epileptic Home. (b) Includes £33,181 Commonwealth Hospital Benefits. (c) Capital expenditure includes Purchases of Land, Cost of New Buildings, and Additions to Buildings.

5. Summary for Australia, 1938-39 and 1950-51 to 1953-54.—The following table gives a summary relating to mental hospitals in Australia during 1938-39 and for each of the years 1950-51 to 1953-54 :—

MENTAL HOSPITALS : SUMMARY. AUSTRALIA.

Particulars.	1938-39.	1950-51.	1951-52.	1952-53.	1953-54.
Hospitals .. ..	35	33	33	33	34
Medical Staff .. ..	92	138	167	149	140
Nursing Staff and Attendants .. ..	4,922	4,826	4,985	5,132	5,415
Beds .. ..	25,654	27,512	27,573	28,546	29,089
Admissions .. ..	3,757	5,325	5,508	5,753	5,864
Discharged as recovered, relieved, etc. .. ..	1,800	2,356	2,711	2,823	3,028
Deaths .. ..	1,632	1,959	2,166	2,303	2,164
Patients at end of year .. ..	26,509	28,932	29,563	30,190	30,862
Average daily resident .. ..	24,063	25,996	26,489	27,259	27,788
Revenue (excluding Government Grants) .. ..	£ 262,817	811,495	861,083	866,561	888,681
Expenditure—Total .. ..	£ 1,903,817	6,449,862	8,749,187	10,713,747	11,680,996
„ —Per average daily resident .. ..	£79/2/4	£248/2/2	£330/5/11	£393/0/7	£420/7/3

6. Number of Mental Patients, 1938-39 and 1950-51 to 1953-54.—The total number returned as under treatment shows slight increases during the period but the proportion to total population shows a slight decline. 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, does not necessarily imply an actual increase in mental diseases.

## MENTAL PATIENTS IN HOSPITALS.

State.	1938-39.	1950-51.	1951-52.	1952-53.	1953-54.
NUMBER.					
New South Wales .. ..	11,678	12,505	12,873	12,979	13,169
Victoria .. ..	7,326	7,472	7,568	7,707	7,936
Queensland(a) .. ..	3,650	4,295	4,388	4,554	4,621
South Australia .. ..	1,747	2,411	2,425	2,534	2,644
Western Australia .. ..	1,477	1,567	1,599	1,666	1,721
Tasmania .. ..	631	682	710	750	771
Australia .. ..	26,509	28,932	29,563	30,190	30,862
PER 1,000 OF POPULATION.					
New South Wales .. ..	4.25	3.81	3.85	3.84	3.85
Victoria .. ..	3.92	3.34	3.29	3.26	3.28
Queensland(a) .. ..	3.59	3.50	3.48	3.53	3.51
South Australia .. ..	2.93	3.29	3.21	3.27	3.32
Western Australia .. ..	3.16	2.74	2.71	2.72	2.72
Tasmania .. ..	2.66	2.38	2.40	2.47	2.50
Australia .. ..	3.81	3.47	3.46	3.46	3.47

(a) Includes the Epileptic Home.

The difference between States in the number of mental patients in hospitals per 1,000 of population may to some extent be the result of differences in classification.

## CHAPTER XV.

### WELFARE SERVICES.

#### A. COMMONWEALTH SOCIAL SERVICE BENEFITS.

##### § 1. Introduction.

Commonwealth social service benefits are provided under the Social Services Act 1947-1955 which came into operation on 1st July, 1947. This Act provided for the repeal of the existing laws relating to age and invalid pensions, maternity allowances, child endowment, widows' pensions and unemployment and sickness benefits, and for the immediate re-enactment of the necessary provisions for the grant and payment of these benefits under a unified law. Its more important effects were the elimination of obsolete provisions and of anomalies, the amalgamation of like provisions, and the modernizing and grouping of the legislation so that it presented a symmetrical part of a well-defined pattern of social security.

##### § 2. Commonwealth Expenditure on Social and Health Services.

The Commonwealth expenditure in each State and Territory on Social and Health Services for the year 1954-55 is shown in the following table:—

**COMMONWEALTH EXPENDITURE ON SOCIAL AND HEALTH BENEFITS, 1954-55.**  
(£'000.)

Social and Health Services.	N.S.W.	Vic.	Qld.	S.A.	W.A.	Tas.	N.T.	A.C.T.	Over-seas.	Total.
Age and Invalid Pensions	36,874	21,527	13,027	7,655	5,759	2,999	26	79	60	88,006
Child Endowment .. ..	19,422	13,735	8,249	4,714	4,069	2,032	133	170	6	52,530
Commonwealth Rehabilitation Service .. ..	102	159	50	75	54	11	..	..	..	451
Funeral Benefits .. ..	128	78	43	24	21	10	..	..	..	304
Maternity Allowances ..	1,250	892	513	297	261	128	7	13	1	3,362
Unemployment and Sickness Benefits—										
Unemployment .. ..	254	99	270	12	27	16	..	1	..	679
Sickness .. ..	673	387	255	137	99	52	2	3	..	1,608
Special(d) .. ..	126	123	58	16	17	12	..	1	..	353
Widows' Pensions .. ..	2,818	1,622	1,179	533	451	238	3	9	9	6,862
National Health Services—										
Hospital Benefits .. ..	4,000	2,179	1,312	711	745	291	33	19	1	9,321
Medical Benefits .. ..	1,855	1,072	396	399	413	75	..	..	..	4,210
Medical Benefits for Pensioners .. ..	1,186	584	309	222	165	46	..	4	..	2,516
Nutrition of Children ..	981	497	322	155	126	144	1	11	..	2,237
Pharmaceutical Benefits ..	3,891	2,579	1,208	817	686	208	..	4	..	(b)9,445
Pharmaceutical Benefits for Pensioners .. ..	619	263	188	118	82	25	..	..	..	1,295
Miscellaneous .. ..	46	32	61	10	15	17	7	..	..	(c) 258
Mental Institution Benefits ..	106	54	37	16	9	3	..	..	..	225
Tuberculosis Campaign(d)	2,177	1,506	749	480	484	242	4	15	..	5,657
<b>Total .. ..</b>	<b>76,508</b>	<b>47,388</b>	<b>28,256</b>	<b>16,391</b>	<b>13,483</b>	<b>6,549</b>	<b>216</b>	<b>329</b>	<b>77</b>	<b>189,319</b>

(a) Includes payments to migrants. (b) Includes £52,000 for administration. (c) Includes £70,000 for administration. (d) Includes allowances and reimbursements to the States.

The amount of Commonwealth expenditure on Social and Health Services, excluding cost of administration, during the years 1938-39 and 1950-51 to 1954-55 for Australia, is shown in the following table.

**COMMONWEALTH EXPENDITURE ON SOCIAL AND HEALTH SERVICES.**  
(£'000.)

Social and Health Services.	1938-39.	1950-51.	1951-52.	1952-53.	1953-54.	1954-55.
Age and Invalid Pensions ..	15,992	49,520	59,788	72,424	81,293	88,006
Child Endowment ..	..	43,585	46,625	53,244	50,761	52,530
Commonwealth Rehabilitation Service ..	..	310	361	454	429	451
Funeral Benefits ..	..	254	276	270	288	304
Maternity Allowances ..	436	3,037	3,157	3,248	3,226	3,362
Unemployment and Sickness Benefits ..	..	1,037	1,008	6,255	4,543	2,640
Widows' Pensions ..	..	4,828	5,615	6,334	6,626	6,862
National Health Services—	..	..	..	..	..	..
Hospital Benefits ..	..	6,536	6,683	7,223	8,330	9,321
Medical Benefits ..	..	..	..	..	1,434	4,210
Medical Benefits for Pensioners ..	..	75	1,036	1,740	2,115	2,516
Nutrition of Children ..	..	36	815	1,521	1,999	2,237
Pharmaceutical Benefits ..	..	2,930	7,327	6,487	8,219	9,145
Pharmaceutical Benefits for Pensioners ..	..	..	358	729	1,011	1,295
Miscellaneous ..	..	131	162	183	216	258
Mental Institution Benefits ..	..	406	518	523	495	225
Rental Rebates under Housing Agreement ..	..	3	..	..	..	..
Tuberculosis Campaign(a) ..	..	2,275	3,879	4,876	5,580	5,657
<b>Total ..</b>	<b>16,428</b>	<b>114,983</b>	<b>137,608</b>	<b>165,511</b>	<b>176,565</b>	<b>189,391</b>

(a) Includes allowances and reimbursements to States for the maintenance of Hospitals.

### § 3. Age and Invalid Pensions.

Age pensions are payable to men, 65 years of age and over, and women, 60 years of age and over, who have resided in Australia continuously for at least 20 years which need not be immediately prior to the date of claim for pension. Absence in a Territory of the Commonwealth does not break continuity of residence. Any periods of absence during which a person's home remained in Australia, and absences in certain other circumstances, and in the case of a claimant who has had at least 18 years' residence, occasional absences aggregating up to 2 years plus 6 months for every year of residence in excess of 18 years are counted as residence.

Invalid pensions are payable to persons, 16 years of age and over, who have resided in Australia for a continuous period of five years, and who are permanently incapacitated for work or permanently blind. For the purpose of the residential qualification, the position in regard to absences is the same as for age pensioners. The degree of permanent incapacity has to be not less than 85 per cent. and the claimant must have become permanently incapacitated or permanently blind while in Australia or during a temporary absence from Australia, but this condition is waived if he has resided in Australia for not less than 20 years (continuous or otherwise), which may be partly before or partly after the occurrence of the permanent incapacity or blindness.

All permanently blind persons qualified in other respects, are eligible for a pension of £4 a week free of the means test, and any blind pensioner who has a child under 16 years of age is entitled to receive a child's allowance of 11s. 6d. per week in addition to the pension.

A pension is not payable to:—an alien (except a woman who, prior to marriage, was a British subject); a person who has directly or indirectly deprived himself of property or income in order to qualify for a pension; a person in receipt of income of £390 per annum (£780 per annum for a married couple); a person who owns property, apart from his permanent home and other exempt property, to the net value of more than £1,750 (£3,500 for married persons); a person who is not deserving of a pension; a person who is not of good character or who has deserted his wife (or her husband) or children for six months immediately preceding the date of the claim (age pension only).

Pensions may be granted to aboriginal natives of Australia who have been granted exemption from State control laws, or who, in any State where exemption is not provided for, are considered suitable persons to receive pensions.

The maximum rate of pension from 27th October, 1955 is £208 per annum.

Permissible income is £182 per annum. Any income in excess of this amount is deducted from the pension. The income of a married person is deemed to be half the total income of husband and wife except where they are legally separated or in certain other circumstances. A married couple where only one is a pensioner may have an income of £7 a week between them without reduction of the pension. "Income" does not include gifts or allowances from children or parents, benefits from friendly societies, payments in respect of illness, infirmity or old-age from any trade union, the value of State food relief, child endowment or other payments for or in respect of children, Commonwealth Hospital Benefits, Pharmaceutical Benefits and interest on Commonwealth war gratuities.

The rate of pension is reduced by £1 per annum for every complete £10 of the value of property which exceeds £200 up to £1,750. The value of property of a married person is deemed to be half the total value of property of husband and wife.

The value of a home, furniture and personal effects, the surrender value (up to £750) of any life assurance policies, the capital value of any life interest, annuity or contingent interest, the value of any property from the estate of a deceased person which has not been received and the amount of any Commonwealth war gratuity are disregarded in the computation of property. From October, 1954 income received from property owned by a pensioner or his spouse and income such as dividends on shares and interest from bonds or on money in a bank or investments, is also disregarded.

A pensioner who is an inmate of a benevolent home is paid £72 16s. per annum of his pension and the balance of the pension is paid to the institution for his maintenance.

An allowance, not exceeding £91 per annum, may be granted to the wife of an invalid pensioner (or an age pensioner who is permanently incapacitated for work or permanently blind) if she is living with her husband and is not receiving an age or invalid pension or a service pension. The rate of the allowance is affected by income and property on the same basis as an age or invalid pension.

An allowance of £29 18s. per annum in respect of one child under the age of 16 years may be granted to the wife of an invalid pensioner (or age pensioner who is permanently incapacitated for work or permanently blind) if she is living with her husband and is not receiving a service pension. This child's allowance is additional to the wife's allowance and may also be granted where the wife is ineligible for a wife's allowance on account of income or property. The allowance may also be granted to any invalid pensioner who has the custody, care and control of a child under the age of 16 years, but where both husband and wife are invalid pensioners (living together) the child's allowance is payable only to the wife.

The rehabilitation service has been set up to help persons who are too disabled to work or who have had to give up their employment because of sickness or injury. It aims at restoring disabled persons so they can earn a living and lead useful lives. They are given suitable treatment and training, the cases selected being those in which the person's disability is remediable and where there are reasonable prospects of his engaging in a suitable vocation within three years after the commencement of treatment or training.

The benefits are available to invalid pensioners, persons receiving unemployment or sickness benefits or tuberculosis allowances. The treatment of certain other disabled persons may also be approved by the Director-General of Social Services. During the treatment stage of rehabilitation the payment of pension or benefit is continued. If, however, vocational training is provided the pension or benefit is suspended and the trainee is paid instead a rehabilitation allowance equivalent to the amount of invalid pension for which he is qualified, or which would be payable if he were qualified, together with the amount of any wife's and child's allowances, plus a training allowance of £1 10s. per week.

Living-away-from-home allowances, where necessary, are paid by the Commonwealth. 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 not more than £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, his right to the continuance of his pension or benefit is not prejudiced.

The number of persons receiving benefits who were examined, accepted, trained and placed in employment during the years 1953-54 and 1954-55 are shown in the following table:—

#### COMMONWEALTH REHABILITATION SERVICE: OPERATIONS, AUSTRALIA.

Type.		Examined.	Accepted.	Completed Training.	Placed in Employment.	
					After Training.	Without Training.
Invalid Pensioners	1953-54	9,764	290	118	85	91
	1954-55	10,724	337	112	101	104
Unemployment and Sickness Beneficiaries	1953-54	10,116	784	124	111	537
	1954-55	9,933	829	120	98	581
Recipients of Tuberculosis Allowances	1953-54	480	266	152	153	25
	1954-55	1,085	344	177	175	54
Special Cases	1954-55	71	73	..	..	55

From 1st July, 1943 a funeral benefit of up to £10 has been 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. This provision has been extended to include payment in respect of the death of a person who at the time of his death was receiving, or was a claimant for, a tuberculosis allowance, if he was otherwise 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. A funeral benefit is not payable to a person administering a contributory funeral benefit fund.

The following statement shows the rates of pension at 1st July, 1909 and the rates as they have been varied since that date and are subject to income and property qualifications:—

#### MAXIMUM RATES OF PENSION PAYABLE.

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.	
	s. d.	£ s.	£ s.		s. d.	£ s.	£ s.
1st July, 1909 ..	10 0	26 0	52 0	1st October, 1942(b) ..	25 6	66 6	98 16
12th October, 1916 ..	12 6	32 10	58 10	7th January, 1943(b) ..	26 0	67 12	100 2
1st January, 1920 ..	15 0	39 0	65 0	1st April, 1943(b) ..	26 6	68 18	101 8
13th September, 1923 ..	17 6	45 10	78 0	19th August, 1943(b) ..	27 0	70 4	102 14
8th October, 1925 ..	20 0	52 0	84 10	25th November, 1943(b)(d) ..	26 6	68 18	101 8
23rd July, 1931 ..	17 6	45 10	78 0	25th November, 1943(d) ..	27 0	70 4	102 14
13th October, 1932(a) ..	15 0	39 0	71 10	5th July, 1945 ..	32 6	84 10	117 0
26th October, 1933 ..	17 6	45 10	78 0	13th August, 1946 ..	32 6	84 10	136 10
4th July, 1935(b) ..	18 0	46 16	79 6	3rd July, 1947 ..	37 6	97 10	149 10
24th September, 1936 ..	19 0	49 8	81 18	21st October, 1948 ..	42 6	110 10	188 10
9th September, 1937 ..	20 0	52 0	84 10	2nd November, 1950 ..	50 0	130 0	208 0
26th December, 1940 ..	21 0	54 12	87 2	1st November, 1951 ..	60 0	156 0	234 0
3rd April, 1941(b) ..	21 6	55 18	88 8	2nd October, 1952 ..	67 6	175 10	253 10
11th December, 1941 ..	23 6	61 2	93 12	29th October, 1953 ..	70 0	182 0	286 0
2nd April, 1942(b) ..	24 0	62 8	94 18	14th October, 1954 ..	70 0	182 0	364 0
2nd April, 1942(c) ..	25 0	65 0	97 10	27th October, 1955 ..	80 0	208 0	390 0

(a) Additional pension of £6 ros. per annum (2s. 6d. per week) was payable to a pensioner with no income. Pensioners with income of less than 2s. 6d. per week were paid additional pension of 2s. 6d. less the amount of income. (b) Variation according to rise in retail price index-number. (c) Increase paid on 9th July, 1942, retrospective to 2nd April, 1942. (d) Rate restored to £70 4s. per annum under National Security (Supplementary) Regulation 112A—Statutory Rule 315 of 1943.

NOTE.—Provision for variations according to retail price index-numbers was repealed on 6th April, 1944.



At 30th June, 1953, there were 374,791 age pensions in force. During 1953-54 54,204 age pensions claims were granted and 2,653 pensioners were transferred from the invalid pension list, while 33,864 pensions expired through cancellations and deaths. The net increase for the year was 22,993 and the number in force at 30th June, 1954 was 397,784.

Of the age pensioners at 30th June, 1954, 138,055 (or 35 per cent.) were males, and 259,729 (or 65 per cent.) were females.

The recorded ages of the 54,204 persons (20,924 males and 33,280 females) to whom age pensions were granted during the year 1953-54 varied considerably, ranging from 7,642 at age 60 to three at age 99, but 37,079 were in the 60-69 years age-group. The conjugal condition of these new pensioners was as follows:—Males—single, 2,320; married, 15,000; and widowed, 3,604: Females—single, 4,255; married, 16,862; and widowed, 12,163.

The number of invalid pensioners increased from 70,232 in 1952-53 to 73,732 in 1953-54, an increase of 3,500. Total pensions granted during 1953-54 were 11,350 while 5,197 pensions ceased through cancellations or deaths and 2,653 were transferred to the age pension list.

Of the 73,732 persons in receipt of invalid pensions at 30th June, 1954, 41,996 (or 57 per cent.) were males and 31,736 (or 43 per cent.) were females.

The recorded ages of the 11,350 persons (6,903 males and 4,447 females) to whom invalid pensions were granted during 1953-54 varied from 16 to 98, 5,484 (or 48 per cent.) being in the 45-59 years age-group.

The conjugal condition of persons to whom invalid pensions were granted during the year was as follows:—Males—single, 2,361; married, 4,107; and widowed, 435: Females—single, 1,920; married, 1,785; and widowed, 742.

## AGE AND INVALID PENSIONS, 1953-54.

Particulars.	N.S.W. (a)	Vic.	Q'land.	S. Aust. (b)	W. Aust.	Tas.	Total.
Age Pensions in force—							
Males .. .. .	62,230	29,799	20,471	11,180	9,950	4,423	138,055
Females .. ..	102,476	68,411	37,890	25,173	17,298	8,481	259,729
Persons .. ..	164,706	98,210	58,361	36,353	27,248	12,906	397,784
Masculinity (c) ..	60.73	43.56	54.03	44.41	57.52	52.18	53.15
Invalid Pensions in force—							
Males .. .. .	21,215	8,977	6,031	2,256	2,192	1,323	41,996
Females .. ..	14,396	6,905	4,991	2,255	1,909	1,280	31,736
Persons .. ..	35,611	15,882	11,022	4,511	4,101	2,603	73,732
Masculinity (c) ..	147.37	130.01	120.84	100.04	114.82	103.52	132.33
Age and Invalid Pensioners—							
Total Payments .. £'000.(d)	34,042	19,978	12,017	7,075	5,375	2,794	(e) 81,293
Annual Liability at 30th June, 1954—							
Age Pensioners .. £'000.	28,733	17,192	10,203	6,310	4,746	2,179	69,363
Invalid Pensioners .. ..	6,385	2,780	1,965	803	728	454	13,115
Total .. .. .	£'000. 35,118	19,972	12,168	7,113	5,474	2,633	82,478

(a) Includes Australian Capital Territory. (b) Includes Northern Territory. (c) Number of males to each 100 females. (d) Includes amounts paid to Benevolent Homes for the maintenance of 6,493 pensioners and 12,362 allowances to wives of invalid pensioners. (e) Includes £12,000 paid abroad.

The number of age pensioners increased by 27,772 during the year 1954-55 to 425,556, comprising 147,750 males (or 34 per cent.) and 277,806 females (or 66 per cent.), the recorded ages of those age pensions granted during the year ranging from 7,914 at age 60 to one at 100, 39,929 being in the 60-69 years age-group.

The conjugal condition of the new pensioners was as follows:—Males—single, 2,389; married, 16,887; and widowed, 3,995: Females—single, 5,185; married, 18,542; and widowed, 14,800.

The number of invalid pensioners increased by 4,766 during the year 1954-55 to 78,498, comprising 44,535 males (or 57 per cent.) and 33,963 females (or 43 per cent.), while the recorded ages of the new pensioners varied from 524 at age 16 to one at 97, 5,795 (or 46 per cent.) being in the 45-59 years age-group.

The conjugal condition of the new pensioners was as follows:—Males—single, 2,176; married, 4,199; and widowed, 396: Females—single, 1,991; married, 2,059; and widowed, 977.

## AGE AND INVALID PENSIONS, 1954-55.

Particulars.	N.S.W.	Vic.	Qld.	S.A.	W.A.	Tas.	N.T.	A.C.T.	Total.
Age Pensioners in force—									
Male .. .. .	64,312	31,495	24,667	11,963	10,569	4,520	71	153	47,750
Females .. .. .	109,584	74,911	38,170	27,407	18,264	9,159	52	259	277,806
Persons .. .. .	173,896	106,406	62,837	39,370	28,833	13,679	123	412	425,556
Masculinity (a) .. .. .	58.69	42.04	64.62	43.65	57.87	49.35	136.54	59.07	53.18
Invalid Pensioners in force—									
Male .. .. .	22,548	9,542	6,398	2,334	2,344	1,325	12	32	44,535
Females .. .. .	15,611	7,532	5,240	2,333	1,847	1,356	9	35	33,963
Persons .. .. .	38,159	17,074	11,638	4,667	4,191	2,681	21	67	78,498
Masculinity (a) .. .. .	144.44	126.69	122.10	100.04	126.91	97.71	133.33	91.43	131.13
Age and Invalid Pensioners—									
Total Payments.. £'000.(b)	36,874	21,527	13,027	7,655	5,759	2,999	26	79	88,006
Annual Liability at 30th June, 1955—									
Age Pensioners .. £'000.	30,755	18,526	10,931	6,813	5,026	2,398	(d)	(e)	74,449
Invalid Pensioners .. „	6,887	2,999	2,085	837	749	483	(d)	(e)	14,040
Total .. £'000.	37,642	21,525	13,016	7,650	5,775	2,881	(d)	(e)	88,489

(a) Number of males to each 100 females. (b) Includes amounts paid to Benevolent Homes for the maintenance of 6,132 pensioners and 12,555 allowances to wives of invalid pensioners. (c) Includes £60,000 paid abroad. (d) Included with South Australia. (e) Included with New South Wales.

The actual sum disbursed in age and invalid pensions in 1953-54 including the amount paid to Homes for the maintenance of pensioners and allowances to wives of invalid pensioners, was £9 2s. 8d. per head of population as compared with £9 13s. 8d. in 1954-55.

The following table gives details of age and invalid pensions for the years 1938-39 and 1950-51 to 1954-55.—

## AGE AND INVALID PENSIONS : SUMMARY, AUSTRALIA.

Year ended 30th June—	Pensioners at End of Year.				Amount Paid in Pensions.	Total Payment to Pensioners and Homes.(b)	Average Fortnightly Pension as at 30th June.		
	Age.		Invalid.	Total.			Age.	Invalid.	Total.
	No.	Rate per 1,000 persons eligible on age qualifi- cation. (a)							
	No.		No.	No.	£	£	s. d. (c)	s. d. (c)	s. d. (c)
1939 ..	232,836	376	88,812	321,648	15,798,038	15,991,782			38 5
1951 ..	342,806	396	68,918	411,724	49,307,690	49,520,285	95 5	96 8	95 7
1952 ..	352,049	397	67,963	420,012	59,512,514	59,788,003	114 2	116 4	114 6
1953 ..	371,701	410	70,232	445,023	72,087,074	72,423,900	128 4	130 11	128 9
1954 ..	397,784	423	73,732	471,516	80,898,725	81,293,003	134 2	136 10	134 7
1955 ..	425,556	439	78,498	504,054	87,614,112	88,006,077	134 7	137 7	135 1

(a) Based on an estimate of the aggregate of males aged 65 years and over and females aged 60 years and over at 30th June of each year. (b) Includes allowances to wives of invalid pensioners payable from the 8th July, 1943, but excludes funeral benefits in respect of deaths of pensioners, £243,058 in 1950-51; £275,850 in 1951-52; £270,448 in 1952-53; £287,798 in 1953-54; and £303,784 in 1954-55. (c) Not available.

## § 4. Maternity Allowances.

A maternity allowance is payable to a woman who, at the date of giving birth to a child, is residing in Australia or is in Australia and intends to remain. The allowance is payable in respect of a birth which occurs in Australia or on board a ship proceeding from a port in Australia or a Territory of the Commonwealth to another port in Australia or a Territory of the Commonwealth, or on board a ship proceeding to Australia, provided the mother receives no maternity benefit in respect of the birth from the country whence she came. 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 period of intra-uterine life of the child was at least 5½ calendar months. There is no means test.

Payment may be made to an alien mother if she was a British subject prior to her marriage, or if she or her husband resided in Australia for at least twelve months immediately prior to the birth of the child. Payment in respect of a birth which occurs within twelve months of the mother's arrival in Australia may be made at the end of that time, but may be made immediately if the mother is likely to remain in Australia, and to Australian residents who are temporarily abroad.

The allowances may be paid only to those aboriginal natives of Australia who have been granted exemption from State control laws or who, in any State where exemption is not provided for, are considered suitable persons to receive the allowance.

From 1st July, 1947, the amount of a maternity allowance has been £15 where there are no other children; £16 where there are one or two other children; and £17 10s. where there are three or more other children. "Other children" means children under the age of sixteen years who were in the custody, care and control of the claimant on the date of the birth in respect of which the claim is made. The amount payable is increased by £5 in respect of each additional child born at a birth. Payment of £5 on account of a maternity allowance may be made available, upon application, within a period of four weeks prior to the expected date of birth. The balance is payable immediately after the birth.

The following table gives details of the maternity allowance claims paid and rejected and of the amount paid for the years 1938-39 and 1950-51 to 1954-55 and since the inception of maternity allowances in 1912-13:—

#### MATERNITY ALLOWANCES: SUMMARY, AUSTRALIA.

Particulars.		1938-39.	1950-51.	1951-52.	1952-53.	1953-54.	1954-55.	Aggregate 1912-13 to 1954-55.
Claims Paid ..	No.	80,916	191,587	195,722	203,042	199,814	208,179	5,588,659
Claims Rejected ..	"	6,272	306	180	190	229	204	111,912
Amount Paid ..	£	436,614	3,057,519	3,156,992	3,248,305	3,225,919	3,362,307	51,805,516

NOTE.—The means test was abolished from 1st July, 1943.

The following table shows the number of maternity allowance claims paid in each State or Territory during the years 1938-39 and 1950-51 to 1954-55:—

#### MATERNITY ALLOWANCES: NUMBER OF CLAIMS PAID IN EACH STATE.

Year ended 30th June—	N.S.W. (a)	Vic.	Q'land.	S.A. (b)	W.A.	Tas.	N.T.	A.C.T.	Over- seas.	Total.
1939 ..	30,860	20,819	12,880	7,204	5,213	3,940	..	..	..	80,916
1951 ..	72,003	50,211	29,155	17,864	14,986	7,250	..	..	119	191,587
1952 ..	72,685	53,111	30,737	17,350	15,074	7,626	..	..	73	195,722
1953 ..	74,011	55,207	31,058	19,068	15,335	7,983	..	..	90	203,042
1954 ..	72,380	54,210	30,890	18,719	15,803	7,721	..	..	71	199,814
1955 ..	76,614	55,726	31,781	18,506	16,261	7,940	491	787	88	208,179

(a) Includes Australian Capital Territory to June, 1954.

(b) Includes Northern Territory to June, 1954.

The following table shows the number of claims paid in each State at the several rates of maternity allowances during the year 1953-54:—

#### MATERNITY ALLOWANCES: NUMBER OF CLAIMS PAID AT EACH RATE, 1953-54.

State.	Single Births.			Multiple Births.						Total Claims Paid.
				Twins.			Triplets.			
	£15.	£16.	£17 10s.	£20.	£21.	£22 10s.	£25.	£26.	£27 10s.	
New South Wales(a) ..	24,483	34,877	12,208	213	404	186	3	5	..	(c) 72,380
Victoria ..	18,202	26,241	9,077	191	340	159	2	6	1	54,210
Queensland ..	9,315	14,461	6,750	91	160	109	..	3	..	30,886
South Australia(b) ..	5,768	9,417	3,349	54	115	46	..	..	..	18,749
Western Australia ..	4,718	7,915	2,996	37	94	42	..	..	1	15,803
Tasmania ..	2,256	3,579	1,784	22	47	35	..	3	..	7,726
Overseas ..	22	24	2	..	..	..	..	..	..	48
Total ..	64,764	96,514	36,166	608	1,160	577	5	17	2	199,814

(a) Includes Australian Capital Territory.

(b) Includes Northern Territory.

(c) Includes quadruplets, one, £32 10s.

The following table shows the number of claims paid in each State at the several rates of maternity allowances during the year 1954-55 :—

**MATERNITY ALLOWANCES : NUMBER OF CLAIMS PAID AT EACH RATE, 1954-55.**

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 ..	24,780	36,593	14,397	194	445	197	3	4	1	76,614
Victoria ..	18,034	27,288	9,712	154	377	150	..	3	2	55,720
Queensland ..	9,531	14,935	6,994	69	149	98	1	1	4	31,782
South Australia ..	5,588	9,238	3,453	53	130	40	3	1	..	18,506
Western Australia ..	4,808	8,067	3,175	42	116	49	1	3	..	16,261
Tasmania ..	2,269	3,685	1,887	30	40	27	1	..	1	7,940
Northern Territory ..	152	231	89	4	3	2	..	..	..	481
Australian Capital Territory ..	262	390	130	1	3	1	..	..	..	787
Overseas ..	44	33	10	..	..	1	..	..	..	88
Total ..	65,468	100,460	39,847	547	1,263	565	9	12	8	208,179

### § 5. Child Endowment.

Any person who is resident in Australia and has the custody, care and control of one or more children under the age of sixteen years, and an approved institution of which children are inmates shall be qualified to receive an endowment in respect of each child. There is a twelve months residential requirement in respect of a claimant and a child who were not born in Australia, but this is waived if the claimant and the child are likely to remain permanently in Australia. A child born during the mother's temporary absence from Australia is deemed to have been born in Australia. There is no means test.

Endowment may be paid in respect of a child whose father is not a British subject if—the child was born in Australia; the mother is a British subject; and the child is likely to remain permanently in Australia. Endowment is also payable to aboriginal natives of Australia unless they are nomadic, or unless the child concerned is wholly or mainly dependent on the Commonwealth or a State and also to children of members of the Naval, Military or Air Forces of the United Kingdom who are serving with the Australian Forces from the time of arrival of the children in Australia.

From 20th June, 1950, the rate of endowment payable has been (a) where the endowee has the custody of one child only—5s. per week; (b) where the endowee has the custody of two or more children—in respect of the elder or eldest child 5s. per week and in respect of each other child 10s. per week; and (c) in the case of an approved institution the rate is 10s. per week for each child inmate. From 1st July, 1941, the rate of endowment was 5s. per week for each child in excess of one in a family, and for each child under sixteen years in an approved institution. The rate was increased to 7s. 6d. per week from 25th June, 1945, and to 10s. per week from 9th November, 1948. There are provisions to meet cases of families divided by reason of divorce, separation, unemployment, death of a parent or other circumstances.

The number of endowed family group claims in force at 30th June, 1954 was 1,280,439 an increase of 33,453 or 2.7 per cent. during the year. The following table shows particulars of the operations in each State and Australia during 1953-54 :—

## CHILD ENDOWMENT : SUMMARY, 1953-54.

State.	Family Groups.					Total Payments to Endowees and Institutions.
	Claims in force at end of year.	Endowed Children.		Annual Liability at 30th June, 1954.		
		Total.	Average per claim.	Total.	Average Liability per claim.	
	No.	No.	No.	£	£	£
New South Wales(a)	501,272	1,031,898	2.06	20,312,812	40.52	19,137,687
Victoria .. .. .	339,022	629,220	2.06	13,772,434	40.62	13,164,948
Queensland .. ..	183,726	407,970	2.22	8,218,782	44.73	8,002,569
South Australia(b) ..	117,644	245,973	2.09	4,865,926	41.36	4,577,489
Western Australia ..	93,117	202,098	2.17	4,044,027	43.43	3,882,899
Tasmania .. .. .	45,246	101,540	2.24	2,051,842	45.17	1,988,637
Overseas .. .. .	412	878	2.13	17,472	42.41	6,570
Total .. .. .	1,280,439	2,689,577	2.10	53,283,295	41.61	50,760,799

(a) Includes Australian Capital Territory.

(b) Includes Northern Territory.

The following table shows particulars of the operations in each State and Territory during 1954-55 :—

## CHILD ENDOWMENT : SUMMARY, 1954-55.

State or Territory.	Family Groups.					Total Payments to Endowees and Institutions.
	Claims in force at end of year.	Endowed Children.		Annual Liability at 30th June, 1955.		
		Total.	Average per claim.	Total.	Average Liability per claim.	
	No.	No.	No.	£	£	£
New South Wales ..	495,063	1,026,195	2.07	20,245,251	40.89	19,421,535
Victoria ..	350,395	729,399	2.08	14,409,239	41.12	13,735,475
Queensland ..	188,868	422,906	2.24	8,540,272	45.22	8,249,095
South Australia ..	120,384	254,879	2.12	5,061,862	42.05	4,713,548
Western Australia ..	96,621	212,025	2.19	4,256,577	44.05	4,069,037
Tasmania ..	46,407	104,736	2.26	2,119,845	45.68	2,032,363
Northern Territory	2,068	4,479	2.17	89,570	43.31	132,808
Australian Capital Territory ..	4,009	8,670	2.16	173,303	43.23	169,621
Overseas ..	412	878	2.13	17,472	42.41	6,420
Total ..	1,304,227	2,764,167	2.12	54,913,391	42.10	52,529,902

In addition to the children endowed in families, child endowment benefits were paid in respect of children in approved institutions during 1953-54 and 1954-55 as follows :— 1953-54, 27,397 ; and 1954-55, 24,394.

The following table shows, as at 30th June, 1955, the number of claims in force and the number of endowed children classified according to the number of endowed children in the family :—

CHILD ENDOWMENT : NUMBER OF CHILDREN(a), 30th JUNE, 1955.

Size of Family.	Claims in force.	Number of endowed children.	Size of Family.	Claims in force.	Number of endowed children.
One child ..	476,672	476,672	Ten children ..	294	2,940
Two children ..	445,194	890,388	Eleven children ..	85	935
Three children ..	227,676	683,028	Twelve children ..	25	300
Four children ..	96,372	385,488	Thirteen children ..	5	65
Five children ..	35,561	177,805	Fourteen children ..	1	14
Six children ..	13,845	83,070	Fifteen children ..	1	15
Seven children ..	5,377	37,639			
Eight children ..	2,263	18,104			
Nine children ..	856	7,704	Total ..	1,304,227	2,764,167

(a) Under 16 years of age.

### § 6. Widows' Pensions.

Widows' pensions and the rates in each class, as from 18th October, 1955, have been payable to the following classes of women :—

Class "A"—A widow who has the custody, care and control of one or more children under the age of 16 years. Rate £221 per annum.

Class "B"—A widow, not less than 50 years of age, who has no children under 16 years of age in her custody, care and control. Rate £175 10s. per annum.

Class "C"—A widow, under 50 years of age, who has no children under the age of 16 years in her custody, care and control, but is in necessitous circumstances within 26 weeks after the death of her husband. Rate £3 7s. 6d. per week for not more than 26 weeks. If at her husband's death, a widow is with child, this period will be extended until the birth of the child. She would then, of course, become eligible for an "A" class widow's pension.

Class "D"—A woman whose husband has been serving a term of imprisonment for at least six months, if she has the custody, care and control of one or more children under the age of 16 years or is not less than 50 years of age. Rate £15 10s. per annum.

The term "widow" includes :—a "dependent female" (i.e. a woman, who, for not less than three years immediately prior to the death of a man, was wholly or mainly maintained by him as his wife on a permanent and bona fide domestic basis) ; a deserted wife (i.e. a woman deserted by her husband for not less than six months) ; a divorcee (i.e. a woman whose marriage has been dissolved and who has not remarried) ; and a woman whose husband is an inmate of a mental hospital.

The residential qualification is five years' continuous residence in Australia immediately prior to the date of lodgment of the claim. This period is reduced to one year where the claimant and her husband were residing permanently in Australia when the husband died.

A widow's pension is not payable to :—a woman who is not a British subject unless she was a British subject before her marriage ; a woman who is in receipt of an age or invalid pension, tuberculosis allowance, or a war widow's pension under the Repatriation Act in respect of the death of her husband ; a woman who has deprived herself of property or income in order to qualify for a pension ; a deserted wife or a divorcee who has not taken reasonable action to obtain maintenance from her husband or former husband ; a woman who is not of good character ; a woman who is not deserving of a pension ; a woman in Class " A " in receipt of income of £403 per annum or more or owning property, apart from her permanent home and other exempt property, to the net value of more than £1,750 or a woman in Classes " B " or " D " in receipt of income of £357 10s. per annum or more or owning property, apart from her permanent home and other exempt property, to the net value of more than £1,750.

Widows' pensions may be granted to aboriginal native women of Australia under the same conditions as age pensions.

Permissible income is £182 per annum. Any income in excess of this amount is deducted from the pension. " Income " has the same meaning as for age pensions. Any amount in excess of 15s. per week received by a deserted wife, or a divorcee from her husband or former husband, for the maintenance of a child is taken into account in the claimant's income.

The rate of pension for women in Classes " B " and " D " is reduced by £1 per annum for every complete £12 of the value of property which exceeds £200 up to £1,750. Property disregarded for pension is the same as for age pensions.

The pension payable to a Class " A " widow may be continued after her child reaches 16 years and until the age of 18 years is reached if the child continues with full-time education at a school or university and is still dependent on the widow and is not in employment.

The number of widows' pensions by Class, current at 30th June, 1954, was as follows :—Class " A ", 18,100 ; Class " B ", 22,314 ; Class " C ", 131 ; Class " D ", 181 ; total, 40,726. The amount paid in pensions during 1953-54 was £6,625,679. The following table shows details of widows' pensions paid in each State in the year 1953-54 :—

## WIDOWS' PENSIONS AT 30th JUNE, 1954.(a)

State.	Pensions Current.(b)		Children for whom Pensions Payable.	Average Fort-nightly rate of Pension.	Amount paid in Pensions during 1953-54.	
	Number.	Per 10,000 of Population.			Amount.	Per head of Population. (c)
			No.	£ s. d.	£	s. d.
New South Wales(d) ..	16,675	48	7,844	6 8 0	2,766,555	16 1
Victoria ..	9,827	40	3,853	6 5 3	1,567,098	12 11
Queensland ..	6,943	53	3,242	6 7 6	1,119,173	17 2
South Australia(e) ..	3,157	39	1,339	6 4 9	506,269	12 7
Western Australia ..	2,753	43	1,106	6 4 0	435,154	13 10
Tasmania ..	1,371	44	716	6 5 0	230,289	14 11
Total ..	40,726	45	18,100	6 6 8	£6,625,679	14 11

(a) The Commonwealth Government commenced to pay widows' pensions from 1st July, 1942.  
 (b) Excludes sixteen pensions in respect of pensioners in Benevolent Homes. (c) Based on mean population for the financial year. (d) Includes Australian Capital Territory. (e) Includes Northern Territory. (f) Includes £1,141 paid overseas.

The number of widows' pensions by Class, current at the 30th June, 1955, was as follows:—Class "A", 18,683; Class "B", 22,491; Class "C", 191; Class "D", 182; total, 41,547. The amount paid in pensions during 1954-55 was £6,862,422. The following table shows the details of widows' pensions paid in each State and Territory in the year 1954-55:—

WIDOWS' PENSIONS AT 30th JUNE, 1955.(a)

State or Territory.	Pensions Current.(b)		Children for whom Pensions Payable.	Average Fort-nightly rate of Pension.	Amount paid in Pensions during 1954-55.	
	Number.	Per 10,000 of Population.			Amount.	Per head of Population. (c)
			No.	£ s. d.	£	s. d.
New South Wales ..	17,006	49	8,076	6 9 8	2,817,474	16 3
Victoria ..	9,795	39	3,966	6 6 3	1,622,173	13 0
Queensland ..	7,123	53	3,365	6 8 6	1,179,395	17 10
South Australia ..	3,287	40	1,421	6 7 3	533,437	13 3
Western Australia ..	2,848	43	1,090	6 4 7	451,002	13 11
Tasmania ..	1,409	45	723	6 10 3	237,635	15 2
Northern Territory ..	19	11	9	(d)	3,411	4 2
Australian Capital Territory ..	60	19	33	(e)	9,150	5 10
Overseas ..	(f)	(f)	(f)	(f)	8,745	..
Total ..	41,547	45	18,683	6 8 2	6,862,422	15 1

(a) The Commonwealth Government commenced to pay widows' pensions from 1st July, 1942.  
 (b) Excludes fourteen pensions in respect of pensioners in Benevolent Homes. (c) Based on mean population for the financial year. (d) Included in average rate for South Australia. (e) Included in average rate for New South Wales. (f) Included in figures for State in which pensioner is permanently domiciled.

## § 7. Unemployment and Sickness Benefits.

From 1st July, 1945, men over 16 and under 65 years of age, and women over 16 and under 60 years of age and who were qualified in other respects, have been eligible to apply for an unemployment benefit or a sickness benefit. There is a twelve months' residential requirement but this is waived if the claimant is likely to remain permanently in Australia. A person in receipt of an age, invalid or widow's pension, or a service pension (as distinct from a war pension) under the Repatriation Act 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 Officer is necessary.

To qualify for a sickness benefit a person must establish that he is temporarily incapacitated for work by reason of sickness or accident and that he has thereby suffered a loss of salary, wages or other income.



A married woman is not qualified 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 benefit may be paid only to those aboriginal natives of Australia who are considered suitable, by reason of character, standard of intelligence and social development.

The maximum weekly rates of benefit payable and permissible income from 22nd September, 1952, are as follows :—

A married claimant can receive £2 10s. and £2 for a dependent spouse and 5s. for one child under 16 years of age with other income of £1. The amount for an unmarried claimant 21 years of age or over is £2 10s. with other income of £1, for those between 18 years and under 21 years £2 with other income of 15s., for those 17 years and under 18 years £1 10s. with other income of 10s., and for those 16 years and under 17 years £1 10s. with other income of 5s.

Where an unmarried claimant has the custody, care and control of a child under the age of sixteen years, the total benefit may be increased by 5s. per week.

Additional benefit of up to £2 per week may be paid in respect of a claimant's housekeeper where no such benefit is payable in respect of his wife, provided there are one or more children under 16 years of age in the home and the woman is substantially dependent on the claimant but is not employed by him.

Any income in excess of the permissible income is deducted from the rate of benefit. For unemployment benefit purposes, the incomes of the claimant and his spouse are taken into account, but where the claimant and his spouse are permanently separated any income received by the spouse may be disregarded. For sickness benefit purposes, the income of claimant only is taken into account, while up to £2 per week is disregarded of any payment received from an approved friendly society or other similar approved body in respect of the incapacity for which sickness benefit is payable. "Income" does not include child endowment, or other payments in respect of children, the Commonwealth hospital benefits and pharmaceutical benefits, or a tuberculosis allowance or an amount paid in reimbursement of medical, dental or similar expenses actually paid.

Where a person qualified for sickness benefit receives or is entitled to receive (in respect of the same period and the same incapacity for which sickness benefit is payable) any payment by way of compensation (including workers' compensation), damages, or otherwise under any law (except payments for which he has contributed), the amount of the compensation, etc., is not taken into account as income but is deducted from the rate of sickness benefit otherwise payable.

There is a waiting period of seven days in respect of which unemployment or sickness benefit is not payable. A special benefit may be granted to a person not qualified for

unemployment or sickness benefit who is not in receipt of an age, invalid or widows' pension or a service pension, if by reason 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. Unemployment and sickness beneficiaries are eligible to participate in the Commonwealth rehabilitation service under the same conditions as invalid pensioners. Payment of an unemployment or sickness benefit may be refused if the claimant or beneficiary, on being required, fails to undergo a medical examination or to receive treatment or undertake training or to do any suitable work. See A, § 3, page 547. The following table shows the number admitted to benefit during 1954-55, the number of persons on benefit at 30th June, 1955, and the amount paid for each benefit during 1954-55.

## UNEMPLOYMENT AND SICKNESS BENEFITS, 1954-55.

Particulars.	N.S.W.	Vic.	Qld.	S.A.	W.A.	Tas.	N.T.	A.C.T.	Total.
<b>Admissions to benefits—</b>									
<b>Unemployment—</b>									
Males ..	5,140	1,724	9,656	332	1,119	359	8	12	18,350
Females ..	2,459	674	2,303	175	209	112	2	16	5,950
Persons ..	7,599	2,398	11,959	507	1,328	471	10	28	24,300
<b>Sickness—</b>									
Males ..	17,430	9,816	8,219	4,140	3,332	1,645	87	82	44,751
Females ..	5,778	3,279	2,066	857	707	298	4	26	13,015
Persons ..	23,208	13,095	10,285	4,997	4,039	1,943	91	108	57,766
<b>Special—(a)</b>									
Males ..	778	382	529	203	105	43	1	5	2,046
Females ..	474	606	205	87	59	63	1	7	1,502
Persons ..	1,252	988	734	290	164	106	2	12	3,548
<b>Total—(a)</b>									
Males ..	23,348	11,922	18,404	4,675	4,556	2,047	96	99	65,147
Females ..	8,711	4,559	4,574	1,119	975	473	7	49	20,462
Persons ..	32,059	16,481	22,978	5,794	5,531	2,520	103	148	85,614
<b>Persons on benefit at end of year—</b>									
<b>Unemployment—</b>									
Males ..	569	196	640	32	203	30	..	..	1,670
Females ..	471	123	324	38	36	15	..	2	1,009
Persons ..	1,040	319	964	70	239	45	..	2	2,679
<b>Sickness—</b>									
Males ..	2,398	1,476	933	497	352	172	6	14	5,848
Females ..	953	527	303	142	88	42	1	1	2,057
Persons ..	3,351	2,003	1,236	639	440	214	7	15	7,905
<b>Special—(a)</b>									
Males ..	180	115	98	45	32	13	..	2	485
Females ..	564	439	313	84	75	83	1	1	1,560
Persons ..	744	554	411	129	107	96	1	3	2,045
<b>Total—(a)</b>									
Males ..	3,147	1,787	1,671	574	587	215	6	16	8,003
Females ..	1,988	1,080	940	264	190	140	2	4	4,626
Persons ..	5,135	2,867	2,611	838	786	355	8	20	12,629
<b>Benefits Paid—</b>									
Unemployment	£ 253,974	99,305	270,416	12,386	26,709	15,952	112	584	679,438
Sickness ..	£ 673,235	387,452	254,082	137,117	98,868	51,716	1,559	2,913	1,607,842
Special (b) ..	£ 125,719	122,202	58,155	16,001	17,217	12,322	40	931	352,587
<b>Total (b)</b>	£ 1,052,928	608,959	583,553	165,504	142,794	79,990	1,711	4,428	2,639,867

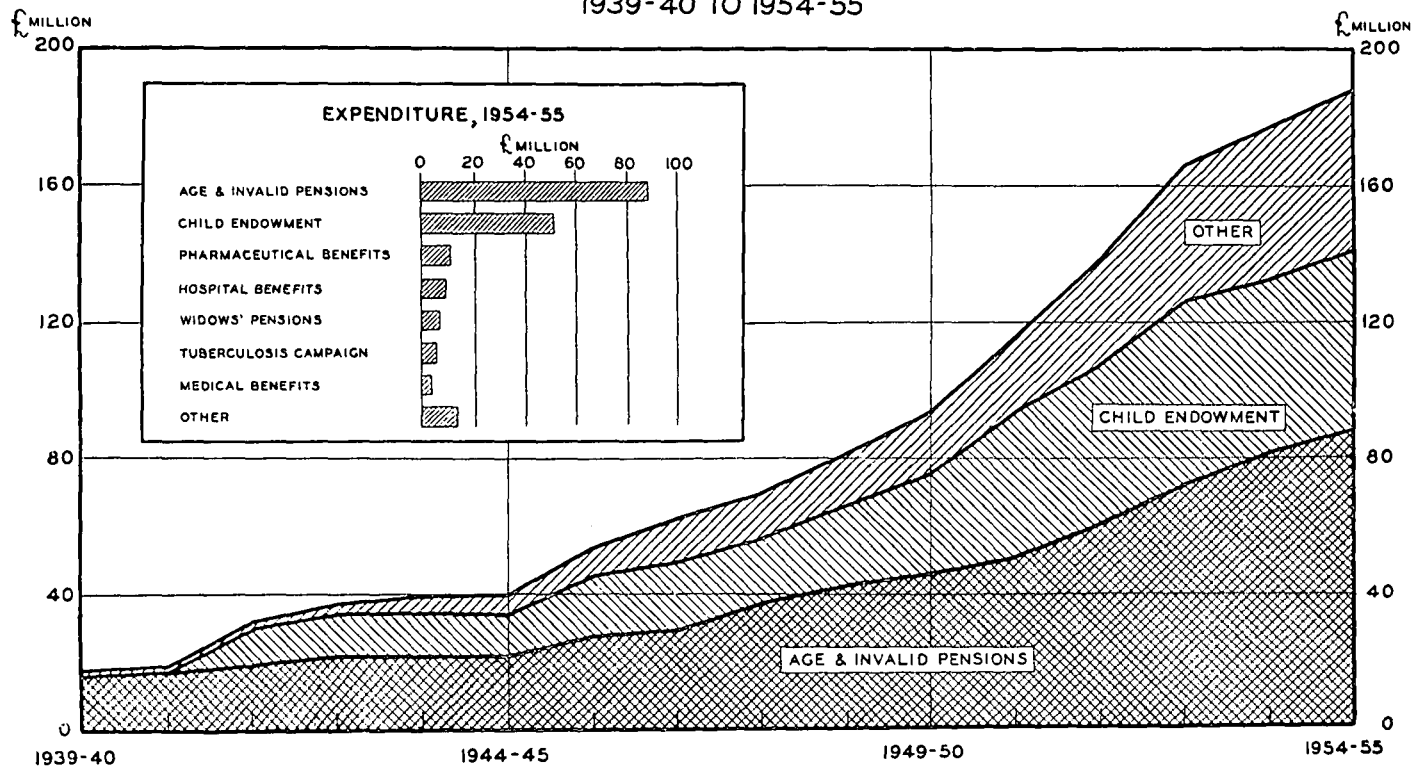
(a) Excludes migrants.

(b) Includes payments to migrants.

The following table shows the number of persons who were admitted to benefit, the number receiving benefit at the end of the year and the amount paid for each benefit for Australia during the years 1950-51 to 1954-55.

# COMMONWEALTH EXPENDITURE ON SOCIAL AND HEALTH SERVICES

1939-40 TO 1954-55





SUMMARY : AUSTRALIA.

Year.	Number Admitted to Benefit.			Persons on Benefit at end of Year.			Amount Paid in Benefits.		
	Un-employment.	Sick-ness.	Special. (a)	Un-employment.	Sick-ness.	Special. (a)	Un-employment.	Sick-ness.	Special. (b)
1950-51 ..	11,904	61,410	2,785	604	7,044	921	£ 62,444	£ 745,716	£ 229,053
1951-52 ..	27,486	51,043	2,786	8,294	6,378	1,148	187,011	709,337	110,759
1952-53 ..	175,082	50,324	2,989	25,914	8,135	1,088	1,560,717	1,303,294	292,431
1953-54 ..	62,133	56,536	3,631	6,083	7,802	1,852	2,505,163	1,675,593	362,393
1954-55 ..	24,300	57,766	3,548	2,679	7,905	2,045	679,438	1,607,842	352,587

(a) Excludes migrants.

(b) Includes payments to migrants.

## § 8. Reciprocal Agreements with Other Countries.

1. **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 counts 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. These payments are made on an agency basis by the appropriate authority of the country in which the person is temporarily resident.

2. **United Kingdom.**—The Governments of the United Kingdom and Australia signed a reciprocal agreement on social services in London on 8th June, 1953.

The agreement covers age and invalid pensions, widows' pensions, child endowment, and unemployment and sickness benefits. Under the agreement former residents of the United Kingdom over pension age—65 years for men and 60 years for women—who were in the National Insurance Scheme when they left the United Kingdom will be eligible to receive Australian pensions without having to complete 20 years' residence in Australia.

Subject to the means test, these persons so entitled have any United Kingdom pensions they receive supplemented by Australia to bring the total payments in most cases to the maximum pension rate for Australians—at present £4 per week.

Similar principles apply to widows' pensions. Australian residential requirements will be waived for these pensions, also for invalid pensions, child endowment and unemployment and sickness benefits.

With few exceptions, all these benefits will be payable to former residents of the United Kingdom at the same rates as are payable to Australian citizens.

Persons from Australia going to the United Kingdom for permanent residence will be treated in the United Kingdom as if they had been insured under the National Insurance Scheme while in Australia, so that they can qualify for various National Insurance benefits.

Families who go from one country to another will be able to qualify for child endowment, or family allowances, as soon as they arrive in their new country.

There is also provision for the safeguard of social service rights for Australians going to the United Kingdom for temporary residence, and vice versa.

The agreement came into operation in both countries on 7th January, 1954.

## B. OTHER SERVICES.

### § 1. Benevolent Homes.

1. **General.**—The public provisions for the care of indigent old people have been a feature of the social development of recent years in most countries. Numerous establishments exist in Australia for the housing and protection of persons no longer able to provide for themselves. These homes are supported by Government and municipal aid, public subscriptions, bequests, etc.; while in many cases relatives of poor and afflicted persons contribute to their maintenance.

An entirely satisfactory statistical tabulation in regard to all forms of charitable aid is especially difficult in the case of benevolent institutions, because the services provided by these institutions are not always identical.

2. **Principal Institutions.**—Particulars respecting the accommodation and the number of inmates of the principal institutions were published in earlier issues of the Official Year Book (*see* No. 22, p. 485).

3. **Revenue and Expenditure.**—Details regarding revenue and expenditure for the year 1953-54 are given in the following table.

#### BENEVOLENT HOMES : REVENUE AND EXPENDITURE, 1953-54.

(£.)

Particulars.	N.S.W.(a)	Vic.(b)	Q'land.	S. Aust.	W. Aust.	Tas.	Total.
<b>Revenue—</b>							
Government Aid	759,577	556,446	330,834	89,319	136,417	109,549	1,982,142
Municipal Aid ..	..	871	..	..	..	..	871
Public Subscriptions, Legacies	} 265,651	{ 42,044	17,143	2	843	..	}
Fees (c) ..							
Other ..							
		{ 347,618	168,288	29,286	115,856	53,723	1,093,313
		15,250	31,467	3,917	1,310	915	
<b>Total ..</b>	<b>1,025,228</b>	<b>962,229</b>	<b>547,732</b>	<b>122,524</b>	<b>254,426</b>	<b>164,187</b>	<b>3,076,326</b>
<b>Expenditure—</b>							
Salaries and Wages ..	400,976	531,676	256,772	81,070	156,356	98,705	1,525,555
Upkeep and Repair of Buildings ..	98,136	39,956	7,624	11,465	6,211	1,576	164,968
All Other ..	300,129	274,338	277,223	25,910	69,448	63,906	1,010,954
Capital (d) ..	225,987	117,685	4,547	4,079	22,411	..	374,709
<b>Total ..</b>	<b>1,025,228</b>	<b>963,655</b>	<b>546,166</b>	<b>122,524</b>	<b>254,426</b>	<b>164,187</b>	<b>3,076,186</b>

(a) These figures relate to the three State hospitals and homes only. (b) Year ended 31st March, 1954. (c) Includes Commonwealth Hospital Benefits and Age and Invalid Pension receipts. (d) Includes such items as purchase of land, cost of new buildings and additions to buildings.

4. **The Aged Persons Homes Act.**—The *Aged Persons Homes Act* No. 81, 1954 operated from 16th December, 1954. The purpose of the Act is to encourage and assist the provision of suitable homes for aged persons, ("Aged Person" means a man who has reached the age of 65 years or a woman who has reached 60 years and includes the wife or husband of an aged person residing or desiring to reside with the aged person) and in particular homes at which aged persons may reside in conditions approaching as nearly as possible normal domestic life, and, in the case of married people, with proper regard to the companionship of husband and wife.

Subject to this section, a society, association or other organization is eligible for assistance under this Act if—

- (a) it is carried on otherwise than for purposes of profit or gain to the individual members ; and
- (b) it is 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 purpose of this Act.

A trustee or trustees under a trust established for charitable or benevolent purposes shall, if the Governor-General so approves, be deemed to be an organization referred to in the last preceding sub-section.

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.

Where the Director-General is satisfied that a building or buildings erected or to be erected, or purchased or to be purchased, by an organization is or are intended to be used permanently by or on behalf of the organization as a home or homes for the accommodation of aged persons, he may, in his discretion, approve that building or proposed building or those buildings or proposed buildings as a home for the purposes of this Act.

A building or proposed building shall not be approved under this section unless—

- (a) it was in course of erection by the organization on the 4th May, 1954 ;
- (b) its erection by the organization was commenced after the date specified in the last preceding paragraph or is to be commenced after the date of the approval ; or
- (c) it was purchased by the organization after the date specified in paragraph (a) of this sub-section or is to be so purchased after the date of the approval.

The Director-General may, in his discretion, on behalf of the Commonwealth, make a grant of moneys in accordance with this Act to an organization as assistance towards meeting the capital cost of an approved home.

A grant under this section shall be made at such time, or by such instalments and at such times, as are determined by agreement between the Director-General and the organization or, in the absence of agreement, by the Director-General.

A payment under this Act shall not be made except to a corporation in which, or to trustees in whom, the approved home is or is to be vested.

Subject to this section the amount of a grant under the Act in respect of an approved home shall be an amount not exceeding—

- (a) one half of the capital cost of the home, as determined by the Director-General ; or
- (b) the sum of the moneys expended, and the moneys presently available for expenditure, by the organization towards the capital cost of the home, being moneys which the Director-General is satisfied did not become available as a result of the borrowing of those moneys or any other moneys by the organization and were not received by the organization from the Government of the Commonwealth or of a State or from a local governing body or other authority established by a State Act, whichever is the less.

The Director-General shall not make, or agree to make, a grant under this Act to an organization in respect of an approved home unless he is satisfied that the sum of the moneys expended, and the moneys 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.

## § 2. Orphanages, Industrial Schools, etc.

1. General.—The methods of caring for orphans and neglected children differ extensively, inasmuch as some of the children are more or less segregated 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 primary 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.

2. **Principal Institutions.**—Particulars concerning the principal institutions in each State were published in earlier issues of the Official Year Book (*see* No. 22, p. 486).

3. **Transactions of State Departments.**—The following table summarizes the transactions of State Departments during 1953-54 in connexion with children under their control or supervision. In addition to neglected children, the figures include uncontrollable and convicted children who are wards of a Government authority, as well as poor children whose parents obtain assistance from the Government without giving up the legal right of custody.

#### CHILDREN UNDER GOVERNMENT AUTHORITY : SUMMARY, 1953-54.

Particulars.	N.S.W.	Vic.(a)	Q'land.	S. Aust.	W. Aust.	Tas.	Total.
<i>A. Children maintained or subsidized by the State.</i>							
In State shelters, industrial schools, reformatories, etc.(b) .. ..	718	276	1,115	213	54	47	5,305
In licensed or approved institutions .. ..	650	1,556					
Boarded out—							
With own mothers ..	5,511	2,238	3,346	22	21	..	11,138
With licensed foster-mothers, guardians, relatives and friends	1,463	381	287	3,344	1,378	80	6,933
Total children maintained or subsidized by the State	8,342	4,451	4,748	3,648	1,882	305	23,376
<i>B. Children not maintained or subsidized by the State.</i>							
In licensed or approved institutions .. ..	(c) 1,597	..	..	79	619	..	2,295
Boarded out .. ..	173	..	..	1,683	259	..	2,115
On probation (from Institutions or Children's Courts) .. ..	2,448	641	175	314	741	..	4,319
In service or apprenticed	92	161	296	128	146	..	823
Adopted or otherwise placed .. ..	427	150	..	719	83	..	1,379
Total children not maintained or subsidized by the State .. ..	4,737	952	471	2,923	1,848	..	10,931
Total children under State control or supervision ..	13,079	5,403	5,219	6,571	3,730	305	34,307
<i>Gross cost of children's relief .. ..</i>	£ 1,014,182	£ 450,519	£ 339,735	£ 254,249	£ 115,095	£ 23,514	£ 2,197,294
<i>Receipts from parents' contributions, etc. ..</i>	71,501	35,476	23,673	42,101	15,810	2,600	191,161
<i>Net Cost to State ..</i>	942,681	415,043	316,062	212,148	99,285	20,914	2,006,133

(a) Year ended 31st December, 1953.  
after-care ex-institution inmates.

(b) Includes inmates of hospitals.

(c) Includes 544



The total expenditure on children's relief in the foregoing table shows considerable variation amongst the States owing to the different methods of treating assistance to mothers with dependent children. In South Australia, Western Australia and Tasmania large amounts have been excluded from the total expenditure on this account owing to the difficulty of obtaining separate amounts for allowances made in respect of the dependent children only.

### § 3. Protection of Aborigines.

For the protection of the aboriginal Australian 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 native race is extinct in Tasmania. The expenditure from Consolidated Revenue in 1953-54 was as follows (figures in brackets are for year 1952-53):—New South Wales, £151,100 (£148,652); Victoria, £10,960 (£9,534); Queensland, £510,696 (£489,654); South Australia, £84,815 (£44,049); Western Australia, £180,517 (£154,400); Northern Territory, £354,266 (£278,492); Australian Capital Territory, £3,227 (£2,739); total for Australia, £1,295,581 (£1,127,520).

### § 4. Royal Life Saving Society.

In each of the State capitals, "centres" of the Royal Life Saving Society have been established, and in some States sub-centres have also been established in the larger provincial districts. In 1934 an Australian Federal Council of this Society was formed with headquarters at Melbourne, and each State centre, or branch, as it is now called, is controlled by this organization. Saving of life from drowning and other forms of asphyxiation is the object of the Society, and its immediate aims are (a) educative and (b) remedial. The encouragement of swimming and life-saving in schools, colleges, clubs, etc., will bring about a more widespread knowledge of these necessary matters, and there is increasing provision of life-belts, reels, lines, warning provisions, and other first-aid appliances on ocean beaches, wharves and other suitable places. Numerous certificates of proficiency in various grades are issued annually after examination throughout Australia, the number for the individual States for 1953-54 being:—New South Wales, 1,796; Victoria, 7,146; Queensland, 1,587; South Australia, 5,108; Western Australia, 485; and Tasmania, 3,557.

### § 5. Royal Humane Society.

The Royal Humane Society of Australasia with head office at 188 Collins-street Melbourne has as its main object the granting of awards to all who with bravery, skill and perseverance promptly 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. About 75 awards are made annually.

### § 6. 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 comprise the St. John Ambulance Association, the St. John Ambulance Brigade and the Hospitallers' Clubs in all States and Commonwealth Territories.

The teaching of first aid to the injured, home nursing, hygiene and child welfare are undertaken by the Association and carried out in a practical manner by the Brigade and qualified members of the public throughout the Commonwealth, in times of peace and war.

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 St. John.

The Order of St. John has established ambulance transport services in some States, acts as an ancillary to such services in other States, provides technical reserves for the medical services of the Crown and trained personnel for the various air raid precaution organizations.

The Life Saving Medal is awarded by the Order as warranted.

### § 7. Other Charitable Institutions.

Owing to the variety of name and function of other charitable institutions it has been found impracticable to give detailed results. 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 so 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, free kindergartens, 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, bush fire, flood and mining accident relief funds, etc.

## CHAPTER XVI.

### POPULATION.

**NOTE.**—The figures shown throughout this chapter for the Census of 30th June, 1954, are the final results, and population estimates shown for the intercensal period 1947 to 1954 are revised figures which have been adjusted in accordance with these results.

A summary of additional census data which became available after this chapter was sent to press will be found in the Appendix.

#### § 1. Population Statistics.

Population statistics relating to Australia or to the component States and Territories as 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.
  - (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. 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 in 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, 1954, and all mean populations for calendar years up to 1953 and financial years up to 1953-54 are final. Population statistics for dates or years subsequent to these are subject to revision when another census is taken.

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 demographic 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 efforts were directed towards their improvement. The 1911 Census disclosed an error in the precensal estimates equivalent to proportions of 14.5 per cent. and 10.0 per cent., respectively, of recorded male and female overseas departures from Australia. These proportions were used as adjusting factors to recorded overseas departures during the intercensal period 1911-21. These adjusting factors were reduced after the 1921 Census to 1 per cent. for males and 4.5 per cent. for females and were discontinued altogether after the 1933 Census. From the results of the 1954 Census it appears that the accuracy of the records of overseas migration is such that in future little adjustment to recorded figures will be necessary for Australia as a whole.

It is improbable that the same degree of accuracy as has been attained in the record of overseas migration can be reached in the case of interstate movements. Records are made of interstate passengers by sea, rail and air, but it is impracticable, with occasional important exceptions, to record the 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 Commonwealth Census and Statistics Act, which provides 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 and the fifth as on the night of 30th June, 1954.

2. **Population recorded at Censuses.**—State and Territorial populations recorded at the Australia-wide censuses taken over the period 1881 to 1954 are shown in the following table. The figures relate to the political boundaries of the several States (or Colonies) as they existed at the date of each census except that Northern Territory has been shown separately from South Australia for three 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 I, § 4. and § 5. The total populations recorded at the censuses taken in the Colonies from 1828 to 1876 were shown in Official Year Book No. 40, page 326.

## POPULATION : AUSTRALIAN CENSUSES, 1881 TO 1954.

Census.	Population Enumerated (Excluding Full-blood Aborigines).							
	N.S.W.	Vic.	Q'land.	S. Aust.	W. Aust.	Tas.	N.T.	A.C.T.
<b>MALES.</b>								
3rd April, 1881 ..	410,211	451,623	125,325	146,183	17,062	61,162	3,347	..
5th April, 1891 ..	609,666	508,222	223,779	162,241	29,807	77,560	4,560	..
31st March, 1901 ..	710,005	603,720	277,003	180,485	112,875	89,624	4,216	(a)
3rd April, 1911 ..	857,698	655,591	329,506	207,358	161,565	97,591	2,734	992
4th April, 1921 ..	1,071,501	754,724	398,969	248,267	177,278	107,743	2,821	1,567
30th June, 1933 ..	1,318,471	903,244	497,217	290,062	233,937	115,097	3,378	4,805
30th June, 1947 ..	1,492,211	1,013,867	567,471	320,031	258,076	129,244	7,378	9,092
30th June, 1954 ..	1,720,860	1,231,099	676,252	403,903	330,358	157,129	10,288	16,229
<b>FEMALES.</b>								
3rd April, 1881 ..	339,614	409,943	88,200	130,231	12,646	54,543	104	..
5th April, 1891 ..	517,471	541,866	169,939	153,292	19,975	69,107	338	..
31st March, 1901 ..	644,841	597,350	221,126	177,861	71,249	82,851	505	(a)
3rd April, 1911 ..	789,036	659,960	276,307	212,000	120,549	93,620	576	722
4th April, 1921 ..	1,028,870	776,556	357,003	246,803	155,454	106,037	1,046	1,005
30th June, 1933 ..	1,282,376	917,017	450,317	289,987	204,915	112,502	1,472	4,142
30th June, 1947 ..	1,492,627	1,040,834	538,944	326,042	244,404	127,834	3,490	7,813
30th June, 1954 ..	1,702,669	1,221,242	612,007	393,191	309,413	151,623	6,181	14,086
<b>PERSONS.</b>								
3rd April, 1881 ..	749,825	861,566	213,525	276,414	29,708	115,705	3,451	..
5th April, 1891 ..	1,127,137	1,140,088	393,718	315,533	49,782	146,667	4,898	..
31st March, 1901 ..	1,354,846	1,201,070	498,129	358,346	184,124	172,475	4,811	(a)
3rd April, 1911 ..	1,646,734	1,315,551	605,813	408,558	282,114	191,211	3,310	1,714
4th April, 1921 ..	2,100,371	1,531,280	755,972	495,160	332,732	213,780	3,867	2,572
30th June, 1933 ..	2,600,847	1,820,261	947,534	580,949	438,852	227,599	4,850	8,947
30th June, 1947 ..	2,984,838	2,054,711	1,106,415	646,073	502,480	257,078	10,868	16,905
30th June, 1954 ..	3,423,529	2,452,341	1,318,250	707,094	640,771	308,752	16,469	30,315

(a) Part of New South Wales prior to 1911.

The final results of the 1954 Census of the Australian External Territories will be found in § 12 of this chapter.

3. **Increase since 1881 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.**  
(EXCLUDING FULL-BLOOD ABORIGINALS.)

State or Territory.	1881-1891 (10 years).	1891-1901 (10 years).	1901-1911 (10 years).	1911-1921 (10 years).	1921-1933 (12½ years).	1933-1947 (14 years).	1947-1954 (7 years) (a)
<b>NUMERICAL INCREASE.</b>							
New South Wales ..	(b)377,312	(b)227,709	(b)293,602	453,637	500,476	383,991	437,091
Victoria ..	278,522	60,982	114,481	215,729	288,981	234,440	397,640
Queensland ..	180,193	104,411	107,684	150,159	191,562	158,881	211,844
South Australia ..	39,119	42,813	50,212	86,602	85,789	65,124	151,021
Western Australia ..	20,074	134,342	97,900	5,618	106,120	63,628	137,291
Tasmania ..	30,962	25,808	18,736	22,569	13,819	29,479	51,674
Northern Territory	1,447	- 87	- 1,501	557	983	6,018	5,601
Aust. Cap. Terr. ..	(c)	(c)	(c)	858	6,375	7,958	13,410
Australia ..	927,629	595,978	681,204	980,729	1,194,105	949,519	1,107,172

<b>PROPORTIONAL INCREASE—PER CENT.</b>							
New South Wales ..	(b)50.32	(b)20.20	(b)21.67	27.55	23.83	14.76	14.70
Victoria ..	32.33	5.35	9.53	16.40	18.87	12.88	19.35
Queensland ..	84.39	26.52	21.62	24.79	25.34	16.77	19.15
South Australia ..	14.15	13.57	14.01	21.20	17.33	11.21	23.38
Western Australia ..	67.57	269.86	53.22	17.94	31.89	14.50	27.32
Tasmania ..	26.76	17.60	10.86	11.80	6.46	12.95	20.10
Northern Territory	41.93	- 1.78	- 31.20	16.83	25.42	124.08	51.54
Aust. Cap. Terr. ..	(c)	(c)	(c)	50.06	247.86	88.95	79.33
Australia ..	41.22	18.75	18.05	22.01	21.97	14.32	18.57

<b>AVERAGE ANNUAL RATE OF INCREASE—PER CENT.</b>							
New South Wales ..	(b)4.16	(b)1.86	(b)1.97	2.46	1.76	0.99	1.98
Victoria ..	2.84	0.52	0.91	1.53	1.42	0.87	2.56
Queensland ..	6.31	2.38	1.98	2.24	1.86	1.11	2.53
South Australia ..	1.33	1.28	1.32	1.94	1.31	0.76	3.05
Western Australia ..	5.30	13.97	4.36	1.66	2.29	0.97	3.51
Tasmania ..	2.40	1.63	1.04	1.12	0.51	0.87	2.65
Northern Territory	3.56	- 0.18	- 3.67	1.57	1.87	5.93	6.12
Aust. Cap. Terr. ..	(c)	(c)	(c)	4.14	10.71	4.65	8.70
Australia ..	3.51	1.73	1.67	2.01	1.63	0.96	2.46

(a) Final figures. (b) Includes Australian Capital Territory. (c) Part of New South Wales prior to 1911.

NOTE.—Minus sign (—) denotes decrease.

The numerical increase during the period 1947-54 (7 years) was greater by 457,653 than that for the period 1933-47 (14 years) and the proportional increase rose from 14.32 per cent. for 1933-47 to 18.57 per cent. for 1947-54. The increase during the earlier period corresponds to 0.96 per cent. per annum, and in the latter to 2.46 per cent. per annum.

### § 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 1880 and thereafter at decennial intervals to 1950. Each year from 1947 to 1954 is included in order to show recent fluctuations in greater detail.

#### ESTIMATED POPULATION : 1880 TO 1954.

(EXCLUDING FULL-BLOOD ABORIGINALS.)

Adjusted in accordance with the final results of the Census of 30th June, 1954.

At 31st Dec.—	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas.	N.T.	A.C.T.	Australia.
<b>MALES.</b>									
1880	404,952	450,558	124,013	147,418	16,085	60,568	..	..	1,204,514
1890	602,704	595,519	223,252	166,040	28,854	76,453	(a)	..	1,692,831
1900	716,047	601,773	274,684	180,349	110,088	89,793	4,288	..	1,976,092
1910	858,181	646,482	325,513	205,557	157,071	98,866	2,738	(b)	2,296,398
1920	1,067,945	753,803	396,555	215,300	176,805	107,259	2,911	1,062	2,751,730
1930	1,294,419	892,424	481,559	288,618	231,868	114,505	3,590	4,712	3,311,722
1940(c)	1,402,297	947,037	536,712	297,885	248,734	113,650	6,337	7,856	3,570,508
1947	1,551,399	1,016,724	577,993	325,399	261,653	135,195	7,389	9,710	3,828,462
1948	1,573,810	1,039,037	584,560	335,085	268,304	138,513	8,016	10,931	3,908,586
1949	1,579,257	1,071,759	601,771	319,600	257,271	144,131	8,650	12,557	4,017,352
1950	1,677,618	1,115,197	620,329	364,705	291,758	147,193	9,114	13,021	4,191,445
1951	1,667,566	1,150,009	636,935	375,188	301,451	153,721	9,370	13,600	4,310,933
1952	1,695,800	1,189,262	652,971	383,133	316,700	157,702	9,477	15,081	4,425,528
1953	1,713,630	1,212,060	666,348	397,610	326,372	161,305	9,854	16,090	4,503,278
1954	1,738,345	1,246,501	679,671	409,828	337,086	166,801	9,971	16,507	4,580,009

For footnotes see following page.

## ESTIMATED POPULATION: 1880 TO 1954—continued.

(EXCLUDING FULL-BLOOD ABORIGINALS.)

Adjusted in accordance with the final results of the Census of 30th June, 1954.

At 31st Dec.—	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas.	N.T.	A.C.T.	Australia.
FEMALES.									
1880	336,190	408,047	87,027	128,955	12,576	54,222	..	..	1,027,017
1890	510,571	538,209	168,864	152,898	19,648	68,334	(a)	..	1,458,524
1900	644,258	594,440	219,103	176,901	69,879	83,137	569	..	1,788,347
1910	785,674	654,926	273,503	200,311	118,861	94,937	563	(b)	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	3,189,020
1940(c)	1,388,651	967,881	494,740	301,171	225,342	120,352	2,637	6,304	3,507,078
1947	1,501,235	1,045,985	541,825	329,233	247,109	132,741	3,503	7,870	3,809,501
1948	1,524,496	1,060,088	553,994	335,530	253,695	134,558	4,169	8,359	3,883,879
1949	1,570,549	1,097,125	568,596	346,018	263,911	137,910	4,689	9,520	3,998,318
1950	1,613,439	1,122,685	585,089	358,138	277,891	143,230	5,006	10,558	4,116,036
1951	1,647,106	1,149,520	601,343	368,597	285,685	148,066	5,244	11,204	4,216,974
1952	1,672,087	1,177,457	618,282	380,137	296,235	151,856	5,294	12,693	4,314,041
1953	1,695,370	1,203,975	632,072	388,055	305,371	155,160	5,781	13,624	4,399,408
1954	1,723,928	1,234,286	643,740	398,385	314,529	156,710	6,166	14,642	4,492,386
PERSONS.									
1880	741,142	853,605	211,040	276,393	29,561	114,790	..	..	2,231,531
1890	1,113,275	1,133,728	392,116	318,947	48,502	144,787	(a)	..	3,151,355
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	(b)	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
1940(c)	2,790,948	1,914,911	1,031,452	599,056	474,076	244,002	8,974	14,160	7,077,586
1947	3,002,634	2,062,709	1,112,818	654,632	508,762	267,936	10,892	17,580	7,637,963
1948	3,048,306	2,108,125	1,138,544	670,615	521,999	273,401	12,185	19,290	7,792,465
1949	3,149,806	2,168,884	1,170,319	695,618	544,184	281,343	13,339	22,077	8,045,570
1950	3,241,057	2,237,182	1,205,418	722,843	572,649	290,333	14,420	23,579	8,307,481
1951	3,314,672	2,299,538	1,238,278	743,785	590,339	301,787	14,614	24,894	8,527,907
1952	3,367,986	2,366,719	1,271,256	768,570	612,935	309,558	14,771	27,774	8,739,569
1953	3,409,009	2,416,035	1,298,420	785,665	631,743	316,465	15,635	29,714	8,902,686
1954	3,462,313	2,480,877	1,322,752	808,243	649,415	319,511	16,140	31,144	9,090,395

(a) Northern Territory figures included with South Australia prior to 1900. (b) Part of New South Wales prior to 1911. (c) 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 on the same basis as in the table above is shown in *Demography Bulletin* No. 67, 1949 and for the period 1881 to 1954 in *Demography Bulletin* No. 72. Figures shown therein for the years 1947 to 1954 have also been revised in accordance with results of the 1954 Census. A graph illustrating the growth of the population of Australia and of each State and Territory appears on page 593.

2. Present Numbers.—The population of Australia at 31st December, 1954, was estimated at 9,090,395 persons of whom 4,598,009, or 50.58 per cent., were males and 4,492,386, or 49.42 per cent., were females. The increase during 1954 was 187,709, equal to 2.11 per cent., males having increased by 94,731 or 2.10 per cent., and females by 92,978 or 2.11 per cent. This increase was due to an excess of births over deaths of 120,451, together with a net gain by migration of 68,207 persons. An adjustment of 949 persons was necessary to effect a reconciliation with the final results of the Census of 30th June, 1954.

3. Proportion of Area and Population, Density and Masculinity.—A previous table shows the number of persons in each of the States and Territories at 30th June, 1954. 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, CENSUS, 30th JUNE. 1954.**  
(EXCLUDING FULL-BLOOD ABORIGINALS.)

State or Territory.	Proportion of Total Area. (Per cent.)	Proportion of Population. (Per cent.)			Density. (a)	Masculinity.(b)
		Males.	Females.	Persons.		
New South Wales .. ..	10.40	37.85	38.34	38.10	11.04	101.07
Victoria .. ..	2.96	27.08	27.50	27.29	27.81	100.81
Queensland .. ..	22.54	14.87	14.46	14.67	1.96	105.33
South Australia .. ..	12.78	8.88	8.86	8.87	2.00	102.72
Western Australia .. ..	32.81	7.27	6.97	7.12	0.65	106.77
Tasmania .. ..	0.88	3.46	3.41	3.43	11.75	103.63
Northern Territory .. ..	17.60	0.23	0.14	0.18	0.03	106.45
Australian Capital Territory..	0.03	0.36	0.32	0.34	32.28	115.21
<b>Australia .. ..</b>	<b>100.00</b>	<b>100.00</b>	<b>100.00</b>	<b>100.00</b>	<b>3.01</b>	<b>102.38</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.

4. **Urban and Rural Distribution.**—Particulars of the distribution of the population amongst metropolitan, provincial urban and rural areas in each State and Territory at the 1947 Census were shown in Official Year Book No: 39. pages 521-524.

At the Census of 30th June, 1954, the number of persons and the proportion of the total population of Australia in each division were:—metropolitan urban 4,845,230, 53.92 per cent.; other urban 2,230,039, 24.81 per cent.; rural 1,887,892, 21.01 per cent. Migratory population (23,369) accounted for the remaining 0.26 per cent.

Of the States Victoria had the largest proportion of population residing in the metropolitan area (62.15 per cent.) but was closely followed in this respect by South Australia (60.66 per cent.). Percentages for the other States were:—New South Wales, 54.42; Queensland, 38.10; Western Australia, 54.50; and Tasmania, 30.84.

A feature of the metropolitan population is its relatively high femininity. In 1933, 52.5 per cent. of the metropolitan population was composed of females; in 1947, the proportion had fallen slightly to 51.9 per cent., being highest in Tasmania at 52.3 per cent.; at the Census of 30th June, 1954, the proportion had fallen to 51.0 per cent., there being little difference in the proportions as between the several States.

Metropolitan Urban Divisions include the capital cities of the States and (included in 1954 for the first time) Canberra, the capital city of Australia, the boundaries of the capital cities being determined for census purposes by the Statisticians of the States, and normally include the city proper and all adjoining urban areas. 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 1954 to the boundaries of the Metropolitan Urban Divisions in New South Wales, Victoria and Tasmania.

Other Urban Divisions comprise the capital city of the Northern Territory, all separately incorporated cities and towns, and all other towns with a population of 1,000 persons or more (750 in Tasmania), outside the Metropolitan Urban Divisions. The inclusion in the Other Urban Divisions in 1954 of the larger towns not separately incorporated was a significant departure from the classification adopted at previous censuses, when these towns (in all States except Tasmania) were included in the Rural Divisions, and the Other Urban Divisions (or Provincial Urban Divisions) were restricted to provincial separately incorporated cities and towns only. As it is not possible to provide 1947 particulars for all these towns, the particulars for the Other Urban and Rural Divisions for 1947 have been combined in the table below.

Rural Divisions comprise the remaining portions of each State and Territory, and are affected by the intercensal changes in the areas of the Metropolitan Urban and Other Urban Divisions. As already mentioned, the Rural Divisions in 1954 exclude the towns of 1,000 persons or more (750 in Tasmania) which were not separately incorporated.

The term "Migratory" used in the following tables refers to persons not elsewhere enumerated who at midnight between 30th June and 1st July, 1954 were on ships in Australian waters or were travelling on long-distance trains or aircraft.

**URBAN AND RURAL POPULATION (a) : CENSUS, 30th JUNE, 1954.**  
(EXCLUDING FULL-BLOOD ABORIGINALS.)

Division.	1954 Census.			Proportion of Total Population of State. (Per cent.)		Percentage Increase since the 1947 Census
	Males.	Females.	Persons.	1947 Census.	1954 Census.	
NEW SOUTH WALES.						
Urban—						
Metropolitan(b)	909,978	953,183	1,863,161	55.14	54.42	13.20
Other ..	485,128	480,259	965,387	44.62	28.20	16.02
Rural ..	319,562	268,549	588,111		17.18	
Migratory ..	6,192	678	6,870	0.24	0.20	-6.43
Total ..	1,720,860	1,702,669	3,423,529	100.00	100.00	14.70
VICTORIA.						
Urban—						
Metropolitan(b)	747,712	776,399	1,524,111	62.91	62.15	17.91
Other ..	233,083	236,980	470,063	36.90	19.17	20.74
Rural ..	243,809	206,317	450,126		18.35	
Migratory ..	6,495	1,546	8,041	0.19	0.33	108.80
Total ..	1,231,099	1,221,242	2,452,341	100.00	100.00	19.35
QUEENSLAND.						
Urban—						
Metropolitan	244,904	257,416	502,320	36.34	38.10	24.95
Other ..	230,157	229,923	460,080	63.49	34.90	15.73
Rural ..	198,605	154,283	352,888		26.77	
Migratory ..	2,586	385	2,971	0.17	0.23	57.45
Total ..	676,252	642,007	1,318,259	100.00	100.00	19.15
SOUTH AUSTRALIA.						
Urban—						
Metropolitan	237,651	245,857	483,508	59.20	60.66	26.42
Other ..	55,853	54,254	110,107	40.54	13.81	18.83
Rural ..	108,199	92,934	201,133		25.23	
Migratory ..	2,200	146	2,346	0.26	0.30	37.92
Total ..	403,903	393,191	797,094	100.00	100.00	23.38
WESTERN AUSTRALIA.						
Urban—						
Metropolitan	171,832	176,815	348,647	54.24	54.50	27.93
Other ..	53,868	51,550	105,418	45.17	16.48	27.27
Rural ..	102,753	80,686	183,439		28.67	
Migratory ..	1,905	362	2,267	0.59	0.35	-23.95
Total ..	330,358	309,413	639,771	100.00	100.00	27.32

(a) See letterpress preceding this table. (b) Adjustments have been made to the 1947 Census figures for the Metropolitan Divisions of New South Wales, Victoria and Tasmania in order to provide approximate comparisons on the 1954 Census basis. See letterpress preceding this table.

NOTE.—Minus sign (—) denotes decrease.



## URBAN AND RURAL POPULATION (a) : CENSUS, 30th JUNE, 1954—continued.

Division.	1954 Census.			Proportion of Total Population of State. (Per cent.)		Percentage Increase since the 1947 Census.
	Males.	Females.	Persons.	1947 Census.	1954 Census.	
TASMANIA.						
Urban—						
Metropolitan(b)	46,544	48,662	95,206	30.19	30.84	22.67
Other ..	53,521	54,607	108,128	69.53	35.02	18.63
Rural ..	56,418	48,350	104,768			
Migratory ..	646	4	650	0.28	0.21	-7.54
Total ..	157,129	151,623	308,752	100.00	100.00	20.10
NORTHERN TERRITORY.						
Urban—						
Metropolitan	..	..	..	..	..	..
Other ..	6,378	4,478	10,856	98.73	65.92	51.40
Rural ..	3,692	1,697	5,389			
Migratory ..	218	6	224	1.27	1.36	62.32
Total ..	10,288	6,181	16,469	100.00	100.00	51.54
AUSTRALIAN CAPITAL TERRITORY.						
Urban—						
Metropolitan	15,076	13,201	28,277	89.65	93.28	86.57
Other ..	..	..	..	..	..	..
Rural ..	1,153	885	2,038	10.35	6.72	16.52
Migratory ..	..	..	..	..	..	..
Total ..	16,229	14,086	30,315	100.00	100.00	79.33
AUSTRALIA.						
Urban—						
Metropolitan(b)	2,373,697	2,471,533	4,845,230	53.94	53.92	18.52
Other ..	1,117,988	1,112,051	2,230,039	45.82	24.81	18.59
Rural ..	1,034,191	853,701	1,887,892			
Migratory ..	20,242	3,127	23,369	0.24	0.26	25.62
Total ..	4,546,118	4,440,412	8,986,530	100.00	100.00	18.57

(a) See letterpress on page 571. (b) Adjustments have been made to the 1947 Census figures for the Metropolitan Divisions of New South Wales, Victoria and Tasmania in order to provide approximate comparisons on the 1954 Census basis. See letterpress on page 571.

NOTE.—Minus sign (—) denotes decrease.

5. Metropolitan Population : Australia and Other Countries.—In Australia there is an abnormal concentration of population in the capital cities, which are the only cities of outstanding importance in the various States. A comparison with the capitals of the more important countries is given in the following table.

**METROPOLITAN POPULATION : AUSTRALIA AND OTHER COUNTRIES.**  
(1954.)

State or Country.	Metropolis.	Year.	Metro- politan Popu- lation.	Country.	Metropolis.	Year.	Metro- politan Popu- lation.
New South Wales ..	Sydney ..	1954	a 1,863	Brazil ..	Rio de Janeiro	1951	2,490
Victoria ..	Melbourne ..	1954	a 1,524	Czechoslovakia ..	Prague ..	1949	933
Queensland ..	Brisbane ..	1954	(a) 502	Denmark ..	Copenhagen	1950	975
South Australia ..	Adelaide ..	1954	(a) 484	Egypt ..	Cairo ..	1951	2,375
Western Australia ..	Perth ..	1954	(a) 349	France ..	Paris ..	1954	2,850
Tasmania ..	Hobart ..	1954	(a) 95	Germany ..	Berlin ..	1953	3,481
				Greece ..	Athens(e)	1951	1,368
England ..	London(b)	1954	8,319	Hungary ..	Budapest(f)	1950	1,600
Scotland ..	Edinburgh ..	1954	469	Italy ..	Rome ..	1952	1,697
Northern Ireland ..	Belfast ..	1952	444	Japan ..	Tokyo(g)	1953	6,330
Ireland, Republic of	Dublin ..	1951	522	Netherlands ..	Amsterdam ..	1954	859
Canada ..	Montreal(c)(d)	1951	1,370	Norway ..	Oslo ..	1954	434
New Zealand ..	Wellington	1954	223	Poland ..	Warsaw ..	1955	965
Union of South Africa	Capetown ..	1951	578	Portugal ..	Lisbon ..	1952	795
				Spain ..	Madrid ..	1952	1,642
Argentina ..	Buenos Aires	1952	3,404	Sweden ..	Stockholm	1954	769
Belgium ..	Brussels ..	1953	973	U.S.A. ..	New York(d)	1954	8,182

(a) Excludes full-blood aboriginals. (b) Greater London. (c) Greater Montreal.  
(d) Principal city. (e) Greater Athens, including Piræus. (f) Greater Budapest.  
(g) Greater Tokyo.

6. Principal Urban Areas.—The following table shows the population of the principal urban incorporated areas (population 5,000 or more) in each State and Territory of Australia at 30th June, 1954.

**POPULATION OF PRINCIPAL URBAN INCORPORATED AREAS : AUSTRALIA,**  
**CENSUS, 30th JUNE, 1954.**  
(EXCLUDING FULL-BLOOD ABORIGINALS.)

City or Town.	Popu- lation at Census, 30th June, 1954.	City or Town.	Popu- lation at Census, 30th June, 1954.	City or Town.	Popu- lation at Census, 30th June, 1954.
<b>New South Wales.</b>		<b>Victoria.</b>		<b>South Australia.</b>	
Sydney and Suburbs(a)	1,863,161	Melbourne and Suburbs(a)	1,524,111	Adelaide and Suburbs(a)	483,508
Newcastle and Suburbs(b)	178,144	Geelong and Suburbs(b)	72,595	Port Pirie ..	14,223
Greater Wollongong ..	90,852	Ballaarat and Suburbs(b)	48,030	Mount Gambier ..	10,331
Broken Hill ..	31,351	Bendigo and Suburbs(b)	36,918	Whyalla ..	8,596
Blue Mountains ..	23,080	Mildura ..	10,972	Port Augusta ..	6,704
Maitland ..	21,331	Warrnambool ..	10,850	Port Lincoln ..	5,871
Wagga Wagga ..	19,235	Shepparton ..	10,848	Gawler ..	5,117
Goulburn ..	19,183	Wangaratta ..	10,715		
Orange ..	18,247	Hamilton ..	8,507	<b>Western Australia.</b>	
Penrith ..	17,924	Colac ..	8,032	Perth and Suburbs(a)	348,647
Lismore ..	17,372	Horsham ..	7,767	Kalgoorlie and Suburbs(b)	22,837
Albury ..	16,726	Ararat ..	7,414	Bunbury ..	9,869
Bathurst ..	16,080	Maryborough ..	6,827	Geraldton ..	8,309
Lithgow ..	15,128	Castlemaine ..	6,577	Albany ..	8,265
Cessnock ..	14,417	Sale ..	6,537	Northam ..	5,725
Grafton and South		Benalla ..	6,045		
Grafton ..	14,201	Yallourn Works Area	5,580	<b>Tasmania.</b>	
Tamworth ..	13,611	Stawell ..	5,463	Hobart and Suburbs	95,206
Dubbo ..	12,009	Echuca ..	5,405	Launceston and Suburbs(b)	49,303
Windsor ..	9,867	Swan Hill ..	5,197	Burnie ..	11,193
Campbelltown ..	9,690			Devonport ..	10,597
Armidale ..	8,661	<b>Queensland.</b>		Ulverstone ..	5,005
Parkes ..	7,973	Brisbane and Suburbs(a)	502,320		
Casino ..	7,844	Toowoomba ..	43,149	<b>Northern Territory.</b>	
Inverell ..	7,514	Rockhampton ..	40,670	Darwin ..	8,071
Kempsey ..	7,469	Townsville ..	40,471		
Taree ..	7,406	Ipswich ..	38,953	<b>Australian Capital Territory.</b>	
Queanbeyan ..	7,310	Cairns ..	21,020	Canberra (a)	28,277
Forbes ..	6,514	Bundaberg ..	19,951		
Cooma ..	6,506	South Coast ..	19,807		
Cowra ..	6,007	Maryborough ..	17,952		
Glen Innes ..	5,842	Mackay ..	14,762		
Cootamundra ..	5,760	Redcliffe ..	13,857		
Muswellbrook ..	5,635	Gympie ..	9,964		
Shellharbour ..	5,523	Warwick ..	9,151		
Young ..	5,503	Charters Towers	6,961		
Moree ..	5,502	Gladstone ..	6,944		
Mudgee ..	5,294	Dalby ..	6,182		
Gunnedah ..	5,129				

(a) Metropolitan Area.

(b) Entire Urban Area.

7. **Urban Areas Outside Metropolitan Areas.**—The proportion of the total population of each State which was located in incorporated urban provincial areas at the 1933 and 1947 Censuses is shown in Official Year Book No. 39, pages 522-3 and in Official Year Book No. 40, page 334, there is a table showing aggregate population at the 1947 Census of all cities and towns outside the metropolitan area of each State with 2,000 or more and 3,000 or more inhabitants, irrespective of whether such centres were incorporated separately or not. In addition, the proportion of the aggregate population of these cities and towns to the total population of the State is shown. The following table shows similar particulars for the 1954 Census.

**AGGREGATE POPULATION OF CITIES AND TOWNS OF SPECIFIED SIZE :  
CENSUS, 30th JUNE, 1954.**

(EXCLUDING FULL-BLOOD ABORIGINALS.)

State or Territory.	Cities and Towns outside Metropolitan Area with 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(a) ..	98	881,391	25.75	67	806,373	23.55
Victoria .. ..	56	415,690	16.95	40	376,347	15.35
Queensland .. ..	41	404,520	30.69	29	374,328	28.40
South Australia ..	14	74,502	9.35	9	62,008	7.78
Western Australia(b) ..	13	82,139	12.84	7	67,440	10.54
Tasmania .. ..	8	89,003	28.83	6	84,312	27.31
Northern Territory ..	2	10,856	65.92	1	8,071	49.01
Australian Capital Territory ..	1	28,277	93.28	1	28,277	93.28
<b>Total ..</b>	<b>233</b>	<b>1,986,378</b>	<b>22.10</b>	<b>160</b>	<b>1,807,156</b>	<b>20.11</b>

(a) Excludes that part of Liverpool Municipality outside the Metropolitan Area of Sydney.

(b) Excludes that part of Fremantle suburbs outside the Metropolitan Area of Perth.

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, Ballaarat, Bendigo, and Geelong ; in Western Australia, Kalgoorlie ; and in Tasmania, Launceston. The figures in each instance include the populations of the adjoining areas which, together with the city proper, constitute the entire urban area.

The numbers of towns of 2,000 or more inhabitants in New South Wales and Victoria, and of 3,000 or more in New South Wales, show considerable decreases as compared with the figures for the 1947 Census. This is due to the absorption, by the increased metropolitan areas, of towns within these ranges which were formerly outside the metropolitan limits, and, in New South Wales, to similar absorptions by the City of Blue Mountains, Greater Wollongong and Newcastle Urban Area.

8. Principal Cities in the World.—The following table shows the population of the world's largest cities at the latest available date :—

### POPULATION OF THE WORLD'S LARGEST CITIES.

(Names of cities in the British Commonwealth are printed in italics.)

Country.	City.	Year.	City Population ('000).	Country.	City.	Year.	City Population ('000).
England	<i>London(a)</i>	1954	8,319	Italy	Milan	1951	1,273
U.S.A.	New York	1954	8,182	China	Wuhan	1950	1,200
Japan	Tokyo(b)	1953	6,330	Philippines	Manila	1953	1,200
China	Shanghai	1953	6,204	Singapore	<i>Singapore</i>	1954	1,165
U.S.S.R.	Moscow	1939	4,137	England	<i>Birmingham</i>	1954	1,118
U.S.A.	Chicago	1950	3,621	Canada	<i>Toronto(g)</i>	1951	1,108
Germany	Berlin	1953	3,481	Japan	Kyoto	1950	1,102
Argentina	Buenos Aires	1952	3,404	India	<i>Hyderabad</i>	1951	1,086
U.S.S.R.	Leningrad	1939	3,191	Scotland	<i>Glasgow</i>	1954	1,083
India	<i>Calcutta(c)</i>	1951	2,982	China	Dairen	1950	1,054
France	Paris	1951	2,850	Romania	Bucharest	1952	1,042
India	<i>Bombay</i>	1951	2,839	Egypt	Alexandria	1951	1,041
China	Peking	1953	2,768	Japan	Nagoya	1950	1,031
China	Tientsin	1953	2,694	Italy	Naples	1951	1,028
Indonesia	Djakarta	1953	2,500	China	Nanking	1950	1,020
Brazil	Rio de Janeiro	1951	2,490	Pakistan	<i>Karachi</i>	1951	1,009
Egypt	Cairo	1951	2,373	Turkey	Istanbul	1950	1,000
Mexico	Mexico City	1950	2,234	Persia	Tehran	1950	990
Brazil	Sao Paulo	1950	2,228	Denmark	Copenhagen	1950	975
Japan	Osaka	1952	2,115	Belgium	Brussels	1953	973
U.S.A.	Philadelphia	1950	2,071	Siam	Bangkok	1952	971
U.S.A.	Los Angeles	1950	1,970	Poland	Warsaw	1955	965
Australia	<i>Sydney</i>	1954	1,863	Japan	Yokohama	1950	951
U.S.A.	Detroit	1950	1,850	U.S.A.	Baltimore	1950	950
Austria	Vienna	1951	1,761	Czechoslovakia	Prague	1949	933
Germany	Hamburg	1953	1,723	India	<i>Delhi</i>	1951	915
Italy	Rome	1952	1,697	U.S.A.	Cleveland	1950	915
Spain	Madrid	1952	1,642	Germany	Munich	1953	906
China	Chungking	1953	1,620	South Africa	<i>Johannesburg</i>	1951	884
Hungary	Budapest(d)	1950	1,600	Netherlands	Amsterdam	1954	859
China	Shenyang	1950	1,551	U.S.A.	St. Louis	1950	857
Australia	<i>Melbourne</i>	1954	1,524	China	Tsingtau	1948	850
China	Canton	1950	1,496	Pakistan	<i>Lahore</i>	1951	849
Korea	Seoul	1949	1,438	U.S.S.R.	Kiev	1939	846
India	<i>Madras</i>	1951	1,416	Uruguay	Montevideo	1953	838
Canada	<i>Montreal(e)</i>	1951	1,370	U.S.S.R.	Kharkov	1939	833
Greece	Athens(f)	1951	1,368	U.S.S.R.	Baku	1939	809
Chile	Santiago	1952	1,348	U.S.A.	Washington	1950	802
Spain	Barcelona	1952	1,288	U.S.A.	Boston	1950	801

(a) Greater London. (b) Greater Tokyo. (c) Includes Howrah. (d) Greater Budapest.  
(e) Greater Montreal. (f) Greater Athens, including Piraeus. (g) Greater Toronto.

### § 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.

2. Method of Calculation.—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*. The principles underlying the adoption of the formula were set out in some detail in Section V. of *Population and Vital Statistics Bulletin* No. 1, 1907.

3. Results.—(i) *Calendar Years*. The following table shows the mean population of each State and Territory for the calendar-years 1944 to 1954 :—

#### MEAN POPULATION : CALENDAR YEARS.

(EXCLUDING FULL-BLOOD ABORIGINALS.)

Adjusted in accordance with the final results of the Census of 30th June, 1954.

Year ended 31st Dec.—	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas.	N.T.	A.C.T.	Australia.
1944(a)	2,886,204	1,989,870	1,061,467	619,409	481,498	245,618	10,440	14,200	7,308,706
1945(a)	2,917,415	2,006,649	1,076,610	627,102	487,510	248,596	10,512	15,012	7,389,406
1946(a)	2,945,220	2,025,475	1,090,238	635,127	492,771	252,192	10,568	15,883	7,467,474
1947 ..	2,983,810	2,053,916	1,105,882	646,686	502,951	257,636	10,866	17,029	7,578,776
1948 ..	3,020,058	2,091,581	1,127,318	661,370	514,621	263,445	11,984	19,182	7,709,559
1949 ..	3,093,277	2,142,529	1,155,638	680,287	532,603	270,327	13,068	21,161	7,908,890
1950 ..	3,193,208	2,209,013	1,191,081	709,475	557,878	278,785	14,309	23,545	8,177,294
1951 ..	3,279,415	2,276,271	1,223,719	732,537	580,317	288,294	15,179	24,658	8,420,391
1952 ..	3,341,476	2,343,616	1,255,896	755,042	600,615	298,361	15,087	26,570	8,636,657
1953 ..	3,386,556	2,395,851	1,287,231	776,355	621,034	306,318	15,534	28,724	8,817,603
1954 ..	3,428,488	2,453,458	1,313,955	796,361	640,140	311,128	16,214	30,383	8,989,227

(a) Includes all defence personnel enlisted in Australia irrespective of movements subsequent to enlistment.

(ii) *Financial Years*. The following table shows the mean population of each State and Territory for the years ended 30th June, 1945 to 1955 :—

#### MEAN POPULATION : FINANCIAL YEARS.

(EXCLUDING FULL-BLOOD ABORIGINALS.)

Adjusted in accordance with the final results of the Census of 30th June, 1954.

Year ended 30th June—	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas.	N.T.	A.C.T.	Australia
1945(a)	2,901,459	1,998,202	1,068,630	623,104	484,720	246,971	10,477	14,607	7,348,170
1946(a)	2,932,366	2,015,197	1,084,125	630,921	489,982	250,309	10,537	15,431	7,428,868
1947(a)	2,963,056	2,039,348	1,097,303	640,352	497,006	254,553	10,676	16,381	7,518,673
1948 ..	3,001,662	2,070,116	1,114,934	653,852	508,747	261,202	11,269	18,097	7,639,519
1949 ..	3,049,051	2,115,830	1,140,816	669,828	521,932	266,518	12,539	19,965	7,796,479
1950 ..	3,145,699	2,174,844	1,173,232	694,582	545,134	274,493	13,737	22,571	8,044,292
1951 ..	3,238,406	2,242,882	1,207,194	721,845	570,346	283,526	14,827	24,017	8,303,043
1952 ..	3,311,840	2,309,708	1,239,866	743,310	589,887	293,340	15,131	25,545	8,528,629
1953 ..	3,366,358	2,372,366	1,272,244	766,538	611,191	302,529	15,241	27,721	8,734,288
1954 ..	3,405,414	2,422,839	1,300,464	785,981	630,705	309,416	15,930	29,595	8,900,344
1955 ..	3,459,538	2,488,115	1,325,336	807,501	648,930	312,987	16,536	31,249	9,090,192

(a) Includes all defence personnel enlisted in Australia irrespective of movements subsequent to enlistment.

### § 5. Elements of Increase.

1. *Natural Increase*.—(i) *General*. The two factors which contribute to the growth of a population are the “natural increase,” i.e., the excess of births over deaths, and the “net migration,” i.e., the excess of arrivals over departures. In earlier issues of the Official Year Book particulars of the natural increase from 1861 were given for each sex and for each State and Territory (see No. 22, page 899). Figures for more recent years will be found in *Demography Bulletin* No. 72.

During the present century the rate of natural increase grew until it reached a maximum rate of 17.44 per thousand of population in 1914, but it steadily declined after that year to 7.07 in 1934. There was little change until 1939, but during the war and in the post-war period the rate rose sharply, reaching the level of 14.37 in 1947, and it has since remained at between 13 and 14 per 1,000 of population.

In the following table particulars of the natural increase in each State and Territory are given for each sex for each five-year period from 1926 to 1950 and for each of the years 1947 to 1954.

POPULATION : NATURAL INCREASE (EXCESS OF BIRTHS OVER DEATHS).  
(EXCLUDING FULL-BLOOD ABORIGINALS.)

Period.	N.S.W.	Vic.	Q'land	S. Aust.	W. Aust.	Tas.	N.T.	A.C.T.	Aust.
MALES.									
1926-30..	72,430	43,756	25,645	14,583	11,245	7,001	-131	175	174,704
1931-35..	51,566	25,286	20,627	8,686	8,576	5,810	-93	270	120,728
1936-40(a)	49,092	26,141	23,145	9,187	9,409	6,040	39	397	123,450
1941-45(a)	68,071	42,650	31,871	15,563	12,391	7,234	15	740	178,535
1946-50(a)	93,564	63,984	41,580	24,206	19,367	11,356	412	1,583	256,052
1947(a) ..	19,743	13,130	8,661	5,048	3,802	2,314	86	265	53,049
1948 ..	17,453	12,017	8,255	4,559	3,867	2,129	77	299	48,656
1949 ..	18,498	12,224	8,262	4,817	3,933	2,314	108	395	50,551
1950 ..	19,218	13,773	8,720	5,159	4,271	2,434	121	414	54,110
1951 ..	18,907	13,357	8,666	4,995	4,598	2,392	117	416	53,448
1952 ..	19,939	14,882	9,327	5,333	4,749	2,699	149	452	57,530
1953 ..	20,444	15,200	9,428	5,576	5,048	2,479	165	337	58,677
1954 ..	19,197	15,950	9,259	5,455	4,933	2,426	178	370	57,768
FEMALES.									
1926-30..	80,733	44,417	31,128	15,407	14,406	6,893	126	203	193,313
1931-35..	60,300	28,216	26,036	9,228	12,352	5,953	156	280	142,521
1936-40(a)	60,628	28,464	28,991	10,057	13,626	6,574	220	437	148,997
1941-45(a)	75,809	42,538	36,709	15,654	16,029	7,420	232	826	195,217
1946-50(a)	102,959	63,744	46,650	24,605	22,273	11,667	652	1,574	274,124
1947(a) ..	21,206	12,794	9,581	5,054	4,349	2,463	125	295	55,867
1948 ..	19,378	12,257	9,141	4,563	4,379	2,322	130	311	52,481
1949 ..	20,950	12,658	9,325	4,852	4,788	2,407	146	324	55,450
1950 ..	21,409	13,716	9,909	5,407	4,899	2,342	194	418	58,294
1951 ..	21,230	13,750	9,881	5,284	4,908	2,398	173	438	58,062
1952 ..	22,219	15,534	10,455	5,501	5,455	2,638	210	511	62,523
1953 ..	22,739	15,711	10,348	5,618	5,742	2,706	179	327	63,370
1954 ..	21,484	16,156	10,573	5,593	5,631	2,648	229	369	62,683

(a) Excess of births over civilian deaths from September, 1939 to June, 1947.

NOTE.—Minus sign (—) denotes excess of deaths over births.

POPULATION : NATURAL INCREASE (EXCESS OF BIRTHS OVER DEATHS)—  
*continued.*

Period.	N.S.W.	Vic.	Q'land.	S. Aust.	W. Aust.	Tas.	N.T.	A.C.T.	Aust.
PERSONS.									
1926-30..	153,163	88,173	56,773	29,990	25,651	13,894	— 5	378	368,017
1931-35..	111,866	53,502	46,663	17,914	20,928	11,763	63	550	263,249
1936-40(a)	109,720	54,605	52,136	19,244	23,035	12,614	259	834	272,447
1941-45(a)	143,880	85,188	68,580	31,217	28,420	14,654	247	1,566	373,752
1946-50(a)	196,523	127,728	88,230	48,811	41,640	23,023	1,064	3,157	530,176
1947(a) ..	40,949	25,924	18,242	10,102	8,151	4,777	211	560	108,916
1948 ..	36,831	24,274	17,396	9,122	8,246	4,451	207	610	101,137
1949 ..	39,448	24,882	17,587	9,669	8,721	4,721	254	719	106,001
1950 ..	40,627	27,489	18,629	10,566	9,170	4,776	315	832	112,404
1951 ..	40,137	27,107	18,547	10,279	9,506	4,790	290	854	111,510
1952 ..	42,158	30,416	19,782	10,834	10,204	5,337	359	963	120,053
1953 ..	43,183	30,911	19,776	11,194	10,790	5,185	344	664	122,047
1954 ..	40,681	32,106	19,832	11,048	10,564	5,074	407	739	120,451

## RATE OF NATURAL INCREASE(b)—PERSONS.

1926-30..	12.51	10.10	12.84	10.58	12.63	12.85	-0.22	9.60	11.72
1931-35..	8.61	5.89	9.88	6.17	9.54	10.33	2.54	11.96	7.95
1936-40(c)	8.06	5.84	10.40	6.48	9.94	10.66	8.27	14.14	7.89
1941-45(c)	10.05	8.64	13.04	10.17	11.86	12.02	4.97	21.85	10.32
1946-50(c)	12.90	12.14	15.56	14.64	16.01	17.41	17.51	33.07	13.65
1947(c)(d)	13.72	12.62	16.50	15.62	16.21	18.54	19.42	32.89	14.37
1948(d) ..	12.20	11.61	15.43	13.79	16.02	16.90	17.27	31.80	13.12
1949(d) ..	12.75	11.61	15.22	14.21	16.37	17.46	19.44	33.98	13.40
1950(d) ..	12.72	12.44	15.64	14.89	16.44	17.13	22.01	35.34	13.75
1951(d) ..	12.24	11.91	15.16	14.03	16.38	16.61	19.11	34.63	13.24
1952(d) ..	12.61	12.98	15.75	14.35	16.99	17.89	23.80	36.24	13.90
1953(d) ..	12.75	12.90	15.36	14.42	17.37	16.93	22.14	23.12	13.84
1954 ..	11.87	13.09	15.10	13.87	16.50	16.31	25.10	24.32	13.40

(a) Excess of births over civilian deaths from September, 1930 to June, 1947. (b) Excess of births over deaths per 1,000 of mean population. (c) Excess of births over civilian deaths per 1,000 of mean population from September, 1939 to June, 1947. (d) Revised in accordance with the final results of the Census of 30th June, 1954.

NOTE.—Minus sign (—) denotes excess of deaths over births.

During the first five years of the present century the average increment to the population of Australia by natural increase was 56,886 persons per annum. The increment rose to 81,695 persons per annum in 1921-25, but thereafter fell to 52,650 persons per annum in the five years 1931-35, increasing during 1936-40 to 54,489. During 1941-45 the average annual excess of births over civilian deaths was 74,750, while during 1946-50 the annual excess of births over deaths was a record high average of 106,035. In the year 1954 the excess was 120,451.

(ii) *Comparison with other Countries.* Notwithstanding its low birth rate, Australia has a higher rate of natural increase than most European countries, owing to the fact that its death rate is very low. The following table gives a comparison between the rate of natural increase in Australia and that in some of the principal countries for which such information is available.

## NATURAL INCREASE OF POPULATION : VARIOUS COUNTRIES.

INCREASE PER ANNUM PER 1,000 OF MEAN POPULATION.

Country.	1931-35.	1936-40.	1941-45.	1946-50.	Country.	1931-35.	1936-40.	1941-45.	1946-50.
Mexico ..	18.4	20.5	23.2	27.7	Portugal ..	12.1	10.7	9.0	11.8
Ceylon ..	12.2	14.5	17.1	25.1	Denmark ..	6.8	7.5	11.2	11.4
Israel ..	21.0	17.9	19.0	23.1	Norway ..	4.8	5.1	8.0	11.4
Egypt ..	15.5	16.1	12.7	21.4	Italy ..	9.8	9.4	5.2	10.6
Canada ..	11.7	10.7	13.7	18.1	Spain ..	(c)	3.8	7.3	10.0
Netherlands ..	12.3	11.5	10.9	18.0	Ireland, Republic of	9.5	6.3	10.0	8.9
Union of S. Africa(a)	14.4	15.3	16.2	17.6	Switzerland ..	4.6	3.6	7.5	8.1
Japan ..	13.8	11.5	9.9	17.6	Sweden ..	2.5	3.1	8.1	8.0
New Zealand(b)	8.8	9.1	11.7	16.1	France ..	0.8	-1.5	-1.9	7.9
Argentina ..	(c)	(c)	13.8	15.6	United Kingdom ..	3.2	2.5	3.3	6.5
Finland ..	6.1	5.3	5.7	15.2	Germany ..	5.4	7.6	(c)	(c) 5.6
U.S.A. ..	6.3	6.3	9.6	14.2	Belgium ..	3.9	1.3	-0.5	4.6
Australia(d)	9.0	7.9	10.3	13.7	Austria ..	0.9	2.4	1.2	4.0

(a) Europeans only. (b) Excludes Maoris. (c) Not available. (d) Excludes full-blood aboriginals. (e) Federal Republic.

NOTE.—Minus sign (—) denotes decrease.

2. Net Migration.\*—The other factor of increase in the population, namely, the excess of arrivals over departures, known as "net migration," is, from its nature, much more subject to variation than is "natural increase".

Particulars of the increase by net migration are given below for five-year periods from 1926 to 1950 and for each of the years 1947 to 1954.

## POPULATION : INCREASE BY NET MIGRATION.

Period.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas.	N.T.	A.C.T.	Aust.
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## MALES.

1926-30..	37,524	7,849	11,584	- 2,230	19,069	- 3,668	870	2,259	73,257
1931-35..	- 1,646	- 5,951	6,195	- 3,654	- 4,215	- 1,384	- 24	3	- 10,676
1936-40(a)	7,847	12,096	5,249	- 4,988	- 2,501	- 793	2,787	1,176	20,873
1941-45ab	6,614	17,502	- 6,487	2,202	- 9,261	- 4,312	889	- 1,822	5,325
1946-50ab	84,834	58,331	15,038	18,531	23,299	13,178	1,852	2,665	217,728
1947abc	2,962	- 2,535	- 1,695	1,736	2,278	5,316	52	462	8,576
1948(c) ..	9,280	10,662	3,320	2,444	2,828	2,483	585	922	32,524
1949(c) ..	41,568	21,217	6,932	7,062	8,140	3,238	555	1,231	89,943
1950(c) ..	33,704	29,770	7,924	7,291	10,374	2,199	672	50	91,984
1951(c) ..	25,298	22,804	5,974	2,809	5,166	5,190	- 131	505	67,615
1952(c) ..	11,812	24,990	4,749	5,254	7,593	2,250	- 14	1,945	58,579
1953(c) ..	604	7,920	1,968	924	4,679	2,088	241	1,677	20,101
1954(c) ..	7,208	18,793	2,411	5,452	3,611	- 450	- 42	545	37,528

(a) Excludes troop movements from September, 1939 to June, 1947. (b) Excludes interstate migration from July, 1943 to June, 1947. (c) Figures for New South Wales, Victoria, Queensland and the Australian Capital Territory have been adjusted for discrepancies in road and rail movements.

NOTE.—Minus sign (—) indicates excess of departures over arrivals.

\* The subject of migration is dealt with at some length later in this chapter (see page 606).



POPULATION: INCREASE BY NET MIGRATION—*continued.*

Period.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas.	N.T.	A.C.T.	Aust.
FEMALES.									
1926-30..	33,326	12,532	3,537	— 341	9,363	— 4,293	278	2,048	56,450
1931-35..	1,093	2,943	1,125	— 2,284	— 578	— 2,644	88	47	— 210
1936-40(a)	14,414	9,409	1,509	— 2,608	— 32	— 1,872	715	656	22,255
1941-45ab	3,648	10,745	— 4,759	786	— 3,654	— 3,701	357	— 938	2,484
1946-50ab	53,087	30,124	10,233	13,464	17,552	7,708	1,643	1,545	135,356
1947abc	— 312	— 1,467	— 1,709	683	1,085	3,771	76	— 90	2,035
1948(c) ..	6,955	8,304	3,079	1,296	2,375	— 307	711	178	22,591
1949(c) ..	28,335	13,001	5,355	5,215	5,624	1,144	547	837	60,058
1950(c) ..	24,695	9,485	6,657	6,280	9,312	3,177	295	620	60,521
1951(c) ..	15,712	10,694	6,444	4,738	3,259	2,637	236	98	43,818
1952(c) ..	6,231	10,063	6,561	5,611	5,084	1,354	12	537	35,453
1953(c) ..	3,974	8,426	3,512	1,867	3,579	800	477	161	22,796
1954(c) ..	8,769	12,971	1,133	4,516	3,617	— 998	243	428	30,679
PERSONS.									
1926-30..	70,850	20,381	15,121	— 2,571	28,432	— 7,961	1,148	4,307	129,707
1931-35..	— 553	— 3,008	7,320	— 5,938	— 4,793	— 4,028	64	50	— 10,886
1936-40(a)	22,261	21,505	6,758	— 7,596	— 2,469	— 2,665	3,502	1,832	43,128
1941-45ab	10,262	28,247	— 11,246	2,988	— 12,915	— 8,013	1,246	— 2,760	7,809
1946-50ab	137,921	88,455	25,271	31,995	40,851	20,886	3,495	4,210	353,084
1947abc	2,650	— 4,001	— 3,404	2,419	3,363	9,087	128	372	10,611
1948(c) ..	16,235	18,666	6,399	3,740	5,203	2,176	1,296	1,100	55,115
1949(c) ..	63,003	31,218	12,287	12,277	13,764	4,382	1,102	2,068	150,001
1950(c) ..	58,399	39,255	14,581	13,571	19,686	5,376	967	670	152,505
1951(c) ..	41,010	33,498	12,418	7,547	8,425	7,827	105	603	111,433
1952(c) ..	18,043	35,053	11,310	10,865	12,677	3,604	— 2	2,482	94,032
1953(c) ..	4,578	16,346	5,480	2,791	8,258	2,888	718	1,838	42,897
1954(c) ..	15,977	31,764	3,544	9,968	7,228	— 1,448	201	973	68,207

(a) Excludes troop movements from September, 1939 to June, 1947. (b) Excludes interstate migration from July, 1943 to June, 1947. (c) Figures for New South Wales, Victoria, Queensland and the Australian Capital Territory have been adjusted for discrepancies in road and rail movements.

NOTE.—Minus sign (—) indicates excess of departures over arrivals.

In the five years ended 1935 there was a net emigration of 10,886 and in the five years ended 1940 a net immigration of 43,128. During the war period 1941-45 net immigration fell to 7,809 persons. In 1946 there was a net loss by migration of 15,148 persons due mainly to the departure of refugees and evacuees, and also fiancées, wives and children of British and Allied servicemen but, with increasing transport facilities and the resumption of assisted migration, there was a net gain of 10,611 in 1947, increasing rapidly to 55,115 in 1948, 150,001 in 1949 and 152,505 in 1950. This large net gain was due in great measure to the arrival of successive contingents from Australia's quota of 176,000 former European displaced persons, of whom 156,491 had arrived by the end of 1950. As this flow diminished it was partly offset by new schemes for assisted migrants but nevertheless by 1953 the total net gain from all sources during the year had fallen to 42,897. It rose again in 1954, to 68,207. The net gains in each of the years 1949 to 1952 were the highest recorded for individual years with the exception of 1919 for which year troops returning from the 1914-18 War were included.

3. Total Increase.—The total increase of the population is obtained by combining the natural increase with the increase by net migration. For the period September,

1939 to June, 1947 deaths of defence personnel have been deducted from the total increase so derived. The results of the 1947 and 1954 Censuses disclosed some unrecorded movements of population during the intercensal periods, July, 1933 to June, 1947 and July, 1947 to June, 1954, and particulars of total increase, after taking into account deaths of defence personnel in the earlier period, have been adjusted for these discrepancies. No separate adjustment has, however, been applied to individual elements of increase during the periods, although intercensal discrepancies disclosed by previous censuses were adjusted on recorded oversea departures.

The annual increments to the population for the years 1947 to 1954 are shown below, together with the increases for each five years from 1926 to 1950. For the reasons stated in the previous paragraph, figures for the period 1933 to 1954 differ from the totals of figures for natural increase and net migration shown in preceding tables by an amount equal to the net total of deaths of defence personnel and unrecorded movements of population disclosed by the Censuses of 1947 and 1954

## POPULATION : TOTAL INCREASE.

Period.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas.	N.T.	A.C.T.	Aust.
MALES.									
1926-30..	109,954	51,605	37,229	12,353	30,314	3,333	739	2,434	247,961
1931-35..	50,277	18,318	26,789	5,049	5,871	4,619	109	502	111,316
1936-40(a)	57,601	36,297	28,364	4,218	9,995	5,526	2,847	2,622	147,470
1941-45ab	62,389	47,747	20,117	14,703	2,856	2,204	915	427	151,358
1946-50ab	164,165	119,843	63,600	52,156	43,160	21,245	2,159	3,358	469,686
1947(a)(b)	20,755	10,329	7,980	8,161	6,343	7,188	126	891	61,773
1948 ..	22,411	22,313	13,567	9,686	6,651	3,648	627	1,221	80,124
1949 ..	55,447	32,722	17,163	14,515	11,969	4,590	634	1,626	138,666
1950 ..	48,301	42,738	18,606	15,105	14,485	3,670	764	464	144,193
1951 ..	39,948	35,512	16,606	10,483	9,696	6,618	44	669	119,488
1952 ..	28,333	39,253	16,039	13,245	12,246	3,981	107	1,391	114,595
1953 ..	17,740	22,798	13,374	9,177	9,672	3,603	377	1,009	77,750
1954 ..	24,746	34,531	12,664	12,248	8,514	1,496	120	412	94,731

## FEMALES.

1926-30..	114,059	56,949	34,665	15,066	23,769	2,600	404	2,251	249,763
1931-35..	61,442	30,672	27,772	7,246	12,142	3,507	275	539	143,595
1936-40(a)	75,275	37,026	31,791	8,076	14,458	5,053	997	1,778	174,454
1941-45ab	79,661	52,442	33,295	17,123	13,156	4,074	657	845	201,253
1946-50ab	144,647	102,337	57,020	39,840	39,378	18,821	1,708	4,018	407,769
1947(a)(b)	19,487	12,611	8,007	6,053	5,446	6,178	124	303	58,209
1948 ..	23,261	23,103	12,159	6,297	6,586	1,817	666	489	74,378
1949 ..	46,053	28,037	14,612	10,488	10,216	3,352	520	1,161	114,439
1950 ..	42,890	25,560	16,493	12,120	13,080	5,320	317	1,038	117,718
1951 ..	33,667	26,844	16,254	10,459	7,594	4,836	238	646	100,938
1952 ..	24,981	27,928	16,939	11,540	10,350	3,790	50	1,489	97,067
1953 ..	23,283	26,518	13,790	7,918	9,136	3,304	487	931	85,367
1954 ..	28,558	30,311	11,668	10,330	9,158	1,550	385	1,018	92,978

(a) Includes recorded deaths of defence personnel, whether inside or outside Australia, from September, 1939 to June, 1947. (b) Excludes interstate migration from July, 1943 to June, 1947.

NOTE.—Minus sign (—) denotes decrease.

POPULATION: TOTAL INCREASE—*continued.*

Period.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas.	N.T.	A.C.T.	Aust.
PERSONS.									
1926-30..	224,013	108,554	71,894	27,419	54,083	5,933	1,143	4,685	497,724
1931-35..	111,710	48,990	54,561	12,295	18,013	8,126	166	1,041	254,911
1936-40(a)	132,876	73,323	60,155	12,294	24,453	10,579	3,844	4,400	321,924
1941-45ab	142,050	100,189	53,412	31,826	16,012	6,278	1,572	1,272	352,611
1946-50ab	308,812	222,180	120,620	91,996	82,538	40,066	3,867	7,376	877,455
1947(a)(b)	40,242	22,940	15,987	14,214	11,789	13,366	250	1,194	119,982
1948 ..	45,672	45,416	25,726	15,983	13,237	5,465	1,293	1,710	154,502
1949 ..	101,500	60,759	31,775	25,003	22,185	7,942	1,154	2,787	253,105
1950 ..	91,251	68,298	35,099	27,225	28,465	8,990	1,081	1,502	261,911
1951 ..	73,615	62,356	32,860	20,942	17,690	11,454	194	1,315	220,426
1952 ..	53,314	67,181	32,978	24,785	22,596	7,771	157	2,880	211,662
1953 ..	41,023	49,316	27,164	17,095	18,808	6,907	864	1,940	163,117
1954 ..	53,304	64,842	24,332	22,578	17,672	3,046	505	1,430	187,709

(a) Includes recorded deaths of defence personnel, whether inside or outside Australia, from September, 1939 to June, 1947. (b) Excludes interstate migration from July, 1943 to June, 1947.

4. Rate of Population Growth.—(i) *Australia.* The annual percentage rate of population growth is computed by the compound interest formula. The formula is as follows:—

$$P_1 = P_0 (1 + r)^t$$

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 per cent. of population in Australia during each of the years 1944 to 1954 were as follows:—1944, 1.06; 1945, 1.13; 1946, 1.18; 1947, 1.60; 1948, 2.02; 1949, 3.25; 1950, 3.26; 1951, 2.65; 1952, 2.48; 1953, 1.87; and 1954, 2.11.

The annual rate of population growth during the present century has been 1.64 per cent., but the results from year to year have deviated widely from this figure. In the following table the period 31st December, 1900 to 31st December, 1954 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	1.59	0.53	2.04
1914 to 1923 ..	10	862	86	1.50	0.15	1.64
1924 to 1929 ..	6	680	113	1.28	0.64	1.88
1930 to 1939(a) ..	10	569	57	0.82	0.03	0.85
1940 to 1946(a) ..	7	513	73	1.05	0.01	1.01
1947 to 1951(a) ..	8	1,572	197	1.43	1.10	2.42

(a) Population figures include Australian defence forces overseas from September, 1939, to June, 1947.

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 rate of growth of the population receded to 0.85 per cent. per annum. With the outbreak of war in 1939, Australia entered a new phase in her demographic history, the full effects of which will not be seen for some time to come. 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 post-war period 1947 to 1954 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 was 2.45 per cent.

Rates of population growth from 1881 to 1954 may be found for each State and Territory of Australia in *Demography Bulletin* No. 72, 1954.

(ii) *Various Countries.* The table hereunder gives estimated rates of growth of the population of Australia in comparison with those for other countries:—

POPULATION : RATES OF GROWTH IN VARIOUS COUNTRIES.

Country.	Annual Rate of Population Growth. (Per cent.)					Country.	Annual Rate of Population Growth (Per cent.)				
	1926- 31.	1931- 36.	1936- 41.	1941- 46.	1946- 51.		1926- 31.	1931- 36.	1936- 41.	1941- 46.	1946- 51.
Ceylon ..	1.18	1.34	1.40	2.15	2.95	Denmark ..	0.67	0.84	0.74	1.20	0.97
Canada ..	1.97	1.23	0.85	1.35	2.62	Germany ..	0.55	0.58	(b)	(b)	0.92
Australia ..	1.50	0.76	0.93	0.98	2.55	Belgium ..	0.71	0.42	-0.10	0.22	0.73
Japan ..	1.48	0.77	1.06	0.92	2.05	Italy ..	0.31	0.63	0.55	0.49	0.70
New Zealand ..	1.38	0.79	0.58	1.81	2.04	Spain ..	0.89	1.46	0.91	0.94	0.61
United States ..	1.27	0.69	0.79	1.18	1.79	England and Wales ..	0.44	0.42	0.44	0.45	0.61
Netherlands ..	1.06	1.26	1.12	1.00	1.72	Ireland, Re- public of ..	-0.12	0.28	0.18	-0.20	-0.01
Norway ..	0.42	0.46	0.52	0.90	1.25	Scotland ..	-0.21	0.50	0.64	0.03	-0.08
Switzerland ..	0.62	0.44	0.43	0.98	1.24						
France ..	0.53	0.02	-1.48	0.51	1.10						
Sweden ..	0.29	0.34	0.45	1.01	1.03						

(a) Excludes armed forces overseas at 31st December, 1941.  
(d) Territory defined by 1947 peace treaty.

(b) Not available.

(c) Excludes

NOTE.—Minus sign (—) denotes decrease.

## § 6. Density.

1. *General.*—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 2,974,581 square miles, and a recorded population at 30th June, 1954, of 8,986,530, excluding about 47,000 full-blood aborigines, has a density of only 3.02 persons to the square mile, and is, therefore, the most sparsely populated of the civilized countries of the world. For the other continents and sub-continents the densities are approximately as follows:—Europe (excluding U.S.S.R.), 212; Asia (excluding U.S.S.R.), 138; U.S.S.R., 25; Africa, 18; North and Central America, 25; and South America, 17. The population of Australia has thus about one-sixth of the density of that of South America and of Africa; about one-eighth of that of U.S.S.R. and of North and Central America; about one-forty-fifth of that of Asia (excluding U.S.S.R.); and about one-seventieth of that of Europe (excluding U.S.S.R.).

On account of the very 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 3.02 in 1954. Victoria's density, however, has grown from 13.77 to 27.90 and that of New South Wales from 4.43 to 11.06 in the same period. 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 area of Australia receiving less than 10 inches of rainfall is 38 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.

A map showing the density of population throughout Australia at the 1947 Census may be found in Official Year Book No. 41, pp. 317-8.

2. Main Countries of the World.—Number and density of population of the most important countries of the world at 30th June, 1953, are shown in the following table. In some instances, more particularly in the cases of Asia and Africa, the numbers must be considered as rough approximations only.

**POPULATION OF THE PRINCIPAL COUNTRIES OF THE WORLD: NUMBER AND DENSITY, 1953.**

Country.	Population. (‘000.)	Density (a)	Country.	Population. (‘000.)	Density. (a)
<b>EUROPE.</b>			<b>AFRICA.</b>		
Germany ..	69,545	509.6	Nigeria ..	30,000	88.5
United Kingdom ..	50,857	539.8	Egypt ..	21,935	56.8
Italy ..	48,065	413.5	French West Africa ..	17,435	9.5
France ..	42,860	201.5	Ethiopia and Eritrea, Federa- tion of(e) ..	16,020	35.0
Spain ..	28,528	146.9	Union of South Africa ..	13,153	27.8
Poland ..	26,500	220.2	Belgian Congo ..	12,154	13.4
Yugoslavia ..	16,991	172.3	Algeria ..	9,367	11.1
Romania ..	16,500	179.9	Sudan ..	8,820	9.1
Czechoslovakia(b) ..	12,952	262.5	French Morocco ..	8,220	54.5
Netherlands ..	10,493	838.8	Tanganyika Territory ..	8,069	22.3
Hungary ..	9,600	267.3	Mozambique ..	5,595	19.8
Belgium ..	8,778	745.2	Other ..	56,932	..
Portugal ..	8,621	242.3	Total Africa ..	208,000	17.8
Greece(e) ..	7,819	152.8	<b>NORTH AND CENTRAL AMERICA.</b>		
Bulgaria ..	7,450	174.1	United States of America ..	150,629	52.8
Sweden ..	7,171	41.3	Mexico ..	28,053	36.9
Austria ..	6,954	214.8	Canada ..	14,781	3.8
Switzerland ..	4,877	305.9	Cuba ..	5,607	131.3
Denmark ..	4,369	263.5	Other ..	23,730	..
Finland ..	4,142	31.8	Total North and Central America ..	232,000	24.8
Norway ..	3,359	26.9	<b>SOUTH AMERICA.</b>		
Ireland, Republic of ..	2,942	108.4	Brazil ..	55,772	17.0
Other ..	3,627	..	Argentina ..	18,393	17.0
Total Europe ..	403,000	211.8	Colombia ..	12,108	27.6
<b>ASIA.</b>			Peru ..	9,035	17.9
China ..	582,003	155.0	Chile ..	6,072	21.2
India ..	372,000	293.0	Other ..	17,620	..
Japan ..	86,700	609.7	Total South America ..	119,000	17.3
Indonesia ..	70,900	138.7	<b>OCEANIA.</b>		
Pakistan(b) ..	80,167	220.1	Australia(f) ..	8,862	3.0
Korea ..	30,000	351.9	New Zealand and Depen- dencies ..	2,047	19.8
Vietnam ..	25,880	203.4	Territory of New Guinea ..	1,155	12.4
Turkey(d) ..	22,461	75.8	Hawaii ..	523	81.4
Philippines ..	21,039	182.0	Papua ..	397	4.4
Iran ..	20,253	32.2	Fiji ..	217	45.0
Thailand ..	19,556	98.5	Other ..	699	..
Burma ..	19,045	72.8	Total Oceania ..	14,000	4.2
Afghanistan(e) ..	12,000	47.8	<b>SUMMARY.</b>		
Ceylon ..	8,155	371.9	Europe ..	403,000	211.8
Nepal ..	7,000	129.5	Asia ..	1,433,000	137.5
Saudi Arabia ..	7,000	11.3	U.S.S.R. ..	214,500	25.0
Malaya, Federation of ..	5,706	112.6	Africa ..	208,000	17.8
Other ..	33,535	..	America, North and Central ..	232,000	24.8
Total Asia ..	1,433,000	137.5	America, South ..	119,000	17.3
<b>U.S.S.R. (Europe and Asia)</b> (b) 214,500 25.0			Oceania ..	14,000	4.2
			Total ..	2,623,500	50.3

(a) Number of persons per square mile.  
Islands. (d) Includes European Territory.  
full-blood aboriginals.

(b) Population 1954.  
(e) Population 1951.

(c) Includes Federated  
(f) Includes 47,000

The populations shown in the above table are, in the main, in accordance with figures published in the *Demographic Year Book*, 1954, published by the United Nations, and the countries have been arranged in accordance with the continental groups used therein.

## § 7. General Characteristics.

NOTE.—Information provided throughout this section relates to the 1954 Census. Further particulars will be found in the Appendix.

1. Sex Distribution.—(i) *States.* The number of males to each hundred females has been adopted as a measure of the “masculinity” of the population. On pp. 163–5 in the second issue of the Official Year Book a table was included showing the masculinity of the population of each of the States for each year from 1796 to 1907. In the fifth issue, on p. 123, the figures in this table for the years 1901 to 1907 were modified in accordance with the results of the 1911 Census.

With the exception of some dislocation arising from the two World Wars, there has been a continuous diminution of the masculinity of the population. This has 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 there has since been an increase in masculinity owing to the higher birth rate and to the increase in the number of immigrants, the majority of whom are males.

The following table shows the masculinity of the population at five-year intervals from 1925 to 1945 and for each of the years 1947 to 1954 :—

## POPULATION : MASCULINITY, 1925 TO 1954.

(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.
1925 .. ..	104.09	99.71	110.94	102.02	115.76	100.90	297.61	132.37	104.24
1930 .. ..	103.39	99.14	110.66	100.97	117.17	101.53	263.66	118.69	103.85
1935 .. ..	102.38	97.84	109.81	100.20	113.21	102.45	212.80	115.64	102.71
1940 .. ..	100.68	97.85	108.48	98.91	110.38	102.74	240.31	124.62	101.81
1945 .. ..	99.75	97.50	105.45	98.21	105.49	101.15	220.16	115.86	100.36
1947 .. ..	100.01	97.20	105.38	98.81	105.89	101.85	210.93	123.38	100.50
1948 .. ..	99.06	97.19	105.52	99.87	105.76	103.18	192.28	130.77	100.64
1949 .. ..	100.55	97.69	105.83	101.04	106.20	104.00	184.47	131.90	101.22
1950 .. ..	100.88	99.27	106.02	101.83	106.07	102.70	188.05	123.33	101.83
1951 .. ..	101.24	100.04	105.92	101.79	106.50	103.82	178.68	122.19	102.23
1952 .. ..	101.42	101.00	105.61	102.18	106.91	103.85	179.01	118.81	102.58
1953 .. ..	101.08	100.67	105.42	102.46	106.88	103.96	170.45	118.10	102.36
1954 .. ..	100.84	101.00	105.48	102.88	106.47	103.89	161.76	112.70	102.35

(ii) *Various Countries.* The masculinity of the population in various countries is shown in the following table.

## POPULATION : MASCULINITY IN VARIOUS COUNTRIES.

Country.	Year.	Number of Males per 100 Females.	Country.	Year.	Number of Males per 100 Females.
Ireland, Republic of ..	1951	103.6	Belgium .. ..	1952	97.1
Canada .. ..	1953	102.7	Japan .. ..	1952	96.2
Australia(a) .. ..	1954	102.4	Northern Ireland ..	1954	95.1
New Zealand (b) ..	1954	101.0	Italy .. ..	1951	95.0
Union of South Africa(c)	1951	100.3	France .. ..	1953	93.5
Netherlands .. ..	1953	99.3	Spain .. ..	1950	92.8
Sweden .. ..	1952	99.3	England and Wales..	1954	92.7
United States of America	1953	98.9	Scotland .. ..	1954	91.5
Norway .. ..	1952	98.6	Germany, Federal Re-		
Denmark .. ..	1953	98.5	public .. ..	1952	88.4

(a) Excludes full-blood aboriginals.

(b) Excludes Maoris.

(c) European population only.

2. Age Distribution.—The age distribution of the population is obtained only at a census, but estimates, based on the census distribution and on births, recorded ages at death and recorded ages of migrants, are made for intercensal years. The following table shows the variation which took place in the age constitution of the population during the 7 years following the 1947 Census.

Of the 8,986,530 persons enumerated at the 1954 Census, 10.8 per cent. were under 5 years of age; 10.0 per cent. were from 5 to 9 years; 7.7 per cent. from 10 to 14 years; 6.6 per cent. from 15 to 19 years; and 36.3 per cent. were under age 21. At the 1947 Census 10.0 per cent. were under 5 years; 8.0 per cent. 5 to 9 years; 7.1 per cent. 10 to 14 years; 7.7 per cent. 15 to 19 years; and 34.4 per cent. under 21 years of age.

Owing mainly to the fall in the birth rate during the years 1930 to 1939, the number of persons in Australia between the ages of 15 and 24 in 1954 showed a decline of 12,683 as compared with the number in this age group in 1947. This decline would have been more serious but for the migration of adolescents between 1947 and 1954. The number of children under 16 years of age among immigrants contributed substantially to the increases in the lower age groups. The proportion of persons under 21 years in Australia increased from 34.4 per cent. in 1947 to 36.3 per cent. in 1954, whilst the proportion of persons aged 21 years and over decreased from 65.6 per cent. to 63.7 per cent. during the same period.

# POPULATION: ADJUSTED AGE DISTRIBUTION (a), AUSTRALIA, 1947 AND 1954.

(EXCLUDING FULL-BLOOD ABORIGINALS.)

Age last Birthday. (Years.)	Census, 30th June, 1947.			Census, 30th June, 1954.			Increase, 1947-54.
	Males.	Females.	Persons.	Males.	Females.	Persons.	
0-4 .. .. .	388,301	372,086	760,387	493,682	472,735	966,417	206,030
5-9 .. .. .	307,697	295,286	603,983	461,903	440,834	902,737	298,754
10-14 .. .. .	271,761	262,922	534,683	354,075	340,105	694,180	159,497
15-19 .. .. .	207,524	289,142	586,666	302,287	289,484	591,771	5,105
20-24 .. .. .	309,490	308,464	617,954	311,979	288,187	600,166	-17,788
25-29 .. .. .	297,497	300,889	598,386	368,639	336,178	704,817	106,431
30-34 .. .. .	297,531	300,567	598,098	364,238	343,605	707,843	109,745
35-39 .. .. .	285,309	275,637	560,946	325,768	317,355	643,123	82,177
40-44 .. .. .	258,008	238,284	496,292	323,418	305,010	628,428	132,136
45-49 .. .. .	236,381	229,347	465,728	286,705	260,224	546,929	81,201
50-54 .. .. .	207,515	217,473	424,988	240,061	233,140	479,201	54,213
55-59 .. .. .	198,928	198,521	397,449	193,148	204,122	397,270	-179
60-64 .. .. .	159,157	164,552	323,709	178,947	198,695	377,642	53,933
65-69 .. .. .	116,511	126,863	243,374	143,140	160,172	303,312	59,938
70-74 .. .. .	76,919	90,481	167,400	94,961	115,429	210,390	42,990
75-79 .. .. .	50,914	61,079	111,993	55,104	72,738	127,842	15,849
80-84 .. .. .	26,218	32,696	58,914	27,972	40,470	68,442	9,528
85-89 .. .. .	9,627	13,301	22,928	11,025	16,618	27,643	4,715
90-94 .. .. .	1,815	2,938	4,753	2,726	4,613	7,339	2,586
95-99 .. .. .	252	439	691	315	652	967	276
100 and over .. .. .	15	21	36	25	46	71	35
Total .. .. .	3,797,370	3,781,988	7,579,358	4,546,118	4,440,412	8,986,530	1,407,172
Under 21 years .. .. .	1,324,623	1,280,353	2,604,976	1,668,770	1,596,959	3,265,729	660,753
21 years and over .. .. .	2,472,747	2,501,635	4,974,382	2,877,348	2,843,453	5,720,801	746,419
Total .. .. .	3,797,370	3,781,988	7,579,358	4,546,118	4,440,412	8,986,530	1,407,172

(a) At the 1947 Census unspecified ages were distributed proportionally over ages 15 years and upwards after completion of tabulation, but at the 1954 Census they were distributed over all ages prior to tabulation.

NOTE.—Minus sign (—) denotes decrease.

The next table shows the change which has been taking place in the age constitution of the population of Australia since 1871. Up to the 1954 Census, each successive census except that of 1921 had revealed a larger percentage of the population 15 years of age and over than was recorded at the previous census. However, in 1954, the proportion of this age group dropped sharply to a level (71.5 per cent.) slightly below that of 1933, the proportion of children under 15 years showing a corresponding increase to 28.5 per cent. of the total population.

**POPULATION : PROPORTIONAL AGE DISTRIBUTION, AUSTRALIA, 1871 TO 1954.**  
(Per cent.)

Census Year.	Males.				Females.				Persons.			
	Under 15 years.	15 and under 65.	65 and over.	Total.	Under 15 years.	15 and under 65.	65 and over.	Total.	Under 15 years.	15 and under 65.	65 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	33.14	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	23.48	67.08	7.44	100	24.03	66.71	8.66	100	23.05	66.90	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

3. **Conjugal Condition.**—Of the total population of Australia at the 1954 Census, 46.8 per cent. had never married; 47.1 per cent. were married (including 1.4 per cent. married but permanently separated); 5.2 per cent. were widowed; and 0.8 per cent. were divorced. Between 1947 and 1954 the number never married increased by 17.7 per cent.; those married (including permanently separated) by 20.6 per cent.; the widowed by 10.2 per cent.; and the divorced by 31.8 per cent.

From the demographic point of view the most important change in the conjugal condition of the population of Australia between 1947 and 1954 was the increase of 35.0 per cent. in never married persons under 15 years of age, which offset by many times the continued decrease in never married persons 15 years and over. The latter decrease was, however, confined to females, as the number of unmarried males 15 years and over increased by 3.6 per cent. between 1947 and 1954. The proportion of married persons continued to increase, and in 1954 comprised 66 per cent. of the population 15 years of age and over who stated their conjugal condition, compared with 62 per cent. in 1947 and 54 per cent. in 1933.

The number of widowed females recorded in Australia in 1954 was 351,101 or more than three times as many as the number of widowed males. This disparity 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.

**POPULATION : CONJUGAL CONDITION, AUSTRALIA, 1947 AND 1954.**

(EXCLUDING FULL-BLOOD ABORIGINALS.)

Conjugal Condition.	Census, 30th June, 1947.			Census, 30th June, 1954.			Increase, 1947-54.
	Males.	Females.	Persons.	Males.	Females.	Persons.	
Never Married—							
Under 15 years of age ..	967,759	931,294	1,899,053	1,300,660	1,253,674	2,553,334	664,281
15 years of age and over ..	929,212	748,414	1,677,626	962,491	684,154	1,646,645	-30,981
Total .. ..	1,896,971	1,679,708	3,576,679	2,272,151	1,937,828	4,209,979	633,300
Married .. ..	1,692,913	1,686,885	3,379,798	2,062,122	2,043,651	4,105,773	725,975
Married but Permanently Separated .. ..	58,722	67,890	126,612	57,371	66,229	123,600	-3,012
Widowed .. ..	111,680	309,383	421,063	113,064	351,101	464,165	43,102
Divorced .. ..	24,952	27,441	52,393	32,389	36,650	69,039	16,646
Not Stated .. ..	12,132	10,681	22,813	9,021	4,953	13,974	-8,839
Total .. ..	3,797,370	3,781,988	7,579,358	4,546,118	4,440,412	8,986,530	1,407,172

NOTE.—Minus sign (—) denotes decrease.



4. Birthplace.—At 30th June, 1954, the Australian-born element of the population of Australia represented 85.7 per cent. as compared with 90.2 per cent. at the 1947 Census. The number of Australian-born increased by 865,410 or by 12.7 per cent. between 1947 and 1954 while the oversea-born population increased by 541,762 or 72.8 per cent. This was due mainly to the increase of 502,961 in the number of persons of European birthplace since 1947—principally persons born in England (an increase of 96,620); Italy (86,011); Germany (50,854); Poland (50,021); and the Netherlands (49,825).

Although numerically less significant, the number of persons of Asian and African birthplace more than doubled during the intercensal period, but there was little change in the number of persons born elsewhere.

Of persons born outside Australia, 57 per cent. were males and 43 per cent. females.

**POPULATION: BIRTHPLACES, AUSTRALIA, 1947 AND 1954.**  
(EXCLUDING FULL-BLOOD ABORIGINALS.)

Birthplace.	Census, 30th June, 1947.			Census, 30th June, 1954.			Increase, 1947-54.
	Males.	Females.	Persons.	Males.	Females.	Persons.	
Australia .. .. .	3,380,324	3,454,847	6,835,171	3,812,842	3,887,739	7,700,581	865,410
New Zealand .. ..	21,890	21,720	43,610	21,723	21,624	43,347	263
Other Australasian ..	776	810	1,586	1,065	1,058	2,123	537
<b>Total, Australasia ..</b>	<b>3,402,990</b>	<b>3,477,377</b>	<b>6,880,367</b>	<b>3,835,630</b>	<b>3,910,421</b>	<b>7,746,051</b>	<b>865,684</b>
England .. .. .	205,330	176,262	381,592	256,583	221,629	478,212	96,620
Wales .. .. .	6,859	5,005	11,864	8,341	6,142	14,483	2,619
Scotland .. .. .	55,734	47,264	102,998	66,791	56,837	123,628	20,630
Northern Ireland ..	3,214	2,325	5,539	5,527	3,975	9,502	3,963
Ireland, Republic of ..	2,420	2,244	4,664	3,595	2,397	5,992	1,328
Ireland (undefined) ..	18,309	16,301	34,610	18,052	14,122	32,174	-2,436
Austria .. .. .	2,368	1,851	4,219	5,582	5,286	10,868	6,649
Czechoslovakia .. ..	926	558	1,484	8,515	4,165	12,680	11,196
Estonia .. .. .	656	446	1,102	3,393	3,156	6,549	5,447
France .. .. .	1,077	1,138	2,215	2,417	2,282	4,699	2,484
Germany .. .. .	8,955	5,612	14,567	33,663	31,758	65,421	50,854
Greece .. .. .	9,115	3,176	12,291	16,794	9,068	25,862	13,571
Hungary .. .. .	702	525	1,227	9,054	5,548	14,602	13,375
Italy .. .. .	22,506	11,126	33,632	80,026	39,617	119,643	86,011
Latvia .. .. .	206	151	417	9,523	7,734	17,257	16,810
Lithuania .. .. .	169	104	273	5,272	3,172	8,444	8,171
Malta .. .. .	2,472	766	3,238	12,411	7,577	19,988	16,750
Netherlands .. .. .	1,577	597	2,174	30,037	21,062	51,099	49,825
Poland .. .. .	3,672	2,901	6,573	35,652	20,942	56,594	50,021
Ukraine .. .. .	2,817	2,159	4,976	8,728	6,028	14,756	22,878
U.S.S.R. .. .. .				6,419	6,679	13,098	
Yugoslavia .. .. .	4,281	1,585	5,866	15,471	7,374	22,845	16,970
Other European .. ..	11,009	4,065	16,055	17,466	7,805	25,271	9,216
<b>Total, Europe .. ..</b>	<b>365,445</b>	<b>286,161</b>	<b>651,606</b>	<b>659,312</b>	<b>495,255</b>	<b>1,154,567</b>	<b>502,961</b>
Ceylon, India and Pakistan ..	5,247	2,913	8,160	8,477	6,373	14,850	6,690
China .. .. .	5,135	1,269	6,404	7,153	3,078	10,231	3,827
Cyprus .. .. .	544	137	681	4,254	1,510	5,773	5,092
Syria and Lebanon .. ..	1,035	851	1,886	2,614	1,552	4,166	2,280
Other Asian .. .. .	4,129	2,846	6,965	9,750	6,788	16,537	9,582
<b>Total, Asia .. .. .</b>	<b>16,090</b>	<b>8,006</b>	<b>24,096</b>	<b>31,257</b>	<b>19,310</b>	<b>51,567</b>	<b>27,471</b>
Egypt .. .. .	412	301	803	4,392	3,748	8,150	7,347
Union of South Africa ..	3,071	2,795	5,866	3,113	2,848	5,971	105
Other African .. .. .	404	271	675	930	775	1,705	837
<b>Total, Africa .. ..</b>	<b>3,077</b>	<b>3,560</b>	<b>7,537</b>	<b>8,435</b>	<b>7,301</b>	<b>15,806</b>	<b>8,269</b>
Canada .. .. .	2,300	1,719	4,009	2,571	1,917	4,458	479
United States of America ..	3,794	2,438	6,232	5,937	3,249	8,286	2,054
Other American .. .. .	787	606	1,389	938	781	1,719	330
<b>Total, America .. ..</b>	<b>6,877</b>	<b>4,753</b>	<b>11,630</b>	<b>8,446</b>	<b>5,947</b>	<b>14,403</b>	<b>2,863</b>
Polynesia .. .. .	1,526	1,619	3,145	1,628	1,730	3,358	213
At Sea .. .. .	465	512	977	310	358	668	-309
<b>Total Born Outside Aus-</b>	<b>417,046</b>	<b>377,141</b>	<b>794,187</b>	<b>733,276</b>	<b>552,673</b>	<b>1,285,949</b>	<b>511,762</b>
<b>Total .. .. .</b>	<b>3,797,370</b>	<b>3,781,988</b>	<b>7,579,358</b>	<b>4,546,118</b>	<b>4,440,412</b>	<b>8,986,530</b>	<b>1,407,172</b>

NOTE.—Minus sign (—) denotes decrease.

5. **Period of Residence in Australia.**—This table classifies the immigrant population of Australia according to period of residence in Australia, and reflects the greatly increased rate of immigration since 1947. It shows that, of persons in 1954 born outside Australia who stated their period of residence, 40.9 per cent. had resided in Australia for a period of less than 5 years, 53.9 per cent. for less than 8 years, and 56.2 per cent. for less than 15 years, compared with 5.7, 7.7 and 14.8 per cent. respectively at the previous Census in 1947.

### IMMIGRANT POPULATION: PERIOD OF RESIDENCE, AUSTRALIA, 1947 AND 1954.

#### PERSONS BORN OUTSIDE AUSTRALIA.

Period of Residence.	Census, 30th June, 1947.			Census, 30th June, 1954.			Increase, 1947-54.
	Males.	Females.	Persons.	Males.	Females.	Persons.	
Under 1 year .. .. .	16,660	9,953	26,613	47,410	34,831	82,241	55,628
1 year and under 2 years ..	4,116	4,953	9,069	32,198	27,093	59,291	50,222
2 years and under 3 years ..	2,124	1,322	3,446	65,289	39,330	104,619	101,173
3 years and under 4 years ..	822	462	1,284	71,119	50,341	121,460	120,176
4 years and under 5 years ..	671	319	990	87,582	62,191	149,773	148,783
<b>Total under 5 years</b> .. .. .	<b>24,393</b>	<b>17,009</b>	<b>41,402</b>	<b>303,598</b>	<b>213,786</b>	<b>517,384</b>	<b>475,982</b>
5 years and under 6 years ..	2,217	1,238	3,455	64,570	45,401	109,971	106,516
6 years and under 7 years ..	2,374	1,827	4,201	21,514	15,418	36,932	32,731
7 years and under 8 years ..	3,608	3,032	6,640	9,446	7,883	17,329	10,689
8 years and under 9 years ..	7,966	6,803	14,769	15,673	12,523	28,196	— 23,285
9 years and under 10 years ..	6,270	4,166	10,436				
10 years and under 15 years ..	13,507	12,769	26,276				
<b>Total 5 years and under 15 years</b> .. .. .	<b>35,942</b>	<b>29,835</b>	<b>65,777</b>	<b>111,203</b>	<b>81,225</b>	<b>192,428</b>	<b>126,651</b>
15 years and over .. .. .	345,039	270,399	615,438	306,202	247,809	554,011	— 61,427
Not Stated .. .. .	11,672	9,898	21,570	12,273	9,853	22,126	556
<b>Born outside Australia</b> .. .. .	<b>417,046</b>	<b>327,141</b>	<b>744,187</b>	<b>733,276</b>	<b>552,673</b>	<b>1,285,949</b>	<b>541,762</b>
<b>Born in Australia</b> .. .. .	<b>3,380,324</b>	<b>3,454,847</b>	<b>6,835,171</b>	<b>3,812,842</b>	<b>3,887,739</b>	<b>7,700,581</b>	<b>865,410</b>
<b>Total</b> .. .. .	<b>3,797,370</b>	<b>3,781,988</b>	<b>7,579,358</b>	<b>4,546,118</b>	<b>4,440,412</b>	<b>8,986,530</b>	<b>1,407,172</b>

NOTE.—Minus sign (—) denotes decrease.

6. **Nationality.**—At 30th June, 1954, 8,582,509 persons (or 95.5 per cent. of the Australian population) were of British nationality (consisting of 85.7 per cent. born in Australia and 9.8 per cent. born outside), compared with 99.5 per cent. in 1947 (90.2 per cent. Australian-born and 9.3 per cent. born outside Australia). Of the over-sea-born population in 1954, 68.6 per cent. were British subjects, compared with 94.8 per cent. in 1947. The most numerous foreign nationals in Australia at 30th June, 1954 were:—Italian, 89,785 persons; Dutch, 53,448; Polish, 49,732; German, 31,448; Yugoslav, 18,120; Greek, 17,843; Ukrainian, 17,234; and Latvian, 17,223.

## POPULATION: NATIONALITY (i.e., ALLEGIANCE), AUSTRALIA, 1947 AND 1954.

(EXCLUDING FULL-BLOOD ABORIGINALS.)

Nationality.	Census, 30th June, 1947.			Census, 30th June, 1954.			Increase, 1947-54.
	Males.	Females.	Persons.	Males.	Females.	Persons.	
British (a)—							
Born in Australia ..	3,380,324	3,454,847	6,835,171	3,812,842	3,887,739	7,700,581	865,410
Born outside Australia ..	387,767	317,767	705,534	484,641	397,287	881,928	176,394
Total, British ..	3,768,091	3,772,614	7,540,705	4,297,483	4,285,026	8,582,509	1,041,804
Foreign—							
American (U.S.) ..	2,474	877	3,351	3,761	1,959	5,720	2,369
Austrian ..	376	280	656	1,859	1,696	3,555	2,899
Chinese ..	4,329	529	4,858	5,010	931	5,941	1,083
Czechoslovak ..	239	135	374	4,958	2,280	7,238	6,864
Dutch ..	1,408	593	2,001	30,509	22,939	53,448	51,447
Estonian ..	159	96	255	2,720	2,581	5,301	5,046
French ..	770	551	1,321	1,908	1,624	3,532	2,211
German ..	1,669	692	2,361	17,262	14,186	31,448	29,087
Greek ..	3,720	784	4,504	11,445	6,428	17,873	13,339
Hungarian ..	154	173	327	3,910	3,746	7,656	9,329
Italian ..	5,473	1,699	7,172	61,441	28,344	89,785	82,613
Latvian ..	36	25	61	9,160	8,063	17,223	17,162
Lithuanian ..	23	15	38	4,854	3,246	8,100	8,062
Norwegian ..	685	60	745	1,413	297	1,710	965
Polish ..	839	721	1,560	29,524	20,208	49,732	48,172
Romanian ..	39	31	70	871	519	1,390	1,320
Russian ..	333	210	543	2,170	2,077	4,256	3,713
Swiss ..	321	127	448	925	696	1,621	1,173
Ukrainian ..	..	..	..	9,867	7,367	17,234	17,234
Yugoslav ..	1,753	343	2,096	11,629	6,491	18,120	16,024
Other Foreign ..	3,292	672	3,964	8,880	3,343	12,223	8,259
Stateless ..	1,187	761	1,948	22,580	16,365	38,945	36,997
Total, Foreign ..	29,279	9,374	38,653	248,635	155,386	404,021	365,368
Total ..	3,797,370	3,781,988	7,579,358	4,546,118	4,440,412	8,986,530	1,407,172

(a) "Irish" nationality is included with "British" nationality for the purpose of this table.

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 and 1954, when the public was informed there was no legal obligation to answer this question, 848,948 persons, (12.8 per cent.), 824,824 (10.9 per cent.) and 855,819 (9.5 per cent.), respectively, gave no reply. Of males 10.3 per cent., and of females 8.7 per cent., did not state their religion in 1954.

Of those who stated their religion, the greatest numerical increase during the intercensal period between 1947 and 1954 was recorded by the Roman Catholic and Catholic combined. This group was followed closely by Church of England, and then Presbyterian, Methodist and Lutheran in that order. Amongst the denominations with the largest numbers of adherents, the greatest proportional increases were recorded by Roman Catholic and Catholic combined, 30.0 per cent.; Presbyterian, 16.9 per cent.; Church of England, 15.3 per cent.; and Methodist, 12.2 per cent. The largest proportional increase was that of the Lutheran denomination, 73.7 per cent.

At the 1954 Census, as at earlier censuses, 99 per cent. of those who stated their religion professed the Christian faith. Between 1947 and 1954 the number who stated they were of non-Christian religion increased by 50 per cent., while those specifically stating they had no religion decreased by 10 per cent.

## POPULATION : RELIGION, AUSTRALIA, 1947 AND 1954.

(EXCLUDING FULL-BLOOD ABORIGINALS.)

Religion.	Census, 30th June, 1947.			Census, 30th June, 1954.			Increase, 1947-54.
	Males.	Females.	Persons.	Males.	Females.	Persons.	
Christian—							
Baptist .. ..	53,197	60,330	113,527	60,048	67,396	127,444	13,917
Brethren .. ..	5,807	7,105	13,002	7,511	8,893	16,404	3,402
Catholic, Roman (a) ..	335,241	294,957	630,198	414,779	347,383	762,102	131,904
Catholic (a) .. ..	448,959	507,581	956,540	635,308	664,486	1,299,884	343,344
Church of Christ .. ..	33,276	38,495	71,771	37,880	42,484	80,364	8,593
Church of England ..	1,480,527	1,476,505	2,957,032	1,709,107	1,699,653	3,408,850	451,818
Congregational .. ..	20,364	33,879	63,243	32,508	36,944	69,452	6,209
Greek Orthodox .. ..	(b)	(b)	(b)	44,382	30,363	74,745	(b)
Lutheran .. ..	34,854	32,037	66,891	60,306	55,872	116,178	49,287
Methodist .. ..	425,745	445,680	871,425	478,605	499,328	977,933	106,508
Presbyterian .. ..	366,802	376,648	743,540	429,798	439,444	869,242	125,702
Protestant (undefined) ..	36,708	36,562	73,270	48,530	46,877	95,416	22,146
Salvation Army .. ..	17,542	20,030	37,572	20,304	22,534	42,838	5,266
Seventh Day Adventist ..	7,453	10,097	17,550	11,166	14,163	25,329	7,779
Other (including Christian undefined) .. ..	27,492	29,883	57,375	31,957	35,616	67,573	10,198
Total, Christian .. ..	3,303,057	3,369,879	6,672,936	4,022,318	4,011,436	8,033,754	1,360,818
Non-Christian—							
Hebrew .. ..	16,426	15,593	32,019	24,548	23,888	48,436	16,417
Other .. ..	3,736	807	4,543	4,910	1,471	6,381	1,838
Total, Non-Christian ..	20,162	16,400	36,562	29,458	25,359	54,817	18,255
Indefinite .. ..	0,838	8,870	18,708	10,038	8,418	18,456	- 252
No Religion .. ..	18,888	7,440	26,328	16,652	7,032	23,684	- 2,644
No Reply .. ..	445,425	379,399	824,824	467,652	388,167	855,819	30,995
Total .. ..	3,797,370	3,781,988	7,579,358	4,546,118	4,440,412	8,986,530	1,407,172

(a) So described in individual Census Schedules. (b) Not available.  
NOTE.—Minus sign (—) denotes decrease.

8. Industry.—In the following table the male and female populations of Australia at the 1954 Census are classified according to the industry in which they are usually engaged. Persons usually engaged in industry are regarded as being "in the work force," while the remainder of the population, which at the 1954 Census comprised 5,284,508 persons, is classified as not being in the work force. The term "in the work force" includes persons of all ages who are employers, self-employed or working on their own account, wage and salary earners, unpaid helpers engaged in industry, and those who usually work for their living but who have lost their jobs.

Persons who do not earn their living by doing work for monetary reward, such as children, housewives, full-time students, retired persons, pensioners and permanent inmates of institutions, are regarded as not being in the work force.

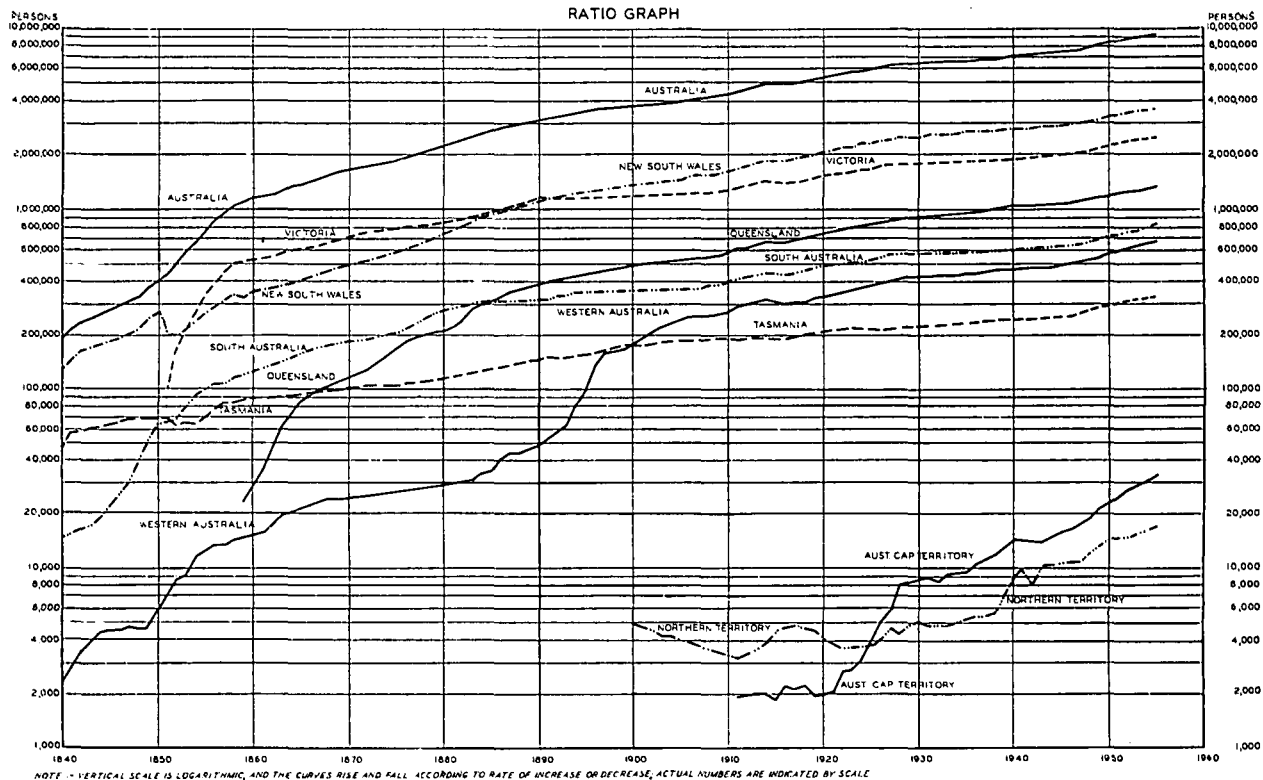
On the average, 63 in every 100 of the male population and 19 in every 100 of the female population were in the work force, or in other words there were, in 1954, 3.4 males to every female in the work force.

Of the total males in the work force those engaged in Manufacturing represented the largest proportion, namely 28.0 per cent., followed next in order by those in Primary Production, 16.1 per cent.; Commerce, 13.6 per cent.; Building and Construction, 11.3 per cent.; Public Authority (n.e.i.) and Professional Activities, 9.1 per cent.; and Transport and Storage, 8.4 per cent.

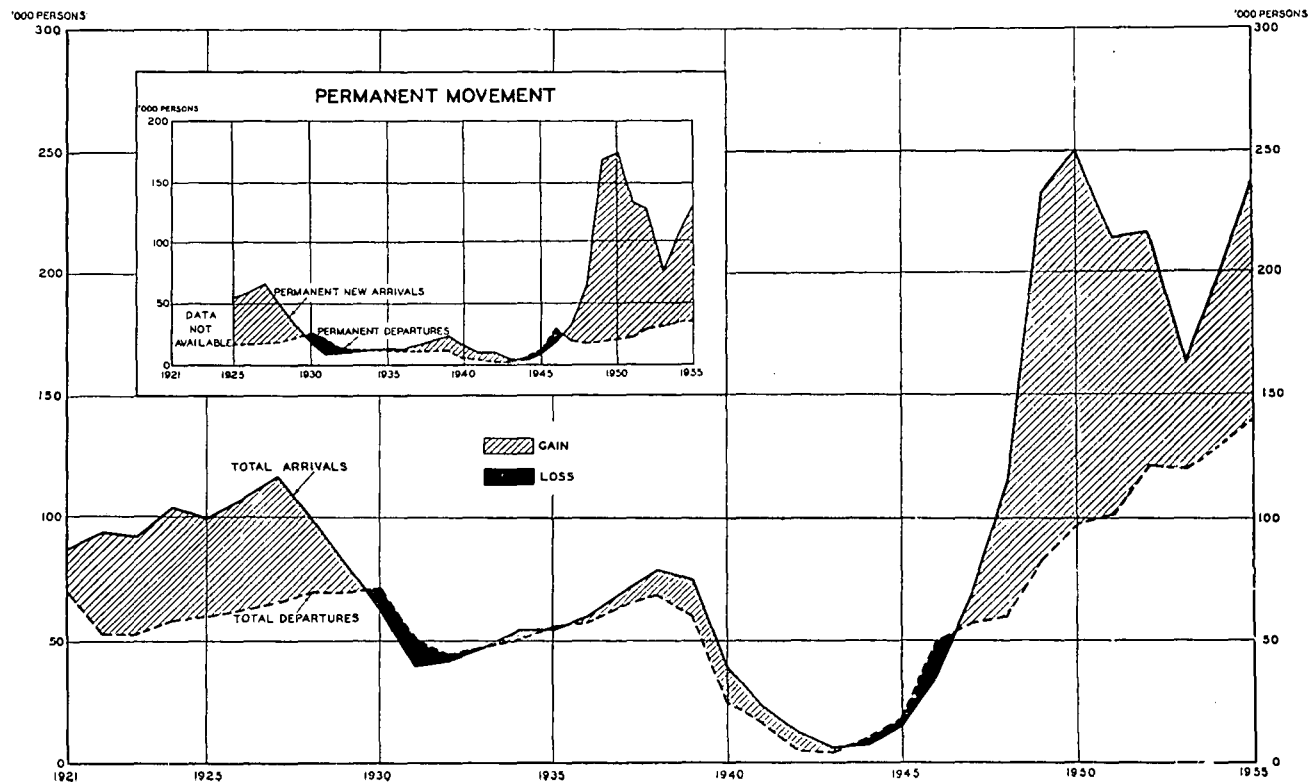
As with males, females in the work force were engaged mainly in Manufacturing, 26.9 per cent.; followed next in order by those in Commerce, 22.5 per cent.; Public Authority (n.e.i.) and Professional Activities, 22.0 per cent.; and Amusement, Hotels, Cafés, Personal Service, etc., 14.8 per cent.

# POPULATION OF AUSTRALIA, 1840 TO 1955

RATIO GRAPH



# OVERSEA MIGRATION: AUSTRALIA, 1921 to 1955



**POPULATION CLASSIFIED ACCORDING TO INDUSTRY: AUSTRALIA, CENSUS,  
30th JUNE, 1954.**

(EXCLUDING FULL-BLOOD ABORIGINALS.)

Industry Group and Sub-group.	Males.	Females.	Persons.	
			Number.	Proportion of Total. (Per cent.)
<b>Primary Production—</b>				
Fishing, Hunting and Trapping ..	10,003	126	10,129	0.11
Agriculture, Mixed Farming ..	220,196	12,172	232,368	2.59
Grazing .. ..	115,162	8,714	123,876	1.38
Dairying .. ..	100,553	11,004	111,557	1.24
Forestry .. ..	15,279	67	15,346	0.17
Total .. ..	461,193	32,083	493,276	5.49
<b>Mining and Quarrying .. ..</b>	<b>60,310</b>	<b>1,061</b>	<b>61,371</b>	<b>0.68</b>
<b>Manufacturing—</b>				
Founding, Engineering and Metal-working .. ..	229,431	32,305	261,736	2.91
Manufacture, Assembly and Repair of Ships, Vehicles, Parts and Accessories .. ..	132,653	6,463	139,116	1.55
Textile and Fibrous Materials (not Dress) .. ..	27,601	26,182	53,783	0.60
Clothing and Knitted Goods (including Needleworking) .. ..	23,144	73,367	96,511	1.07
Food, Drink and Tobacco .. ..	117,088	27,927	145,015	1.61
Sawmilling and Manufacture of Wood Products .. ..	53,252	2,136	55,388	0.62
Paper and Paper Products, Printing, Bookbinding and Photography ..	53,953	18,770	72,723	0.81
Other and Undefined .. ..	163,146	39,913	203,059	2.26
Total .. ..	800,268	227,063	1,027,331	11.43
<b>Electricity, Gas, Water and Sanitary Services Production, Supply and Maintenance .. ..</b>	<b>69,554</b>	<b>4,096</b>	<b>73,650</b>	<b>0.82</b>
<b>Building and Construction—</b>				
Construction and Repair of Buildings	196,205	2,452	198,657	2.21
Construction Works (other than Buildings) .. ..	125,624	1,341	126,965	1.41
Total .. ..	321,829	3,793	325,622	3.62
<b>Transport and Storage—</b>				
Road Transport and Storage ..	92,976	4,486	97,462	1.08
Shipping and Loading and Discharging Vessels .. ..	55,935	2,182	58,117	0.65
Rail and Air Transport .. ..	91,675	8,031	99,706	1.11
Total .. ..	240,586	14,699	255,285	2.84
<b>Communication .. ..</b>	<b>63,802</b>	<b>16,748</b>	<b>80,550</b>	<b>0.90</b>
<b>Finance and Property; Business Services (n.e.i.) .. ..</b>	<b>64,366</b>	<b>34,278</b>	<b>98,644</b>	<b>1.10</b>
<b>Commerce .. ..</b>	<b>387,558</b>	<b>189,913</b>	<b>577,471</b>	<b>6.43</b>
<b>Public Authority (n.e.i.) and Professional Activities .. ..</b>	<b>260,406</b>	<b>186,443</b>	<b>446,849</b>	<b>4.97</b>
<b>Amusement, Hotels, Cafés, Personal Service, etc. .. ..</b>	<b>99,003</b>	<b>125,486</b>	<b>224,489</b>	<b>2.50</b>
<b>Other, Inadequately Described or Not Stated .. ..</b>	<b>27,745</b>	<b>9,739</b>	<b>37,484</b>	<b>0.42</b>
Persons in the Work Force ..	2,856,620	845,402	3,702,022	41.20
Persons not in the Work Force ..	1,680,498	3,595,010	5,284,508	58.80
Total Population .. ..	4,546,118	4,440,412	8,986,530	100.00

9. **Occupational Status.**—The term “occupational status” has been substituted for “grade of occupation” formerly in use, and it relates to the capacity in which persons are engaged in the various branches of industry.

While the numbers of employers and of persons self-employed at the 1954 Census showed increases of approximately 13 per cent. and 6 per cent., respectively, as compared with 1947, the number of employees increased by slightly more than 20 per cent., and in 1954 constituted nearly 80 per cent. of the total work force, as compared with 77 per cent. in 1947. Employers and self-employed combined constituted 17.8 per cent. of the work force in 1954 as compared with 19.0 per cent. in 1947.

**POPULATION : OCCUPATIONAL STATUS, AUSTRALIA, 1947 AND 1954.**  
(EXCLUDING FULL-BLOOD ABORIGINALS.)

Occupational Status.	Census, 30th June, 1947.			Census, 30th June, 1954.			Increase. 1947-54.
	Males.	Females.	Persons.	Males.	Females.	Persons.	
<b>In Work Force—</b>							
<b>At Work—</b>							
Employer .. .. .	196,932	24,357	221,289	220,407	30,028	250,435	29,146
Self-employed .. .	342,650	44,487	387,137	358,746	51,436	410,182	23,045
Employee (on wage or salary) .. .	1,827,072	620,421	2,447,493	2,211,916	737,488	2,949,404	501,911
Helper (not on wage or salary) .. .	24,227	4,498	28,725	18,342	9,866	28,208	—517
<b>Total at Work ..</b>	<b>2,390,881</b>	<b>693,763</b>	<b>3,084,644</b>	<b>2,809,411</b>	<b>828,818</b>	<b>3,638,229</b>	<b>553,585</b>
<b>Not at Work (a) ..</b>	<b>66,009</b>	<b>16,765</b>	<b>82,774</b>	<b>40,913</b>	<b>13,953</b>	<b>54,866</b>	<b>—27,908</b>
<b>Not Stated .. ..</b>	<b>22,379</b>	<b>6,634</b>	<b>29,013</b>	<b>6,296</b>	<b>2,631</b>	<b>8,927</b>	<b>—20,086</b>
<b>Total in Work Force ..</b>	<b>2,479,269</b>	<b>717,162</b>	<b>3,196,431</b>	<b>2,856,620</b>	<b>845,402</b>	<b>3,702,022</b>	<b>505,591</b>
<b>Not in Work Force ..</b>	<b>1,318,101</b>	<b>3,064,826</b>	<b>4,382,927</b>	<b>1,689,498</b>	<b>3,595,010</b>	<b>5,284,508</b>	<b>901,581</b>
<b>Grand Total .. ..</b>	<b>3,797,370</b>	<b>3,781,988</b>	<b>7,579,358</b>	<b>4,546,118</b>	<b>4,440,412</b>	<b>8,986,530</b>	<b>1,407,172</b>

(a) Includes persons who were (1) unable to secure employment; (2) temporarily laid off from their jobs; or (3) not actively seeking work at the time of the Census on account of sickness or accident, industrial dispute, resting between jobs or for any other reason.

NOTE.—Minus sign (—) denotes decrease.

10. **Other General Characteristics.**—Questions asked at the 1933 Census regarding orphanhood, and the ability to read and write a foreign language (of persons who could not read and write English), were not asked on the schedules of the 1947 Census. The question on dependent children asked at the 1947 Census was not asked in 1954, and information supplied in 1954 in reply to the question on race has not yet been tabulated.

The latest data published in respect of the first two questions appear, therefore, on pp. 482 and 487 of Official Year Book No. 36, and of the last two on pp. 326 and 327 of Official Year Book No. 41.

## § 8. Dwellings.

1. **Number of Dwellings.**—In addition to the questions relating to the personal particulars of the individual members of the household there were 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 information obtained at the 1933 and 1947 Censuses see Official Year Book No. 38, pp. 557 to 571. The following tables relate to the 1947 and 1954 Censuses. 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.

The following table shows the number of occupied and unoccupied dwellings in the urban and rural areas of Australia at 30th June, 1954. (For definitions of "urban" and "rural" see para. 4, page 571. As explained therein, the boundaries of the Metropolitan Urban and other divisions of State differ from census to census, and consequently accurate comparison cannot be made between figures for corresponding divisions. Moreover, the inclusion in the Other Urban Division in 1954 of the larger towns not separately incorporated has further reduced comparability. These factors should be borne in mind when referring to tables in this section showing divisions of State.

Occupied dwellings are classified into private and other dwellings (see para. 2, page 598, for definitions of "private" and "other" dwellings). The term "unoccupied dwellings" is not synonymous with vacant houses and flats available for occupancy, but refers mainly to "week-end", holiday and other dwellings whose usual occupants were temporarily absent on the night of the Census. Newly-completed dwellings awaiting occupancy are also included. Examination of the geographical distribution of such "unoccupied dwellings" indicates that for the most part they were temporarily unoccupied, or located in rural areas other than towns with a population of 1,000 persons or more.

The total number of occupied dwellings in Australia at the Census of 30th June, 1954, showed an increase of 24.8 per cent. over the corresponding figure for the 1947 Census, compared with an increase of 18.6 per cent. in population. Occupied private dwellings increased by 25.1 per cent. and occupied dwellings other than private by 7.8 per cent. At the 1954 Census 98.4 per cent. of the total occupied dwellings in Australia were private dwellings, compared with 98.2 per cent. in 1947. Percentage increases in total occupied dwellings over 1947 figures in each State and Territory were:—New South Wales 22.3 per cent., Victoria 25.3 per cent., Queensland 24.7 per cent., South Australia 27.7 per cent., Western Australia 30.5 per cent., Tasmania 26.1 per cent., Australian Capital Territory 96.9 per cent. and Northern Territory 27.1 per cent.

Unoccupied dwellings increased by 139 per cent.

#### DWELLINGS : AUSTRALIA, CENSUS, 30th JUNE, 1954.

(EXCLUDING DWELLINGS OCCUPIED SOLELY BY FULL-BLOOD ABORIGINALS.)

Division.	Occupied.				Unoccupied.	
	Private.	Other than Private.	Total.		Number.	Proportion of Total Dwellings.
			Number.	Proportion of Total Dwellings.		
Urban—				%		%
Metropolitan	1,309,188	19,203	1,328,391	55.81	32,984	29.30
Other ..	568,679	9,075	577,754	24.27	33,477	29.73
Rural ..	465,554	8,654	474,208	19.92	46,133	40.97
Total ..	2,343,421	36,932	2,380,353	100.00	112,594	100.00

The total numbers of occupied and unoccupied dwellings in each State and Territory at the Censuses of 1947 and 1954 were as follows:—

### DWELLINGS : STATES, 1947 AND 1954.

(EXCLUDING DWELLINGS OCCUPIED SOLELY BY FULL-BLOOD ABORIGINALS.)

State or Territory.	Census, 30th June, 1947.		Census, 30th June, 1954.	
	Occupied.	Unoccupied.	Occupied.	Unoccupied.
New South Wales .. .. .	746,343	17,392	912,877	42,831
Victoria .. .. .	527,406	11,412	660,690	27,491
Queensland .. .. .	272,045	9,647	339,328	21,473
South Australia .. .. .	168,538	3,547	215,301	8,524
Western Australia .. .. .	124,767	2,606	162,823	6,614
Tasmania .. .. .	62,484	2,351	78,789	5,288
Northern Territory .. .. .	2,697	34	3,427	47
Australian Capital Territory .. .. .	3,615	52	7,118	326
Total .. .. .	1,907,895	47,041	2,380,353	112,594

2. *Class of Dwelling.*—The dwellings in which the people are housed comprise private dwellings such as private houses, shares of private houses, flats, apartments, rooms, etc., and dwellings other than private, such as hotels, boarding houses, charitable institutions, etc.

*Private dwellings* comprise private houses (including sheds, huts, garages, etc. used for dwelling purposes), shares of private houses, flats, and rooms, apartments, etc. In previous censuses dwellings returned on the Schedules as sheds, huts, garages, etc. were included with private houses. In the Census of 1954, particulars of these dwellings have been tabulated separately, but are linked with private houses to preserve continuity with past census results. Separate particulars were shown in the 1947 Census publications for private houses which were shared by two or more family units and for which only one Householder's Schedule was received, but in 1954 these dwellings were included with private houses.

*Share of private house* is a portion of a shared private house which is occupied separately and for which portion a separate Householder's Schedule was furnished.

*Flat* is part of a house or other building which can be completely closed off and which includes both cooking and bathing facilities.

*Other private dwelling* is an apartment, room(s), etc., which is part of a building, but is not a self-contained unit.

*Dwellings other than private* include hotels, boarding houses, lodging houses, hostels, hospitals, educational, religious and charitable institutions, defence and penal establishments, 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 mainly to private dwellings only.

## OCCUPIED DWELLINGS ACCORDING TO CLASS, AUSTRALIA, 1947 AND 1954.

(EXCLUDING DWELLINGS OCCUPIED SOLELY BY FULL-BLOOD ABORIGINALS.)

Class of Occupied Dwelling.	Census, 30th June, 1947.(a)				Census, 30th June, 1954.(a)				Increase, 1947-54.
	Urban.		Rural.	Total, Aus- tralia.	Urban.		Rural.	Total, Aus- tralia.	
	Metro- politan.	Other.			Metro- politan.	Other.			
Private House(b)— House Shed, Hut, etc. }	760,678	289,898	567,476	1,618,052	{ 1,067,674 14,259	506,128 12,276	433,069 22,613	2,006,871 49,148	437,967
Total .. ..	760,678	289,898	567,476	1,618,052	1,081,933	518,404	455,682	2,056,019	
Share of Private House c	72,724	19,627	13,660	106,011	77,344	22,747	7,125	107,216	1,205
Flat .. ..	94,822	12,697	3,880	111,399	104,603	20,784	2,033	127,420	16,021
Other .. ..	33,263	3,855	1,043	38,161	45,308	6,744	714	52,766	14,605
Total Private Dwell- ings .. ..	961,487	326,077	586,059	1,873,623	1,309,188	568,679	465,554	2,343,421	469,798
Caretaker's Quarters ..	1,110	279	352	1,741	998	264	194	1,456	-285
Hotel .. ..	1,686	1,776	2,854	6,316	1,720	2,457	2,015	6,192	-124
Boarding House, etc. ..	15,302	3,367	2,512	21,181	14,110	4,120	1,041	19,271	-1,910
Educational Institution	449	290	389	1,128	523	488	251	1,262	134
Religious Institution (non-educational) ..	85	21	42	148	142	31	24	197	49
Hospital .. ..	543	368	593	1,504	559	517	353	1,429	-75
Charitable Institution (other than Hospital)	206	72	128	406	299	107	104	510	104
Other .. ..	552	293	1,003	1,848	852	1,091	4,672	6,615	4,767
Total Dwellings Other than Private ..	19,933	6,466	7,873	34,272	19,203	9,075	8,654	36,932	2,660
Total Occupied Dwellings .. ..	981,420	332,543	593,932	1,907,895	1,328,391	577,754	474,208	2,380,353	472,458
Total Occupied Dwellings per square mile ..	711.92	121.89	0.20	0.64	592.88	123.44	0.16	0.80	0.16
Wagon, Van, etc. (in- cluding campers-out)	847	1,029	3,997	5,873	2,693	3,611	5,380	11,684	5,811

(a) See letterpress on p. 571 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.

NOTE.—Minus sign (—) denotes decrease.

3. Population According to Class of Dwelling, etc.—The following table shows the number of the various classes of occupied dwellings at the Censuses of 1947 and 1954, together with the number of inmates therein.

Of the total population in 1954, 92.52 per cent. were living in private dwellings—houses, flats, apartments, rooms, etc.—whilst 672,168 persons, or 7.48 per cent. of the population, spent the night in other than private dwellings, or on ships, trains or aircraft, or were camping out.

## OCCUPIED DWELLINGS, ETC. AND INMATES, AUSTRALIA, 1947 AND 1954.

(EXCLUDING FULL-BLOOD ABORIGINALS AND DWELLINGS OCCUPIED SOLELY BY THEM.)

Particulars.	Census, 30th June, 1947.			Census, 30th June, 1954.		
	Number of Dwellings.	Inmates.		Number of Dwellings.	Inmates.	
		Number.	Proportion of Total.		Number.	Proportion of Total.
			%			%
Private House(a)—						
House .. .. .	1,618,052	6,323,621	83.43	2,006,871 49,148	7,449,088 134,077	82.90 1.49
Shed, Hut, etc. ..						
Total .. .. .	1,618,052	6,323,621	83.43	2,056,019	7,583,165	84.39
Share of Private House (b)	106,011	303,996	4.01	107,216	290,579	3.23
Flat .. .. .	111,399	316,115	4.17	127,420	329,265	3.66
Other .. .. .	38,161	83,028	1.10	52,766	111,353	1.24
Total Private Dwellings	1,873,623	7,026,760	92.71	2,343,421	8,314,362	92.52
Dwellings Other than Private	34,272	520,204	6.86	36,932	618,744	6.89
Total Occupied Dwellings	1,907,895	7,546,964	99.57	2,380,353	8,933,106	99.41
Wagon, Camp, etc. ..	5,873	13,791	0.18	11,684	30,055	0.33
Migratory(c) .. ..	..	18,603	0.25	..	23,369	0.26
Total .. .. .	..	7,579,358	100.00	..	8,986,530	100.00

(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) Shipping, railway and air travellers.

4. Occupied Private Dwellings.—(i) *Material of Outer Walls.* In the following table occupied private dwellings are classified according to the material of which the outer walls were built.

Wood has been the most extensively used material in the construction of the outer walls, followed by brick and fibro-cement, and in 1954 the respective percentages for Australia for occupied private dwellings for which the material of the outer walls was specified were—wood, 44.4 per cent., brick, 33.5 per cent. and fibro-cement, 12.7 per cent. The latter has shown a most spectacular increase since 1933 when the proportion was 1.6 per cent. (23,696 dwellings), compared with 6.3 per cent. in 1947 (117,631 dwellings). The proportions of both brick and wooden dwellings have shown small decreases since 1947. The numbers of dwellings of all other materials except fibro-cement and concrete have decreased. Brick dwellings in 1954 represented 51.5 per cent. of all occupied private dwellings in the Metropolitan Urban Divisions, whilst in the Other Urban and Rural Divisions wooden dwellings predominated, the percentages of such dwellings being 60.0 per cent. and 59.4 per cent. respectively.

# OCCUPIED PRIVATE DWELLINGS CLASSIFIED ACCORDING TO MATERIAL OF OUTER WALLS, AUSTRALIA, 1947 AND 1954.

(EXCLUDING DWELLINGS OCCUPIED SOLELY BY FULL-BLOOD ABORIGINALS.)

Material of Outer Walls.	Census, 30th June, 1947.(a)				Census, 30th June, 1954.(a)				Increase, 1947-54.
	Urban.		Rural.	Total, Aus- tralia.	Urban.		Rural.	Total, Aus- tralia.	
	Metro- politan.	Other.			Metro- politan.	Other.			
Brick	551,618	60,215	38,179	650,012	674,165	86,254	25,089	785,508	135,496
Stone	36,714	13,409	37,573	87,696	35,907	18,049	33,604	87,560	- 136
Concrete	10,442	5,111	13,283	29,136	24,299	13,497	13,639	51,435	22,299
Wood	315,567	204,863	364,221	884,651	422,010	341,145	276,584	1,039,739	155,088
Iron, Tin	6,087	14,491	45,347	65,932	7,387	19,652	31,177	58,216	- 7,716
Fibro-cement	31,924	23,586	62,121	117,631	140,542	84,835	71,176	296,553	178,922
Calico, Canvas, Hessian	656	1,539	13,255	15,450	426	1,843	5,446	7,715	- 7,735
Other	4,430	1,774	9,902	16,106	3,644	2,686	7,750	14,080	- 2,026
Not Stated	4,049	782	2,178	7,009	808	718	1,089	2,615	- 4,394
Total	961,487	326,077	586,059	1,873,623	1,309,188	568,679	465,554	2,343,421	469,798

(a) See letterpress on p. 571 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 unless generally used for sleeping.

Excluding houses with rooms unspecified, private houses of four, five and six rooms represented 78.3 per cent. of the total number of private houses in Australia at 30th June, 1954, compared with 79.2 per cent. in 1947, and three-quarters of the total increase in the number of private houses since 1947 consisted of houses containing these numbers of rooms. Houses of seven and more rooms also showed substantial increases.

## OCCUPIED PRIVATE DWELLINGS CLASSIFIED ACCORDING TO NUMBER OF ROOMS, AUSTRALIA, 1947 AND 1954.

(EXCLUDING DWELLINGS OCCUPIED SOLELY BY FULL-BLOOD ABORIGINALS.)

Number of Rooms(b) per Dwelling.	Census, 30th June, 1947.(a)					Census, 30th June, 1954.(a)				
	Private House. (c)	Share of Private House. (d)	Flat.	Other.	Total Private Dwell- ings.	Private House. (c)	Share of Private House. (d)	Flat.	Other.	Total Private Dwell- ings.
1 ..	2,913	9,547	1,055	11,263	24,778	5,383	9,353	678	15,186	30,600
2 ..	5,193	17,360	5,850	13,035	41,738	17,177	17,018	5,723	16,126	56,044
3 ..	27,929	18,433	20,595	3,495	72,302	39,250	18,164	21,614	7,841	86,869
4 ..	153,385	13,917	37,406	1,923	206,631	193,237	13,477	40,911	3,176	249,801
5 ..	271,401	7,776	20,338	508	300,023	377,643	9,176	23,221	1,175	411,215
6 ..	203,942	3,539	6,967	210	214,658	302,004	5,734	9,073	594	317,405
7 ..	61,279	1,106	1,572	35	63,992	96,252	2,095	2,098	193	100,638
8 ..	20,078	317	470	9	20,874	31,608	809	685	92	33,254
9 ..	6,888	103	147	1	7,139	10,562	204	213	41	11,080
10 and over ..	5,826	49	86	..	5,961	8,841	111	83	14	9,049
Not Stated ..	1,544	577	426	784	3,331	976	1,083	304	870	3,233
Total Private Dwellings	760,678	72,724	94,822	33,263	961,487	1,081,933	77,344	104,603	45,308	1,309,188
Average num- ber of Rooms(b) per Private Dwelling ..	5.28	3.15	4.07	2.02	4.89	5.31	3.37	4.16	2.15	5.00

### METROPOLITAN URBAN.

Number of Rooms(b) per Dwelling.	Census, 30th June, 1947.(a)					Census, 30th June, 1954.(a)				
	Private House. (c)	Share of Private House. (d)	Flat.	Other.	Total Private Dwell- ings.	Private House. (c)	Share of Private House. (d)	Flat.	Other.	Total Private Dwell- ings.
1 ..	2,913	9,547	1,055	11,263	24,778	5,383	9,353	678	15,186	30,600
2 ..	5,193	17,360	5,850	13,035	41,738	17,177	17,018	5,723	16,126	56,044
3 ..	27,929	18,433	20,595	3,495	72,302	39,250	18,164	21,614	7,841	86,869
4 ..	153,385	13,917	37,406	1,923	206,631	193,237	13,477	40,911	3,176	249,801
5 ..	271,401	7,776	20,338	508	300,023	377,643	9,176	23,221	1,175	411,215
6 ..	203,942	3,539	6,967	210	214,658	302,004	5,734	9,073	594	317,405
7 ..	61,279	1,106	1,572	35	63,992	96,252	2,095	2,098	193	100,638
8 ..	20,078	317	470	9	20,874	31,608	809	685	92	33,254
9 ..	6,888	103	147	1	7,139	10,562	204	213	41	11,080
10 and over ..	5,826	49	86	..	5,961	8,841	111	83	14	9,049
Not Stated ..	1,544	577	426	784	3,331	976	1,083	304	870	3,233
Total Private Dwellings	760,678	72,724	94,822	33,263	961,487	1,081,933	77,344	104,603	45,308	1,309,188
Average num- ber of Rooms(b) per Private Dwelling ..	5.28	3.15	4.07	2.02	4.89	5.31	3.37	4.16	2.15	5.00

(a) See letterpress on p. 571 regarding comparability as between Censuses.

(b) Includes kitchen and permanently enclosed sleep-out, but does not include bathroom, pantry, laundry or storehouse, unless generally used for sleeping.

(c) Includes houses, sheds, huts, etc., and shared private houses for which only one Householder's Schedule was received.

(d) Portion of a shared private house which is occupied separately and for which portion a separate Householder's Schedule was received.

OCCUPIED PRIVATE DWELLINGS CLASSIFIED ACCORDING TO NUMBER OF ROOMS, AUSTRALIA, 1947 AND 1954—*continued.*

Number of Rooms( <i>b</i> ) per Dwelling.	Census, 30th June, 1947.( <i>a</i> )					Census, 30th June, 1954.( <i>a</i> )				
	Private House. ( <i>c</i> )	Share of Private House. ( <i>d</i> )	Flat.	Other.	Total Private Dwellings.	Private House. ( <i>c</i> )	Share of Private House. ( <i>d</i> )	Flat.	Other.	Total Private Dwellings.
<b>OTHER URBAN.</b>										
1.. ..	3,788	2,418	85	956	7,247	5,693	2,232	81	1,068	9,074
2.. ..	5,014	4,788	901	1,396	12,099	11,669	5,446	1,453	2,374	20,942
3.. ..	10,860	4,903	3,285	904	19,952	20,429	5,854	5,121	1,907	33,311
4.. ..	61,611	3,902	4,671	390	70,574	98,504	4,254	7,910	899	111,567
5.. ..	107,482	2,208	2,610	83	112,383	186,088	2,565	4,098	293	193,044
6.. ..	69,714	873	803	37	71,427	132,573	1,399	1,522	84	135,578
7.. ..	20,211	249	182	4	20,646	41,366	485	392	24	42,267
8.. ..	6,470	77	60	..	6,607	13,373	163	112	6	13,654
9.. ..	2,158	29	20	..	2,207	4,336	56	28	6	4,426
10 and over..	1,543	13	12	..	1,568	3,208	37	12	3	3,255
Not Stated ..	1,047	167	68	85	1,367	1,165	261	55	80	1,561
<b>Total Private Dwellings..</b>	<b>289,898</b>	<b>19,627</b>	<b>12,697</b>	<b>3,855</b>	<b>326,077</b>	<b>518,404</b>	<b>22,747</b>	<b>20,784</b>	<b>6,744</b>	<b>568,679</b>
<b>Average number of Rooms<sup>b</sup> per Private Dwelling ..</b>	<b>5.12</b>	<b>3.15</b>	<b>3.99</b>	<b>2.30</b>	<b>4.92</b>	<b>5.18</b>	<b>3.31</b>	<b>4.03</b>	<b>2.61</b>	<b>5.04</b>
<b>RURAL.</b>										
1.. ..	23,808	1,340	33	160	25,341	12,976	544	10	82	13,612
2.. ..	21,942	3,279	325	314	25,860	16,271	1,297	157	175	17,900
3.. ..	37,929	3,608	1,048	324	42,909	27,458	1,698	535	207	29,898
4.. ..	134,898	2,959	1,353	182	139,392	89,397	1,553	727	173	91,852
5.. ..	163,621	1,509	741	40	165,911	128,313	987	382	52	129,734
6.. ..	110,130	570	246	5	110,951	99,843	530	157	9	100,539
7.. ..	41,390	184	63	1	41,638	43,694	208	35	1	43,938
8.. ..	16,619	63	37	..	16,719	19,111	98	9	2	19,220
9.. ..	6,089	20	6	..	6,115	7,532	21	3	..	7,556
10 and over..	7,095	26	2	..	7,123	8,759	20	3	1	8,783
Not Stated ..	3,955	102	26	17	4,100	2,328	169	15	10	2,522
<b>Total Private Dwellings</b>	<b>567,476</b>	<b>13,660</b>	<b>3,880</b>	<b>1,043</b>	<b>586,059</b>	<b>455,682</b>	<b>7,125</b>	<b>2,033</b>	<b>714</b>	<b>465,554</b>
<b>Average number of Rooms<sup>b</sup> per Private Dwelling ..</b>	<b>4.90</b>	<b>3.23</b>	<b>3.95</b>	<b>2.66</b>	<b>4.85</b>	<b>5.19</b>	<b>3.62</b>	<b>4.00</b>	<b>2.98</b>	<b>5.16</b>
<b>TOTAL, AUSTRALIA.</b>										
1.. ..	30,569	13,305	1,173	12,379	57,366	24,052	12,129	769	16,336	53,286
2.. ..	32,449	25,427	7,076	14,745	79,697	45,117	23,761	7,333	18,675	94,886
3.. ..	76,718	26,944	24,838	6,723	135,223	87,137	25,716	27,270	9,955	150,078
4.. ..	349,894	20,778	43,430	2,495	416,597	380,138	19,284	49,548	4,250	453,220
5.. ..	542,504	11,493	23,689	631	578,317	692,044	12,728	27,701	1,520	733,993
6.. ..	383,786	4,982	8,016	252	397,036	534,400	7,663	10,752	687	553,522
7.. ..	122,880	1,539	1,817	40	126,276	181,312	2,788	2,525	218	186,843
8.. ..	43,167	457	567	9	44,200	64,092	1,130	806	100	66,128
9.. ..	15,135	152	173	1	15,461	22,430	341	244	47	23,062
10 and over..	14,464	88	100	..	14,652	20,808	163	98	18	21,087
Not Stated ..	6,546	846	520	886	8,798	4,469	1,513	374	960	7,316
<b>Total Private Dwellings..</b>	<b>1,618,052</b>	<b>106,011</b>	<b>111,399</b>	<b>38,161</b>	<b>1,873,623</b>	<b>2,056,019</b>	<b>107,216</b>	<b>127,420</b>	<b>52,766</b>	<b>2,343,421</b>
<b>Average number of Rooms<sup>b</sup> per Private Dwelling ..</b>	<b>5.12</b>	<b>3.16</b>	<b>4.06</b>	<b>2.07</b>	<b>4.88</b>	<b>5.26</b>	<b>3.38</b>	<b>4.14</b>	<b>2.22</b>	<b>5.04</b>

(*a*) See letterpress on p. 571 regarding comparability as between Censuses. (*b*) Includes kitchen and permanently enclosed sleep-out but does not include bathroom, pantry, laundry or storehouse, unless generally used for sleeping. (*c*) Includes houses, sheds, huts, etc., and shared private houses for which only one Householder's Schedule was received. (*d*) Portion of a shared private house which is occupied separately and for which portion a separate Householder's Schedule was received.

(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 private houses with four inmates were most numerous, followed very closely by those with two and three inmates in that order.

An increase of nearly 51 per cent. (149,348 houses) in the number of private houses occupied by two inmates brought this group from third position in 1947 to second position in 1954. Houses with two inmates in 1954 constituted 22 per cent. of the total number of occupied private houses in Australia, about the same proportion as for houses with four inmates. In 1947 houses with two inmates constituted 18 per cent. of the total and houses with four inmates 21 per cent. Houses with three inmates constituted 21 per cent. at both the 1947 and 1954 Censuses. The average number of inmates in private houses was 3.69 in 1954 compared with 3.91 in 1947.

The number of private houses which were shared, and for each share of which a separate Householder's Schedule was furnished, increased slightly between 1947 and 1954, but the average number of inmates therein decreased from 2.87 to 2.71. Separate particulars of shared houses for which only one Householder's Schedule was furnished were not compiled in 1954. These particulars are included with private houses in all tables in this section.

Flats and other classes of private dwellings increased in both numbers and total inmates, but the average number of inmates fell from 2.84 to 2.58 for flats and from 2.18 to 2.11 for others.

In flats those with two inmates and in other classes of occupied private dwellings those with one inmate predominated.

### OCCUPIED PRIVATE DWELLINGS CLASSIFIED ACCORDING TO NUMBER OF INMATES, AUSTRALIA, 1947 AND 1954.

(EXCLUDING DWELLINGS OCCUPIED SOLELY BY FULL-BLOOD ABORIGINALS.)

Number of Inmates per Dwelling.	Census, 30th June, 1947.(a)					Census, 30th June, 1954.(a)				
	Private House. (b)	Share of Private House. (c)	Flat.	Other.	Total Private Dwell- ings.	Private House. (b)	Share of Private House. (c)	Flat.	Other.	Total Private Dwell- ings.
<b>METROPOLITAN URBAN.</b>										
1 ..	29,205	12,110	12,158	12,232	65,705	62,022	16,509	19,345	19,203	117,079
2 ..	135,257	24,144	33,104	11,357	203,862	242,815	26,497	41,373	14,306	324,985
3 ..	172,288	17,901	25,616	5,689	221,524	241,859	16,400	23,793	6,356	288,408
4 ..	178,141	10,193	14,827	2,104	205,565	247,207	9,917	12,926	3,295	273,345
5 ..	117,858	4,562	5,812	977	129,209	153,006	4,449	4,743	1,220	163,427
6 ..	64,385	2,092	2,071	339	68,873	75,492	2,033	1,604	488	79,618
7 ..	32,669	935	772	153	34,582	33,245	891	549	216	34,903
8 ..	16,973	496	306	70	17,815	15,107	448	186	125	15,866
9 ..	6,911	146	80	23	7,160	5,933	115	55	53	6,206
10 and over	6,988	89	63	19	7,159	5,190	85	20	41	5,351
Total Private Dwellings ..	760,678	72,724	94,822	33,213	961,487	1,081,933	77,344	104,603	45,308	1,309,188
Total In- mates ..	1,008,429	203,337	265,259	70,591	3,547,672	3,944,181	204,571	264,616	92,576	4,505,974
Average num- ber of In- mates per Private Dwell- ing ..	3.95	2.80	2.80	2.12	3.69	3.65	2.64	2.53	2.04	3.44

(a) See letterpress on p. 571 regarding comparability as between Censuses. (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.

**OCCUPIED PRIVATE DWELLINGS CLASSIFIED ACCORDING TO NUMBER  
OF INMATES, AUSTRALIA, 1947 AND 1954—continued.**

Number of Inmates per Dwelling.	Census, 30th June, 1947.(a)					Census, 30th June, 1954.(a)				
	Private House. (b)	Share of Private House. (c)	Flat.	Other.	Total Private Dwell- ings.	Private House. (b)	Share of Private House. (c)	Flat.	Other.	Total Private Dwell- ings.
<b>OTHER URBAN.</b>										
1..	18,520	2,838	1,229	941	23,528	39,178	1,609	2,945	1,883	48,615
2..	53,774	6,107	4,043	1,326	65,250	112,952	7,231	7,333	2,211	129,727
3..	60,924	4,853	3,328	870	69,975	107,678	4,986	5,083	1,389	119,138
4..	61,336	3,880	3,318	324	69,667	110,022	3,056	3,161	756	116,995
5..	42,319	1,477	1,021	174	45,991	73,415	1,479	1,383	278	76,556
6..	24,827	734	406	64	26,031	39,436	768	557	132	40,893
7..	13,595	377	203	33	14,208	18,961	353	211	51	19,576
8..	7,636	219	89	17	7,961	9,348	160	60	21	9,595
9..	3,266	60	34	4	3,373	3,777	56	32	11	3,876
10 and over..	3,501	61	26	2	3,593	3,630	43	17	12	3,708
Total Private Dwellings..	289,898	19,627	12,697	3,855	326,077	518,404	22,747	20,784	6,744	568,679
Total In- mates ..	1,140,137	58,651	38,823	9,579	1,247,190	1,913,307	63,029	58,201	16,430	2,050,967
Average num- ber of In- mates per Private Dwell- ing ..	3.93	2.99	3.06	2.48	3.82	3.69	2.77	2.80	2.44	3.61
<b>RURAL.</b>										
1..	6,330	1,921	357	187	8,795	46,108	904	217	105	47,394
2..	105,800	3,788	1,190	337	111,115	88,412	1,898	597	167	91,074
3..	109,182	3,444	1,050	384	113,960	86,442	1,534	473	159	88,308
4..	107,455	2,296	693	116	110,560	89,458	1,285	381	134	91,258
5..	78,714	1,141	335	73	80,263	65,284	715	209	71	66,309
6..	48,670	577	155	21	49,423	39,762	379	102	34	40,268
7..	27,531	283	57	15	27,886	20,740	185	36	25	20,995
8..	15,958	147	29	9	16,143	10,788	9	10	14	10,902
9..	6,487	147	8	..	6,524	4,508	30	5	3	4,552
10 and over	7,349	33	6	1	7,380	4,471	18	3	2	4,494
Total Private Dwellings..	567,476	13,660	3,880	1,043	586,059	455,682	7,125	2,033	714	465,554
Total In- mates ..	2,175,055	41,955	12,033	2,855	2,231,898	1,725,677	22,970	6,418	2,347	1,757,421
Average num- ber of In- mates per Private Dwell- ing ..	3.83	3.07	3.10	2.74	3.81	3.79	3.23	3.16	3.29	3.77
<b>TOTAL, AUSTRALIA.</b>										
1..	108,055	16,870	13,744	13,360	152,029	147,308	22,082	22,507	21,191	213,088
2..	294,831	34,039	38,337	13,020	380,227	444,179	35,626	49,303	16,678	545,786
3..	342,394	26,199	30,024	6,843	405,459	435,679	22,920	29,331	7,904	495,554
4..	346,935	15,378	17,838	2,944	383,095	446,637	14,258	16,468	4,185	481,598
5..	239,091	7,180	7,168	1,224	254,603	291,766	6,673	6,335	1,578	306,292
6..	137,882	3,409	2,612	424	144,327	154,691	3,171	2,263	654	160,779
7..	73,795	1,615	1,035	201	76,676	72,955	1,429	796	294	75,474
8..	40,567	862	424	96	41,949	35,243	704	256	160	36,363
9..	16,664	244	122	27	17,057	14,268	207	92	67	14,634
10 and over..	17,348	166	95	22	18,141	13,303	146	49	55	13,553
Total Private Dwellings..	1,618,052	106,011	111,399	38,161	1,873,623	2,056,010	107,216	127,420	52,766	2,343,421
Total In- mates ..	6,323,621	303,996	316,115	83,028	7,026,760	7,583,165	290,579	329,265	111,353	8,314,362
Average num- ber of In- mates per Private Dwell- ing ..	3.91	2.87	2.84	2.18	3.75	3.69	2.71	2.58	2.11	3.55

(a) See letterpress on p. 571 regarding comparability as between Censuses. (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.



(iv) *Nature of Occupancy.* At the 1954 Census, 52.5 per cent of occupied private houses in Australia for which particulars were supplied were occupied by owners; 16.8 per cent. by purchasers by instalments; 28.1 per cent. by tenants; and 2.6 per cent. by others. The corresponding percentages in 1947 were—owners, 50.5 per cent; purchasers by instalments, 9.0 per cent; tenants, 37.6 per cent; and others, 2.9 per cent. Owner-occupied houses in Australia increased by 33.4 per cent. between 1947 and 1954, and those being purchased by instalments by 139.3 per cent., the increase in these two groups combined being nearly 50 per cent., while tenant-occupied houses decreased by 4.1 per cent.

In the metropolitan areas 70.5 per cent. of all occupied private houses were either owner-occupied or being purchased by instalments, as compared with 69.0 per cent. in the other urban areas, and 66.9 per cent. in the rural areas.

Tenants occupied by far the greater proportion of flats and other private dwellings.

### OCCUPIED PRIVATE DWELLINGS CLASSIFIED ACCORDING TO NATURE OF OCCUPANCY, AUSTRALIA, 1947 AND 1954.

(EXCLUDING DWELLINGS OCCUPIED SOLELY BY FULL-BLOOD ABORIGINALS.)

Nature of Occupancy.	Census, 30th June, 1947.(a)					Census, 30th June, 1954.(a)				
	Private House. (b)	Share of Private House. (c)	Flat.	Other.	Total Private Dwelling.	Private House. (b)	Share of Private House. (c)	Flat.	Other.	Total.
Owner .. .. .	325,942	13,401	8,368	617	348,328	512,632	19,525	12,272	1,899	546,328
Purchaser by Instalments .. .. .	95,232	2,562	37	86	98,250	249,018	5,777	1,503	481	256,779
Tenant .. .. .	328,974	55,776	84,880	31,890	501,520	307,966	50,512	89,657	42,062	490,197
Caretaker .. .. .	4,350	305	624	228	5,507	6,617	449	681	391	8,138
Other Methods of Occupancy .. .. .	2,694	129	290	202	3,315	3,682	448	322	211	4,663
Not Stated .. .. .	3,486	551	281	240	4,558	2,018	633	168	264	3,083
<b>Total Private Dwellings .. .. .</b>	<b>760,678</b>	<b>72,724</b>	<b>94,822</b>	<b>33,263</b>	<b>961,487</b>	<b>1,081,933</b>	<b>77,344</b>	<b>104,603</b>	<b>45,308</b>	<b>1,309,188</b>

#### METROPOLITAN URBAN.

Owner .. .. .	146,320	4,091	1,677	141	152,238	279,042	6,469	3,271	426	289,208
Purchaser by Instalments .. .. .	25,712	58	84	16	26,392	77,063	1,158	280	70	78,571
Tenant .. .. .	109,027	14,444	10,712	3,591	137,781	149,560	14,182	16,926	6,126	187,094
Caretaker .. .. .	3,685	159	109	48	4,001	5,715	186	184	67	6,152
Other Methods of Occupancy .. .. .	2,232	53	53	13	2,351	4,440	150	81	28	4,699
Not Stated .. .. .	2,913	291	62	43	3,314	2,584	302	42	27	2,955
<b>Total Private Dwellings .. .. .</b>	<b>289,898</b>	<b>19,627</b>	<b>12,697</b>	<b>3,855</b>	<b>326,077</b>	<b>518,404</b>	<b>22,747</b>	<b>20,784</b>	<b>6,744</b>	<b>568,679</b>

#### OTHER URBAN.

Owner .. .. .	146,320	4,091	1,677	141	152,238	279,042	6,469	3,271	426	289,208
Purchaser by Instalments .. .. .	25,712	58	84	16	26,392	77,063	1,158	280	70	78,571
Tenant .. .. .	109,027	14,444	10,712	3,591	137,781	149,560	14,182	16,926	6,126	187,094
Caretaker .. .. .	3,685	159	109	48	4,001	5,715	186	184	67	6,152
Other Methods of Occupancy .. .. .	2,232	53	53	13	2,351	4,440	150	81	28	4,699
Not Stated .. .. .	2,913	291	62	43	3,314	2,584	302	42	27	2,955
<b>Total Private Dwellings .. .. .</b>	<b>289,898</b>	<b>19,627</b>	<b>12,697</b>	<b>3,855</b>	<b>326,077</b>	<b>518,404</b>	<b>22,747</b>	<b>20,784</b>	<b>6,744</b>	<b>568,679</b>

(a) See letterpress on p. 571 regarding comparability as between Censuses. (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.

**OCCUPIED PRIVATE DWELLINGS CLASSIFIED ACCORDING TO NATURE  
OF OCCUPANCY, AUSTRALIA, 1947 AND 1954—continued.**

Nature of Occupancy.	Census, 30th June, 1947.(a)					Census, 30th June, 1954.(a)				
	Private House. (b)	Share of Private House. (c)	Flat.	Tenement.	Total Private Dwellings.	Private House. (b)	Share of Private House. (c)	Flat.	Other.	Total Private Dwellings.
<b>RURAL.</b>										
Owner ..	333,131	3,641	635	52	337,459	283,022	2,778	431	47	286,278
Purchaser by Installments ..	22,650	330	49	6	23,035	17,544	164	33	2	17,743
Tenant ..	160,572	8,801	3,107	960	173,440	116,255	3,530	1,494	660	121,939
Caretaker ..	17,528	257	43	10	17,838	12,975	137	23	2	13,137
Other Methods of Occupancy ..	15,645	189	17	4	15,855	19,163	271	32	2	19,468
Not Stated ..	17,950	442	29	11	18,432	6,723	245	20	1	6,989
<b>Total Private Dwellings ..</b>	<b>567,476</b>	<b>13,660</b>	<b>3,880</b>	<b>1,043</b>	<b>586,059</b>	<b>455,682</b>	<b>7,125</b>	<b>2,033</b>	<b>714</b>	<b>465,554</b>
<b>TOTAL, AUSTRALIA.</b>										
Owner ..	805,402	21,133	10,680	810	838,025	1,074,696	28,772	15,974	2,372	1,121,814
Purchaser by Installments ..	143,594	3,472	503	108	147,677	343,625	7,099	1,816	553	353,093
Tenant ..	598,573	79,025	98,708	36,444	812,750	573,781	68,524	108,077	48,848	799,230
Caretaker ..	25,563	721	776	286	27,346	25,307	772	888	460	27,427
Other Methods of Occupancy ..	20,571	371	360	219	21,521	27,285	869	45	241	28,830
Not Stated ..	24,349	1,289	372	294	26,304	11,325	1,180	20	292	13,027
<b>Total Private Dwellings ..</b>	<b>1,618,052</b>	<b>106,011</b>	<b>111,399</b>	<b>38,161</b>	<b>1,873,623</b>	<b>2,056,019</b>	<b>107,216</b>	<b>127,420</b>	<b>52,766</b>	<b>2,343,421</b>

(a) See letterpress on p. 571 regarding comparability as between Censuses. (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.

(v) *Other Dwelling Characteristics.* In addition to the questions asked on the 1954 Census Schedule as to class of dwelling, material of outer walls, number of rooms, number of inmates and nature of occupancy, from the replies to which the data in the preceding paragraphs have been compiled, questions were also asked as to weekly rent, facilities, date of building and farm dwellings.

Particulars of weekly rent and date of building were still being summarized at the time of preparation of this section, and the results will be included in the Appendix to this volume. At the 1947 Census a detailed question was asked concerning facilities and a summary of the information obtained therefrom was published on page 571 of Official Year Book No. 38. The question asked at the 1954 Census was much less detailed and was designed partly to clarify replies to the question on class of dwellings. Information obtained in reply to this question and to that on farm dwellings has not been compiled.

## § 9. Oversea Migration.

1. *Overseas Migration during Present Century.*—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 the *Demography Bulletin* issued by this Bureau gives this information for individual years. The following table shows, for Australia, arrivals and departures and net migration since 1901. A graph showing overseas migration from 1921 to 1955 appears on p. 594.

## OVERSEA MIGRATION : AUSTRALIA.

Period.	Arrivals.			Departures.			Net Migration.		
	Males.	Females.	Persons.	Males.	Females.	Persons.	Males.	Females.	Persons.
1901-05..	196,993	84,167	281,160	204,170	93,783	297,953	- 7,177	- 9,616	- 16,793
1906-10..	251,482	119,552	371,034	213,493	100,273	313,756	37,999	19,279	57,278
1911-15..	422,927	209,893	632,820	382,552	113,406	495,958	40,375	96,487	136,862
1916-20..	438,721	100,764	539,485	390,202	78,574	468,776	48,519	22,190	70,709
1921-25..	289,695	188,357	478,052	172,236	122,550	294,786	117,459	65,807	183,266
1926-30..	266,593	203,887	470,480	193,336	147,437	340,773	73,257	56,450	129,707
1931-35..	124,207	115,116	239,323	134,883	115,326	250,209	- 10,676	- 210	- 10,886
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
1949 ..	132,648	100,487	233,135	42,705	40,429	83,134	89,943	60,058	150,001
1950 ..	141,891	108,513	250,404	49,907	47,992	97,899	91,934	60,521	152,505
1951 ..	122,136	91,504	213,640	51,521	47,686	102,207	67,615	43,818	111,433
1952 ..	127,516	88,423	215,839	68,917	52,870	121,807	58,579	35,451	94,032
1953 ..	88,584	74,541	163,125	68,483	51,745	120,228	20,101	22,796	42,897
1954 ..	109,601	88,424	198,025	72,073	57,745	129,818	37,528	30,679	68,207

(a) Excludes movements of defence personnel from September, 1939 to June, 1947.

NOTE.—Minus sign (—) indicates excess of departures over arrivals.

As the encouragement of immigration by governmental assistance has been a feature of Australian immigration policy, a clear indication of the significance of migration movements is obtained when "assisted" and "unassisted" movements are distinguished. This was shown broadly, for the period 1901-1952, in Official Year Book No. 40, page 361, and has been continued in the following table for the period 1926 to 1954.

## "ASSISTED" AND "UNASSISTED" MIGRATION : AUSTRALIA.

Period.	Arrivals.			Departures.	Excess of "Un- assisted" Arrivals over All Departures.
	Nominated and Selected ("Assisted").	Other ("Un- assisted").	Total.		
1926-30..	99,403	371,077	470,480	340,773	30,304
1931-35..	781	238,542	239,323	250,209	- 11,667
1936-40(a)	3,828	317,484	321,312	278,184	39,300
1941-45(a)	..	63,925	63,925	56,116	7,809
1946-50(a)	273,195	428,725	701,920	348,836	79,889
1949 ..	118,840	114,295	233,135	83,134	31,161
1950 ..	119,109	131,295	250,404	97,899	33,396
1951 ..	66,674	146,966	213,640	102,207	44,759
1952 ..	60,531	155,308	215,839	121,807	33,501
1953 ..	27,310	135,815	163,125	120,228	15,597
1954 ..	54,038	143,987	198,025	129,818	14,169

(a) Excludes movements of defence personnel from September, 1939 to June, 1947.

NOTE.—Minus sign (—) indicates excess of departures over "unassisted" arrivals.

It is not possible in the statistics of departures to distinguish the return movement of persons who came to Australia as "assisted" migrants and consequently the separate net migration of "assisted" and "non-assisted" persons cannot be ascertained. Nevertheless the basis on which the above table has been compiled is sufficient to throw into relief the major trends in Australian migration statistics in the period reviewed.

Although separate net migration figures are not available it is generally agreed that Australia has gained considerably more population through its encouraged migration programme than it has from non-assisted migration.

A detailed review of assisted migration into Australia in recent years is given in § 10.

2. *Classes of Arrivals and Departures.*—(i) *General.* Since 1st July, 1924, all overseas travellers have been classified according to their declared intention in regard to residence made at the time of arrival or departure. For various reasons the intentions of travellers are subject to subsequent modification and the classification headings used must therefore be accepted as indicating intention only. The numbers so classified since 1st January, 1926 are as follows.

#### MIGRANTS CLASSIFIED ACCORDING TO INTENDED RESIDENCE : AUSTRALIA.

Period.	Arrivals.				Departures.			
	Per- manent Move- ment.	Temporary Move- ment.		Total.	Per- manent Move- ment.	Temporary Move- ment.		Total.
	New Arrivals.	Aus- tralian Residents Return- ing.	Visitors Arriving.		Aus- tralian Residents Departing Per- manently.	Aus- tralian Residents Depart- ing Tempo- rarily.	Visitors Depart- ing.	
1926-30 ..	224,010	121,395	125,029	a 470,480	103,209	111,714	125,772	b 340,773
1931-35 ..	54,444	84,554	100,325	239,323	71,670	79,426	99,108	c 250,209
1936-40 ..	d 88,712	104,870	127,730	321,312	51,006	94,650	132,528	278,184
1941-45 ..	d 32,624	11,150	20,151	63,925	22,399	9,163	24,554	56,116
1946-50 ..	457,988	108,736	135,196	701,920	105,968	101,787	141,081	348,836
1949 ..	167,727	28,116	37,292	233,135	18,457	25,351	39,326	83,134
1950 ..	174,540	32,172	43,692	250,404	20,855	31,413	45,631	97,899
1951 ..	132,542	36,116	44,982	213,640	22,180	34,532	45,495	102,207
1952 ..	127,824	40,317	47,698	215,839	30,370	40,679	50,818	121,807
1953 ..	74,915	42,695	45,515	163,125	32,032	39,946	48,250	120,228
1954 ..	104,014	44,944	49,067	198,025	35,449	45,701	48,668	129,818

(a) Includes 46 arrivals whose intended period of residence was not stated. (b) Includes 78 departures whose intended length of stay abroad was not stated. (c) Includes 5 departures whose intended length of stay abroad was not stated. (d) Includes evacuees arriving in Australia during the war years as follows:—1936-40, 4,543; 1941-45, 12,586.

(ii) *Permanent Movement.* In the table above "permanent" means residence for a year or longer, in Australia in the case of arrivals or overseas in the case of departures.

The 1939-45 War caused a large drop, from 1940, in the number of permanent new arrivals but after the war the number rose progressively, reaching 174,540 in 1950, the highest on record. As in the case of arrivals, although not to the same extent, the number of Australian residents departing permanently rose rapidly in the period of immediate post-war re-adjustment of population, but the high figure of 29,806 in 1946 was surpassed in 1952, 1953 and 1954, in which years the figures were higher than any recorded since this method of classification was introduced.

Up to and including 1929 there was a considerable net gain of permanent residents, but during 1930 and 1931 there was a heavy net loss. The loss was very much reduced in 1932, 1933 and 1934, whilst during the five years up to and including 1939 there was a net gain in permanent residents of more than 28,000. Except for the arrival of evacuees, little movement took place during the war period, but in 1946 a net permanent loss of 11,589 persons occurred, owing in large measure to the departure for the United States of America of Australian wives and children of American servicemen, and, when conditions

permitted after the war, the departure of Australians to Papua and New Guinea and of large numbers of war evacuees who were returned to their home countries. Subsequently large net gains were recorded, amounting to 149,270 in 1949, 153,685 in 1950, 110,362 in 1951, 97,454 in 1952, 42,883 in 1953, and 68,565 in 1954.

(iii) *Temporary Movement.* Temporary movement refers to persons intending residence for periods shorter than one year and includes Australian residents and visitors from overseas. Since 1st July, 1947, it also includes Australian defence personnel irrespective of length of intended residence. Although considerable in number, the temporary movement is of little significance from the point of view of population growth, as it represents principally the movement of business people and tourists.

3. *Extent of Journey.*—(i) *General.* Since 1st January, 1945, the journeys undertaken by passengers have been recorded for Australian overseas migration statistics in two ways: (a) according to country of embarkation or disembarkation and (b) according to country of last or future permanent residence. In the case of a complete journey in a single stage to or from Australia there is no difference in result between the two methods. With multiple-stage journeys to or from an Australian port, however, one method distinguishes only the first stage of outward journeys or the last stage of inward journeys, whilst the second method records the complete journey.

Detailed statistics of overseas journeys are published in the annual *Demography Bulletin*. In addition, from January, 1951 onwards, statistics distinguishing State of residence have been compiled for special purposes. The following brief explanations indicate the principles followed in the compilation of migration statistics generally.

(ii) *Arrivals.* (a) *Country of Embarkation*—refers to the country in which the passenger embarked on the particular ship or aircraft which brought him to Australia. Therefore in multiple-stage journeys to Australia these statistics refer only to the last booked stage.

(b) *State of Disembarkation*—refers to the State in which the passenger actually disembarked, irrespective of the State to which originally booked or of State of ultimate destination. Passengers embarking on fresh journeys from one Australian State to another State are recorded in interstate migration.

(c) *Country of Last Permanent Residence*—This is taken from the passenger's own statement and is not necessarily the country from which the single-stage or multiple-stage journey to Australia commenced. Permanent residence means residence for one year or longer.

(d) *State of Intended Future Permanent Residence*—In the administration of the encouraged migration schemes large numbers of migrants are disembarked in States other than the State for which they are destined, and their subsequent movements in Australia to State of ultimate destination are recorded as interstate migration, in which distinction between individuals is not practicable. The classification by State of intended future permanent residence was introduced to permit compilation of statistics which show the true effect of overseas arrivals on the populations of individual States.

(iii) *Departures.* (a) *State of Embarkation*—refers to the State in which the passenger actually embarked on the ship or aircraft to leave Australia. The interstate travel of any such passengers prior to embarking is recorded as interstate migration.

(b) *Country of Disembarkation*—refers to the intended country of disembarkation from the particular ship or aircraft which takes the passenger from Australia. In multiple-stage journeys from Australia these statistics refer only to the first booked stage and changes in this, subsequent to departure, are not recorded.

(c) *Country of Intended Future Permanent Residence*—refers to the ultimate destination, after a complete single-stage or multiple-stage journey, of the passenger, as intended at the time of embarkation.

(d) *State of Last Permanent Residence*—refers to the State in which the passenger was last resident for a period of 12 months or longer, irrespective of the State in which actual embarkation on an overseas ship or aircraft took place. In the case of temporary visitors leaving Australia who have not resided for at least twelve months in any one State, the State of embarkation is regarded as the State of last permanent residence.

4. **Racial Origin.**—Up to 30th June, 1948, the system of classifying racial origin was a compromise based partly on nationality and partly on racial origin (*see* para. 5). From 1st July, 1948, this system was superseded by one in which the passenger's statement as to race is restricted to either "European", "Asian", "African" or "Polynesian", only. Statistics based on this system are shown for the years 1952 to 1954 in the following table. Under this system nationality is recorded independently, as indicated in the next paragraph.

#### RACIAL ORIGIN OF ARRIVALS AND DEPARTURES : AUSTRALIA.

Racial Origin.	Arrivals.			Departures.			Net Migration.		
	1952.	1953.	1954.	1952.	1953.	1954.	1952.	1953.	1954.
European ..	210,559	157,564	192,334	117,870	115,710	124,636	92,689	41,854	67,698
Asian ..	4,699	4,873	4,850	3,332	3,916	4,237	1,367	957	653
African ..	49	30	98	47	20	39	2	10	59
Polynesian ..	532	658	703	558	582	906	—26	77	—203
Total ..	215,839	163,125	198,025	121,807	120,228	129,818	94,032	42,897	68,207

NOTE.—Minus sign (—) indicates excess of departures over arrivals.

5. **Nationality.**—From 1st July, 1924 to 30th June, 1948, nationality of overseas passengers was recorded as "British" or "Alien" only. Racial origin was also recorded and as the particulars of racial origin stated by passengers closely reflected their nationalities and made it possible to present much more detail of "nationality" than was possible on the total "Alien" basis, published statistics were mostly confined to those compiled on the detailed basis according to a composite classification of "nationality or race".

This method was superseded on 1st July, 1948, by one in which each passenger's race was recorded as indicated in paragraph 4 above, and nationality, as shown on each passenger's passport or other document of identification, was recorded independently of race. The principal nationalities recorded on this basis for the years 1952 to 1954 are as follows :—

#### NATIONALITY OF ARRIVALS AND DEPARTURES : AUSTRALIA.

Nationality.	Arrivals.			Departures.			Net Migration.		
	1952.	1953.	1954.	1952.	1953.	1954.	1952.	1953.	1954.
British(a) ..	143,433	114,380	128,537	107,754	104,749	112,848	35,679	9,631	15,684
American (U.S.) ..	3,756	4,226	5,379	3,893	4,020	4,739	—137	206	640
Austrian ..	583	508	1,551	130	284	177	453	224	1,379
Chinese ..	1,256	1,010	830	648	885	704	608	125	135
Czechoslovak ..	536	105	107	158	124	127	378	—19	—20
Dutch ..	16,769	10,411	12,637	1,950	2,041	2,604	14,810	8,370	10,028
Estonian ..	101	36	9	33	26	67	68	10	—58
French ..	2,058	1,347	1,591	1,447	1,480	1,560	611	—133	38
German ..	7,270	8,185	13,350	492	778	1,006	6,778	7,407	12,350
Greek ..	2,467	3,036	10,074	457	261	306	2,010	2,775	9,768
Hungarian ..	511	114	113	81	99	95	430	15	18
Italian ..	28,213	13,981	16,261	1,561	2,302	2,101	26,652	11,679	14,166
Latvian ..	231	78	42	98	55	76	133	23	—33
Lithuanian ..	72	28	21	53	48	86	19	—20	—61
Polish(b) ..	1,033	307	165	177	170	187	856	137	—26
Russian(c) ..	682	523	283	117	116	127	565	407	156
Ukrainian ..	65	54	18	27	23	74	38	31	—56
Yugoslav ..	1,238	618	749	145	143	176	1,093	475	579
Stateless (so described) ..	1,738	909	2,291	289	278	312	1,449	631	1,979
Stateless (other)(d) ..	20	14	384	7	12	15	13	2	369
Other ..	3,807	3,255	3,605	2,290	2,334	2,433	1,517	921	1,172
Total ..	215,839	163,125	198,025	121,807	120,228	129,818	94,032	42,897	68,207

(a) Irish nationality is included with British for the purposes of this table. (b) Includes "Stateless" who were formerly Polish. (c) Includes "Stateless" who were formerly Russian. (d) Stateless, with former nationality stated but other than Polish or Russian.

NOTE.—Minus sign (—) indicates excess of departures over arrivals.

6. Age Distribution and Conjugal Condition.—The annual *Demography Bulletin* shows particulars of total arrivals and departures of overseas travellers classified according to intention as to residence (see para. 2 above) with independent dissections into five-year age groups and separate conjugal conditions (see *Demography Bulletin* No. 72 for 1954 figures). A summary of the age distribution and conjugal condition of permanent arrivals and departures during 1954 is as follows:—

**AGE DISTRIBUTION AND CONJUGAL CONDITION OF PERMANENT ARRIVALS AND DEPARTURES : AUSTRALIA, 1954.**

Particulars.	Permanent New Arrivals.			Permanent Departures.		
	Males.	Females.	Persons.	Males.	Females.	Persons.
<b>AGE DISTRIBUTION.</b>						
0-14 years ..	16,434	14,947	31,381	3,003	2,689	5,692
15-44 years ..	34,757	27,838	62,595	12,528	9,960	22,488
45-64 years ..	3,794	4,546	8,340	2,531	3,030	5,561
65 years and over ..	635	1,063	1,698	714	994	1,708
<b>Total ..</b>	<b>55,620</b>	<b>48,394</b>	<b>104,014</b>	<b>18,776</b>	<b>16,673</b>	<b>35,449</b>

**CONJUGAL CONDITION.**

Never Married ..	35,650	24,108	59,758	11,071	8,038	19,109
Married ..	19,467	22,143	41,610	7,231	6,860	14,091
Widowed ..	299	1,762	2,061	335	1,518	1,853
Divorced ..	204	381	585	139	257	396
<b>Total ..</b>	<b>55,620</b>	<b>48,394</b>	<b>104,014</b>	<b>18,776</b>	<b>16,673</b>	<b>35,449</b>

7. Occupation.—A classification of the occupations of males who arrived or departed permanently during 1954 is published in *Demography Bulletin* No. 72. A summary for 1954 for the main occupational groups is as follows:—Rural, fishing and hunting—permanent new arrivals, 7,068, permanent departures, 770; professional and semi-professional, 1,720, 1,870; administrative, 884, 790; commercial and clerical, 2,950, 2,446; domestic and protective service, 1,143, 683; craftsmen, 10,889, 4,332; operatives, 4,686, 1,711; labourers, 5,397, 1,573; indefinite or not stated, 2,122, 429; not gainfully occupied (mainly children), 18,761, 4,172; total, 55,620, 18,776.

## § 10. Immigration.

### (A) Assisted Migration into Australia.

1. 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, may be found in earlier issues of the Official Year Book (see No. 38, page 576). After the outbreak of hostilities in 1939 it was decided to discontinue the grant of assisted passages for the duration of the war.

2. United Kingdom Free and Assisted Passage Agreements, March, 1946.—

(i) *General.* Resumption of migration was the subject of negotiations between the Commonwealth and United Kingdom 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 was terminated on 28th February, 1955. The Assisted Passage Agreement continued until 31st March, 1949, when it was renewed for a further two years. It was revived from 1st April, 1951 for a term of three years, but under changed financial arrangements. For the year ended 31st March, 1952 the United Kingdom Government contributed £500,000 sterling towards the scheme, and for the following two years agreed to pay a maximum amount of £150,000 sterling per annum. The Assisted Passage Agreement was again extended for a further period of one year as from 1st April, 1954 and for two years as from 1st April, 1955, on the basis that the United Kingdom Government would contribute a maximum amount of £150,000 sterling per annum.

The Free and Assisted Passage Agreements have covered three main groups of migrants, viz., *Personal nominees*, who 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 the United Kingdom who are eligible to be considered for free or assisted passages under this agreement); *Group nominees*, who are recruited on a trade-qualification basis to meet applications lodged by employers and State Governments who guarantee to provide employment and accommodation for those selected; *Commonwealth nominees*, who comprise workers selected against known and assessed employment demands in Australia; and their families. Migrants in the latter group live in hostels established by the Commonwealth Government until such time as they are able to obtain private accommodation. The Commonwealth nominee scheme was introduced in 1950 in order to reinforce the personal and group nomination schemes, but towards the end of 1952 it was greatly curtailed and selection was confined to workers in a limited group of essential skilled trades. During the latter part of 1953 the list of categories of workers who could be selected was broadened and the scheme resumed its former impetus.

(ii) *Assisted Passages.* As the Free Passage Scheme has now terminated only the Assisted Passage Scheme remains in operation. Assisted passages are granted under the Empire Settlement Acts of the United Kingdom to suitable British subjects normally resident in the United Kingdom. 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 juveniles aged 14 years and under 19 years have to pay £5 sterling. Children under 14 years travel free. Apart from these contributions and that made annually by the United Kingdom Government, the cost of the passages is borne by the Commonwealth Government.



(iii) *Numbers Arrived.* The numbers of British migrants who came to Australia under the Free and Assisted Passage Agreement during the years 1947 to 1954 are given in the following table :—

**UNITED KINGDOM FREE AND ASSISTED PASSAGE AGREEMENT : NUMBER OF MIGRANTS.**

Period.	N.S.W.	Vic.	Q'land.	S. Aust.	W.Aust.	Tas.	A.C.T.	C'wealth Nominees.	Total.
1947-50 ..	27,984	27,662	12,975	8,464	11,106	3,831	1,721	4,062	97,805
1951 ..	6,386	10,727	4,097	1,617	2,691	1,176	255	17,058	44,007
1952 ..	7,386	10,596	4,104	2,326	2,804	1,235	382	6,247	35,080
1953 ..	3,890	3,962	1,835	1,072	1,969	485	110	372	13,695
1954 ..	3,046	3,199	1,872	1,406	2,067	425	97	6,605	18,717
Total, 1947-54	48,692	56,146	24,883	14,885	20,637	7,152	2,565	34,344	209,304

3. *Child Migration from the United Kingdom.*—(i) *General.* Since the commencement of the assisted passage schemes in 1947, the immigration of unaccompanied children and youths from the United Kingdom has been encouraged under the auspices of approved voluntary organizations. The organizations at present introducing child migrants include the Fairbridge Farm Schools of New South Wales and Western Australia, 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. At the present time 43 institutions are caring for child migrants.

(ii) *Financial Assistance.* The United Kingdom Government contributes 12s. 6d. and the Commonwealth Government 10s. per week to approved organizations in respect of each child under 16 years of age, while the respective State Governments contribute amounts varying from 4s. 8d. per week in New South Wales to £1 10s. 9d. in Western Australia. In addition, the Commonwealth Government and State Government concerned each contribute, where necessary, towards the approved capital expenditure on accommodation for child migrants brought in by these organizations.

(iii) *Numbers Arrived.* From the beginning of 1947 to the end of 1954, a total of 3,645 British children and youths arrived under the sponsorship of voluntary organizations, and of this number 571 came in 1952, 574 in 1953 and 375 in 1954. New South Wales took 1,868, Western Australia 1,033, Victoria 413, and the other three States 331. 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.

4. *Assisted Passage Scheme, Eire.*—In November, 1948, the Commonwealth Government decided to grant limited financial assistance to natural-born citizens of Eire normally residing in the British Isles, and to natural-born British citizens residing in Eire, who wish to emigrate to Australia and who are duly selected. This scheme applies only to prospective settlers and their dependants who are not eligible for assisted passages under the agreement with the United Kingdom Government (*see para. 2 above*). The maximum amount granted towards an adult passage is £30 sterling, with varying amounts for children according to age.

It is not essential for an applicant for a passage to be nominated by a friend or relative in Australia before the question of granting financial assistance is considered. Single men or women who are eligible under the scheme are readily accepted. Families, on the other hand, are accepted only if they can produce evidence of having secured

accommodation in Australia, or, in the case of nominated migrants, a guarantee of accommodation by their sponsors. Up to the end of 1954, 2,023 migrants had arrived under this scheme (*see* table on p. 617).

5. *Maltese Migration*.—On 31st May, 1948, the Commonwealth Government and the Government of Malta entered into an agreement under which the two governments jointly grant financial assistance towards the cost of the passages of Maltese selected to migrate to Australia. In the case of an adult the maximum contribution of the Commonwealth is £30 sterling, and the payment of this is subject to the Government of Malta contributing not less than a like amount.

Any person already established in Australia may nominate individual Maltese under the scheme, while an employer or firm or a voluntary or other organization may nominate a group. In all cases the nominator must undertake to provide accommodation and, so far as groups of migrants are concerned, employment. The Commonwealth retains the right of final selection of both personal and group nominees. The Government of Malta attends to their after-care in Australia.

At 31st December, 1954, a total of 17,889 Maltese had arrived under this scheme since its inception (*see* table on p. 617). These arrivals were largely dependants of those who had earlier migrated to Australia. To the end of 1954, 197 Maltese children had been brought out to approved institutions in Western Australia. These are included in the number shown above.

6. *Empire and Allied Ex-Servicemen's Scheme*.—With the object principally of giving ex-servicemen of Empire and Allied countries who had served in Australia during the 1939–45 War an opportunity to return for permanent settlement, the Commonwealth Government on 26th May, 1947 initiated a scheme of financial assistance towards the cost of the passages of eligible Empire ex-servicemen not covered by the Free and Assisted Passage Agreement with the United Kingdom (*see* para. 2 above) and of ex-servicemen of the United States of America, and their dependants. This was later extended to cover ex-servicemen and former members of the resistance movements of the Netherlands, Norway, Belgium, France and Denmark, and their dependants. The maximum amount granted towards an adult passage was £30 sterling, with varying amounts for children according to age. The scheme was discontinued as from 30th June, 1955, being superseded by the General Assisted Passage Scheme (*see* para. 12).

Since its inception, 21,024 migrants have come to Australia under this scheme (*see* table on p. 617), the number of each nationality being: Dutch, 16,023; American, 3,138; French, 1,005; British, 581; Belgian, 126; Norwegian, 74; Danish, 76; Polish, 1.

7. *Displaced Persons Scheme*.—On 21st July, 1947, the Commonwealth Government entered into an agreement with the International Refugee Organization to resettle in Australia European displaced persons who were under the protection of that body. In the first two years, limitation of shipping restricted the departure of these migrants, with the result that only 840 arrived in 1947 and 9,953 in 1948, but in the next two years the numbers rose to 75,486 and 70,212 respectively. When the International Refugee Organization wound up its activities in 1951, the Commonwealth agreed to receive those displaced persons already accepted for migration whose passages had still to be arranged. During that year 11,708 reached Australia. In 1952 another 2,055 arrived, whilst in 1953 and 1954 arrivals numbered 441 and 5 respectively, bringing the total number of arrivals under this scheme to 170,700.

8. *Netherlands Migration.*—A migration agreement concluded between the Commonwealth and the Netherlands Governments in February, 1951, came into operation on 1st April of that year. This superseded an earlier agreement between the Commonwealth Government and the Netherlands Emigration Foundation which was made in December, 1946 (*see* Official Year Book No. 39, p. 567). The initial selection of the migrants is carried out by the Netherlands authorities in accordance with requisitions furnished from time to time by the Commonwealth, the responsibility for final selection resting with Australian migration officers stationed in that country.

Important changes were made in 1955 in the financial arrangements which apply under the Netherlands-Australia Migration Agreement. As from 1st April, 1955, an arrangement known as the "Equalization Scheme" commenced operating in respect of all Netherlands migrants, both full-fare or assisted. Recognizing that a migrant's choice of the country in which he wishes to settle is influenced by the cost of passages, the Netherlands Government decided to subsidize passage costs to all countries so that the maximum cost to the migrant would not exceed the passage costs to the nearest migration country (*i.e.*, Canada).

The actual amount contributed by the migrant towards his passage costs is assessed by the Netherlands Government and is subject to a minimum of £A17 12s. 1d. for single persons and £A11 14s. 9d. for family units. The balance of the fare is made up by the Netherlands Government which later receives a contribution from the Inter-Governmental Committee for European Migration and from the Commonwealth Government. The amount contributed by the Commonwealth is the equivalent of \$100 per head.

An account of the financial arrangements which applied prior to 1st April, 1955 may be found on page 341 of Official Year Book No. 41.

The provision of the shipping is the responsibility of the Netherlands Government. The Commonwealth undertakes the arrangements for the reception of the migrants and their after-care, and assists in the securing of employment. Those unable to secure private accommodation in advance of their arrival are housed in "reception" centres controlled by the Department of Immigration, and if, when he obtains employment, the worker of the family cannot find accommodation for his dependants, they are moved to one of the department's "holding" centres. Here they remain until the family is able to arrange to live together privately again.

Under the 1946 agreement 584 persons arrived between 1948 and May, 1951 and, up to the end of 1954, 13,810 migrants had come to Australia under the 1951 agreement.

9. *Italian Migration.*—On 29th March, 1951, the Commonwealth and Italian Governments entered into a migration agreement on lines similar to those of the Commonwealth-Netherlands agreement. Under the terms of this agreement, which came into force on 1st August, 1951, the maximum amount payable by the Commonwealth towards the fares of selected Italian migrants was £25 sterling for each adult, with amounts in proportion for children according to the passage rates. From 1st March, 1955, this amount was increased to \$75. During 1951 and 1952, 9,970 migrants arrived under this scheme. The agreement was temporarily suspended at the end of 1952, but in March, 1954 provision was made for the migration to Australia of certain relatives and fiancées of migrants who had previously travelled to Australia under the agreement. On 1st December, 1954, the agreement proper was re-opened. The number of Italians who arrived under the scheme during 1954 was 409.

10. **German Migration.**—On 29th August, 1952, a migration agreement was signed by representatives of Australia and the Federal Republic of Germany. Except in regard to financial and shipping arrangements, this agreement operates in a manner similar to those concluded with the Netherlands and Italy.

On the financial side, the Commonwealth and the West German Governments each contribute a sum up to a maximum of the equivalent of \$60 towards the fare of each adult selected, the payment of the balance being a matter of arrangement between the migrant and the Inter-Governmental Committee for European Migration. From 1st March, 1955, the Commonwealth contribution was increased to \$75. The ships to carry the migrants are provided by the Committee.

The number of Germans who had arrived under this scheme to the end of 1954 was 19,308. This figure excludes 424 East Zone refugees (*see* para. 11).

11. **Other European Assisted Migration.**—Late in 1952 agreement was reached between the Inter-Governmental Committee for European Migration and the Commonwealth for the migration to Australia of a limited number of selected rural and other workers and their families from Austria and Greece. These arrangements were later extended to include selected migrants from Trieste and refugees from the East Zone of Germany. It was also agreed that selection would not be confined to rural workers. Passages for these migrants are arranged by the Inter-Governmental Committee for European Migration, which also bears the cost of fares initially. The Commonwealth later reimburses the Committee with such sums as are agreed upon from time to time, the current cost to the Commonwealth being the equivalent of \$75 (\$60 prior to 1st March, 1955) per adult migrant with *pro rata* amounts for children. The reception of these migrants, their temporary accommodation on arrival, after-care and placement in employment are undertaken by the Commonwealth.

Under these arrangements 13 Austrians arrived in 1952, 103 in 1953 and 1,674 in 1954, while 1,486 Greeks arrived during 1953 and 7,278 in 1954.

Total arrivals of Triestians and East Zone refugees were 4,273 and 424 respectively, all of whom arrived during 1954. The arrangements for East Zone refugees were terminated at the end of 1954 when these people became eligible for acceptance under the bilateral agreement with the Federal Republic of Germany.

12. **General Assisted Passage Scheme.**—As a measure of encouragement to persons wishing to migrate to Australia from the United States of America, Switzerland, Denmark, Norway, Sweden and Finland the Commonwealth Government on 10th September, 1954 introduced a scheme of assisted passages from those countries.

Under this scheme the Commonwealth contributes an amount of £37 10s. sterling towards an adult passage with *pro rata* amounts for children according to the fare paid.

To the end of December, 1954, 19 migrants had travelled to Australia under this scheme.

13. **Summary of Arrivals of Assisted Migrants.**—The following table shows, for each of the years 1948 to 1954, the number of assisted migrants who arrived in Australia under the various schemes introduced since 1946. The total for the years 1947 to 1954 is also given.

## ASSISTED MIGRATION SCHEMES : NUMBER OF MIGRANTS.

Assisted Migration Scheme.	1948.	1949.	1950.	1951.	1952.	1953.	1954.	Total, 1947-54.
United Kingdom Free and Assisted Passage Agreement, 1946 (including Royal Navy Personnel) Empire and Allied Ex-Servicemen's Scheme.	16,243	38,486	38,329	44,007	35,080	13,695	18,717	209,304
1947 .. .. .	1,170	1,412	6,444	5,557	3,025	1,227	1,920	21,024
Displaced Persons Scheme, 1947 .. .. .	9,953	75,486	70,212	11,708	2,055	441	5	170,700
Polish Migrants from United Kingdom .. .. .	1,010	..	..	..	..	..	..	1,457
Maltese Assisted Migration Agreement, 1948 .. .. .	527	3,260	3,226	3,313	1,903	1,145	4,515	17,859
Elire Assisted Migration Agreement, 1948 .. .. .	..	109	457	426	573	240	218	2,023
Netherlands Foundation Agreement, 1946 .. .. .	40	87	441	16	..	..	..	584
Netherlands Agreement, 1951 .. .. .	..	..	..	1,588	6,964	2,397	2,861	13,810
Italian Assisted Migration Agreement, 1951 .. .. .	..	..	..	59	9,911	..	409	10,379
German Assisted Migration Agreement, 1952 .. .. .	..	..	..	..	1,007	6,576	12,149	19,732
General Assisted Passage Scheme .. .. .	..	..	..	..	..	..	19	19
I.C.E.M. Agreement, 1952—	..	..	..	..	..	..	..	..
Triestians .. .. .	..	..	..	..	..	..	4,273	4,273
Austrians .. .. .	..	..	..	..	13	103	1,674	1,790
Greeks .. .. .	..	..	..	..	..	1,486	7,278	8,764
Total Assisted Migrants	28,943	118,840	119,109	66,674	60,531	27,310	54,038	481,748

From the earliest years of assisted migration to the end of 1954 a total of 1,550,048 assisted migrants arrived in Australia, of whom 504,006 were destined for New South Wales, 465,918 for Victoria, 265,562 for Queensland, 137,293 for South Australia, 136,881 for Western Australia, 33,669 for Tasmania, 6,664 for the Australian Capital Territory and 55 for the Northern Territory.

## (B) 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 and emigration and the influx of criminals.

(ii) *Legislation*. Immigration into the Commonwealth is regulated by the Immigration Act 1901-1949, which specifies the persons whose immigration is prohibited and provides for their deportation if they enter contrary to the Act. Provision is also made for the deportation of persons who have entered lawfully but who contravene the provisions of the Act after they have entered. Power is given to the Minister for Immigration to admit prohibited immigrants for a specified period under Certificate of Exemption from the provisions of the Act relating to entry or stay in the Commonwealth.

The amending Act of 1948 provided for the registration of immigration agents, and made it unlawful for unregistered persons to charge fees in respect of applications by intending immigrants for admission to Australia, or to arrange or secure passages to Australia for such immigrants. In addition, the Minister for Immigration has power to fix the fees which registered agents may charge for these services.

The Aliens Deportation Act 1948 repealed the Aliens Deportation Act 1946 and empowers the Minister for Immigration to order the deportation of an alien who after investigation by a Commissioner is reported as not being a fit and proper person to be allowed to remain in Australia.

The War-time Refugees Removal Act 1949 enables the Minister for Immigration to effect the repatriation to their own countries of persons given refuge in Australia during the 1939–45 War. Deportation is limited to persons in respect of whom orders for deportation were issued prior to 12th July, 1950.

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 other than in the 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 who, as the Minister's delegates under the Act, supervise the welfare of each "immigrant child".

The Aliens Act 1947–1952 provides that a register of aliens shall be maintained for every State and 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 also provides that consent must be obtained before an alien may change his surname.

**2. Conditions of Immigration into Australia.**—(i) *Persons of Non-European Race.* In pursuance of the established policy, the general practice is not to permit Asians or other coloured persons to enter Australia for the purpose of settling permanently.

Special provision exists for the temporary admission of non-Europeans who are bona fide merchants, students or tourists. They are permitted to enter and remain in Australia under exemption while they retain their status.

Permission may also be given for the entry of non-Europeans as assistants or substitutes for local traders domiciled in Australia. Such persons are allowed to remain so long as they retain their status.

(ii) *Persons of European Race.* Persons of European race desiring to settle permanently in Australia are required to obtain authority for admission from the Department of Immigration. Their admission under the present policy is subject to their compliance with the Commonwealth's requirements in 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, A.C.T., and Commonwealth Migration Officers in the capital cities of the various States;
- (b) In Great Britain—the Chief Migration Officer, High Commissioner's Office, Australia House, Strand, London;
- (c) In other British Dominions—the High Commissioner for Australia;
- (d) In other countries where Australia is represented—the Secretary, Australian Embassy, Legation or Consulate.

For details of the Australian representatives in the British Dominions and other countries. *see* the section entitled "Diplomatic and other Representatives Overseas and in Australia" in Chapter XXIX.

**3. Racial Origin and Nationality of Persons Arriving.**—For details of the racial origin and nationality of persons who arrived in Australia during the years 1952 to 1954 *see* § 9, paras. 4 and 5.

### (C) Passports.

Provision is made in the Immigration Act 1901-1949 for the production of a passport by each immigrant over 16 years of age who desires to enter Australia. Under the Passports Act 1920, it was compulsory also for each person over 16 years of age to be in possession of a passport or other document authorizing his departure. This Act has now been superseded by the Passports Act 1938-1948 which repealed the compulsory provisions. The Act also applies to the Territories of Australia, including Papua, Norfolk Island and the Trust Territory of New Guinea.

Although it is not compulsory for Australians to obtain a passport when leaving Australia, it is desirable in their own interests that they should have one in order to establish their identity and nationality overseas. A passport is necessary for admission into most countries, and the holder of an Australian passport also has no difficulty in landing on return to Australia. The charge for an Australian passport is £1.

As a result of the Nationality and Citizenship Act 1948-1955 (see § 11 below) and the enactment of similar citizenship legislation in other British Commonwealth countries it is now the general rule that Australian passports are issued only to Australian citizens. Citizens of other British Commonwealth countries secure passports from their own High Commissioners in Australia. Australian citizens abroad may secure passports only from Australian representatives.

Diplomatic and official passports are issued to members of the Australian diplomatic service and other Government officials proceeding abroad on official business.

Applicants for passports are required to produce evidence of their identity and nationality (e.g., birth certificates).

## § 11. 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 British Commonwealth. All Australian citizens, and the citizens of other countries of the British Commonwealth, are declared to be British subjects. Australian citizenship was automatically acquired as from 26th January, 1949 by persons who were British subjects at that date and who either (a) were born in Australia or New Guinea; or (b) were naturalized in Australia; or (c) had been residing in Australia during the five years immediately preceding 26th January, 1949; or (d) were born outside Australia of fathers to whom (a) or (b) above applied (provided the persons concerned had entered Australia without being placed under any immigration restriction); or (e) were women who had been married to men who became Australian citizens under the above headings (provided that the women concerned had entered Australia without being placed under immigration restriction). For the purposes of the Act, "Australia" includes Norfolk Island and the Territory of Papua, and by an amendment of the Act in 1950 it was further provided that Nauru shall be treated in the same manner as New Guinea.

After the Act's commencement citizenship may be acquired in the following ways:—(a) by birth in Australia; (b) by birth outside Australia, of a father who is an Australian citizen, provided that the birth is registered at an Australian Consulate; (c) by registration—Certificates of Registration as Australian citizens may be granted by the Minister to British subjects or Irish citizens who make application and satisfy the Minister that they can comply with specified requirements as to residence in Australia, good character and intention to reside permanently in Australia; (d) by naturalization—Certificates of Naturalization as Australian citizens may be granted by the Minister to aliens who make application and can comply with requirements somewhat similar to those previously required under the Nationality Act 1920-1946. New requirements for naturalization are—(i) as a rule five years residence in Australia is required, but residence in other British countries or service under a British government may be accepted (special concessions in the matter of residence qualifications in respect of persons who have voluntarily enlisted in the armed forces were made by an amending Act of 1952); (ii) the

applicants must have an adequate knowledge of the responsibilities and privileges of citizenship; (iii) Certificates do not take effect until the applicant takes the Oath of Allegiance. The oath is now taken, and citizenship is conferred, at public ceremonies held in the Town Hall of the applicant's place of residence, and presided over by the mayor or equivalent head of the local government.

The Declaration of Intention to apply for naturalization, which was introduced by the original Act of 1948, is no longer compulsory, although it can still be made if an intending applicant so desires. This change was made by an amending Act of 1955 under the provisions of which aliens may apply up to six months before completing their residence requirements, but may not be granted naturalization until six months after application.

Under the Act, the independence of married women in nationality matters is recognized, and British nationality is restored to those women who had lost it through marriage to aliens. In future, marriage will not affect a woman's nationality. Alien women who marry Australian citizens may, however, be naturalized under somewhat easier conditions than those which apply to other aliens.

2. *Certificates Granted.*—(i) *Australia.* The following figures relate to certificates issued under the Nationality and Citizenship Act 1948–1955 during the year 1954:—

### NATURALIZATION : CERTIFICATES GRANTED, AUSTRALIA, 1954.

#### PREVIOUS NATIONALITIES OF RECIPIENTS.

Nationality.	Certificates Granted.	Nationality.	Certificates Granted.	Nationality.	Certificates Granted.	Nationality.	Certificates Granted.
Albanian ..	9	Danish ..	21	Israeli ..	8	Romanian ..	95
American (U.S.) ..	22	Dutch ..	316	Italian ..	598	Russian ..	71
Argentinian ..	1	Egyptian ..	21	Latvian ..	268	Spanish ..	13
Austrian ..	194	Estonian ..	140	Lebanese ..	36	Swedish ..	13
Belgian ..	9	Finnish ..	14	Lithuanian ..	130	Swiss ..	15
Brazilian ..	1	French ..	25	Luxembourgais ..	1	Syrian ..	1
Bulgarian ..	10	German ..	225	Norwegian ..	33	Turkish ..	4
Burmese ..	4	Greek ..	324	Paraguayan ..	1	Ukrainian ..	104
Chilean ..	1	Hungarian ..	415	Peruvian ..	1	Yugoslav ..	207
Chinese ..	2	Iranian ..	1	Polish ..	771	Stateless ..	336
Czechoslovak ..	303	Iraqian ..	5	Portuguese ..	2	Total ..	4,770

#### COUNTRIES IN WHICH RECIPIENTS ORDINARILY RESIDED IMMEDIATELY BEFORE ENTERING AUSTRALIA OR NEW GUINEA.

Country.	Certificates Granted.	Country.	Certificates Granted.	Country.	Certificates Granted.	Country.	Certificates Granted.
Abyssinia ..	1	Denmark ..	20	Latvia ..	4	South America ..	1
Africa ..	15	Dutch ..	2	Lebanon ..	44	Spain ..	9
Albania ..	8	Guinea ..	171	Lithuania ..	5	Sweden ..	41
Arabia ..	1	Egypt ..	10	Luxemburg ..	3	Switzerland ..	62
Argentina ..	4	Estonia ..	12	Malaya ..	4	Syria ..	2
Austria ..	117	Finland ..	309	Mexico ..	1	Tanganyika ..	1
Belgium ..	58	France ..	1,156	New Caledonia ..	4	Thailand ..	3
Bolivia ..	3	Germany ..	236	New Zealand ..	13	Trieste ..	3
Brazil ..	5	Greece ..	215	Norway ..	25	Turkey ..	4
Bulgaria ..	5	Holland ..	5	Pakistan ..	1	United Kingdom ..	216
Burma ..	6	Hong Kong ..	201	Paraguay ..	1	Ukraine ..	1
Canada ..	2	Hungary ..	43	Peru ..	1	Uruguay ..	1
Ceylon ..	2	India ..	82	Philippines ..	14	U.S. of America ..	91
Chile ..	3	Indonesia ..	9	Poland ..	94	U.S.S.R. ..	12
China ..	379	Iran ..	2	Portugal ..	1	Yugoslavia ..	54
Costa Rica ..	1	Iraq ..	103	Romania ..	37		
Cuba ..	1	Israel ..	661	Samoa ..	1		
Cyprus ..	19	Italy ..	2	Singapore ..	8		
Czechoslovakia ..	138	Japan ..	2	South Africa ..	3	Total ..	4,770



(ii) *States.* The certificates of naturalization granted in 1954 were issued in respect of residents of the various States and Territories as follows :—New South Wales, 1,661 ; Victoria, 1,428 ; Queensland, 400 ; South Australia, 548 ; Western Australia, 487 ; Tasmania, 115 ; Northern Territory, 25 ; Australian Capital Territory, 85 ; New Guinea, 21 ; Total, 4,770.

## § 12. Population of Territories.

At the Census of 30th June, 1954, as at previous censuses, arrangements were made to obtain complete information concerning not only the two internal territories of Australia—the Northern Territory and the Australian Capital Territory—but also the external territories under the control of Australia, namely :—Norfolk Island, Papua, the Trust Territory of New Guinea, and the Trust Territory of Nauru. Figures respecting population and number of dwellings in each Territory at the Census of 1954 are summarized in the following table :—

POPULATION AND DWELLINGS : TERRITORIES, CENSUS, 30th JUNE, 1954.  
(EXCLUDING INDIGENOUS POPULATION.)

Territory.	Population.			Dwellings.	
	Males.	Females.	Persons.	Occupied.	Unoccupied
Internal—					
Northern Territory ..	10,288	6,181	16,469	3,426	47
Aust. Capital Territory	16,229	14,086	30,315	7,118	326
External—					
Norfolk Island ..	478	464	942	310	41
Papua ..	3,867	2,446	6,313	1,605	66
Trust Territory of New Guinea ..	7,201	4,241	11,442	3,098	104
Trust Territory of Nauru	1,269	376	1,645	99	13

Particulars concerning the indigenous populations of the internal and external territories will be found in Chapter V.—The Territories of Australia.

## § 13. The Aboriginal Population of Australia.

In Official Year Book No. 17, pp. 951–61, a brief account is given of the Australian aboriginal population, its origin, its numbers as estimated from time to time, and the steps taken for its protection. On pp. 914–6 of Official Year Book No. 22, particulars are 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 appears on pp. 687–96 of Official Year Book No. 23.

The aborigines are scattered over the whole of the mainland but the majority are concentrated in Western Australia, Queensland and the Northern Territory. Details of the number in each State at the June, 1947 Census are shown in the following table. Full-blood aborigines in employment or living in proximity to settlements were enumerated at the census, while estimates of the total numbers, including those living in the wild state, were furnished by the Protectors of Aborigines. Half-caste aborigines are included in the numbers of the population and are of course enumerated at the census. The figures shown for Queensland are exclusive of Torres Strait Islanders.

## ABORIGINAL POPULATION, 30th JUNE, 1947.

State or Territory.	Full-blood.				Half-caste. (Enumerated at the Census.)				Total, Full-blood and Half-caste.
	In Employment or Living in Proximity to Settlements.(a)			Esti- mate of Total Num- bers.(b)					
	Males.	Females.	Persons.		Persons.	Males.	Females.	Persons.	
New South Wales ..	546	407	953	(c) 953	5,498	5,109	10,607	11,560	
Victoria ..	100	108	208	(c) 208	537	532	1,069	1,277	
Queensland ..	3,504	2,822	6,326	9,100	3,684	3,527	7,211	16,311	
South Australia ..	259	205	464	2,139	1,103	1,054	(d)2,157	(d)4,296	
Western Australia ..	2,664	2,269	4,933	20,338	2,359	2,215	(d)4,574	d 24,912	
Tasmania ..	..	..	..	..	127	87	214	214	
Northern Territory ..	5,615	5,370	10,985	13,900	660	587	1,247	15,147	
Aust. Capital Territory ..	..	..	..	..	58	42	100	100	
Total ..	12,688	11,181	23,869	46,638	14,026	13,153	27,179	73,817	

(a) Enumerated at the Census. (b) Furnished by the Protectors of Aborigines. (c) Census totals. (d) In addition to these totals, the Protectors of Aborigines estimated that there were 826 half-caste and mixed bloods in South Australia and 1,322 in Western Australia, presumably living in the nomadic state.

According to the annual Reports of the Protectors of Aborigines, there has been little change in the numbers of aborigines in most States since 1947. In Western Australia, however, the estimate for the total number of full-blood and half-caste aborigines at 30th June, 1952 was 21,051.

## CHAPTER XVII.

### VITAL STATISTICS.

**NOTE.**—1. Tables in this chapter cover the year 1954. More detailed figures will be found in *Demography Bulletin* No. 72 unless otherwise specifically indicated.

2. Figures for Australia throughout are exclusive of full-blood aborigines.

#### § 1. Provisions for Registration and Compilation of Statistics.

In Australia vital statistics are compiled from information obtained from the registers 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 or the Principal Registrar, or, as in the case of Victoria, the Government Statist.

In the Australian Capital Territory and the Northern Territory, information concerning a birth is required to be supplied within 21 days, in South Australia in 42 days, and in all other States 60 days is allowed. In all States, however, provision has been made for the late registration of births. For the registration of a death, the length of time varies more considerably, being 8 days in Tasmania, 10 days in South Australia, 14 days in Western Australia, the Northern Territory and the Australian Capital Territory, 21 days in Victoria and 30 days in New South Wales and Queensland. In all States and Territories provision is made for the celebration of marriages by ministers of religion registered for that purpose with the Registrar-General or the Principal Registrar of Births, Deaths and Marriages of the State or Territory and also by certain civil officers. In all cases the celebrant, whether minister of religion or civil officer, is required to register particulars of the parties married with the Registrar of the district in which the marriage has taken place. The length of time allowed for registration of marriage also shows considerable variation as between States and Territories. In Victoria, Western Australia, the Northern Territory and the Australian Capital Territory, registration is required immediately following the ceremony, in Tasmania and South Australia within 7 days and in New South Wales and Queensland within 30 days.

For all States except Queensland and Tasmania the registration of stillbirths is compulsory. 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 and Victoria in 1953. No statutory provision has been made in Queensland or Tasmania for the registration of stillbirths. In these States, however, provision is made for voluntary registration and it appears likely that such births are notified to the Registrar-General. In this chapter stillbirths have been excluded from all tables of births and deaths and shown only in those specially relating to stillbirths.

While there is every indication that the registration work of the several States and the Territories is very efficiently carried out, it is clear that in those States with a large area and scattered population, failure to register births and deaths may occur in some cases. It is believed, however, that consequent on the abolition, in 1943, of income limits previously restricting eligibility for maternity allowances, claims for which are checked against birth registers before payment, the proportion of births now occurring which is not registered is very small.

The data required for the compilation of vital statistics are copied from the registers of births, deaths and marriages in the Registrar General's Office and forwarded, through the Government Statistician in each State, and direct from the Principal Registrars in the two Territories, to the Commonwealth Statistician. The compilation and publication of vital statistics for Australia is a function of the Commonwealth Statistician. The Statisticians in the various States compile and publish statistics relating to their respective States.

## § 2. Marriages.

1. **Number of Marriages.**—The number of marriages registered in Australia during the year ended 31st December, 1954 was 71,229, giving a rate of 7.92 per 1,000 of the mean population for the year. A summary of the number of marriages registered in each State and Territory from 1926 to 1954 is given in the following table. Annual averages for each five-year period from 1861 will be found in Official Year Book No. 39, page 575.

### 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	5,517	4,668	2,097	71	109	71,981
1946-50 ..	30,162	20,453	10,666	6,581	5,205	2,520	114	181	75,891

### ANNUAL TOTALS.

1950 ..	30,036	20,320	10,304	6,585	5,434	2,560	144	216	75,599
1951 ..	30,341	21,117	10,814	6,646	5,390	2,607	143	240	77,298
1952 ..	29,351	20,220	10,056	6,241	5,389	2,553	137	225	74,172
1953 ..	27,573	19,238	9,859	6,149	5,032	2,424	154	211	70,640
1954 ..	27,503	19,404	10,027	6,190	5,204	2,512	143	246	71,229

2. **Crude Marriage Rates.**—The crude marriage rates for each State and Territory from 1926 to 1954 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(h) ..	9.90	9.72	9.41	9.87	10.01	9.56	9.39	9.36	9.77

(a) Number of marriages per 1,000 of mean population.  
population estimates shown on p. 577.

(b) Rates based on revised mean

CRUDE MARRIAGE RATES—*continued*.

Period.	N.S.W.	Vic.	Q'land.	S. Aust.	W. Aust.	Tas.	N.T.	A.C.T.	Aust.
ANNUAL RATES.(a)									
1950 .. ..	9.41	9.20	8.65	9.28	9.74	9.18	10.06	9.17	9.24
1951 .. ..	9.25	9.28	8.84	9.07	9.29	9.04	9.42	9.73	9.18
1952 .. ..	8.78	8.63	8.01	8.27	8.97	8.56	9.08	8.47	8.59
1953 .. ..	8.14	8.03	7.66	7.92	8.10	7.91	9.91	7.35	8.01
1954 .. ..	8.02	7.91	7.64	7.77	8.13	8.07	8.82	8.10	7.92

(a) Rates based on revised mean population estimates shown on p. 577.

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 eight census periods to 1953-55. 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	1920-22 .. ..	55.97
1890-92 .. ..	44.04	1932-34 .. ..	42.88
1900-02 .. ..	42.14	1946-48 .. ..	71.24
1910-12 .. ..	50.12	1953-55 .. ..	65.32

(a) Average annual number of persons who married per 1,000 unmarried persons, including widowed and divorced, aged 15 years and over.

4. **Crude Marriage Rates of Various Countries.**—The following table gives the crude marriage rates for Australia in comparison with the rates for various other countries.

## CRUDE MARRIAGE RATES(a) : VARIOUS COUNTRIES.

Country.	1921-25.	1926-30.	1931-35.	1954.	Country.	1921-25.	1926-30.	1931-35.	1954.
Yugoslavia .. ..	10.6	9.5	7.8	9.9	Japan .. ..	8.8	8.0	7.6	7.9
Union of South Africa(b) .. ..	8.0	9.3	9.4	(c)9.5	Norway .. ..	6.3	6.1	6.5	7.8
United States of America .. ..	10.6	9.9	9.2	9.2	Austria .. ..	9.6	7.5	6.8	7.8
New Zealand(d) .. ..	8.0	7.6	7.3	8.6	Finland .. ..	7.1	7.2	7.2	7.8
Netherlands .. ..	8.2	7.7	7.2	8.3	Switzerland .. ..	7.7	7.5	7.7	7.8
Canada .. ..	7.3	7.3	6.4	8.3	United Kingdom .. ..	7.7	7.5	7.9	7.7
Denmark .. ..	7.9	7.8	8.7	8.1	Belgium .. ..	10.6	9.1	7.8	7.7
Spain .. ..	7.3	7.3	6.5	8.0	France .. ..	9.5	8.2	7.4	7.2
Australia(e) .. ..	8.0	7.5	7.2	7.9	Sweden .. ..	6.3	6.7	7.3	7.2
					Italy .. ..	9.0	7.3	6.8	7.2
					Ireland, Republic of .. ..	4.9	4.6	4.6	5.4

(a) Number of marriages per 1,000 of mean population.

(b) European population only.

(c) 1953.

(d) Includes Maoris.

(e) Excludes full-blood aboriginals.

5. **Age and Conjugal Condition at Marriage.**—(i) *General.* Age at marriage in single years of age and previous conjugal condition of bridegrooms and brides in 1954 will be found in *Demography Bulletin* No. 72. A summary in age groups is given

hereunder. There were 5,291 males aged less than twenty-one years married during 1954 while the corresponding number of females was 22,967. At the other extreme there were 95 bachelors and 54 spinsters in the age group 65 years and over.

**AGE AND CONJUGAL CONDITION OF BRIDEGROOMS AND BRIDES : AUSTRALIA, 1954.**

Age at Marriage (Years).	Bridegrooms.				Brides.			
	Bachelors.	Widowers.	Divorced.	Total.	Spinsters.	Widows.	Divorced.	Total.
Under 20 ..	2,327	..	..	2,327	15,585	3	7	15,595
20-24 ..	29,489	15	63	29,567	31,574	85	262	31,921
25-29 ..	19,742	82	519	20,343	9,302	242	1,103	10,647
30-34 ..	6,431	184	892	7,507	3,126	329	1,148	4,603
35-39 ..	2,157	224	907	3,588	1,393	453	971	2,817
40-44 ..	1,334	310	837	2,481	821	474	707	2,002
45-49 ..	766	380	587	1,733	463	510	418	1,391
50-54 ..	403	517	366	1,286	253	448	214	915
55-59 ..	199	448	171	818	158	326	76	560
60-64 ..	113	462	119	694	76	286	32	394
65 and over	95	722	68	885	54	300	30	384
Total ..	63,356	3,344	4,529	71,229	62,805	3,456	4,968	71,229

(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 to 1950 and for each of the years 1952 to 1954 :—

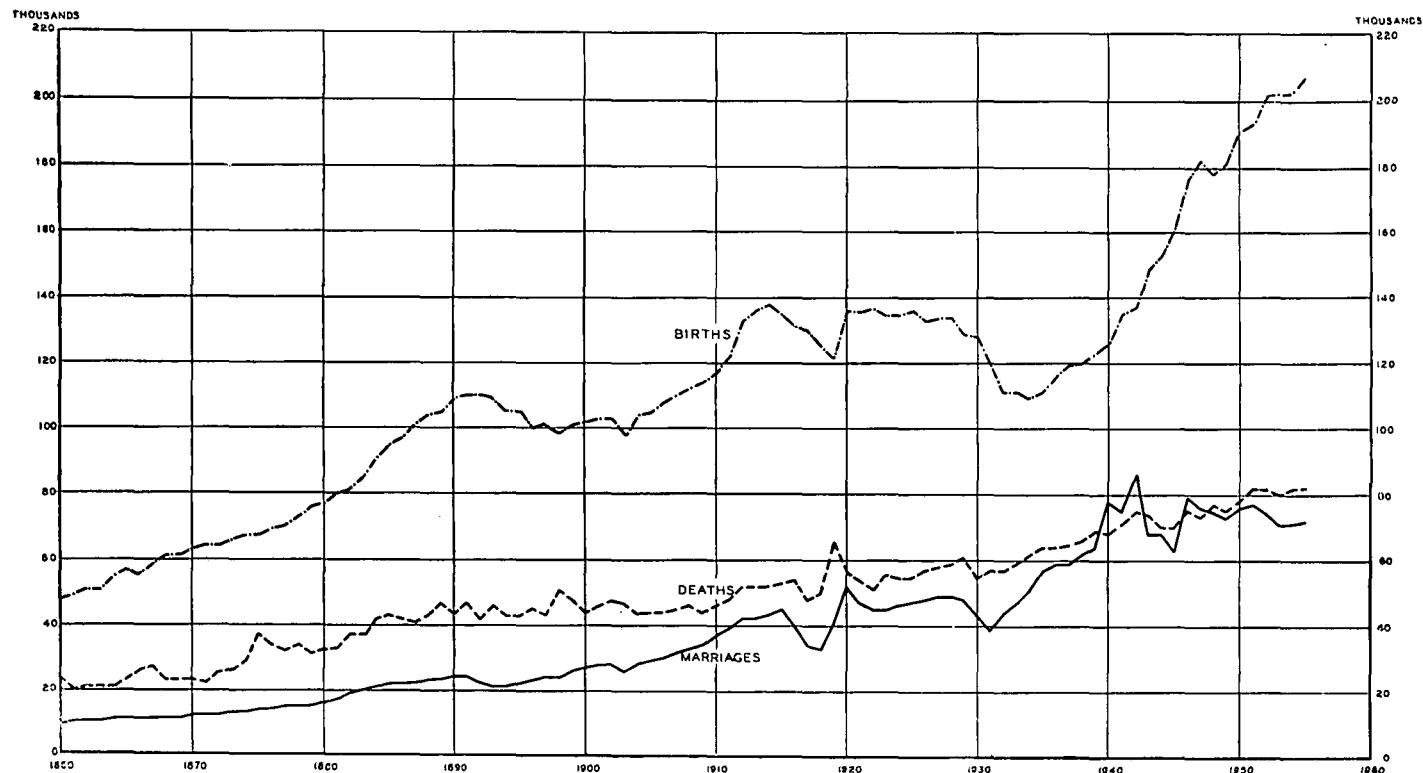
**CONJUGAL CONDITION OF BRIDEGROOMS AND BRIDES : PROPORTIONAL DISTRIBUTION, AUSTRALIA.**

(Per Cent.)

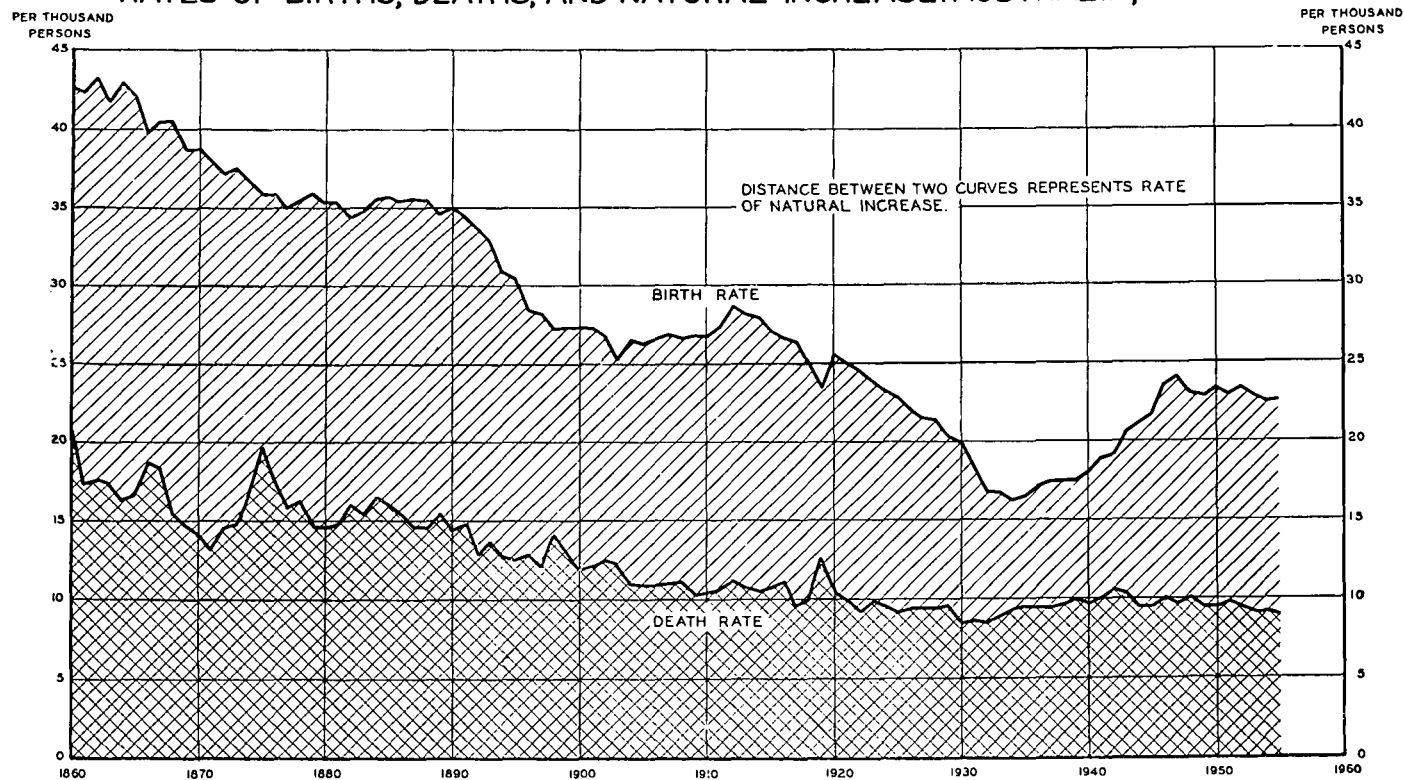
Period.	Bridegrooms.				Brides.			
	Bachelors.	Widowers.	Divorced.	Total.	Spinsters.	Widows.	Divorced.	Total.
1926-30 ..	92.31	5.93	1.76	100.00	93.46	4.55	1.99	100.00
1931-35 ..	92.63	5.39	1.98	100.00	94.37	3.53	2.10	100.00
1936-40 ..	92.59	4.82	2.59	100.00	93.94	3.38	2.68	100.00
1941-45 ..	91.44	4.77	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
1952 ..	88.91	4.65	6.44	100.00	88.14	4.76	7.10	100.00
1953 ..	88.27	4.68	7.05	100.00	87.65	4.75	7.60	100.00
1954 ..	88.95	4.69	6.36	100.00	88.17	4.85	6.98	100.00

(iii) *Relative Ages of Bridegrooms and Brides.* The relative ages of bridegrooms and brides in 1954 are shown in single years in *Demography Bulletin No. 72*. A summary in age groups of five years is given below.

# BIRTHS, DEATHS, AND MARRIAGES: AUSTRALIA, 1860 to 1955

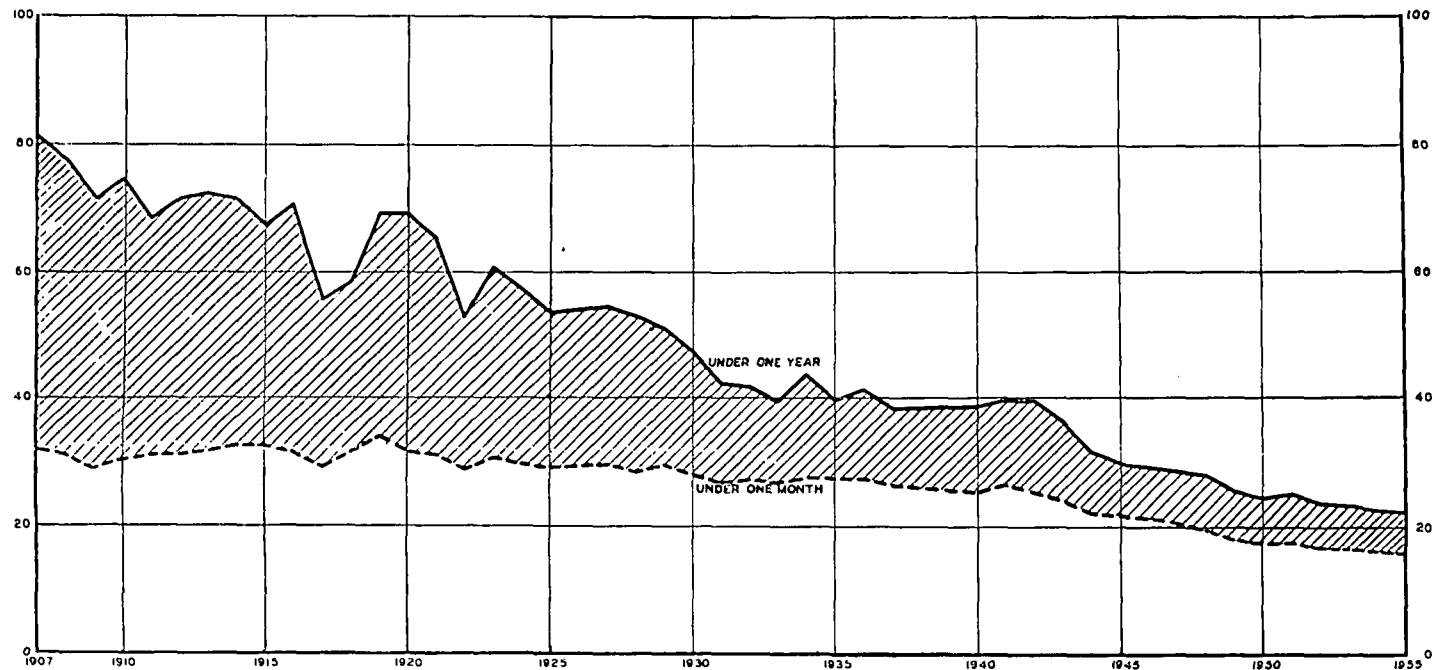


# RATES OF BIRTHS, DEATHS, AND NATURAL INCREASE: AUSTRALIA, 1860 to 1955





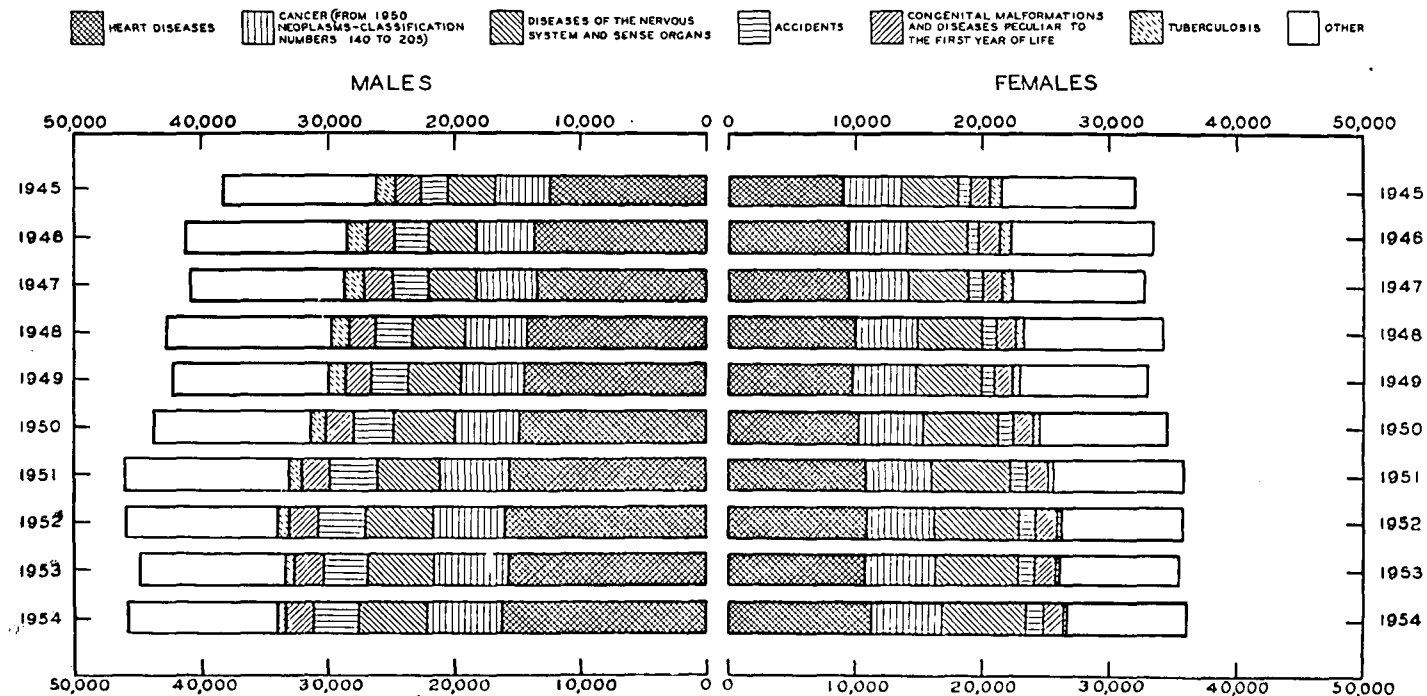
# INFANT MORTALITY RATES: AUSTRALIA, 1907 to 1955 (INFANT DEATHS PER 1000 LIVE BIRTHS)



629

EXPLANATION.—This graph shows the marked improvement in infantile mortality rates over the past 48 years. The improvement has been confined mainly to children over one month, considerably less having occurred in the first month of life (see page 649).

# CAUSES OF DEATH: AUSTRALIA, 1945 to 1954



## RELATIVE AGES OF BRIDEGROOMS AND BRIDES : AUSTRALIA, 1954.

Age of Bridegroom (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..	2,327	2	1,843	456	24	2	..	..	..
20-24 ..	29,567	12	10,123	17,325	1,810	225	47	19	6
25-29 ..	20,343	2	3,025	11,059	4,922	1,013	240	62	20
30-34 ..	7,507	1	453	2,312	2,480	1,469	503	165	64
35-39 ..	3,588	..	83	534	896	928	702	315	130
40-44 ..	2,481	1	29	154	335	579	583	515	285
45-49 ..	1,733	..	12	55	116	239	375	443	493
50-54 ..	1,286	..	5	21	41	96	182	271	670
55-59 ..	818	..	2	5	13	39	79	118	562
60-64 ..	694	..	1	..	6	6	31	54	596
65 and over	885	..	1	..	4	7	15	40	818
Total									
Brides ..	71,229	18	15,577	31,921	10,647	4,603	2,817	2,002	3,644

(iv) *Average Ages of Bridegrooms and Brides.* The age at marriage of brides has remained fairly constant during recent years at an average of about 25½ years, although in the period 1937-39 the average rose to almost 26 years. The average ages, in years, of brides for each of the five years to 1954 were:—1950, 25.73; 1951, 25.71; 1952, 25.61; 1953, 25.73; and 1954, 25.59. For the following five-year periods the average ages in years were:—1911-15, 25.76; 1916-20, 26.05; 1921-25, 25.76; 1926-30, 25.57; 1931-35, 25.50; 1936-40, 25.72; 1941-45, 25.68; and 1946-50, 25.61. The average ages, in years, of bridegrooms were 28.99 in 1950, 28.92 in 1951, 28.79 in 1952, 28.96 in 1953, and 28.82 in 1954. It follows, therefore, that brides are, generally speaking, a little more than three years younger than bridegrooms. The average ages of brides and bridegrooms for the years 1940-46 showed the effects of war-time conditions. The proportion of young persons marrying during those years increased, thereby causing decreases in the average ages of both brides and bridegrooms. The difference in age between brides and bridegrooms was 3.26 years in 1950, 3.21 in 1951, 3.18 in 1952 and 3.23 in 1953 and 1954.

6. *Previous Conjugal Condition.*—The number of bachelors, spinsters and widowed and divorced persons who married during 1954 is shown in the table on page 626. The following table shows the relative conjugal condition of the contracting parties.

## CONJUGAL CONDITION OF BRIDEGROOMS AND BRIDES : AUSTRALIA, 1954.

Conjugal Condition of Bridegrooms.	Total Bridegrooms.	Conjugal Condition of Brides.		
		Spinsters.	Widows.	Divorced.
Bachelors ..	63,356	58,896	1,502	2,958
Widowers ..	3,344	1,363	1,338	643
Divorced ..	4,529	2,546	616	1,367
Total Brides ..	71,229	62,805	3,456	4,968

7. *Birthplaces of Persons Marrying.*—A table showing the relative birthplaces of bridegrooms and brides married in each year will be found in the *Demography Bulletin*.

8. *Occupation of Bridegrooms.*—The distribution of the 71,229 bridegrooms for 1954 amongst classes of occupations was as follows:—Craftsmen, 18,257; Commercial and Clerical, 12,282; Operatives, 12,108; Rural, Fishing and Hunting, 8,653; Labourers, 6,297; Domestic and Protective Service, 4,828; Professional and Semi-Professional, 3,781; Administrative, 2,913; and Not Gainfully Occupied and Not Stated, 2,110.

9. *Celebration of Marriages.*—In all the States marriages may be celebrated either by ministers of religion who are registered for that purpose with the Registrar-General, or by certain civil officers—in most cases district registrars—but most of the marriages

are celebrated by ministers of religion. The registered ministers in 1954 belonged to more than forty different denominations, some of which, however, have only very few adherents. A number of these have been bracketed under the heading "Other Christian". The figures for 1954 are shown in the following table.

#### MARRIAGES IN EACH DENOMINATION, 1954.

Denomination.	N.S.W.	Vic.	Qld.	S.A.	W.A.	Tas.	N.T.	A.C.T.	Australia.	
									No.	Proportion of Total.
										%
Church of England	9,870	5,256	2,561	1,329	1,532	918	31	99	21,596	30.32
Roman Catholic ..	6,484	4,595	2,583	1,087	1,097	457	36	73	16,412	23.04
Presbyterian ..	3,264	3,541	1,955	318	440	153	10	21	9,702	13.62
Methodist ..	2,670	2,597	1,586	1,658	713	385	29	9	9,647	13.54
Baptist ..	355	312	204	165	64	76	..	..	1,176	1.65
Congregational ..	328	271	94	241	113	53	..	1	1,101	1.54
Lutheran ..	111	209	245	367	28	4	..	7	971	1.36
Church of Christ ..	60	337	64	133	68	15	..	..	677	0.95
Greek Orthodox ..	200	140	52	43	58	3	..	..	496	0.70
Salvation Army ..	111	97	93	47	21	12	8	1	390	0.55
Seventh-Day Adventist ..	68	28	27	3	11	10	..	..	147	0.21
Other Christian ..	161	171	181	65	98	25	2	..	703	0.99
Hebrew ..	148	165	6	..	17	..	..	..	336	0.47
Total ..	23,830	17,719	9,651	5,456	4,260	2,111	116	211	63,354	88.94
Civil Officers ..	3,673	1,685	376	734	944	401	27	35	7,875	11.06
Grand Total ..	27,503	19,404	10,027	6,190	5,204	2,512	143	246	71,229	100.00

#### PROPORTION OF TOTAL.

(Per cent.)

Denominational ..	86.65	91.32	96.25	88.14	81.86	84.04	81.12	85.77	88.94
Civil ..	13.35	8.68	3.75	11.86	18.14	15.96	18.88	14.23	11.06

10. Divorces.—Chapter XIII.—Public Justice shows details of the number of marriages dissolved annually by divorce, nullity of marriage and judicial separation. The number dissolved by decrees for divorce and nullity of marriage made absolute and by judicial separation in 1954 was 6,528. Detailed tables relating to divorce statistics for 1954 and summary tables for earlier years are shown also in *Demography Bulletin* No. 72.

### § 3. Fertility and Reproduction.

1. **Introductory.**—Of the two elements of increase in the population, namely, natural increase and net migration, the former has been by far the more important over the past few decades. 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 1954.* There are various methods of measuring the fertility of the population by relating the number of births to the numbers in the population. In each the basic data are, of course, the numbers of live births.

The number of live births registered in Australia during 1954 is shown in the table below. 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, 1954.

Particulars.	N.S.W.	Vic.	Q'land.	S. Aust.	W.A.	Tas.	N.T.	A.C.T.	Australia.
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## LIVE BIRTHS.

Single births	71,379	53,327	30,583	17,811	15,576	7,559	501	845	197,581
Twins ..	1,709	1,315	581	407	346	208	12	12	4,590
Triplets ..	37	18	12	9	6	3	..	..	85
Males ..	37,453	28,112	15,880	9,347	8,136	3,919	268	440	103,555
Females ..	35,672	26,548	15,296	8,880	7,792	3,851	245	417	98,701
Total ..	73,125	54,660	31,176	18,227	15,928	7,770	513	857	202,256

## STILLBIRTHS ASSOCIATED WITH MULTIPLE BIRTHS INCLUDED ABOVE.

Twins ..	47	15	15	3	10	8	..	..	98
Triplets ..	2	..	..	..	..	..	..	..	2

## CONFINEMENTS RESULTING IN ABOVE BIRTHS.

Nuptial ..	69,415	52,132	29,311	17,455	15,054	7,380	431	840	192,018
Ex-nuptial ..	2,855	1,866	1,574	504	702	288	76	11	7,930
Total ..	72,270	53,998	30,885	18,019	15,756	7,668	507	851	199,954

NOTE.—In Queensland and Tasmania the registration of stillbirths is not compulsory and it is possible that in some cases where one child only of a multiple pregnancy is live-born the confinement has been treated as a single birth. This applies particularly to South Australia, where registration practice for twins, when one is live-born and one still-born, is to treat each child as a single birth, and for triplets with one still-born, to treat the two live-born as twins, and so on.

(ii) *Live Births, Years 1926 to 1954.* The average annual number of live births in each State and Territory for each five-year period from 1926 to 1950 and the total number of live births in each State and Territory for each year from 1950 to 1954 are given in the following table. Corresponding figures for each five-year period from 1861 will be found in Official Year Book No. 39, p. 583.

## LIVE BIRTHS.

Period.	N.S.W.	Vic.	Q'land.	S. Aust.	W. Aust.	Tas.	N.T.	A.C.T.	Aust.
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## 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

## ANNUAL TOTALS.

1950 ..	71,592	49,830	29,028	17,306	14,228	7,242	411	954	190,591
1951 ..	72,069	50,553	29,652	17,463	14,794	7,357	407	1,003	193,298
1952 ..	74,196	53,738	30,953	17,884	15,413	7,916	448	1,102	201,650
1953 ..	74,890	53,561	30,782	18,156	15,862	7,736	460	788	202,235
1954 ..	73,125	54,660	31,176	18,227	15,928	7,770	513	857	202,256

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.

Crude birth rates for each five-year period from 1926 to 1950 and for each year from 1950 to 1954 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(b)	22.60	22.51	24.69	24.41	25.24	26.71	23.77	37.92	23.39

## ANNUAL RATES.(b)

1950 .. ..	22.42	22.56	24.37	24.39	25.50	25.98	28.72	40.52	23.31
1951 .. ..	21.98	22.21	24.23	23.84	25.49	25.52	26.81	40.68	22.96
1952 .. ..	22.20	22.93	24.65	23.69	25.66	26.53	29.69	41.48	23.35
1953 .. ..	22.11	22.36	23.91	23.39	25.54	25.25	29.61	27.43	22.94
1954 .. ..	21.33	22.28	23.74	22.89	24.88	24.97	31.64	28.21	22.50

(a) Number of births per 1,000 of mean population.  
estimates shown on p. 577.

(b) Rates based on revised mean population

NOTE.—The birth rates in the table above are based on live births registered in the respective States and Territories. Some years ago a large proportion of births in respect of which the mother's usual residence was the Australian Capital Territory took place in Queanbeyan, just over the New South Wales border, but with improved hospital facilities in the Territory the movement to outside hospitals rapidly diminished and was reversed in 1939. The following rates, based on births in respect of which the mother's usual residence is the Australian Capital Territory and on revised population figures, are a truer measure of birth rates in the Australian Capital Territory :—

Annual Average.			Year.		
1926-1930 ..	..	22.45	1950 ..	..	29.69
1931-1935 ..	..	19.53	1951 ..	..	28.51
1936-1940 ..	..	19.29	1952 ..	..	31.09
1941-1945 ..	..	23.06	1953 ..	..	27.61
1946-1950 ..	..	27.13	1954 ..	..	28.67

The variations similarly caused in the birth rates for the States and the Northern Territory by referring the birth registrations to the State or Territory in which the mother was usually resident are shown by the following corrected rates for 1954 :—New South Wales, 21.32; Victoria, 22.25; Queensland, 23.82; South Australia, 22.82; Western Australia, 24.91; Tasmania, 25.03; and Northern Territory, 32.38.

In the earlier years of the present century the crude birth rate fluctuated somewhat but from 1912, when 28.60 was recorded, there was an almost continuous decline to the very low figure of 16.39 in 1934. The decline in the depression years was to some extent occasioned by the postponement of marriages, and with subsequent improvement in economic conditions the rate rose. From 1940 the rate increased quite appreciably owing to a continued improvement in the economic welfare of the community and the war-time boom in marriages. The latter resulted in an abnormal number of first births but investigation indicates that rates for births other than first were generally slightly higher than might have been expected from pre-war experience. The improvement in the birth rate has been maintained since the end of the war despite some falling off in marriage rates. The post-war peak of 24.07 was recorded in 1947.

4. Crude Birth Rates of Various Countries.—The following table gives crude birth rates for Australia in comparison with rates for various other countries.

## CRUDE BIRTH RATES(a) : VARIOUS COUNTRIES.

Country.	1921- 25.	1926- 30.	1931- 35.	1934.	Country.	1921- 25.	1926- 30.	1931- 35.	1934.
Canada .. ..	27.4	24.1	21.4	28.5	Japan .. ..	34.6	33.5	31.6	20.1
Yugo-Slavia ..	35.0	34.2	31.8	28.4	Spain .. ..	29.8	28.5	27.1	20.0
Union of South Africa(b) ..	27.1	25.9	24.1	25.5	France .. ..	19.3	18.2	16.5	18.7
United States of America .. ..	22.5	19.7	16.9	24.9	Norway .. ..	22.2	18.0	15.2	18.6
New Zealand(d) ..	22.2	19.7	17.0	21.7	Italy .. ..	29.8	26.8	23.8	17.6
Australia(e) ..	23.9	21.0	16.9	22.5	Denmark .. ..	22.3	19.4	17.7	17.4
Netherlands ..	25.7	23.2	21.2	21.6	Switzerland ..	19.5	17.6	16.4	17.0
Finland .. ..	24.7	22.5	19.5	21.3	Belgium .. ..	20.4	18.6	16.8	16.8
Ireland, Republic of	20.3	20.1	19.4	21.1	United Kingdom ..	20.4	17.2	15.5	15.6
					Austria .. ..	22.2	17.6	14.4	14.7
					Sweden .. ..	19.1	15.9	14.1	14.6

(a) Number of births per 1,000 of mean population. (b) European population only. (c) 1933-35.  
(d) Excludes Maoris. (e) Excludes full-blood aborigines.

5. **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 high 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	167	67	61	52

(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 27 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.

6. **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 single ages. The following table sets out age-specific fertility rates for Australia for the period 1921 to 1954 in five-year age groups.

AGE-SPECIFIC FERTILITY RATES(a) : AUSTRALIA.

Age Group (Years).	1921.	1926.	1931.	1936.	1941.	1946.	1951.	1952.	1953.	1954.
15-19..	12.83	14.02	13.08	12.18	11.90	12.63	18.59	19.07	18.45	19.12
20-24..	65.45	60.23	53.08	50.33	59.42	73.52	85.84	90.93	94.53	96.24
25-29..	82.24	76.82	62.47	62.02	70.78	89.51	90.24	94.53	94.73	94.40
30-34..	68.50	61.90	51.25	46.33	49.72	65.03	59.16	61.51	61.17	59.91
35-39..	49.48	43.55	33.23	28.89	28.69	37.43	32.29	32.61	31.87	31.17
40-44..	21.66	17.63	13.61	10.19	9.52	11.87	9.97	9.95	9.77	9.85
45-49..	2.10	1.90	1.45	1.11	0.80	1.03	0.80	0.83	0.67	0.71

(a) Number of female births per 1,000 women in each age group.

The table shows that in 1954 the most fertile age group was 20-24 years. The decline in fertility between 1921 and 1936 was general but was more pronounced in the older age groups. During the period 1936 to 1954 a rise in fertility occurred in all age groups below 40, the most noticeable increase being in the 20 to 24 age group.

7. **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 the 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 fertility in paragraph 9 hereof.

GROSS AND NET REPRODUCTION RATES : AUSTRALIA.

Year.	Gross Reproduction Rate.	Net Reproduction Rate.	Year.	Gross Reproduction Rate.	Net Reproduction Rate.(g)
1881 (a) ..	2.65	(b) 1.88	1948 ..	1.451	1.376
1891 (a) ..	2.30	(b) 1.73	1949 ..	1.457	1.382
1901 (a) ..	1.74	(c) 1.39	1950 ..	1.491	1.415
1911 ..	1.705	(d) 1.421	1951 ..	1.485	1.409
1921 ..	1.511	(e) 1.313	1952 ..	1.547	1.468
1931 ..	1.141	(f) 1.039	1953 ..	1.556	1.477
1941 ..	1.154	(f) 1.053	1954 ..	1.558	1.478

(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) 1946-48 mortality experience used.

NOTE.—It is not strictly correct to assume, as 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 experiences. Reproduction rates are, therefore, somewhat 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.



Since 1881 there has been a substantial downward trend in both rates, but the gross rate has fallen considerably more than the net, showing that the decline in fertility has been offset to some extent by a decline in mortality. The net reproduction rate was below unity over the period 1932 to 1939, and if the low level of those years were to continue, ultimate population decline would be certain. The progressive rise in both gross and net reproduction rates from 1939 to 1947 was due largely to higher marriage rates during the war and early post-war years than had been experienced in the immediate pre-war years. Such fluctuations in marriage rates affect both gross and net reproduction rates substantially. When fluctuations in marriage rates are transient, reproduction rates calculated as above are not valid as indicators of relative fertility nor of the extent to which population will replace itself. Owing to various influences the number of marriages in each year since 1948 has remained at a relatively high level and the net reproduction rates have been steady between 1.4 and 1.5. The fertility of marriages is measured in paragraph 9 below.

8. **Gross and Net Reproduction Rates of Various Countries.**—In the following table a comparison is given of the gross and net reproduction rates recorded for various countries in the period 1951 to 1953. These have been taken mainly from the United Nations *Demographic Year Book*, 1954 and represent the latest available international comparison. More recent Australian rates are shown in the table above.

#### GROSS AND NET REPRODUCTION RATES : VARIOUS COUNTRIES.

Country.	Period.	Reproduction Rate.		Country.	Period.	Reproduction Rate.	
		Gross.	Net.			Gross.	Net.
Canada ..	1952	1.77	(a)	Norway ..	1952	1.24	1.17
New Zealand (b)	1953	1.70	1.63	Switzerland ..	1952	1.25	1.15
United States of America(c) ..	1951	1.59	1.51	Denmark ..	1953	1.25	1.14
Australia(d) ..	1953	1.56	1.48	Scotland ..	1952	1.18	1.12
Finland ..	1952	1.49	1.39	Portugal ..	1951	1.49	1.09
Netherlands ..	1953	1.46	1.39	England and Wales ..	1953	(a)	1.03
Ireland, Republic of ..	1950-52	1.60	1.38	Belgium ..	1952	1.13	1.03
France ..	1952	1.33	1.25	Sweden ..	1951	1.07	1.02

(a) Not available.  
full-blood aboriginals.

(b) Excludes Maoris.

(c) White population only.

(d) Excludes

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.

9. **Fertility of Marriages.**—In issues of the Official Year Book prior to No. 36 estimates of the fertility of marriages were published. These were calculated by relating the births of one five-year period to the marriages in the preceding five years (see Official Year Book No. 35, p. 329). Since the publication of that issue, an improved method has been formulated for measuring current marriage fertility 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.
1940.. ..	2.18	1945.. ..	2.36	1950.. ..	2.56
1941.. ..	2.19	1946.. ..	2.55	1951.. ..	2.55
1942.. ..	2.12	1947.. ..	2.55	1952.. ..	2.63
1943.. ..	2.21	1948.. ..	2.44	1953.. ..	2.66
1944.. ..	2.28	1949.. ..	2.45	1954.. ..	2.66

NOTE.—See Note at foot of p. 636.

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. There was an almost continuous decline for a number of years to 1942, but a pronounced increase from 1943 to 1946. Comparing this index with the net reproduction rate it is evident that the rise in the latter since 1935 has been caused by a rise in the marriage rate, due firstly to the postponed depression marriages, and secondly to war-time marriages, and since 1942 to an increase in the fertility of marriages. 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 are consequently not included in Australian marriage records. Partial investigation suggests that this factor may overstate the index by as much as 6 per cent.

10. **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, State totals), considerable variation is shown. For 1954 the figures ranged from 101.77 in Tasmania to 109.39 in the Northern Territory. The averages for the ten years 1941–50 were as follows:—New South Wales, 105.49; Victoria, 105.47; Queensland, 105.49; South Australia, 105.78; Western Australia, 104.27; Tasmania, 104.45; Australia, 105.38. The following table shows the figures for Australia for each ten-year period from 1901 to 1950 and for each of the years 1951 to 1954:—

**MASCUILITY(a) OF LIVE BIRTHS REGISTERED : AUSTRALIA.**

Particulars.	1901–10.	1911–20.	1921–30.	1931–40.	1941–50.	1951.	1952.	1953.	1954.
Total Births ..	105.22	105.27	105.55	105.12	105.38	105.86	105.20	104.82	104.92
Ex-nuptial Births	104.08	105.25	105.16	105.36	105.34	105.30	99.57	105.69	101.58

(a) Number of males born for every 100 female births.

11. **Ex-nuptial Live Births.**—(i) *General.* The highest proportion of ex-nuptial births in any one year since 1901 was recorded in 1905 when there were 6,545 ex-nuptial births representing 6.24 per cent. of total births. Since then the proportion has declined steadily. The largest number of ex-nuptial births was recorded in 1953 when 8,032 were registered, but this number represented only 3.97 per cent. of total births. The lowest proportion was 3.78 per cent. in 1940.

The variations in the proportions of ex-nuptial births as between the individual States and Territories for 1954 are shown below.

**EX-NUPTIAL LIVE BIRTHS : NUMBER AND PROPORTION, 1954.**

Particulars.	N.S.W.	Vic.	Q'land.	S.A.	W.A.	Tas.	N.T.	A.C.T.	Aust.
Number ..	2,889	1,890	1,585	569	711	295	77	11	8,027
Proportion of Total Births%	3.95	3.46	5.08	3.12	4.46	3.80	15.01	1.28	3.97

The number and proportion of ex-nuptial births at intervals from 1901 to 1954 are as follows:—

**EX-NUPTIAL LIVE BIRTHS : NUMBER AND PROPORTION, AUSTRALIA.**

Particulars.	Annual Average.					1951.	1952.	1953.	1954.
	1901–10.	1911–20.	1921–30.	1931–40.	1941–50.				
Number ..	6,498	6,836	6,238	5,133	6,780	7,555	7,842	8,032	8,027
Proportion of Total Births .. %	6.05	5.22	4.66	4.40	4.13	3.91	3.89	3.97	3.97

It is, of course, possible that the number of ex-nuptial births is somewhat understated owing to diffidence in proclaiming the fact of ex-nuptiality.

(ii) *Rate of Ex-nuptiality.* A further comparison is obtained by calculating the number of ex-nuptial births per thousand of the single, widowed and divorced female population between the ages of 15 and 45 years. On this basis the number of ex-nuptial births per 1,000 unmarried women of ages 15 to 45 has been found to be 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; and 1946–48, 11.45.

(iii) *Comparison of Rates.* The following table, showing the relative proportions of ex-nuptial and nuptial births to the total population, discloses a much greater proportional reduction in the ex-nuptial birth rate than in the nuptial rate:—

**CRUDE EX-NUPTIAL, NUPTIAL, AND TOTAL BIRTH RATES(a) : AUSTRALIA.**

Birth Rate.	Annual Average.					1951.	1952.	1953.	1954.
	1901–10.	1911–20.	1921–30.	1931–40.	1941–50.				
Ex-nuptial	1.60	1.39	1.04	0.76	0.90	0.90	0.91	0.91	0.89
Nuptial ..	24.91	25.18	21.40	16.47	20.99	22.06	22.44	22.03	21.61
Total ..	26.51	26.57	22.44	17.23	21.89	22.96	23.35	22.94	22.50

(a) Number of births per 1,000 of mean population.

12. *Legitimations.*—In the several States Acts have been passed 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 comes within the scope of their purposes, born before or after the passing thereof, is 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 1954 the number of children legitimized in Australia was 1,041.

13. *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 of differences in registration practice where stillbirths are involved, from which it is evident, in recent years, that in Victoria and Queensland, some, and in South Australia, all, cases of multiple births in which only one child was live-born have been registered as single births. It is estimated that the deficiency due to this second cause is about 50 cases per annum. During 1954 multiple births recorded on the above basis comprised 2,344 cases of twins and 29 cases of triplets, the resultant numbers of live-born and still-born children being respectively 4,590 and 98 for twins and 85 and 2 for triplets. This represents an average of 11.72 recorded cases of twins and 0.15 recorded cases of triplets per 1,000 confinements or, alternatively, mothers of twins represented one in every 85 mothers and mothers of triplets one in every 7,000. Total cases of multiple births represented 11.87 per 1,000 confinements or one in every 84 mothers.

The proportion of mothers of multiple births to total mothers does not vary greatly from year to year.

14. *Ages of Parents.*—The relative ages of the parents of children registered in 1954 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. 72. In the present work the exigencies of space allow only the insertion of a table showing, in respect of confinements resulting in one or more live births, the relative ages of parents in groups of five years.

## CONFINEMENTS : RELATIVE AGES OF PARENTS, AUSTRALIA, 1954.

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 ..	1,206	3	919	240	10	4	..	..	..	..
20-24 ..	27,857	1	6,023	18,841	2,734	222	33	..	..	..
25-29 ..	61,621	..	2,093	26,258	28,776	4,120	343	36	1	..
30-34 ..	50,643	..	358	6,945	22,687	18,159	2,306	183	5	..
35-39 ..	27,982	1	74	1,330	6,081	11,760	7,861	807	8	..
40-44 ..	14,788	..	29	371	1,664	4,394	5,810	2,403	57	..
45-49 ..	5,656	..	9	93	462	1,176	2,206	1,542	168	..
50-54 ..	1,644	..	2	23	138	314	566	515	86	..
55-59 ..	395	..	3	11	28	68	149	114	22	..
60-64 ..	152	..	..	4	7	31	52	48	10	..
65 and over ..	74	..	..	3	7	13	25	19	7	..
<hr/>										
Mothers of Nuptial Children { Single	189,740	5	9,474	53,640	61,856	39,661	19,027	5,713	364	..
Twins ..	2,250	..	64	469	723	595	322	77	..	..
Triplets ..	28	..	2	10	9	5	2	..	..	..
Total ..	192,018	5	9,540	54,119	62,588	40,261	19,351	5,790	364	..
<hr/>										
Mothers of Ex-nuptial Children { Single	7,841	27	1,692	2,347	1,702	1,102	685	261	15	10
Twins ..	94	..	15	21	24	18	12	4	..	..
Triplets ..	1	..	..	..	..	..	1	..	..	..
Total ..	7,936	27	1,707	2,368	1,726	1,120	698	265	15	10
<hr/>										
Total Mothers { Single	197,581	32	11,166	55,987	63,558	40,763	19,712	5,974	379	10
Twins ..	2,344	..	79	490	747	613	334	81	..	..
Triplets ..	29	..	2	10	9	5	3	..	..	..
Total ..	199,954	32	11,247	56,487	64,314	41,381	20,049	6,055	379	10

15. *Birthplaces of Parents.*—A table showing birthplaces of parents of children whose births were registered during 1954 appears in *Demography Bulletin* No. 72.

16. *Occupation of Fathers.*—A table showing occupations of the fathers of all nuptial children registered in 1954 appears in *Demography Bulletin* No. 72.

17. *Age, Duration of Marriage and Issue of Mothers.*—(i) *General.* The total number of nuptial confinements resulting in live births in 1954 was 192,018, comprising 189,740 single births, 2,250 cases of twins, and 28 cases of triplets. The tables relating to previous issue exclude the issue of former marriages and still-born children. On the other hand, they include 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 1954 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 1954 was 2.48 compared with 2.45 in 1953, 2.42 in 1952, 2.40 in 1951, and 2.39 in 1950.

**NUPTIAL CONFINEMENTS : DURATION OF MARRIAGE AND ISSUE OF MOTHERS.  
AUSTRALIA, 1954.**

Duration of Marriage (Years).	Total Married Mothers.	Total Issue.	Average Issue.	Duration of Marriage (Years).	Total Married Mothers.	Total Issue.	Average Issue.
0-1 ..	24,063	24,452	1.02	14-15 ..	2,904	13,532	4.56
1-2 ..	22,109	26,780	1.21	15-16 ..	2,090	10,573	5.06
2-3 ..	21,773	36,699	1.69	16-17 ..	1,573	8,513	5.41
3-4 ..	20,448	41,025	2.01	17-18 ..	1,354	7,529	5.56
4-5 ..	17,806	41,031	2.30	18-19 ..	1,023	6,029	5.89
5-6 ..	15,371	39,673	2.58	19-20 ..	733	4,592	6.10
6-7 ..	13,331	38,211	2.87	20-21 ..	532	3,492	6.56
7-8 ..	11,367	35,574	3.13	21-22 ..	414	2,835	6.85
8-9 ..	8,877	29,756	3.35	22-23 ..	282	1,987	7.05
9-10 ..	6,474	23,010	3.55	23-24 ..	189	1,442	7.63
10-11 ..	5,346	19,987	3.74	24-25 ..	149	1,178	7.91
11-12 ..	5,141	20,104	3.91	25 and over	164	1,405	8.57
12-13 ..	4,810	19,866	4.13				
13-14 ..	3,675	16,096	4.38	Total ..	192,018	475,371	2.48

(iii) *Age and Average Issue of Mothers.* The following table shows the average number of children born to mothers of different ages. In the younger ages there is, naturally, little difference in the average number of children to each mother from year to year, but with the increase of the age of the mother the number of issue has fallen in comparison with past years. The average issue of mothers of all ages recorded for 1954 (namely, 2.48) is 24.5 per cent. below the average of 3.25 for the years 1911-20.

**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.	
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
1954 ..	1.22	1.70	2.36	3.05	3.78	4.56	5.60	2.48

(iv) *Previous Issue of Mothers, Various Ages.* A classification of mothers by age group and previous issue is given for 1954 in the following table.

**NUPTIAL CONFINEMENTS : AGE OF MOTHER AND PREVIOUS ISSUE, AUSTRALIA, 1954.**

Previous Issue.	Age of Mother (Years).							Total Married Mothers.
	Under 20.	20-24.	25-29.	30-34.	35-39.	40-44.	45 and over.	
0 ..	7,730	27,978	16,799	6,435	2,422	629	36	62,029
1 ..	1,622	17,767	22,083	10,330	3,382	745	49	55,978
2 ..	181	6,180	14,246	10,606	4,290	939	32	36,474
3 ..	12	1,745	6,016	6,779	3,575	986	47	19,160
4 ..	..	363	2,239	3,160	2,250	805	34	8,851
5 ..	..	70	793	1,492	1,421	548	31	4,355
6 ..	..	13	289	757	844	357	32	2,292
7 ..	..	2	89	392	514	252	29	1,278
8 ..	..	1	26	171	270	171	27	666
9 ..	..	..	5	82	167	139	11	404
10 and over	..	..	3	57	216	219	36	531
Total Married Mothers	9,545	54,119	62,588	40,261	19,351	5,790	364	192,018

[illegible]

The masculinity of nuptial first births in 1954 was 105.31 compared with 104.92 for total births.

(ii) *Age of Mother and Duration of Marriage.* A tabulation showing the individual ages of mothers of nuptial first-born children in conjunction with full detail of duration of marriage is given in *Demography Bulletin* No. 72. A summary showing grouped ages and grouped durations is given in the following table.

**FIRST BIRTHS : AGE OF MOTHER AND DURATION OF MARRIAGE,  
AUSTRALIA, 1954.**

Duration of Marriage.	Age Group of Mother (Years).							Total.
	Under 20.	20-24.	25-29.	30-34.	35-39.	40-44.	45 and over.	
Under 8 months ..	4,576	4,354	1,049	452	207	20	5	10,689
8 months ..	342	1,058	370	143	51	10	..	1,971
9 ..	537	2,542	923	267	84	13	..	4,366
10 ..	455	2,681	861	248	93	19	1	3,761
11 ..	338	1,787	675	257	67	19	1	3,141
Total under 1 year ..	6,248	11,825	3,878	1,367	502	107	7	23,931
1-2 years ..	1,294	9,977	4,399	1,430	510	134	11	17,755
2-3 ..	167	3,946	2,739	806	290	81	2	8,031
3-4 ..	20	1,545	2,061	558	189	60	3	4,136
4-5 ..	1	473	1,552	485	158	37	2	2,708
5-10 ..	..	206	2,109	1,462	416	93	8	4,321
10-15 ..	..	6	61	316	260	63	1	707
15 years and over ..	..	..	..	11	67	54	2	134
Total ..	7,730	27,978	16,799	6,135	2,122	629	36	62,029

(iii) *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.	
ANNUAL AVERAGES.				
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
ANNUAL TOTALS.				
1950 .. .. .	62,081	119,101	181,182	34.26
1951 .. .. .	62,078	121,594	183,672	33.80
1952 .. .. .	65,238	126,432	191,670	34.04
1953 .. .. .	63,726	128,187	191,913	33.21
1954 .. .. .	62,029	129,989	192,018	32.30

19. *Stillbirths.*—Registration of stillbirths is not compulsory in all Australian States. It has been compulsory in Western Australia since 14th January, 1908; in the Australian Capital Territory since 1st January, 1930; in New South Wales since 1st April, 1935; in South Australia since 1st May, 1937; and in Victoria from 1st January, 1953. In Victoria, independently of compulsory registration, and in Queensland and Tasmania where registration is not enforced, some information is obtained by notification of stillbirths for various purposes. Because registration is not compulsory in all States detailed statistics of stillbirths for Australia as a whole have not been compiled.

The number of stillbirths in each State and Territory, as recorded since 1936 by the means outlined above, 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.
ANNUAL AVERAGES.									
1936-40 ..	1,409	854	(a) (b) 274	234	144	(a)	5	(a)	
1941-45 ..	1,478	966	(c) 657	324	248	143	(u)	9	de 3,825
1946-50 ..	1,405	949	626	368	274	161	(a)	12	(e) 3,795
ANNUAL TOTALS.									
1950 ..	1,406	963	607	325	240	138	6	11	3,696
1951 ..	1,291	929	651	316	297	166	5	15	3,670
1952 ..	1,195	919	596	320	283	154	13	10	3,490
1953 ..	1,256	817	562	287	268	141	8	16	3,355
1954 ..	1,207	794	550	254	270	124	8	19	3,226

(a) Not available.  
Queensland for 1941.

(b) Three years 1938-40.  
(e) Excludes Northern Territory.

(c) Four years 1942-45.

(d) Excludes

The incidence of stillbirth 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)	27.49	25.70	28.75	(b)	22.18	(b)
1941-45 ..	25.46	24.79	26.76	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

### ANNUAL RATES.

1950	19.26	18.96	20.48	18.43	16.59	18.70	14.39	11.40	19.02
1951	17.60	18.05	21.48	17.77	19.68	22.07	12.14	14.73	18.63
1952	15.85	16.81	18.89	17.58	18.03	19.08	28.20	8.99	17.01
1953	16.49	15.02	17.93	15.56	16.62	17.90	17.09	19.90	16.32
1954	16.24	14.32	17.34	13.74	16.67	15.71	15.36	21.69	15.70

(a) Number 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.

## § 4. Mortality.

1. **Number of Deaths.**—(i) *Year 1954.* 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, 1954.

Sex.	N.S.W.	Vic.	Q'land.	S. Aust.	W. Aust.	Tas.	N.T.	A.C.T.	Aust.
Males ..	18,256	12,162	6,621	3,892	3,203	1,493	90	70	45,787
Females ..	14,188	10,392	4,723	3,287	2,161	1,203	16	48	36,018
Persons ..	32,444	22,554	11,344	7,179	5,364	2,696	106	118	81,805

(ii) *Years 1926 to 1954.* A summary of the number of deaths in each State and Territory from 1926 to 1954 is given in the following table. Annual averages for each five-year period from 1861 were published in Official Year Book No. 39, p. 597.



## DEATHS.

Period.	N.S.W.	Vic.	Q'land.	S. Aust.	W. Aust.	Tas.	N.T.	A.C.T.	Aust.
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## 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

## ANNUAL TOTALS.

1950	..	30,965	22,341	10,399	6,740	5,058	2,466	96	122	78,187
1951	..	31,932	23,446	11,105	7,184	5,288	2,567	117	149	81,788
1952	..	32,038	23,322	11,171	7,050	5,209	2,579	89	139	81,597
1953	..	31,707	22,650	11,006	6,962	5,072	2,551	116	124	80,188
1954	..	32,444	22,554	11,344	7,179	5,364	2,696	106	118	81,805

(a) Excludes deaths of defence personnel and of internees and prisoners of war from overseas for the period September, 1939 to June, 1947.

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 numbers 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 1954 are shown in the following table.

## CRUDE DEATH RATES.(a)

Period.	N.S.W.	Vic.	Q'land.	S. Aust.	W. Aust.	Tas.	N.T.	A.C.T.	Aust.
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## 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	9.62	13.46	3.81	9.00
1936-40(b)	9.45	10.36	9.08	9.33	9.22	9.91	11.69	4.54	9.63
1941-45(b)	9.73	10.63	9.24	10.26	9.86	10.21	6.43	4.98	9.96
1946-50(b)(c)	9.70	10.37	9.13	9.76	9.23	9.30	6.27	5.31	9.74

## ANNUAL RATES.(c)

1950	..	9.70	10.11	8.73	9.50	9.07	8.85	6.71	5.18	9.56
1951	..	9.74	10.30	9.07	9.81	9.11	8.90	7.71	6.04	9.71
1952	..	9.59	9.95	8.89	9.34	8.67	8.64	5.90	5.23	9.45
1953	..	9.36	9.45	8.55	8.97	8.17	8.33	7.47	4.32	9.09
1954—										
Males	..	10.60	9.87	9.83	9.65	9.70	9.43	8.88	4.30	10.07
Females	..	8.32	8.51	7.38	8.37	6.98	7.88	2.63	3.40	8.11
Persons	..	9.46	9.19	8.64	9.01	8.38	8.67	6.54	3.88	9.10

(a) Number of deaths per 1,000 of mean population. (b) Excludes deaths of defence personnel from September, 1939 to June, 1947. (c) Rates based on revised mean population estimates shown on page 577.

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 were as recorded, but the age and sex distribution were 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. Full details of the "Standard Population" are given in Official Year Book No. 22, p. 962.

(ii) *Death Rates in Age Groups.* An examination of the age distribution of deaths and the resultant age-specific mortality rates is made in paragraph 9, p. 653.

(iii) *Comparison of Crude and Standardized Death Rates.* The relative incidence of mortality as between individual States and as between the years 1921, 1933, 1947 and 1954 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	9.19	8.64	9.01	8.38	8.67	9.10
<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

(a) Total deaths per 1,000 of mean population.  
In para. 3 (i) above.

(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. A correct measurement of the mortality of the population can be obtained, however, from life tables. A life table represents the number of survivors at each age from a selected 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 the standard 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 survivorship 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

(a) Number of deaths per 1,000 males in life table or stationary population. (b) Number of deaths per 1,000 females in life table or stationary population.

5. **Crude Death Rates of Various Countries.**—The following table gives crude death rates for Australia in comparison with rates for various other countries.

**CRUDE DEATH RATES(a) : VARIOUS COUNTRIES.**

Country.	1921-25.	1926-30.	1931-35.	1954.	Country.	1921-25.	1926-30.	1931-35.	1954.
Netherlands ..	10.4	9.9	8.9	7.5	United States of America ..	11.8	11.8	10.9	9.2
Canada ..	11.2	11.1	9.7	8.2	Italy ..	17.4	16.0	14.1	9.2
Japan ..	21.8	19.3	17.9	8.2	Sweden ..	12.1	12.1	11.6	9.6
Norway ..	11.5	11.0	10.4	8.4	Switzerland ..	12.5	12.1	11.8	10.0
Union of South Africa(b) ..	9.7	9.7	9.8	8.6	Yugoslavia ..	20.2	20.0	17.9	10.8
New Zealand(c) ..	8.6	8.6	8.2	9.0	United Kingdom ..	12.4	12.3	12.2	11.4
Denmark ..	11.3	11.1	10.9	9.1	Belgium ..	13.4	13.7	12.9	11.9
Australia(d) ..	9.5	9.3	9.0	9.1	France ..	17.2	16.8	15.7	12.0
Finland ..	15.1	14.8	13.3	9.1	Ireland, Republic of ..	14.6	14.4	14.0	12.1
Spain ..	20.2	17.9	16.4	9.1	Austria ..	15.8	14.4	13.5	12.1

(a) Number of deaths per 1,000 of mean population. (b) European population only. (c) Excludes Maoris. (d) Excludes full-blood aboriginals. (e) 1933-35.

6. **True Death Rates of Various Countries.**—The following table gives true death rates for Australia in comparison with rates for various other countries :—

**TRUE DEATH RATES : VARIOUS COUNTRIES.**

Country.	Period.	True Death Rate.		Country.	Period.	True Death Rate.	
		Males. (a)	Females. (b)			Males. (a)	Females. (b)
Norway ..	1946-50	14.4	13.8	Germany, Federal Republic ..	1949-51	15.5	14.6
Netherlands ..	1947-49	14.4	14.0	France ..	1950-51	15.7	14.4
Sweden ..	1946-50	14.5	14.0	Union of South Africa(e) ..	1945-47	15.7	14.6
New Zealand(c) ..	1950-52	14.6	13.8	Switzerland ..	1939-44	16.0	14.9
Denmark ..	1946-50	14.7	14.3	Belgium ..	1946-49	16.1	14.9
England and Wales ..	1952	14.9	13.8	Austria ..	1949-51	16.2	14.9
Canada ..	1950-52	15.1	14.1	Japan ..	1953	16.2	15.2
Australia(d) ..	1946-48	15.1	14.2	Ireland, Republic of ..	1945-47	16.5	16.0
United States of America—				Finland ..	1946-50	17.1	15.2
Whites ..	1950	15.0	13.8	Northern Ireland ..	1936-38	17.3	16.9
Others ..	1950	16.9	15.8				
Scotland ..	1953	15.2	14.1				

(a) Number of deaths per 1,000 males in life table or stationary population (see explanation on p. 636). (b) Number of deaths per 1,000 females in life table or stationary population (see explanation on p. 646). (c) Excludes Maoris. (d) Excludes full-blood aboriginals. (e) European population only.

7. *Australian Life Tables.*—(i) *Life Tables prior to 1947.* It has been the practice at each census from 1911 onwards to prepare Life Tables representative of the mortality experience of Australia. In 1911 the mortality of the Australian population for the thirty years from 1881 to 1910 inclusive was investigated 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, of time, and of 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 population recorded and the deaths in the three years 1920–22. Similarly in 1933 the Life Tables, which were prepared by Mr. F. W. Barford, M.A., A.I.A., were based on the census population and the deaths in the calendar years 1932–34.

(ii) *Life Tables of Census of 1947.* On the occasion of the 1947 Census, Life Tables representing the sixth in the series were compiled by the Commonwealth Actuary, Mr. W. C. Balmford, O.B.E., F.I.A. These were based on the population recorded, in conjunction with the deaths during 1946, 1947 and 1948, as it was considered undesirable to take into account deaths occurring prior to 1946 owing to the possible effects on the civilian population of conditions arising from the 1939–45 War. Full particulars of the data used, the methods 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 1950. This report also appeared in Volume III. of the Census of the Commonwealth of Australia, 1947. Monetary tables for both single and joint lives have also been prepared by the Commonwealth Actuary.

Comparative tables showing the number of survivors ( $l_x$ ) out of 100,000 births, rates of mortality ( $q_x$ ) and probability of surviving ten years ( $_{10}p_x$ ), at selected ages, in respect of the Australian Life Tables of 1920–22, 1932–34 and 1946–48, together with a summary of the main characteristics of the tables, were published in Official Year Book No. 39, pp. 602–3. The expectation of life at selected ages taken from these three Life Tables is as follows:—

**AUSTRALIAN LIFE TABLES : COMPLETE EXPECTATION OF LIFE ( $e_x$ ) AT  
SELECTED AGES.**

Age (x).	Males.			Females.		
	1920–22.	1932–34.	1946–48.	1920–22.	1932–34.	1946–48.
0 .. ..	59.15	63.48	66.07	63.31	67.14	70.63
10 .. ..	56.01	58.02	59.04	59.20	61.02	63.11
20 .. ..	46.99	48.81	49.64	50.03	51.67	53.47
30 .. ..	38.44	39.90	40.40	41.48	42.77	44.08
40 .. ..	30.05	31.11	31.23	33.14	34.04	34.91
50 .. ..	22.20	22.83	22.67	24.90	25.58	26.14
60 .. ..	15.08	15.57	15.36	17.17	17.74	18.11
70 .. ..	9.26	9.60	9.55	10.41	10.98	11.14

8. *Infant Deaths and Death Rates.*—(i) *Australia, 1926 to 1954.* 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 is confirmed by the fact that out of 507,666 male infants born from 1950 to 1954, 13,453 (26.50 per 1,000) died during the first year of life, while of 482,364 female infants only 10,146 (21.03 per 1,000) died during the first year. Stillbirths are not included in any of the tables relating to deaths.

## INFANT DEATHS AND DEATH RATES : AUSTRALIA.

Period.	Number of Deaths under One Year.			Infant Mortality Rate.(a)		
	Males.	Females.	Total.	Males.	Females.	Total.
ANNUAL AVERAGES.						
1926-30 ..	3,909	2,942	6,851	57.66	45.99	51.99
1931-35 ..	2,649	1,986	4,635	46.00	36.29	41.27
1936-40 ..	2,679	2,016	4,695	43.23	34.16	38.81
1941-45 ..	2,921	2,215	5,136	39.11	31.18	35.24
1946-50 ..	2,808	2,094	4,902	30.09	23.70	26.98
ANNUAL TOTALS.						
1950 .. ..	2,661	2,004	4,665	27.20	21.60	24.47
1951 .. ..	2,749	2,129	4,878	27.66	22.67	25.24
1952 .. ..	2,774	2,023	4,797	26.83	20.59	23.79
1953 .. ..	2,661	2,052	4,713	25.71	20.78	23.30
1954 .. ..	2,608	1,938	4,546	25.18	19.64	22.48

(a) Number of deaths of children aged under one year per 1,000 live births registered.

(ii) *States, 1926 to 1954.* For each State and Territory the rates of infant mortality during the period 1926 to 1954 were as follows :—

## INFANT MORTALITY RATES(a) : UNDER ONE YEAR.

Period.	N.S.W.	Vic.	Q'land.	S. Aust.	W. Aust.	Tas.	N.T.	A.C.T.	Aust.
AVERAGE ANNUAL RATES.									
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 ..	36.29	34.73	34.55	33.20	33.37	39.54	55.97	18.75	35.24
1946-50 ..	28.91	23.82	27.49	26.50	28.15	26.53	37.37	19.89	26.98
ANNUAL RATES.									
1950 ..	27.04	20.09	24.77	24.04	27.13	23.75	36.50	20.96	24.47
1951 ..	26.29	22.61	25.66	24.51	28.73	26.64	44.23	11.96	25.24
1952 ..	24.50	22.29	24.94	23.09	24.91	21.73	31.25	23.59	23.79
1953 ..	24.65	21.15	24.98	20.65	23.83	22.88	39.13	21.57	23.30
1954 ..	25.30	19.30	22.29	21.29	22.54	23.94	17.54	4.67	22.48

(a) Number of deaths of children aged under one year per 1,000 live births registered.

## 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.
AVERAGE ANNUAL RATES.									
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
ANNUAL RATES.									
1950 ..	18.79	14.71	18.43	17.57	18.41	16.02	19.46	16.77	17.41
1951 ..	18.01	16.04	18.21	16.43	20.08	18.35	14.74	8.97	17.50
1952 ..	16.56	16.39	17.96	15.04	18.04	14.65	17.86	17.24	16.64
1953 ..	17.17	15.70	17.80	13.99	16.45	15.51	23.91	13.96	16.48
1954 ..	17.70	14.42	16.81	15.25	16.07	16.47	7.80	3.50	16.19

(a) Number of deaths of children aged under four weeks per 1,000 live births registered.

## 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.
AVERAGE ANNUAL RATES.									
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

## ANNUAL RATES.

1950 ..	8.25	5.38	6.34	6.47	8.72	7.73	17.04	4.19	7.06
1951 ..	8.28	6.57	7.45	8.08	8.65	8.29	29.49	2.99	7.74
1952 ..	7.94	5.90	6.98	8.05	6.87	7.08	13.39	6.35	7.15
1953 ..	7.48	5.45	7.18	6.66	7.38	7.37	15.22	7.61	6.82
1954 ..	7.60	4.88	5.48	6.04	6.47	7.47	9.74	1.17	6.29

(a) Number of deaths of children aged four weeks and under one year per 1,000 live births registered.

These tables indicate the striking decrease in infant mortality in Australia, the mortality rate of children aged under one year per 1,000 live births for 1954 being only 43 per cent. of the average rate for 1926-30. The tables above reveal the fact that this improvement was due largely to the decrease in deaths from preventable causes, the mortality rate for children aged four weeks but under one year declining by 73 per cent. while that for children aged under four weeks declined by only 44 per cent.

A graph showing infant mortality rates for each year from 1907 to 1955 will be found on page 629.

(iii) *Statistical Divisions.* The total numbers of births and of deaths of children under one year of age for 1954 are shown in *Demography Bulletin* No. 72 for each of the sixty-seven statistical divisions for which vital statistics have been tabulated.

(iv) *Various Countries.* Compared with other countries Australia occupies a very favourable position in respect of infant mortality. In 1954 only New Zealand, Sweden and the Netherlands recorded a lower rate than Australia.

## INFANT MORTALITY RATES : VARIOUS COUNTRIES.

Country.	Infant Mortality Rate.(a)						Crude Birth Rate (b) 1954.
	1921-25.	1926-30.	1931-35.	1936-40.	1953.	1954.	
Sweden ..	60	58	50	42	19	19	14.6
New Zealand (c) ..	43	37	32	32	20	20	24.7
Netherlands ..	64	56	45	37	22	21	21.6
<b>Australia (d)</b> ..	<b>58</b>	<b>52</b>	<b>41</b>	<b>39</b>	<b>23</b>	<b>22</b>	<b>22.5</b>
Norway ..	52	49	45	(e) 40	22	(h)	18.6
United Kingdom ..	78	70	65	59	28	26	15.6
Denmark ..	82	82	71	60	27	27	17.3
United States of America ..	74	68	59	51	28	27	24.9
Switzerland ..	65	54	48	45	30	27	17.0
Finland ..	96	88	72	72	34	31	21.3
Canada ..	98	93	75	64	35	32	28.5
Union of South Africa (f) ..	73	67	63	53	34	34	25.5
France ..	95	89	73	70	42	36	18.8
Ireland, Republic of ..	69	70	68	69	39	38	21.1
Japan ..	159	137	120	(g) 112	48	45	20.1
Austria ..	136	117	99	81	50	48	14.9
Belgium ..	100	95	82	77	42	49	16.7
Italy ..	127	119	105	103	58	53	17.9
Spain ..	143	124	113	121	59	54	20.0
Yugoslavia ..	(h)	151	153	(g) 141	116	102	28.4

(a) Number of deaths under one year per 1,000 live births registered. (b) Number of live births per 1,000 of mean population. (c) Excludes Maoris. (d) Excludes full-blood aboriginals. (e) 1935-39. (f) European population only. (g) 1935-38. (h) Not available.

(v) *Causes of Death: Children under one Year.* Causes of deaths 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. In 1954, 2,819 (97.7 per cent.) of the deaths occurring during the first week of life were caused by congenital malformations (12.2 per cent.) and certain diseases of early infancy (85.5 per cent.). Of the latter, 65.4 per cent. were associated with immaturity (*see table below*). At ages one week and under four weeks the proportions were 33.0 per cent. and 58.1 per cent. respectively. Of deaths of children over four weeks and under one year of age, 22.7 per cent. were caused by congenital malformations and only 4.8 per cent. by diseases of early infancy, the emphasis having shifted to respiratory and digestive diseases (44.2 per cent.), infective and parasitic diseases (7.9 per cent.), diseases of the nervous system (7.7 per cent.) and accidents and violence (5.5 per cent.). A summary for 1954 of the 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.

Deaths from each cause in the detailed list of titles adopted for publication, classified according to age at death, will be found in *Demography Bulletin* No. 72. Causes of infant deaths in each State and Territory in 1954 will also be found therein.

### CAUSES OF DEATH: CHILDREN UNDER ONE YEAR OF AGE, AUSTRALIA, 1954.

Cause of Death.	Age at Death.															Under One Year.	
	Weeks.				Months.												
	Under 1.	1.	2.	3.	1. (a)	2.	3.	4.	5.	6.	7.	8.	9.	10.	11.		
Tuberculosis																7	
Septicaemia and pyaemia	1	1	1		3	2	1	2	1	1	1	1	1	1	1	17	
Diphtheria																	
Whooping cough					1		3	1	2	1				2	2	12	
Meningococcal infections	1		1		1	6	2	4	5	3	4	6	7	4	4	48	
Measles			1				1			1		1		1	1	6	
Other infective and parasitic diseases	3		1	3	2	1		1	2	3	1		2		5	24	
Neoplasms	2					1	2	1		1	2	2	1	1	2	15	
Allergic, endocrine system, etc., diseases	1				1	2	2	1	4	3	1		5	2		22	
Diseases of the blood	4		1	1			1		1		1					9	
Mental, etc., disorders	6		1	3	3	2	3		1		2	1			1	23	
Meningitis	2	2	3	1	4	6	4	1	6	5	5	2	1	1		43	
Encephalitis						2				1		1				4	
Erythroedema polynurica										1		1			1	4	
Otitis media and mastoiditis							3	2	2	2	2		1	2	2	16	
Other diseases of the nervous system, etc.			1		4	3		4	1	2	3	3		1	5	27	
Diseases of the circulatory system					3	1	2	1	5	3			2		1	18	
Pneumonia, age four weeks and over					41	43	41	31	30	24	14	21	12	19	22	298	
Bronchitis					2		5	5	4	2	5	1	2	3	3	32	
Other diseases of the respiratory system	3				2	6	10	8	2	3	3	3	4	3		47	
Hernia and intestinal obstruction	20	1		2	2	4	5	7	3	7	1	4		1		57	
Gastro-enteritis and colitis, age four weeks and over					10	19	10	26	5	14	13	11	9	10	11	138	
Other diseases of the digestive system	4		1	2	3	2	1		3	2	2		1	2		23	
Diseases of the genito-urinary system	1				5	1	2	1			1				1	13	
Diseases of the skin and cellular tissue		1	2				1	2	1	1	2					10	
Diseases of the bones and organs of movement			1						1				1			3	
Congenital malformations	353	64	31	34	63	61	35	29	26	20	15	13	6	12	9	771	
Certain diseases of early infancy (b)																	
Without mention of immaturity (b)	854	57	32	34	12	9	7	5	2	3	2	1	4	1	2	1,025	
With immaturity (b)	1,612	76	16	12	9	3										1,729	
Symptoms and ill-defined conditions	6				1	2	2	2	3	2	1	2				21	
Accidents, poisoning and violence	11	2		1	9	13	12	3	3	7	1	6	6	4	6	84	
All Causes	2,884	204	93	94	181	169	155	138	111	112	85	79	69	73	79	4,546	

(a) Age four weeks and under two months.

(b) For further detail of this group of causes *see* next table.

The individual categories representing the causes of death which come within Class XV.—Certain Diseases of Early Infancy are designed to show the effect of immaturity in such causes of infant death. In 1954, 65 per cent. of deaths during the first week of life and 46 per cent. of those in the next three weeks of life were due, directly or indirectly, to immaturity. The relationship between immaturity and each of the individual categories of Class XV. is shown for the year 1954 in the following table:—

**DEATHS OF CHILDREN UNDER ONE YEAR OF AGE FROM CERTAIN DISEASES OF EARLY INFANCY : AUSTRALIA, 1954.**

Category No.	Cause of Death.	Without Mention of Immaturity.			With Immaturity.			Total.		
		Males.	Fe-males.	Per-sons.	Males.	Fe-males.	Per-sons.	Males.	Fe-males.	Per-sons.
760	Intracranial and spinal injury at birth ..	181	119	300	58	39	97	239	158	397
761	Other birth injury ..	45	37	82	66	48	114	111	85	196
762	Post-natal asphyxia and atelectasis ..	145	112	257	191	126	317	336	238	574
763	Pneumonia of the newborn ..	67	40	107	32	8	40	99	48	147
764	Diarrhoea of the newborn ..	7	6	13	2	1	3	9	7	16
765	Ophthalmia neonatorum ..	..	..	..	..	..	..	..	..	..
766	Pemphigus neonatorum ..	2	..	2	..	..	..	2	..	2
767	Umbilical sepsis ..	1	1	2	..	..	..	1	1	2
768	Other sepsis of newborn ..	10	2	12	..	..	..	10	2	12
769	Neonatal disorders arising from maternal toxæmia ..	16	13	29	43	29	72	59	42	101
770	Haemolytic disease of newborn (erythroblastosis) ..	69	44	113	18	7	25	87	51	138
771	Haemorrhagic disease of newborn ..	31	19	50	8	4	12	39	23	62
772	Nutritional maladjustment ..	13	8	21	..	..	..	13	8	21
773	Ill-defined diseases peculiar to early infancy ..	20	17	37	19	27	46	39	44	83
774	Immaturity with mention of any other subsidiary condition ..	..	..	..	16	11	27	16	11	27
775	Immaturity subsidiary to some other cause ..	..	..	..	..	..	..	..	..	..
776	Immaturity unqualified ..	..	..	..	552	424	976	552	424	976
	Total, Class XV. ..	607	418	1,025	1,005	724	1,729	1,612	1,142	2,754

(vi) *Deaths of Ex-nuptial Children under one Year of Age.* Distinction between nuptial and ex-nuptial children in death statistics for Australia as a whole has been made only since 1925. Results show that death rates during infancy have generally been much higher for ex-nuptial children than for nuptial children, but the disparity has become smaller in recent years. The following table shows the number of deaths of children under one year of age and the infant mortality rates for nuptial, ex-nuptial and all children in five-year periods since 1926 and for each year from 1950 to 1954.

**DEATHS UNDER ONE YEAR OF AGE : NUPTIAL AND EX-NUPTIAL, AUSTRALIA.**

Period.	Nuptial Children.		Ex-Nuptial Children.			All Children.	
	Number of Deaths.	Infant Mortality Rate.(a)	Number of Deaths.	Infant Mortality Rate.(b)		Number of Deaths.	Infant Mortality Rate.(c)
				Actual.	Ratio to Nuptial Rate. (Per Cent.)		
1926-30 ..	31,367	49.96	2,888	93.38	187	34,255	51.99
1931-35 ..	21,460	40.09	1,713	65.37	163	23,173	41.27
1936-40 ..	21,792	37.59	1,680	66.87	178	23,472	38.81
1941-45 ..	24,053	34.20	1,627	52.39	153	25,680	34.97
1946-50 ..	23,139	26.54	1,373	37.37	141	24,512	26.98
1950 ..	4,444	24.25	221	30.17	124	4,665	24.47
1951 ..	4,687	25.23	191	25.28	100	4,878	25.24
1952 ..	4,609	23.78	188	23.97	101	4,797	23.79
1953 ..	4,515	23.25	198	24.65	106	4,713	23.30
1954 ..	4,353	22.41	193	24.04	107	4,546	22.48

(a) Number of deaths under one year of age per 1,000 nuptial live births registered. (b) Number of deaths under one year of age per 1,000 ex-nuptial live births registered. (c) Number of deaths under one year of age per 1,000 total live births registered.



The ex-nuptial rates are higher at all ages under one year but the difference is greatest several months after birth. For the five years 1950-54 the ratio of the ex-nuptial to the nuptial rate at various ages was as follows:—Under one month, 102 per cent.; one month, 143 per cent.; 2 months, 119 per cent.; 3 months, 147 per cent.; 4 months, 114 per cent.; 5 months, 145 per cent.; under one year, 107 per cent.

Full particulars of the causes of deaths of ex-nuptial children who died in 1954, aged under four weeks and under one year, are given for each State and Territory in *Demography Bulletin* No. 72. Detailed information for Australia as to the age at which ex-nuptial children died from each cause of death will also be found therein. It is difficult to assess the real significance of the differences between the numbers of nuptial and ex-nuptial deaths from each individual cause because of the small number of ex-nuptial deaths involved in each case.

9. 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 two years and in completed years of life thereafter. Owing to exigencies of space these ages are usually combined in groups for publication, the most common grouping being in weeks for the first four weeks, in months or groups of months for the first year, in single years of age for the first five years and thereafter in the five-year groups 5-9 years, 10-14 years, etc. A summary in this form for Australia is given in the following table for the year 1954.

## AGE AT DEATH : AUSTRALIA, 1954.

Age at Death.	Males.	Fe- males.	Per- sons.	Age at Death.	Males.	Fe- males.	Per- sons.
Under 1 week ..	1,668	1,216	2,884	Total 5-9 years ..	300	216	516
1 week and under 2 weeks ..	116	88	204	" 10-14 ..	218	135	353
2 weeks and under 3 weeks ..	63	30	93	" 15-19 ..	437	162	599
3 weeks and under 28 days ..	67	27	94	" 20-24 ..	572	173	745
				" 25-29 ..	628	305	933
Total under 28 days ..	1,914	1,361	3,275	" 30-34 ..	659	395	1,054
28 days and under 3 months ..	201	169	370	" 35-39 ..	757	591	1,348
3 months and under 6 ..	219	185	404	" 40-44 ..	1,200	813	2,013
6 months and under 12 ..	274	223	497	" 45-49 ..	1,695	1,080	2,775
				" 50-54 ..	2,509	1,509	4,018
Total under 1 year ..	2,608	1,938	4,546	" 55-59 ..	3,385	1,949	5,334
1 year ..	292	241	533	" 60-64 ..	4,740	2,933	7,673
2 years ..	182	117	299	" 65-69 ..	5,863	3,859	9,722
3 ..	134	71	205	" 70-74 ..	6,233	4,780	11,013
4 ..	91	59	150	" 75-79 ..	5,598	5,119	10,717
				" 80-84 ..	4,125	4,774	8,899
Total under 5 years ..	3,307	2,426	5,733	" 85-89 ..	2,551	3,190	5,741
				" 90-94 ..	843	1,326	2,169
				" 95-99 ..	138	260	398
				" 100 and over ..	11	15	26
				Age not stated ..	18	8	26
				Total, All Ages ..	45,787	36,018	81,805

There are different mortality rates at various stages of life and the actual number of deaths in any period depends upon the impact of these rates on the numbers living at the respective stages. Changes in the number of deaths from one period to another are caused by changes in the rate of mortality in the various age groups and by the changed proportions of persons living in the different groups.

In Australia during the last fifty years there has been a steady improvement in the rate of mortality at all ages, thus tending to reduce the number of deaths. This has been most pronounced at ages under one year. The increased length of life due to this factor, coupled with the long-term decline in the birth rate and the effects of past and present migration, has been a significant cause in changing the age distribution of the population and consequently the age distribution of deaths, thus obscuring the effects of improved mortality rates.

The combined effect of these various influences can be seen from the following table, which shows the proportion of deaths in various age groups in periods of ten years from 1901 to 1950 and for the year 1954.

**PROPORTION OF DEATHS IN EACH AGE GROUP : AUSTRALIA.**  
(Per Cent.)

Period.	Age Group (Years).								Total.
	Under 1.	1-4.	5-19.	20-39.	40-59.	60-64.	65 and over.	Unspecified.	
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
1954—Males ..	5.70	1.53	2.09	5.71	19.19	10.35	55.39	0.04	100.00
Females ..	5.38	1.36	1.42	4.07	14.86	8.14	64.75	0.02	100.00
Persons ..	5.56	1.45	1.79	4.99	17.29	9.38	59.51	0.03	100.00

A table showing these proportions for males and females separately for the period 1901 to 1950 will be found in Official Year Book No. 39, p. 614.

(ii) *Age-specific Death Rates.* In earlier issues of the Official Year Book average annual age-specific death rates were given for each State and for Australia for the years 1932-34 and 1946-48 (see No. 37, p. 778 and No. 39, pp. 615-6). A table showing the rates in the age groups used for calculating the standardized death rate for each State for the year 1947 appeared in Official Year Book No. 39, p. 599. Estimates of the age distribution of the population in each State are not available to enable a similar comparison to be made for later years.

Estimates of the age distribution of the population of Australia as a whole have been used to calculate the following age-specific death rates for the years 1952, 1953 and 1954.

**AGE-SPECIFIC DEATH RATES(a) : AUSTRALIA.**

Age Group (Years).	1952.	1953.	1954.	Age Group (Years).	1952.	1953.	1954.
0-4 ..	6.39	6.18	5.93	50-54 ..	8.91	8.60	8.38
5-9 ..	0.64	0.67	0.57	55-59 ..	13.87	13.28	13.43
10-14 ..	0.55	0.51	0.51	60-64 ..	22.07	21.11	20.32
15-19 ..	1.08	1.10	1.01	65-69 ..	33.98	31.79	32.05
20-24 ..	1.40	1.33	1.24	70-74 ..	51.45	50.66	52.35
25-29 ..	1.42	1.29	1.32	75-79 ..	84.93	83.31	83.83
30-34 ..	1.61	1.44	1.49	80-84 ..	136.23	127.56	130.02
35-39 ..	2.28	2.11	2.10	85-89 ..	232.25	236.98	207.68
40-44 ..	3.34	3.11	3.20	90 and over ..	352.43	343.67	309.54
45-49 ..	5.62	5.20	5.07				

(a) Average number of deaths per 1,000 of population in each age group.

10. *Birthplaces of Persons who Died.*—A table showing the birthplaces of persons whose deaths were registered in each year will be found in the *Demography Bulletin*. Tabulations were discontinued for the years 1941 to 1945 inclusive, but were revived for 1946.

11. *Occupation of Males who Died.*—A table showing occupations of males who died during 1954 appears in *Demography Bulletin* No. 72.

12. *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 revisions by International Commissions in 1909 (Second), 1920 (Third), 1929 (Fourth) and 1938 (Fifth) were successively adapted for use in Australian statistics.

Proposals for the Fourth and Fifth revisions were drafted by a "Mixed Commission" of representatives of the International Statistical Institute and the Health Organization of the League of Nations and the final revision was carried out by the International Conference for the Revision of the International List of Causes of Death. Preparatory work in connexion with the Sixth Revision was entrusted by the International Health Conference in 1946 to the Interim Commission of the World Health Organization. As a result of this arrangement the World Health Organization compiled the International Statistical Classification of Diseases, Injuries and Causes of Death, which in its final stages was unanimously approved by the International Conference for the Sixth Revision of the International Lists of Diseases and Causes of Death in April, 1948. This classification was adopted by the First World Health Assembly, which also issued regulations to guide member states in its application. Australia adopted the classification, together with the rules for using it, for use commencing with the year 1950.

For the first time in connexion with the International List, international rules for a uniform method of selecting the main cause to be tabulated, if more than one cause is stated on the death certificate, were laid down, as well as the new classifications of causes of death. 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 with successive revisions of the International List.

The adoption of the new method marked a fundamental change in Australian cause of death statistics, with emphasis now placed on the underlying cause of death as indicated by the certifying practitioner. The introduction of this method required the adoption by all States of a form of medical certificate substantially identical with the International Form of Medical Certificate of Cause of Death as laid down in Article 9 of the World Health Organization Regulations No. 1. By 1950 all States had adopted satisfactory forms of certificate and it was possible to apply the new principles uniformly to all State cause of death records.

This change in principle affects the comparability of the statistics for 1950 and subsequent years with those of earlier years. For convenience in assessing the extent of the change and in accordance with a recommendation of the Sixth Decennial Revision Conference, causes of death for Australia for 1950 were also classified according to the detailed classification of the Fifth Revision, 1938, on the joint cause rules current for that revision. A complete detailed classification according to both the Fifth and Sixth Revisions was shown in *Demography Bulletin* No. 68. Commencing with 1951 the classification is according to the Sixth Revision only.

In order to facilitate the limited 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 for the cause of death tabulations A to C which follow. Tables A and B show deaths of males and females, respectively, for 1954 and Table C shows the numbers of persons who died and the death rates and proportion per 10,000 deaths for the years 1953 and 1954.

A graph showing the main causes of death for the years 1945 to 1954 appears on page 630.

## A.—CAUSES OF DEATH : MALES, 1954.

## ABBREVIATED LIST OF 50 CAUSES (BASED ON THE SIXTH REVISION OF THE INTERNATIONAL LIST).

Cause of Death.	Detailed List Numbers.	N.S.W.	Vic.	Qld.	S.A.	W.A.	Tas.	N.T.	A. C. T.	Aust.
B 1 Tuberculosis of respiratory system	001-008	244	165	109	43	52	23	4	..	640
B 2 Tuberculosis, other forms	010-019	14	11	7	4	3	4	..	..	43
B 3 Syphilis and its sequelae	020-029	48	38	24	22	6	1	1	..	140
B 4 Typhoid fever	040	2	..	..	..	..	..	..	..	2
B 5 Cholera	043	..	..	..	..	..	..	..	..	..
B 6 Dysentery, all forms	045-048	9	1	1	2	2	..	..	..	15
B 7 Scarlet fever and streptococcal sore throat	050, 051	3	..	1	1	1	..	..	..	6
B 8 Diphtheria	055	10	1	3	..	3	..	..	1	18
B 9 Whooping cough	056	1	5	2	1	..	..	..	..	9
B10 Meningococcal infections	057	25	23	12	5	2	4	..	..	71
B11 Plague	058	..	..	..	..	..	..	..	..	..
B12 Acute poliomyelitis	080	16	25	4	3	2	..	..	..	50
B13 Smallpox	084	..	..	..	..	..	..	..	..	..
B14 Measles	085	16	3	3	1	1	..	..	..	24
B15 Typhus and other rickettsial diseases	100-108	..	..	..	..	..	..	..	..	..
B16 Malaria	110-117	3	..	1	..	..	..	..	..	4
B17 All other diseases classified as infective and parasitic	(a)	57	39	26	19	13	3	1	1	159
B18 Malignant neoplasms, including neoplasms of lymphatic and haematopoietic tissues	140-205	2,391	1,692	839	473	438	196	8	6	6,043
B19 Benign and unspecified neoplasms	210-239	66	46	29	8	9	3	..	..	161
B20 Diabetes mellitus	260	127	139	47	20	19	19	1	2	374
B21 Anaemias	290-293	36	39	27	15	6	4	..	..	127
B22 Vascular lesions affecting central nervous system	330-334	1,983	1,220	634	434	265	123	3	9	4,671
B23 Non-meningococcal meningitis	340	33	19	8	5	7	2	..	..	74
B24 Rheumatic fever	400-402	20	17	3	1	4	1	..	..	46
B25 Chronic rheumatic heart disease	410-416	129	106	50	28	29	16	..	..	358
B26 Arteriosclerotic and degenerative heart disease	420-422	5,456	3,606	1,661	1,206	947	446	8	16	13,349
B27 Other diseases of heart	430-434	703	255	229	98	43	31	4	1	1,364
B28 Hypertension with heart disease	440-443	457	244	202	92	96	32	..	3	1,126
B29 Hypertension without mention of heart	444-447	219	160	130	39	51	15	..	1	615
B30 Influenza	480-483	76	46	46	13	19	17	..	..	217
B31 Pneumonia	490-493	642	355	219	150	102	74	2	2	1,546
B32 Bronchitis	500-502	243	180	86	48	33	30	1	3	624
B33 Ulcer of stomach and duodenum	540, 541	209	143	73	50	38	15	..	2	530
B34 Appendicitis	550-553	42	14	18	4	7	2	..	1	88
B35 Intestinal obstruction and hernia	560, 561, 570	109	63	36	18	21	7	1	..	255
B36 Gastritis, duodenitis, enteritis and colitis, except diarrhoea of the newborn	543, 571, 572	99	49	42	18	23	5	..	1	237
B37 Cirrhosis of liver	581	100	85	33	31	9	5	..	..	263
B38 Nephritis and nephrosis	590-594	302	188	145	71	52	16	1	..	775
B39 Hyperplasia of prostate	610	183	202	111	49	51	29	..	..	625
B41 Congenital malformations	750-759	232	150	83	53	54	24	1	..	597
B42 Birth injuries, post-natal asphyxia and atelectasis	760-762	239	203	104	53	66	21	..	..	686
B43 Infections of the newborn	763-768	52	28	14	12	10	4	1	..	121
B44 Other diseases peculiar to early infancy, and immaturity unqualified	769-776	328	159	150	78	60	30	2	1	808
B45 Senility without mention of psychosis, ill-defined and unknown causes	780-795	271	141	116	47	26	11	7	3	622
B46 All other diseases	Residual	1,369	1,229	586	308	262	119	9	4	3,886
BE47 Motor vehicle accidents	E810-E835	582	482	223	136	149	58	14	6	1,650
BE48 All other accidents	E800-E802, E840-E962	775	427	356	164	150	74	10	5	1,961
BE49 Suicide and self-inflicted injury	E963, E970-E979	304	143	109	67	65	25	9	2	724
BE50 Homicide and operations of war	E984, E985, E980-E999	31	21	16	2	7	4	2	..	83
All Causes	..	18,256	12,162	6,621	3,892	3,203	1,493	90	70	45,787

(a) 030-039, 041, 042, 044, 049, 052-054, 059-074, 081-083, 086-096, 120-138.

## B.—CAUSES OF DEATH : FEMALES, 1954.

ABBREVIATED LIST OF 50 CAUSES (BASED ON THE SIXTH REVISION OF THE INTERNATIONAL LIST).

Cause of Death.	Detailed List Numbers.	N.S.W.	Vic.	Qld.	S.A.	W.A.	Tas.	N.T.	A. C. T.	Aust.
B 1 Tuberculosis of respiratory system	001-008	80	56	23	14	5	5	..	..	183
B 2 Tuberculosis, other forms	010-019	9	13	1	4	1	3	..	..	31
B 3 Syphilis and its sequelae	020-029	15	9	2	6	..	2	..	..	34
B 4 Typhoid fever	040	..	..	..	..	1	..	..	..	1
B 5 Cholera	043	..	..	..	..	..	..	..	..	..
B 6 Dysentery, all forms	045-048	8	2	..	1	1	..	..	..	12
B 7 Scarlet fever and streptococcal sore throat	050, 051	..	2	1	..	..	..	..	..	3
B 8 Diphtheria	055	11	3	1	..	..	1	..	..	16
B 9 Whooping cough	056	2	2	1	..	1	..	..	..	6
B 10 Meningococcal infections	057	26	18	8	3	1	1	..	..	57
B 11 Plague	058	..	..	..	..	..	..	..	..	..
B 12 Acute poliomyelitis	080	13	11	1	2	2	..	..	1	30
B 13 Smallpox	084	..	..	..	..	..	..	..	..	..
B 14 Measles	085	12	..	4	..	2	..	..	1	19
B 15 Typhus and other rickettsial diseases	100-108	..	..	..	..	..	..	..	..	..
B 16 Malaria	110-117	..	..	..	..	1	..	..	..	1
B 17 All other diseases classified as Infective and parasitic	(a)	52	23	16	9	9	6	1	..	116
B 18 Malignant neoplasms, including neoplasms of lymphatic and haematopoietic tissues	140-205	2,125	1,679	719	501	343	197	..	4	5,568
B 19 Benign and unspecified neoplasms	210-239	90	31	30	21	11	4	..	..	187
B 20 Diabetes mellitus	260	264	241	88	54	36	39	..	..	722
B 21 Anaemias	290-293	68	52	34	10	7	7	..	..	178
B 22 Vascular lesions affecting central nervous system	330-334	2,471	1,879	787	592	364	192	..	7	6,292
B 23 Non-meningococcal meningitis	340	16	14	14	3	2	2	1	..	52
B 24 Rheumatic fever	400-402	13	5	3	2	4	3	..	..	30
B 25 Chronic rheumatic heart disease	410-416	174	105	56	46	29	10	..	1	421
B 26 Arteriosclerotic and degenerative heart disease	420-422	3,441	2,514	967	825	599	255	2	11	8,614
B 27 Other diseases of heart	430-434	468	246	151	87	27	21	..	1	1,001
B 28 Hypertension with heart disease	440-443	465	315	188	98	82	41	..	2	1,191
B 29 Hypertension without mention of heart	444-447	242	192	109	42	34	18	..	1	638
B 30 Influenza	480-483	54	60	28	10	12	15	..	..	179
B 31 Pneumonia	490-493	513	318	127	139	65	62	2	2	1,228
B 32 Bronchitis	500-502	78	80	31	27	15	7	..	..	238
B 33 Ulcer of stomach and duodenum	540, 541	68	43	29	8	6	5	..	1	160
B 34 Appendicitis	550-553	22	19	14	2	4	3	..	..	64
B 35 Intestinal obstruction and hernia	560, 561, 570	103	69	33	18	14	10	..	..	247
B 36 Gastritis, duodenitis, enteritis and colitis, except diarrhoea of the newborn	543, 571, 572	113	51	33	28	17	4	..	1	247
B 37 Cirrhosis of liver	581	48	47	9	14	12	7	..	..	137
B 38 Nephritis and nephrosis	590-594	268	166	130	46	28	17	2	1	658
B 40 Complications of pregnancy, childbirth and the puerperium	640-652, 670-689	49	31	30	9	12	7	..	1	139
B 41 Congenital malformations	750-759	191	110	79	49	16	21	..	1	467
B 42 Birth injuries, post-natal asphyxia and atelectasis	760-762	189	129	71	34	35	22	..	1	481
B 43 Infections of the newborn	763-768	23	17	10	3	3	2	..	..	58
B 44 Other diseases peculiar to early infancy, and immaturity unqualified	769-776	261	122	103	44	46	25	1	1	603
B 45 Senility without mention of psychosis, ill-defined and unknown causes	780-795	337	173	108	70	14	14	1	1	718
B 46 All other diseases	Residual	1,126	1,145	453	322	205	121	1	5	3,378
BE 47 Motor vehicle accidents	E810-E835	171	140	56	27	33	13	3	1	444
BE 48 All other accidents	E800-E802, E840-E962	385	195	129	88	47	35	..	2	881
BE 49 Suicide and self-inflicted injury	E963, E970-E979	112	50	41	25	11	5	..	1	245
BE 50 Homicide and operations of war	E964-E965, E980-E999	12	15	5	4	4	1	2	..	43
All Causes	..	14,188	10,392	4,723	3,287	2,161	1,203	16	48	36,018

(a) 030-039, 041, 042, 044, 049, 052-054, 059-074, 081-083, 086-096, 120-138.

**C.—CAUSES OF DEATH : PERSONS, AUSTRALIA.**  
**ABBREVIATED LIST OF 50 CAUSES (BASED ON THE SIXTH REVISION OF THE**  
**INTERNATIONAL LIST).**

Cause of Death.	Detailed List Numbers.	Number of Deaths.		Rate per 1,000,000 of Mean Population.		Proportion per 10,000 Deaths.	
		1953.	1954.	1953.	1954.	1953.	1954.
B 1 Tuberculosis of respiratory system	001-008	879	823	100	91	110	101
B 2 Tuberculosis, other forms	010-019	95	74	11	8	12	9
B 3 Syphilis and its sequelae	020-029	201	174	23	19	25	21
B 4 Typhoid fever	040	7	3	1	..	1	..
B 5 Cholera	043	..	..	..	..	..	..
B 6 Dysentery, all forms	045-048	24	27	3	3	3	3
B 7 Scarlet fever and streptococcal sore throat	050, 051	9	9	1	1	1	1
B 8 Diphtheria	055	51	34	6	4	6	4
B 9 Whooping cough	056	26	15	3	2	3	2
B10 Meningococcal infections	057	112	128	13	14	14	16
B11 Plague	058	..	..	..	..	..	..
B12 Acute poliomyelitis	080	115	80	13	9	14	10
B13 Smallpox	084	..	..	..	..	..	..
B14 Measles	085	27	43	3	5	3	5
B15 Typhus and other rickettsial diseases	100-108	1	..	..	..	..	..
B16 Malaria	110-117	1	5	..	1	..	1
B17 All other diseases classified as infective and parasitic	(a)	328	275	37	31	41	34
B18 Malignant neoplasms, including neoplasms of lymphatic and haematopoietic tissues	140-205	11,507	11,611	1,305	1,292	1,435	1,419
B19 Benign and unspecified neoplasms	210-239	358	348	41	39	45	43
B20 Diabetes mellitus	260	1,104	1,096	125	122	138	134
B21 Anaemias	290-293	295	305	33	34	37	37
B22 Vascular lesions affecting central nervous system	330-334	10,675	10,963	1,211	1,220	1,331	1,340
B23 Non-meningococcal meningitis	340	124	126	14	14	15	15
B24 Rheumatic fever	400-402	100	76	11	8	12	9
B25 Chronic rheumatic heart disease	410-416	776	779	88	87	97	95
B26 Arteriosclerotic and degenerative heart disease	420-422	21,237	21,963	2,408	2,443	2,648	2,685
B27 Other diseases of heart	430-434	2,110	2,365	239	263	263	289
B28 Hypertension with heart disease	440-443	2,317	2,317	263	258	289	283
B29 Hypertension without mention of heart	444-447	1,316	1,253	149	139	164	153
B30 Influenza	480-483	183	396	21	44	23	49
B31 Pneumonia	490-493	2,626	2,774	298	309	327	339
B32 Bronchitis	500-502	783	864	89	96	98	105
B33 Ulcer of stomach and duodenum	540, 541	658	690	75	77	82	84
B34 Appendicitis	550-553	151	152	17	17	19	19
B35 Intestinal obstruction and hernia	560, 561, 570	558	502	63	56	70	61
B36 Gastritis, duodenitis, enteritis and colitis, except diarrhoea of the newborn	543, 571, 572	487	484	55	54	61	59
B37 Cirrhosis of liver	581	371	400	42	44	46	49
B38 Nephritis and nephrosis	590-594	1,570	1,433	178	159	196	175
B39 Hyperplasia of prostate	610	618	625	70	69	77	76
B40 Complications of pregnancy, child birth and the puerperium	640-652, 670-689	126	139	14	15	16	17
B41 Congenital malformations	750-759	1,066	1,064	121	118	133	130
B42 Birth injuries, post-natal asphyxia and atelectasis	760-762	1,149	1,167	130	130	143	143
B43 Infections of the newborn	763-768	224	179	25	20	28	22
B44 Other diseases peculiar to early infancy, and immaturity unqualified	769-776	1,460	1,411	166	157	182	173
B45 Senility without mention of psychosis, ill-defined and unknown causes	780-795	1,540	1,340	175	149	192	164
B46 All other diseases	Residual	6,844	7,264	776	808	854	888
BE47 Motor vehicle accidents	E810-E835	1,948	2,094	221	233	243	256
BE48 All other accidents	E800-E802, E840-E962	2,948	2,842	334	316	368	348
BE49 Suicide and self-inflicted injury	E963, E970-E979	959	969	109	108	120	119
BE50 Homicide and operations of war	E964, E965, E980-E999	124	126	14	14	15	15
All Causes	..	80,188	81,805	9,094	9,100	10,000	10,000

(a) 030-039, 041, 042, 044, 049, 052-054, 059-074, 081-083, 086-096, 120-138.

13. *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 Sixth Revision of the International List. The more important of these causes are treated in detail hereunder. The Abbreviated Classification number used in tables A to C is 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 as all forms of tuberculosis in 1954 was 897, consisting of 683 males and 214 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 Official Year Book No. 39, p. 626.

(b) *Age at Death.* The following table shows the age groups of males, females and persons who were classified as dying from tuberculosis in 1954 together with figures for 1931, 1941 and 1951.

**TUBERCULOSIS (ALL FORMS) : DEATHS IN AGE GROUPS, AUSTRALIA.**

Age Group (Years).	1931.			1941.			1951.			1954.		
	Males.	Fe- males.	Per- sons.	Males.	Fe- males.	Per- sons.	Males.	Fe- males.	Per- sons.	Males.	Fe- males.	Per- sons.
Under 5 ..	57	47	104	42	28	70	17	29	46	12	13	25
5-9 ..	14	14	28	12	10	22	3	4	7	1	..	1
10-14 ..	19	20	39	9	16	25	3	2	5	1	..	1
15-19 ..	45	105	150	30	52	82	6	4	10	1	6	7
20-24 ..	113	183	296	69	91	160	15	28	43	4	4	8
25-29 ..	136	199	335	63	132	195	25	36	61	13	13	26
30-34 ..	191	164	355	125	129	254	29	46	75	16	27	43
35-39 ..	187	156	343	144	111	255	44	47	91	20	22	42
40-44 ..	207	102	309	159	79	238	62	49	111	37	25	62
45-49 ..	197	83	280	180	76	256	92	31	123	59	15	74
50-54 ..	185	62	247	216	64	280	146	40	186	69	21	90
55-59 ..	164	57	221	210	52	262	148	25	173	67	10	77
60-64 ..	128	50	178	187	59	246	184	30	214	116	11	127
65-69 ..	110	38	148	137	39	176	130	23	153	110	19	129
70-74 ..	52	31	83	74	41	115	97	29	126	79	20	99
75-79 ..	27	16	43	48	18	66	47	16	63	47	4	51
80 and over ..	4	4	8	20	12	32	32	18	50	31	4	35
Not Stated ..	..	..	..	..	..	..	..	1	1	..	..	..
Total ..	1,836	1,331	3,167	1,725	1,009	2,734	1,080	458	1,538	683	214	897

(c) *Occupation at Death, Males.* A summary of the main groups of occupations of males who died from tuberculosis during 1954 is given in *Demography Bulletin* No. 72.

(d) *Period of Residence in Australia.* The period of residence in Australia of persons who died from tuberculosis in 1954 is given in relation to age at death in *Demography Bulletin* No. 72.

(e) *Death Rates.* The improvement which has taken place in recent years in the incidence of tuberculosis in Australia is shown by the fall in the death rate from tubercular diseases. The death rate represents the number of deaths from tuberculosis per 100,000 of mean population. In 1931 the rate was 49 (males, 55; females, 42). In 1941 it was 38 (males, 48; females, 29) and by 1951 had fallen to 18 (males, 25; females, 11). Figures for 1954 show that the rate has declined still further, to 10 per 100,000 of mean population (males, 15; females, 5).

(f) *Proportion of Total Deaths.* A table showing the number of deaths from tuberculosis per 10,000 deaths from all causes in each State and Territory during 1911-20, 1921-30, 1931-40 and 1941-50 was given in Official Year Book No. 39, p. 627.

(g) *Death Rates, Various Countries.* A comparison of the death rates from tuberculosis for Australia with those for various other countries, made on the latest figures available, shows that Australia with a rate of 10 deaths per 100,000 of mean population occupies a favourable position as regards this disease. Whereas the rate for Denmark is only 9, rates range as high as 82 for Japan. For various other countries rates are

as follows :—Netherlands, 9 ; Canada, 12 ; New Zealand, 15 ; United States of America, 20 ; Union of South Africa, 20 ; United Kingdom, 24 ; Italy, 27 ; France, 36 ; Finland, 58 ; and Portugal, 63.

(iii) *Malignant Neoplasms, including Neoplasms of Lymphatic and Haematopoietic Tissues* (B18). (a) *General*. It was shown in Official Year Book No. 39, p. 628 that deaths classified under this heading according to the Sixth Revision of the International List are not directly comparable in total with those on the Fifth Revision basis and comparability ratios were given to enable comparison to be made on an adjusted basis. This change must be kept in mind in considering the comparisons between 1951, 1941 and 1931 which are shown in the following pages.

(b) *Type and Seat of Disease*. Tables showing the type and seat of disease in conjunction with age and conjugal condition of the persons dying from malignant neoplasms in 1954 will be found in *Demography Bulletin* No. 72. A summary regarding type and seat of disease for 1954 is given below. It may be pointed out that the significance of the number of deaths shown for the various types of neoplasms enumerated hereunder is doubtful, owing to the fact that, in the absence of a post-mortem, it is impracticable for the certifying doctor in the majority of cases to make an accurate diagnosis as to type in the detail required for the following classification.

**DEATHS FROM MALIGNANT NEOPLASMS AND NEOPLASMS OF LYMPHATIC AND HAEMATOPOIETIC TISSUES : TYPE AND SEAT OF DISEASE, AUSTRALIA, 1954.**

Type of Disease.	Males.	Fe- males.	Per- sons.	Seat of Disease.	Males.	Fe- males.	Per- sons.
<b>Malignant Neoplasms—</b>				<b>Malignant Neoplasms—</b>			
Cancer and Carcinoma				Buccal Cavity and			
(other than skin) ..	5,028	4,755	9,783	Pharynx ..	200	57	257
Skin Cancer ..	62	38	100	Digestive Organs and			
Sarcoma and Myeloid Sar-				Peritoneum—			
coma ..	111	100	211	Oesophagus ..	167	70	237
Myeloma ..	..	..	..	Stomach ..	1,089	720	1,809
Glioma ..	82	57	139	Small Intestine ..	17	11	28
Endothelioma ..	..	..	..	Large Intestine ..	634	787	1,421
Melanoma and Melanotic				Other ..	799	654	1,453
Sarcoma ..	72	74	146	Respiratory System ..	1,023	206	1,229
Hypernephroma ..	33	23	56	Breast ..	6	1,089	1,095
Teratoma ..	8	3	11	Uterus ..	..	605	605
Malignant Disease and				Other Female Genital			
Malignant Tumor n.o.s.	193	173	366	Organs ..	..	355	355
<b>Total, Malignant</b>				Male Genital Organs ..	737	..	737
<b>Neoplasms ..</b>	5,589	5,223	10,812	Urinary Organs ..	331	176	507
				Skin ..	157	125	282
<b>Neoplasms of Lymphatic and</b>				Other and Unspecified			
<b>Haematopoietic Tissues—</b>				Organs ..	429	368	797
Lymphosarcoma and				<b>Total, Malignant</b>			
Reticulosarcoma ..	123	70	193	<b>Neoplasms ..</b>	5,589	5,223	10,812
Hodgkin's Disease ..	70	49	119				
Other forms of Lym-				<b>Neoplasms of Lymphatic</b>			
phoma (Reticulosis) ..	20	16	36	<b>and Haematopoietic Tis-</b>			
Multiple Myeloma (Plas-				<b>suces ..</b>	454	345	799
mocytoma) ..	28	30	58				
Leukaemia and Aleu-							
kaemia ..	213	178	391				
Mycosis Fungoides ..	..	2	2				
<b>Total, Neoplasms of</b>							
<b>Lymphatic, etc.,</b>							
<b>Tissues ..</b>	454	345	799				
<b>Grand Total ..</b>	6,043	5,568	11,611	<b>Grand Total ..</b>	6,043	5,568	11,611

(c) *Age at Death*. The ages of persons who died from malignant neoplasms in 1954 are given below, together with figures for 1931, 1941 and 1951. Inferences drawn from the great increase in the number of deaths from malignant neoplasms in 1954 compared with 1931 need qualification in view of the altered age constitution of the population since the earlier year. The number of people over 55 years of age, at which level cancer risks are greatest, nearly doubled between 1931 and 1954, whilst those in the age group



75 years and over more than doubled. It is only in this extreme old age group from 75 onwards that the rate of mortality, as distinct from the number of deaths, has increased. For groups up to age 75 there has been no increase in mortality rates since 1931; indeed, in some age groups the rates have actually declined. It is also probable that a proportion of the increased number of deaths from cancer recorded in recent years has been due to better diagnosis and certification on the part of medical practitioners rather than to any actual increase in the disease itself.

#### MALIGNANT NEOPLASMS : NUMBER OF DEATHS IN AGE GROUPS, AUSTRALIA

Age Group (Years).	1931.			1941.			1951.			1954.		
	Males.	Fe- males.	Per- sons.	Males.	Fe- males.	Per- sons.	Males.	Fe- males.	Per- sons.	Males.	Fe- males.	Per- sons.
Under 15 ..	25	23	48	21	25	46	91	71	162	114	101	215
15-19 ..	12	11	23	10	10	20	28	14	42	31	17	48
20-24 ..	12	14	26	15	13	28	33	17	50	28	15	43
25-29 ..	19	13	32	24	22	46	42	45	87	39	50	89
30-34 ..	26	55	81	28	45	73	65	74	139	60	76	136
35-39 ..	59	98	157	56	106	162	96	122	218	79	130	209
40-44 ..	111	173	284	92	193	285	114	191	305	179	239	418
45-49 ..	149	261	410	149	282	431	210	274	484	245	315	560
50-54 ..	261	287	548	316	403	719	374	418	792	400	415	815
55-59 ..	349	344	693	425	435	860	541	538	1,079	571	520	1,091
60-64 ..	519	400	919	558	491	1,049	793	642	1,435	804	682	1,486
65-69 ..	662	478	1,140	670	558	1,228	904	663	1,567	981	743	1,724
70-74 ..	609	410	1,019	753	623	1,376	844	741	1,585	951	790	1,741
75-79 ..	397	294	691	676	512	1,188	700	604	1,304	786	711	1,497
80-84 ..	187	152	339	331	330	661	438	417	855	476	452	928
85 and over ..	87	92	179	131	175	306	242	273	515	298	312	610
Not Stated ..	..	..	..	..	..	..	..	..	..	I	..	I
Total ..	3,484	3,105	6,589	4,255	4,223	8,478	5,515	5,104	10,619	6,043	5,568	11,611

(d) *Occupation at Death, Males.* A table showing main groups of occupations of males who died from malignant neoplasms and neoplasms of lymphatic and haematopoietic tissues during 1954 appears in *Demography Bulletin* No. 72.

(e) *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 reflect the increasing age of the population rather than the true change in mortality from malignant neoplasms (see para. 13 (iii) (c) p. 660). 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, 129; females, 122). Figures for 1954 show that a further rise has taken place, the rate being 129 (males, 133; females, 125).

(f) *Proportion of Total Deaths.* A table showing the number of deaths from malignant neoplasms per 10,000 deaths from all causes in each State and Territory during 1911-20, 1921-30, 1931-40 and 1941-50 was given in *Official Year Book* No. 39, p. 631.

(g) *Death Rates, Various Countries.* Death rates from malignant neoplasms per 100,000 of mean population for Australia and for various other countries are as follows:—Portugal, 71; Spain, 75; Japan, 81; Union of South Africa, 125; Australia, 129; Canada, 130; United States of America, 141; New Zealand, 149; France, 175; Switzerland, 188; and United Kingdom, 200. 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 1954 was 27,424 (16,197 males and 11,227 females). Details for each individual category within the group may be obtained from *Demography Bulletin* No. 72. This class is the largest amongst causes of death, the death rate having increased from 102 per 100,000 of mean population in 1911-15 to 305 in 1954. 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 the years 1931, 1941, 1951 and 1954 were as follows :—1931, 159 (males, 178 ; females, 142) ; 1941, 269 (males, 306 ; females, 231) ; 1951, 314 (males, 367 ; females, 259) ; and 1954, 305 (males, 356 ; females, 252). In 1954 deaths from heart diseases represented 34 per cent. of the total deaths.

(v) *Diarrhoea and Enteritis (Children under two years of age)*. Figures published in Official Year Book No. 39, p. 634, show that deaths in this category declined from a rate of 22.8 per 1,000 children born for the period 1911–15 to 1.5 for the period 1946–50, from which it is evident that this cause of death is no longer the scourge that it was in earlier years.

Owing to changes in classification it is not possible to continue the tables in the same form for 1954.

(vi) *Puerperal Causes (B40)*. It was shown in Official Year Book No. 39, p. 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 death rate from these causes (including criminal abortion) has fallen rapidly during recent years and in 1954 the rate was 0.7 per 1,000 live births, compared with a rate of 6 per 1,000 in 1936. The 139 deaths in 1954 correspond to a death rate of 3.1 per 100,000 females. The death rate may be expressed in other terms by stating that 1 of every 1,439 women giving birth to a live child in 1954 died from puerperal causes ; the corresponding ratios for married women were 1 in every 1,536, and for single women 1 in every 567.

The death rate per 1,000 live births from puerperal causes in various countries for the latest available years is as follows :—United Kingdom, 0.6 ; Australia, 0.7 ; New Zealand, France and the United States of America, 0.7 ; Canada and Denmark, 0.8 ; Union of South Africa, Spain and Switzerland, 1.1 ; Portugal and Japan, 1.7.

A tabulation of puerperal causes for Australia according to age at death for married and single women separately will be found in *Demography Bulletin* No. 72.

The total number of children left by the 125 married mothers who died from puerperal causes in 1954 was 356, an average of 2.8 children per mother.

Three of the mothers who died had been married less than one year, 9 between one and two years, and 8 between two and three years. The duration of marriage ranged up to 26 years. Tabulations distinguishing the ages at marriage and at death will be found in *Demography Bulletin* No. 72, which also includes a table showing in combination the duration of marriage and previous issue.

(vii) *Congenital Malformations and Diseases of Early Infancy (B41–B44)*. This combined group embraces two complete classes of the International List of Causes of Death which relate more specifically to infant deaths and they have already been presented in detail in the section devoted to causes of infant death (see pp. 651 and 652).

(viii) *Accidents, Poisonings and Violence (BE 47 to BE 50)*. (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 accident, 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 late effects.

The following table, showing the death rates in the main sub-groups per 100,000 of mean population and the proportion of deaths caused by violence during the period 1926–54, indicates that the death rate from violence is generally about twice as great for males as for females. It can be seen also that in 1954 the percentage of deaths caused by violence was 7.37.

The low level of the rates and proportions for the years 1941–45 is attributable mainly to the fact that deaths of defence personnel have been excluded but the rates

have been based on total mean population (including defence personnel). A contributing factor is the decrease during this period in the number of automobile accidents, a consequence of the war-time restrictions on travel. From 1st July, 1947, deaths of defence personnel have again been included and the rates and proportions have since risen fairly steadily.

### ACCIDENTS, POISONINGS AND VIOLENCE : DEATH RATES.(a)

Period.	Death Rate(a) from—												All Violence Proportion per 10,000 Deaths.		
	Accident.(b)			Suicide.			Homicide.(c)			Total Violence.					
	M.	F.	P.	M.	F.	P.	M.	F.	P.	M.	F.	P.	M.	F.	P.
1926-30..	84	24	54	20	4	13	2	2	2	106	30	69	1,039	365	746
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
1950 ..	80	27	54	14	5	9	1	1	1	95	33	64	893	387	670
1951 ..	86	31	59	14	5	10	2	1	1	102	37	70	948	429	721
1952 ..	83	32	57	16	5	11	2	1	2	101	38	70	967	454	742
1953 ..	79	30	56	16	6	11	2	1	1	97	37	68	969	463	746
1954 ..	79	30	55	16	5	11	2	1	1	97	36	67	965	448	737

(a) Number of deaths per 100,000 of mean population.

(b) Includes "open verdict".

(c) Includes "war wounds".

(b) *Accident* (BE 47, BE 48). In 1954 the total number of deaths from accidental causes was 4,936 (3,611 males and 1,325 females). Slightly less than 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, 2,014 (40.80 per cent.); motor vehicle non-traffic accidents, 80 (1.62 per cent.); other road vehicle accidents, 126 (2.55 per cent.); railway accidents, 143 (2.90 per cent.); water transport accidents, 78 (1.58 per cent.); aircraft accidents, 22 (0.45 per cent.); a total of 2,463 (49.90 per cent.). Other important causes were accidental falls, 990 (20.05 per cent.); accidental drowning 430 (7.46 per cent.); and accidents caused by fire and explosion of combustible material, 173 (3.50 per cent.).

(c) *Suicide* (BE 49). (i) *Modes Adopted*. Deaths from suicide in 1954 numbered 969 (males, 724; females, 245). Firearms and explosives were used in 290 cases (29.93 per cent. of total deaths by suicide). Other important modes adopted, together with the numbers and relevant percentages, were as follows:—Poisoning other than gases, 174 (17.96 per cent.); hanging or strangulation, 178 (18.37 per cent.); poisoning by gases, 151 (15.58 per cent.); submersion (drowning), 58 (5.98 per cent.); other modes, 118 (12.18 per cent.).

Of the 724 males who committed suicide, 265 (36.60 per cent.) used firearms and explosives. For females the most common mode was poisoning (other than gases). This was used in 71 cases (28.98 per cent.).

(ii) *Age at Death*. From the following table which shows the age of persons who committed suicide in 1954 it will be seen that both young and extremely old people took their lives during this year.

## AGE OF PERSONS WHO COMMITTED SUICIDE : AUSTRALIA, 1954.

Age Group (Years).	Males.	Females.	Persons.	Age Group (Years).	Males.	Females.	Persons.
10-14 ..	3	..	3	60-64 ..	79	28	107
15-19 ..	17	6	23	65-69 ..	59	19	78
20-24 ..	39	3	42	70-74 ..	46	12	58
25-29 ..	61	20	81	75-79 ..	24	6	30
30-34 ..	58	15	73	80-84 ..	13	1	14
35-39 ..	61	25	86	85-89 ..	2	..	2
40-44 ..	79	23	102	90-94 ..	2	..	2
45-49 ..	66	36	102	Not stated ..	1	..	1
50-54 ..	50	27	77				
55-59 ..	64	24	88	Total Deaths	724	245	969

(iii) *Occupation at Death, Males.* A table showing main groups of occupations of males who committed suicide during 1954 appears in *Demography Bulletin* No. 72.

(d) *Homicide and Operations of War (BE 50).* In 1954 there were 117 deaths from homicide and injury purposely inflicted by other persons (not in war), of which non-accidental poisoning caused 2 deaths, assault by firearms and explosives, 39; assault by cutting and piercing instruments, 15; and assault by other means, 61. Deaths from injury resulting from the operations of war numbered 9, but all were deaths from late effects of such injuries.

14. Age at Death of Deceased Married Males and Females, and Issue.—*Demography Bulletin* No. 72 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 1954. Deaths of married males in 1954 numbered 33,797, and of married females, 27,982. The tabulations which follow deal, however, with only 33,362 males and 27,756 females, the information regarding issue in the remaining 661 cases being incomplete. The total number of children in the families of the 33,362 males was 109,739 and of the 27,756 females, 98,944. The average number of children is shown for various age groups in the following table.

## AGE AT DEATH AND AVERAGE ISSUE OF DECEASED MARRIED (a) MALES AND FEMALES : AUSTRALIA.

Age at Death (Years).	Average Issue.									
	Males.					Females.				
	1921.	1931.	1941.	1951.	1954.	1921.	1931.	1941.	1951.	1954.
Under 20 ..	..	0.75	..	0.43	..	0.77	0.66	0.79	0.83	0.36
20-24 ..	0.84	0.81	0.73	0.96	0.71	1.22	1.13	0.95	0.86	1.17
25-29 ..	1.29	1.33	1.12	1.29	1.53	1.86	1.81	1.45	1.61	1.64
30-34 ..	2.06	1.79	1.76	1.79	1.91	2.45	2.34	1.91	1.98	2.09
35-39 ..	2.58	2.13	2.11	2.12	2.14	3.29	2.89	2.30	2.49	2.42
40-44 ..	3.23	2.77	2.49	2.30	2.39	3.66	3.29	2.77	2.39	2.36
45-49 ..	3.48	3.10	2.68	2.51	2.55	3.76	3.55	2.93	2.59	2.47
50-54 ..	3.76	3.46	2.96	2.56	2.56	4.23	3.60	3.29	2.76	2.65
55-59 ..	4.41	3.69	3.28	2.71	2.64	4.69	4.01	3.55	3.03	2.95
60-64 ..	4.98	4.02	3.55	3.07	2.90	5.39	4.21	3.79	3.29	3.12
65-69 ..	5.50	4.41	3.73	3.25	3.18	5.86	4.82	4.01	3.63	3.43
70-74 ..	6.06	5.06	4.17	3.58	3.40	6.30	5.41	4.29	3.64	3.51
75-79 ..	6.66	5.65	4.56	3.83	3.72	6.56	6.02	4.85	3.96	3.80
80-84 ..	6.89	6.17	4.93	4.30	4.05	6.76	6.26	5.39	4.19	4.02
85-89 ..	7.18	6.59	5.70	4.63	4.41	6.93	6.57	5.85	4.68	4.34
90-94 ..	7.21	6.94	6.57	5.06	4.78	6.53	6.73	6.11	5.08	4.86
95-99 ..	6.97	6.69	7.04	5.78	5.60	6.05	7.10	6.34	5.76	5.35
100 and over ..	9.20	7.00	8.69	5.71	5.13	5.11	8.20	6.73	7.72	6.67
Age not stated ..	5.36	5.00	..	8.00	2.00	5.80	5.00	..	5.50	5.67
All Ages ..	4.97	4.44	3.91	3.39	3.29	5.05	4.72	4.22	3.68	3.54

(a) Includes widowed or divorced.

The figures in the preceding table include the issue both living and dead, the proportion between them, taking the issue of deceased males and females together, being about five to one. The totals for 1954 are shown in the following table:—

#### ISSUE OF DECEASED MARRIED(a) MALES AND FEMALES : AUSTRALIA, 1954.

Issue of Married Males.				Issue of Married Females.			
Issue.	Males.	Females.	Total.	Issue.	Males.	Females.	Total.
Living ..	48,248	47,493	95,741	Living ..	41,025	41,112	82,137
Dead ..	8,327	5,671	13,998	Dead ..	9,950	6,857	16,807
Total ..	56,575	53,164	109,739	Total ..	50,975	47,969	98,944

(a) Includes widowed or divorced.

15. Age at Marriage of Deceased Males and Females, and Issue.—While the table giving the average issue of married males and females naturally shows an increase in the averages with advancing age at death, the following table which gives the average issue of males and females according to the age at marriage of the deceased parent shows a corresponding decrease in the averages as the age at marriage advances.

#### AGE AT MARRIAGE OF DECEASED MALES AND FEMALES, AND AVERAGE ISSUE : AUSTRALIA.

Age at Marriage (Years).	Average Issue.									
	Males.					Females.				
	1921.	1931.	1941.	1951.	1954.	1921.	1931.	1941.	1951.	1954.
Under 15 ..	..	..	..	..	..	7.60	6.36	7.80	4.88	5.85
15-19 ..	6.32	6.15	5.40	4.63	4.62	6.97	6.79	6.10	5.41	5.22
20-24 ..	6.05	5.56	4.89	4.23	4.00	5.50	5.23	4.80	4.28	4.13
25-29 ..	5.17	4.70	4.21	3.65	3.51	4.09	3.79	3.51	3.14	3.08
30-34 ..	4.45	3.96	3.41	3.00	2.94	2.66	2.42	2.35	2.23	2.08
35-39 ..	3.90	3.14	2.80	2.45	2.39	1.61	1.40	1.26	1.16	1.26
40-44 ..	2.67	2.36	2.01	1.69	1.67	0.62	0.39	0.35	0.36	0.44
45-49 ..	2.20	1.96	1.52	1.33	1.15	0.03	0.12	0.01	0.07	0.14
50-54 ..	1.70	1.60	1.05	0.80	0.66	..	..	..	..	..
55-59 ..	1.30	0.95	0.79	0.49	0.45	..	..	..	..	..
60-64 ..	0.33	0.63	0.29	0.24	0.20	..	..	..	..	..
65 and over ..	0.25	0.18	0.01	0.29	0.21	..	..	..	..	..
Age not stated	4.93	3.64	2.95	2.81	2.65	5.41	3.96	2.45	3.17	2.93
All Ages ..	4.97	4.44	3.91	3.39	3.29	5.05	4.72	4.22	3.68	3.54

16. Occupation of Deceased Married Males, and Issue.—A summary of the main groups of occupations of married (including widowed or divorced) males who died during 1954, together with issue, appears in *Demography Bulletin* No. 72.

## § 5. Vital Statistics of External Territories.

Because of the outbreak of hostilities in the Pacific during the 1939-45 War, civil administration in the external territories was suspended on 11th February, 1942, and registration of births, deaths and marriages was not resumed until 1946. The following table for the year 1954 shows the number of births, deaths and marriages registered in the external territories under the control of Australia, namely :—Norfolk Island ; Papua ; Trust Territory of New Guinea ; and Trust Territory of Nauru. More detailed information will be found in a series of tables in *Demography Bulletin* No. 72.

## VITAL STATISTICS : EXTERNAL TERRITORIES, 1954.

(EXCLUDING INDIGENOUS POPULATION.)

Territory.	Marriages.	Births.			Deaths.		
		Males.	Females.	Persons.	Males.	Females.	Persons.
Norfolk Island ..	4	10	11	21	9	4	13
Papua .. ..	55	73	60	133	22	8	30
Trust Territory of New Guinea .. ..	77	170	171	341	41	10	51
Trust Territory of Nauru ..	..	6	6	12	2	1	3

## CHAPTER XVIII.

### LOCAL GOVERNMENT.

#### § 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 upkeep and construction 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 a large number 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 914, 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 corporate towns and district council areas; in Western Australia as municipalities and road districts; and in Tasmania as 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. In Western Australia there are local health boards, whose personnel in most cases coincide with those of municipalities and road boards. Apart from the more thinly populated parts of New South Wales and South Australia and the Commonwealth Territories, 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, or water and sewerage, or electricity and irrigation, or harbours, or tramways, etc.—i.e. each dispenses a specific service throughout an area as distinct from the general services of the local authority.

Sections 4 to 7 following, dealing with roads and bridges, water supply and sewerage, harbours and fire brigades, include particulars 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 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. Although roads and bridges constructed and maintained directly by the Government or by the central road authority do not properly come under the heading of “Local Government”, they have been included in this chapter for the sake of convenience. Owing to difficulty in obtaining complete particulars of receipts and expenditure by the various local governing bodies in regard to roads under their control, the details of receipts and expenditure given in § 4 are those of the Government only, relating either to the supervisory board or commission in the State or to direct activities of a department. 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 are appointed by the Government. In a few 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.

7. **Other Local or Semi-Governmental Activity.**—The activities referred to above are not the only forms of local or semi-governmental undertakings. There are others, the most important being tramways and omnibus services and electricity and gas undertakings, which are not dealt with in this chapter, except to the extent that they are represented in the finances as shown in the following section. Chapter VII.—Transport and Communication contains information on municipal transport services, and Chapter X.—Electric Power Generation and Distribution deals with the various types of electricity undertakings in each State. In addition, particulars of municipal electricity and gas undertakings, although not shown separately, are included in the relevant sections in Chapter IX.—Manufacturing Industry.



## § 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 embrace important towns). At the end of 1952 the area incorporated was 18,400 square miles, or nearly three-fifths 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. There were 33 county councils and the Grafton and South Grafton Water Board at 31st December, 1952.

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 (42,000 acres) in Westernport Bay, Julia Percy Island (650 acres), off Port Fairy, and Tower Hill (1,350 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. The law relating to local government was consolidated by the Local Government Act 1946.

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. In June, 1949, the State Government rearranged the boundaries of the local authorities to the south of Brisbane, reducing their number by ten. The towns of Coolangatta and Southport were absorbed by the new town of South Coast; two new shires were created and eleven were abolished, being absorbed by the new shires and existing cities, towns and shires.

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.**—In this State, local government is carried on by means of municipalities and district road boards. Certain functions are delegated to health boards, whose personnel, in most cases, coincide with those of the municipalities and district road boards.

6. **Tasmania.**—The whole State is divided into municipal districts, Hobart and Launceston being incorporated 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 in the table below. 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 1954 Census, and are the results of 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 meaning 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 "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, 1952-53.(a)

Local Bodies.	Number.	Area. '000 Acres.	Popula- tion. (a) '000.	Dwellings.(a)		Value of Ratable Property.		
				Occu- pied.	Unoccu- pied.	Unim- proved Capital Value.	Im- proved Capital Value.	Annual Value.
				No.	No.	£'000.	£'000.	£'000.

NEW SOUTH WALES.(b)

Metropolitan—								
Capital City ..	1	7	193	52,767	1,099	71,603	240,507	12,663
Other ..	34	702	1,696	470,690	13,464	210,123	759,633	46,948
Outside Metropolitan Area	207	117,110	1,510	385,568	28,126	285,401	(c)	(c)
Total ..	242	117,819	3,399	909,025	42,691	567,127	(c)	(c)

VICTORIA.(d)

Metropolitan—								
Capital City ..	1	8	93	22,348	455	(c)	148,433	7,422
Other ..	33	328	1,329	371,340	6,316	(c)	653,645	33,050
Outside Metropolitan Area	166	55,857	1,022	267,089	20,713	(c)	560,560	28,564
Total ..	200	56,193	2,444	660,777	27,484	(c)	1,371,047	69,036

QUEENSLAND.(f)

Capital City ..	1	246	502	133,064	3,948	62,372	(c)	(c)
Outside Metropolitan Area	133	428,178	809	205,598	17,436	80,506	(c)	(c)
Total ..	134	428,424	1,311	338,662	21,384	142,878	(c)	(c)

SOUTH AUSTRALIA.(f)

Metropolitan—								
Capital City ..	1	4	30	7,454	211	12,084	49,000	2,441
Other ..	20	99	454	126,669	2,737	(c)	156,000	7,808
Outside Metropolitan Area	122	34,433	298	78,474	5,399	(c)	169,000	8,427
Total ..	143	34,536	782	212,597	8,347	(c)	374,000	18,676

WESTERN AUSTRALIA.(g)

Metropolitan—								
Capital City ..	1	14	97	25,460	577	(c)	51,450	2,659
Other ..	19	107	257	65,281	1,262	(c)	(c)	1,016
Outside Metropolitan Area	126	624,467	284	72,082	4,775	(c)	(c)	1,274
Total ..	146	624,588	638	162,223	6,614	(c)	(c)	4,949

TASMANIA.(f)

Metropolitan—								
Capital City ..	1	18	55	14,624	375	6,761	23,010	1,428
Other ..	2	99	38	9,333	531	3,407	14,973	799
Outside Metropolitan Area	46	16,661	215	54,905	4,382	24,798	74,473	4,187
Total ..	49	16,778	308	78,862	5,288	34,966	112,456	6,414

(a) Particulars of population and dwellings are as at Census 30th June, 1954. (b) Year ended 31st December, 1952. (c) Not available. (d) Year ended 30th September, 1953. (e) Excludes Yallourn area under the jurisdiction of the State Electricity Commission. (f) Year ended 30th June, 1953. (g) Municipalities—Year ended 31st October, 1953; Road Districts—Year ended 30th June, 1953.

8. Finances.—(i) *General.* The following tables show the latest available financial statistics for local government authorities. The figures relate to the years 1952-53 and 1953-54, except for New South Wales, where they relate to the years 1952 and 1953.

(ii) *Ordinary Services.* In the returns of revenue and expenditure for 1952-53 in the following table, 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, 1952-53.

Particulars.	N.S.W. (a)	Vic. (b)	Q'land. (c)	S. Aust. (c)	W. Aust. (d)	Tas. (e)	Total.
Number of Local Government Authorities ..	242	200	134	143	146	49	914

#### REVENUE (EXCLUDING LOAN RECEIPTS). (£.)

Taxation—							
Rates (net) ..	18,427,749	11,276,281	8,465,957	7,880,162	{ 1,910,633	1,119,677	44,202,817
Penalties ..	89,507	32,148					
Licences ..	349,462	67,054					
Total ..	18,866,718	11,375,483	8,516,033	7,921,727	1,951,408	1,130,886	44,785,256
Public Works and Services—							
Sanitary and Garbage Services ..	2,255,275	816,388	1,427,209	58,840	355,440	75,294	4,983,446
Council Properties ..	1,585,810	1,730,949	538,313	243,028	602,029	190,975	4,891,104
Street Construction ..	907,060	617,665	211,331	631,613	158,533	30,320	2,241,022
Other ..	1,211,232	212,183	64,491	88,740	21,938	20,188	1,668,772
Total ..	5,959,377	3,408,185	2,241,344	706,221	1,137,940	325,777	13,775,844
Government Grants—							
Roads ..	4,947,833	130,784	1,594,507	1,116,998	824,096	166,848	8,781,076
Other ..	976,656	331,389	(f) 843,533	35,910	33,290	23,783	2,246,905
Total ..	5,924,489	465,173	2,438,040	1,152,908	857,395	189,916	11,027,981
Profits from Business Undertakings ..	..	218,949	2,651	..	19,708	..	241,308
Fees and Fines ..	..	41,176	..	71,656	844,296	..	2,099,772
All Other ..	..	131,796	598,240	82,159	177,100	153,349	2,099,772
Total Revenue ..	30,750,584	15,640,763	13,816,308	4,937,701	4,987,847	1,799,958	71,933,161

#### EXPENDITURE (EXCLUDING LOAN EXPENDITURE). (£.)

General Administration ..	2,019,104	1,708,071	1,105,344	473,100	502,978	209,959	6,699,219
Debt Services (excluding Business Undertakings)—							
Interest ..	874,918	528,618	940,127	34,456	113,322	49,834	2,541,279
Redemption ..	2,062,204	759,890	1,427,003	310,444	262,430	106,986	4,928,958
Exchange ..	21,566	..	175,372	..	..	..	196,932
Other ..	..	6,473	8,370	..	..	251	15,197
Total ..	2,958,688	1,295,651	2,550,872	344,900	375,752	157,078	7,682,366
Public Works and Services—							
Roads, Streets and Bridges ..	13,999,720	5,257,097	5,044,833	2,970,981	1,752,342	746,544	29,771,529
Health Administration ..	578,819	645,515	214,840	104,548	146,569	42,181	1,732,472
Sanitary and Garbage Services ..	2,858,165	1,416,011	1,212,502	296,801	426,890	82,839	6,293,208
Street Lighting ..	758,800	361,167	200,250	115,750	72,139	41,343	1,552,458
Council Properties ..	4,026,221	2,995,861	1,131,058	455,915	1,207,454	237,146	10,048,655
Other ..	970,811	118,161	1,001,660	71,620	36,086	20,773	2,321,047
Total ..	23,192,577	11,797,115	8,807,752	4,015,618	3,636,486	1,179,827	51,710,369
Grants—							
Fire Brigades ..	201,811	283,547	152,912	73,721	57,349	30,481	799,824
Hospitals and Ambulances ..	..	..	..	..	..	..	..
Other Charities ..	81,725	59,331	1,666	108,497	3,522	2,223	1,625,407
Other ..	(h) 117,677	(i) 72,104	180,112	10,043	8,307	7,238	..
Total ..	704,163	1,057,242	347,011	197,655	69,178	39,012	2,125,231
All Other ..	700,837	80,336	180,514	463	118,660	193,812	1,702,561
Total Expenditure ..	29,605,365	15,457,185	13,150,493	5,031,698	4,793,057	1,780,648	69,818,746

(a) Figures for New South Wales relate to the year ended 31st December, 1952, 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, 1953. (c) Year ended 30th June, 1953. (d) Municipalities—Year ended 31st October, 1953; Road Districts—Year ended 30th June, 1953. (e) Includes £50,778 reimbursement from Highways Department for work done. (f) Includes £363,319 for sewerage and drainage. (g) Includes £138,146 for sewerage, mosquito control and drainage. (h) To Main Roads Department. (i) Includes £336,773 to Country Roads Board.

The following table shows the revenue and expenditure (excluding loan) of local government authority ordinary services for the years 1938-39 and 1948-49 to 1952-53:—

**LOCAL GOVERNMENT AUTHORITIES : ORDINARY SERVICES—REVENUE AND EXPENDITURE.**

(£.)

Year.	N.S.W.(a)	Victoria.(b)	Q'land.(c)	S. Aust.(c)	W. Aust.(d)	Tas.(c)	Total.
<b>REVENUE (EXCLUDING LOAN RECEIPTS).</b>							
1938-39 ..	10,657,409	6,070,551	4,177,632	1,578,688	1,447,154	518,755	24,450,189
1948-49 ..	13,524,992	8,190,347	7,035,155	2,526,530	2,436,790	895,920	34,009,734
1949-50 ..	16,293,311	9,454,755	8,291,960	2,917,606	2,858,147	1,050,939	40,866,718
1950-51 ..	18,591,800	11,044,520	10,182,127	3,460,747	3,581,714	1,214,430	48,075,338
1951-52 ..	24,169,405	13,503,694	12,471,901	4,390,093	4,158,300	1,590,395	60,283,788
1952-53 ..	30,750,584	15,640,763	13,816,308	4,937,701	4,987,847	1,799,958	71,933,161
<b>EXPENDITURE (EXCLUDING LOAN EXPENDITURE).</b>							
1938-39 ..	10,790,273	6,192,859	4,334,634	1,558,169	1,489,079	506,976	24,871,990
1948-49 ..	13,815,846	8,548,147	7,579,954	2,525,528	2,420,541	910,926	35,800,942
1949-50 ..	15,923,965	9,737,254	8,379,575	2,965,857	2,808,053	1,049,961	40,864,665
1950-51 ..	18,520,494	11,658,885	9,995,576	3,491,448	3,424,644	1,237,117	48,328,364
1951-52 ..	24,166,870	14,049,324	12,614,922	4,451,992	4,270,946	1,604,932	61,149,986
1952-53 ..	29,605,395	15,157,485	13,150,493	5,031,698	4,793,057	1,780,648	69,818,746

(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 table hereunder shows, for 1952-53, 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, 1952-53.**

(£.)

Particulars.	N.S.W.	Vic.	Q'land.	S. Aust.	W. Aust.	Tas.	Total.
<b>REVENUE (EXCLUDING LOAN RECEIPTS).</b>							
Water Supply and Sewerage—							
Rates .. ..	1,294,730	..	28,086	..	10,974	350,77	1,684,562
Charges for Services and Sales of Products ..	332,704	88,985	2,516,584	1,710	2,303	78,594	3,020,880
Other (Including Grants) ..	(a) 751,102	5,084	1,458,300	..	..	35,392	2,250,058
Total .. ..	2,378,626	94,069	4,003,060	1,710	13,277	464,758	6,955,500
Electricity and Gas—							
Rates .. ..	149,062	..	12,242	489	..	..	161,793
Charges for Services and Sales of Products ..	30,007,194	7,040,585	5,374,611	413,342	426,080	..	43,261,812
Other (Including Grants) ..	1,127,629	100,068	313,283	27,726	10,317	..	1,579,923
Total .. ..	31,283,885	7,141,553	5,700,136	441,557	436,397	..	45,003,528
Railways, Tramways and Omnibuses—							
Rates .. ..	..	..	..	..	..	38,735	38,735
Charges for Services and Sales of Products ..	..	..	2,927,478	..	..	639,969	3,567,447
Other (Including Grants) ..	..	..	102,135	..	..	9,871	112,006
Total .. ..	..	..	3,029,613	..	..	688,575	3,718,188
Other—							
Rates .. ..	(b) ..	(c) ..	(d) 1,922	(e) ..	(f) 513	(g) 181	2,616
Charges for Services and Sales of Products ..	1,988,563	403,010	49,836	14,691	18,673	57,377	2,532,150
Other (Including Grants) ..	2,501	17,056	13,685	4,519	..	1,328	39,080
Total .. ..	1,991,064	420,066	65,443	19,210	19,186	58,886	2,573,855
Grand Total .. ..	35,653,575	7,655,688	12,798,252	462,477	468,860	1,212,219	58,251,071

NOTE.—See next page for footnotes.

LOCAL GOVERNMENT AUTHORITIES: BUSINESS UNDERTAKINGS—  
REVENUE AND EXPENDITURE, 1952-53—*continued.*

(£.)

Particulars.	N.S.W.	Vic.	Q'land.	S. Aust.	W. Aust.	Tas.	Total.
<b>EXPENDITURE (EXCLUDING LOAN EXPENDITURE).</b>							
<b>Water Supply and Sewerage—</b>							
Working Expenses ..	1,109,397	62,162	1,418,362	1,547	9,071	231,567	2,832,109
Depreciation ..	(h) 72,907	12,351	..	..	..	..	— 60,556
Debt Charges ..	651,687	17,827	1,020,072	65	5,053	202,398	1,897,102
Other (including Transfers to General Revenue and Construction) ..	..	1,331	1,376,776	..	..	55,935	1,434,042
<b>Total .. ..</b>	<b>1,688,177</b>	<b>93,671</b>	<b>3,815,210</b>	<b>1,612</b>	<b>14,127</b>	<b>489,900</b>	<b>6,102,697</b>
<b>Electricity and Gas—</b>							
Working Expenses ..	27,364,730	6,180,650	4,464,229	384,780	356,280	..	38,750,669
Depreciation ..	(h) 958,194	277,183	..	..	33,752	..	1,269,129
Debt Charges ..	2,118,632	386,158	690,615	26,209	28,973	..	3,250,587
Other (including Transfers to General Revenue and Construction) ..	..	261,236	429,059	16,390	16,605	..	723,290
<b>Total .. ..</b>	<b>30,441,556</b>	<b>7,105,227</b>	<b>5,583,903</b>	<b>427,379</b>	<b>435,610</b>	<b>..</b>	<b>43,993,675</b>
<b>Railways, Tramways and Omnibuses—</b>							
Working Expenses ..	..	..	2,913,977	..	..	555,567	3,469,544
Depreciation ..	..	..	..	..	..	..	..
Debt Charges ..	..	..	386,394	..	..	105,849	492,243
Other (including Transfers to General Revenue and Construction) ..	..	..	90,358	..	..	38,476	128,834
<b>Total .. ..</b>	<b>..</b>	<b>..</b>	<b>3,390,729</b>	<b>..</b>	<b>..</b>	<b>699,892</b>	<b>4,090,621</b>
<b>Other—</b>							
Working Expenses ..	(b) 1,861,378	(c) 358,011	(d) 55,110	(e) 18,523	(f) 19,134	(g) 38,174	2,350,339
Depreciation ..	(h) 25,215	11,500	..	..	..	..	36,805
Debt Charges ..	34,783	35,667	1,659	..	114	8,565	80,788
Other (including Transfers to General Revenue and Construction) ..	..	18,933	4,456	1,246	..	6,614	31,249
<b>Total .. ..</b>	<b>1,921,376</b>	<b>124,201</b>	<b>61,234</b>	<b>19,769</b>	<b>19,248</b>	<b>53,353</b>	<b>2,499,181</b>
<b>Grand Total .. ..</b>	<b>24,051,109</b>	<b>7,623,099</b>	<b>12,851,076</b>	<b>448,760</b>	<b>468,985</b>	<b>1,243,145</b>	<b>56,686,174</b>

(a) Includes Government grant, £630,451, for part of cost of new works borne by Government.  
 (b) Abattoirs, ice-works, and production of building materials. (c) Abattoirs and hydraulic power undertakings. (d) Municipal markets, amusement parks, hotels, and cinemas. (e) Quarries.  
 (f) Quarries, ice-works and abattoirs. (g) Abattoirs. (h) Net balance after deducting charge for debt redemption. The full amount of charge for debt redemption is included under debt charges.

NOTE.—For years to which particulars relate, *see* preceding table. 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 1938-39 and 1948-49 to 1952-53.

## LOCAL GOVERNMENT AUTHORITIES : BUSINESS UNDERTAKINGS—REVENUE AND EXPENDITURE.

(£.)

Year.	N.S.W.(a)	Victoria.(b)	Q'land.(c)	S. Aust.(c)	W. Aust.(d)	Tas.(c)	Total.
REVENUE (EXCLUDING LOAN RECEIPTS).							
1938-39 ..	6,405,010	1,813,796	3,373,966	113,132	962,470	528,461	13,196,835
1948-49 ..	14,294,306	3,667,290	5,658,198	229,896 (e)	733,538	750,963	25,334,191
1949-50 ..	16,337,869	4,520,756	6,608,609	272,369	523,654	795,929	29,059,186
1950-51 ..	20,773,694	5,094,127	7,923,664	328,840	550,538	927,257	35,598,120
1951-52 ..	26,803,005	6,309,342	10,435,609	379,576	436,151	1,088,285	45,451,968
1952-53 ..	35,653,575	7,655,688	12,798,252	462,477	468,860	1,212,219	58,251,071

EXPENDITURE (EXCLUDING LOAN EXPENDITURE).							
1938-39 ..	5,556,123	1,802,972	3,256,263	123,356	935,052	513,666	12,187,432
1948-49 ..	14,394,453	3,597,041	5,701,314	258,702 (e)	755,793	736,647	25,443,950
1949-50 ..	16,659,960	4,494,128	6,655,637	292,237	535,287	797,887	29,435,136
1950-51 ..	20,556,981	5,219,961	7,917,049	339,556	585,938	926,336	35,545,821
1951-52 ..	27,381,428	6,248,151	10,734,811	394,516	453,963	1,070,473	40,283,342
1952-53 ..	34,051,109	7,623,099	12,851,076	448,760	468,985	1,243,145	50,686,172

(a)-(d) See notes to corresponding table on Ordinary Services (page 672). (e) Electricity undertaking taken over by State Electricity Commission on 20th December, 1948. Includes trading from 1st November, 1948 to 19th December, 1948.

(iv) *Loan Expenditure.* The table below shows particulars for 1952-53 of loan expenditure on works connected with the ordinary services and the business undertakings of local government authorities.

## LOCAL GOVERNMENT AUTHORITIES : LOAN EXPENDITURE ON WORKS, 1952-53.

(£.)

Particulars.	N.S.W.	Vic.	Q'land.	S. Aust.	W. Aust.	Tas.	Total.
ORDINARY SERVICES.							
Roads, Bridges, Streets, Footpaths, Drainage and Sewerage ..	2,047,126	1,006,714	1,579,126	378,093	347,859	350,754	10,830,967
Council Properties ..	1,902,840	537,135	1,016,766	31,267	325,082		
Parks, Gardens and Recreational Reserves ..	311,378	140,662		..	27,797		
Other ..	(a) 398,421	112,709	302,061	655	14,522		
Total ..	4,659,765	1,797,220	2,897,953	410,015	715,260	350,754	10,830,967

BUSINESS UNDERTAKINGS.							
Water Supply ..	1,665,657	36,659	1,466,640	..	..	732,011	18,596,466
Sewerage ..	351,343	..	568,971	..	2,980		
Electricity and Gas ..	8,276,375	1,685,315	3,106,576	115,004	40,968		
Railways, Tramways and Omnibuses ..	..	..	243,561	..	..		
Abattoirs ..	201,682	50,436	..	..	..	732,011	18,596,466
Other ..	1,387	..	50,901	..	..		
Total ..	10,496,444	1,772,410	5,436,649	115,004	43,948	732,011	18,596,466
Grand Total ..	15,156,200	3,569,630	8,334,602	525,019	759,208	1,082,765	29,427,433

(a) Includes advances for homes, £200,550.

NOTE.—For years to which particulars relate, see next table.

The following table shows the loan expenditure on works connected with local government ordinary services and business undertakings during the years 1938-39 and 1948-49 to 1952-53 :—

### LOCAL GOVERNMENT AUTHORITIES : LOAN EXPENDITURE ON WORKS.

(£.)

Year.	N.S.W.(a)	Victoria.(b)	Q'land.(c)	S. Aust.(c)	W. Aust.(d)	Tas.(c)	Total.
ORDINARY SERVICES.							
1938-39 ..	1,757,704	662,986	1,316,651	43,479	117,172	39,481	3,937,473
1948-49 ..	2,614,670	712,378	2,326,484	189,792	356,977	189,497	6,389,798
1949-50 ..	2,769,996	924,630	2,737,791	331,047	500,905	315,439	7,579,808
1950-51 ..	3,242,674	1,194,723	3,546,437	280,704	586,386	347,347	9,198,271
1951-52 ..	4,255,591	1,700,714	4,412,322	512,166	692,908	467,938	12,041,639
1952-53 ..	4,659,765	1,797,220	2,897,953	410,015	715,260	350,754	10,830,967

### BUSINESS UNDERTAKINGS.

1938-39 ..	1,481,484	452,374	941,911	9,542	76,280	232,687	3,194,278
1948-49 ..	4,038,922	654,619	2,109,248	16,900	36,794	196,499	7,052,982
1949-50 ..	6,356,107	680,481	2,811,709	8,044	71,005	396,297	10,323,643
1950-51 ..	8,950,059	1,185,122	3,311,223	74,864	64,087	449,703	14,035,058
1951-52 ..	12,077,623	1,841,068	5,432,804	100,873	46,884	811,166	20,310,418
1952-53 ..	10,196,444	1,772,410	5,436,649	115,004	43,948	732,011	18,596,466

(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 and Semi-Governmental Authorities' Debt.

1. **General.**—Statistics of local and semi-governmental debt for the years 1938-39 and 1950-51 to 1953-54 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, 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, Miscellaneous.

*Queensland.* Water Supply and Sewerage, Irrigation and Drainage, Harbours, Electricity Supply, Roads and Bridges, Fire Brigades, Universities, Hospitals and Ambulances, Marketing (Buying and Selling and Agency), Industry Assistance.

*South Australia.* Irrigation and Drainage, Tramways, Electricity Supply, Fire Brigades, Hospitals and Ambulances, Marketing (Agency), Industry Assistance, Banking, Housing, Miscellaneous.

*Western Australia.* Water Supply and Sewerage, Irrigation and Drainage, Harbours, Tramways, Electricity Supply, Fire Brigades, Hospitals and Ambulances, Marketing (Agency), Housing.

*Tasmania.* Harbours, Electricity Supply, Fire Brigades, Housing.

A detailed list of the authorities included is shown in *Finance Bulletin* No. 45, 1953-54.

2. **Local and Semi-Governmental Authorities' Debt.**—The following table provides a summary of new money loan raisings, provisions for the redemption of debt, debt outstanding and interest payable of local and semi-governmental authorities for the years ended 30th June, 1953 and 1954. For greater detail See *Finance Bulletin* No. 45, 1953-54.

**LOCAL AND SEMI-GOVERNMENTAL AUTHORITIES: NEW MONEY LOAN  
RAISINGS, REDEMPTION, DEBT AND INTEREST PAYABLE 1952-53 AND 1953-54.**  
(£'000.)

Particulars.	N.S.W.	Vic.	Q'land.	S. Aust.	W. Aust.	Tas.	Total.
<b>LOCAL GOVERNMENT AUTHORITIES.</b>							
<b>1952-53.</b>							
New Money Loan Raisings—							
From Government ..	130	23	1,335	137	22	1	1,648
From Public ..	7,553	3,901	7,802	410	765	1,091	21,522
Total ..	7,683	3,924	9,137	547	787	1,092	23,170
Funds Provided for Redemption—							
Government Loans ..	32	8	977	238	4	8	1,267
Loans due to Public ..	2,191	1,008	1,602	76	281	317	6,475
Total ..	3,223	1,016	2,579	314	285	325	7,742
Accumulated Sinking Fund Balance ..	5,097	1,844	2,482	..	225	299	9,947
Debt—							
Due to Government ..	1,330	293	11,072	707	90	100	13,642
Due to Banks (Net Overdraft) ..	225	829	565	69	7	295	1,990
Due to Public Creditor (a) ..	48,125	19,511	46,064	1,175	3,426	5,850	125,951
Total(a) ..	49,730	20,633	58,601	1,951	3,523	6,245	110,683
Maturing Overseas(a)(b) ..	1,812	..	2,213	..	..	..	4,025
Annual Interest Payable (a) ..	(c)	799	2,163	54	134	224	(c)
<b>LOCAL GOVERNMENT AUTHORITIES.</b>							
<b>1953-54.</b>							
New Money Loan Raisings—							
From Government ..	308	56	1,997	586	18	35	3,000
From Public ..	10,958	3,341	7,553	433	1,265	1,174	23,844
Total ..	10,366	3,397	9,550	1,019	1,303	1,209	26,844
Funds Provided for Redemption—							
Government Loans ..	58	13	996	256	1	8	1,333
Loans due to Public ..	2,952	1,118	2,099	98	340	321	6,927
Total ..	3,010	1,131	3,095	354	341	329	8,260
Accumulated Sinking Fund Balance ..	5,198	2,029	2,743	1	199	260	10,430
Debt—							
Due to Government ..	1,687	336	12,062	1,036	42	127	15,290
Due to Banks (Net Overdraft) ..	146	543	27	55	4	20	795
Due to Public Creditor(a) ..	55,148	21,468	52,638	1,509	4,397	6,673	141,831
Total(a) ..	56,981	23,347	64,727	2,600	4,443	6,820	157,918
Maturing Overseas(a)(b) ..	1,812	..	2,103	..	..	..	3,915
Annual Interest Payable(a) ..	(c)	894	2,530	73	181	267	(c)
<b>SEMI-GOVERNMENTAL AND OTHER PUBLIC AUTHORITIES.</b>							
<b>1952-53.</b>							
New Money Loan Raisings—							
From Government ..	15,228	21,621	263	8,694	2,961	9,118	57,885
From Public ..	18,801	32,377	5,827	4,686	2,979	4,162	68,831
Total ..	34,029	53,998	6,090	13,380	5,940	13,280	120,716
Funds Provided for Redemption—							
Government Loans ..	468	751	143	345	321	288	2,316
Loans due to Public ..	1,814	2,518	704	3	43	54	5,106
Total ..	2,312	3,290	847	348	364	342	7,512
Accumulated Sinking Fund Balance ..	11,054	5,944	..	461	18	10	17,487
Debt—							
Due to Government ..	77,897	101,067	3,640	48,709	21,937	43,411	296,661
Due to Banks (Net Overdraft) ..	1,146	3,392	882	46	24	..	5,490
Due to Public Creditor(a) ..	138,216	189,877	21,480	17,491	3,321	6,002	376,390
Total(a) ..	217,259	294,336	26,002	66,249	25,282	10,117	678,541
Maturing Overseas(a)(b) ..	8,541	3,899	..	767	..	..	13,207
Annual Interest Payable(a) ..	(c)	10,351	1,014	2,390	962	1,571	(c)

NOTE.—See next page for footnotes.



LOCAL AND SEMI-GOVERNMENTAL AUTHORITIES: NEW MONEY LOAN  
RAISINGS, REDEMPTION, DEBT AND INTEREST PAYABLE 1952-53 AND  
1953-54—continued.

(£'000.)

Season.	N.S.W.	Vic.	Q'land.	S. Aust.	W. Aust.	Tas.	Total.
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## SEMI-GOVERNMENTAL AND OTHER PUBLIC AUTHORITIES.

1953-54.

New Money Loan Raisings—							
From Government ..	20,040	20,977	1,349	12,601	1,873	9,523	66,363
From Public ..	14,231	34,485	8,631	2,565	2,784	2,024	64,720
Total ..	34,271	55,462	9,980	15,166	4,657	11,547	131,083
Funds Provided for Redemption—							
Government Loans ..	574	800	211	424	370	360	2,739
Loans due to Public ..	2,528	4,650	1,271	2,312	82	113	10,956
Total ..	3,102	5,450	1,482	2,736	452	473	13,695
Accumulated Sinking Fund Balance ..	12,169	6,487	188	562	54	58	19,518
Debt—							
Due to Government ..	97,364	121,172	4,766	60,988	23,441	44,796	352,527
Due to Banks (Net Overdraft) ..	336	190	711	18	8	..	1,263
Due to Public Creditor(a) ..	151,268	220,823	34,492	17,746	6,059	7,964	438,352
Total(a) ..	248,968	342,185	39,969	78,752	29,508	52,760	792,142
Maturing Overseas(a)(b) ..	8,520	3,886	..	767	..	..	13,176
Annual Interest Payable(a) ..	(c)	12,510	1,646	2,916	1,145	1,792	(c)

(a) Includes debt or interest payable in London and New York. The former is expressed in United Kingdom currency, the latter is payable in dollars which have been converted at the rate of 4.8665 dollars to £1.

(b) Included in debt figures above.

(c) Not available.

In this and 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 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 1938-39 and 1950-51 to 1953-54.

**LOCAL AND SEMI-GOVERNMENTAL AUTHORITIES, AUSTRALIA : NEW MONEY  
LOAN RAISINGS, REDEMPTION AND DEBT.**

(£'000.)

Particulars.	1938-39.	1950-51.	1951-52	1952-53.	1953-54.
<b>LOCAL GOVERNMENT AUTHORITIES.</b>					
New Money Loan Raisings—					
From Government .. ..	371	1,970	3,175	1,648	3,000
From Public .. ..	7,060	16,502	18,381	21,522	23,844
Total .. ..	7,431	18,472	21,556	23,170	26,844
Funds provided for Redemption—					
Government Loans .. ..	2,141	748	942	1,267	1,333
Loans due to Public .. ..	2,995	4,777	5,351	6,475	6,927
Total .. ..	5,136	5,525	6,293	7,742	8,260
Accumulated Sinking Fund Balance ..	(a)	9,826	9,542	9,947	10,439
Debt—					
Due to Government .. ..	13,207	11,110	13,374	13,642	15,290
Due to Banks (Net Overdraft) .. ..	1,544	1,163	2,567	1,990	795
Due to Public Creditor(b) .. ..	76,582	97,038	109,600	125,051	141,833
Total(b) .. ..	91,333	109,311	125,555	140,683	157,918
Maturing Overseas(b)(c) .. ..	17,893	4,429	4,229	4,025	3,915
<b>SEMI-GOVERNMENTAL AND OTHER PUBLIC AUTHORITIES.</b>					
New Money Loan Raisings—					
From Government .. ..	1,524	23,205	69,130	57,885	66,363
From Public .. ..	7,038	54,140	56,173	68,831	64,720
Total .. ..	8,562	77,345	125,303	126,716	131,083
Funds provided for Redemption—					
Government Loans .. ..	699	1,616	1,864	2,316	2,739
Loans due to Public .. ..	1,146	5,415	3,962	5,196	10,956
Total .. ..	1,845	7,031	5,826	7,512	13,695
Accumulated Sinking Fund Balance ..	(a)	14,583	16,119	17,487	19,518
Debt—					
Due to Government .. ..	(d)44,817	111 676	218,210	296,661	352,527
Due to Banks (Net Overdraft) .. ..	2,006	4,718	9,141	5,490	1,263
Due to Public Creditor(b) .. ..	118,506	253,169	307,240	376,390	438,352
Total(b) .. ..	165,329	369,563	534,591	678,541	792,142
Maturing Overseas(b)(c) .. ..	12,088	12,923	13,267	13,207	13,176

(a) Not available. (b) Includes debt in London and New York. The former is expressed in United Kingdom currency, the latter is payable in dollars which have been converted at the rate of 4.8665 dollars to £1. (c) Included in debt figures above. (d) Approximate only.

## § 4. Roads and Bridges.

1. Commonwealth Government Grants.—The following table shows the allocations to the several States under the several Commonwealth Aid Roads and Works Acts, for road construction, maintenance, repair and other works connected with transport during the years 1938-39 and 1948-49 to 1953-54. Allocations for the construction and maintenance of strategic roads and for the promotion of road safety practices made in the years 1948-49 to 1953-54 are excluded. The aggregate amounts payable under the relevant Acts from 1922-23 to 1953-54 for the purposes outlined above are also shown. Further particulars of these grants appear in Chapter XX.—Public Finance and in *Finance Bulletins*.

## ROAD CONSTRUCTION, MAINTENANCE, ETC.: GRANTS BY COMMONWEALTH GOVERNMENT.

(£'000.)

Year ended 30th June—	N.S.W.	Vic.	Q'land.	S. Aust.	W. Aust.	Tas.	Total.
1939 .. .. .	1,199	747	815	474	819	213	4,267
1949 .. .. .	2,003	1,236	1,363	781	1,363	355	7,101
1950 .. .. .	2,472	1,526	1,683	965	1,683	438	8,767
1951 .. .. .	3,819	2,357	2,600	1,490	2,600	677	13,543
1952 .. .. .	4,131	2,549	2,812	1,611	2,812	732	14,647
1953 .. .. .	4,260	2,629	2,900	1,662	2,900	756	15,107
1954 .. .. .	4,641	2,863	3,160	1,810	3,160	823	(a) 21,457
Aggregate, years 1922-23 to 1953-54 .. .. .	39,191	24,486	26,676	15,497	26,812	6,932	a 144,644

(a) Includes £5,000,000 paid into the Commonwealth Aid Roads (Supplementary) Trust Account, to be expended on grants to the States for roads purposes in subsequent years.

2. New South Wales.—(i) *General.* A central road authority was created by legislation early in 1925 for the purpose of providing improved and uniform standards of construction and maintenance of the principal roads, and to administer Governmental subsidies for work on those roads. This authority, known as the Department of Main Roads, exercises control over Government activities in connexion with road works. Its activities embrace works on main and developmental roads throughout the State, all roads in the unincorporated portion of the Western Division, and proclaimed national works (principally bridges and vehicular ferries) constructed from Government funds. The department co-operates with the municipal and shire councils in the work of constructing and maintaining a well-organized system of main highways.

In the metropolitan district the whole cost of the construction and maintenance of main roads is paid from the funds of the Main Roads Department, while in the country districts assistance in respect of road works may be granted for any area through which a main road passes. The cost of constructing developmental roads and works is borne in full by the Main Roads Department, but local councils are required to maintain them in satisfactory condition. For other roads the cost of both construction and maintenance work is generally chargeable to the revenue of local authorities, although Governmental assistance is not infrequently granted for works of construction and re-construction. In the Western Division the full cost of all roads and bridges is met by the Department of Main Roads.

The general system of road communication throughout the State is made up of main roads classified into State highways, trunk roads and ordinary main roads. There are also secondary roads (metropolitan area) and developmental roads.

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 representations made by councils concerned, availability of funds for construction and maintenance purposes, and the value as connecting links between centres of population or business.

(ii) *Length of Roads.* (a) *Proclaimed Roads.* The following table shows lengths of proclaimed roads at 30th June, 1954, according to class of road :—

PROCLAIMED ROADS, NEW SOUTH WALES : LENGTHS, 30th JUNE, 1954.  
(Miles.)

Division.	Main Roads.				Secondary Roads.	Developmental Roads.	Total.
	State Highways.	Trunk Roads.	Ordinary Main Roads.	Total.			
Eastern and Central	5,199	2,874	9,695	17,768	(a) 77	2,934	20,779
Western ..	1,329	1,355	2,839	5,523	..	..	(b) 5,523
Total ..	6,528	4,229	12,534	23,291	77	2,934	26,302

(a) Metropolitan area.  
Department.

(b) Excludes 3,213 miles of unclassified roads, the responsibility of the

During 1953-54, 89 miles of new developmental roads were proclaimed and 66 miles were removed from the list of proclaimed roads. There were no main roads proclaimed during the year.

The length of main and secondary roads maintained by the Department of Main Roads at 30th June, 1954 (excluding the Western Division) was 2,807 miles (16 per cent.), while the length maintained by councils was 15,038 miles (84 per cent.). The proportions of the several classes of main roads maintained by the Department and councils respectively were :—State highways, 41 per cent., 59 per cent.; trunk roads, 2 per cent., 98 per cent.; ordinary main roads, 6 per cent., 94 per cent. Secondary roads were wholly maintained by councils. In the County of Cumberland (the metropolis and adjoining areas) the Department maintained 55 per cent. of the roads (504 miles).

(b) *Composition of Roads.* In 1954, the total length of all roads in New South Wales was estimated at 125,029 miles, including 8,645 miles in the Western Division. The lengths of roads, according to their composition or nature, were as follows :—cement concrete, 405 miles; asphaltic concrete, 200 miles; tar or bituminous macadam, 4,684 miles; surface water-bound macadam, 5,442 miles; water-bound macadam, 1,792 miles; gravel or crushed rock, 39,550 miles; formed only, 27,279 miles; cleared or natural surface only, 45,677 miles.

(iii) *Main Roads Department.* (a) *General.* Progress has continued with the implementation of the Main Roads Department plan for main road development in the metropolis and the balance of the County of Cumberland. The plan has been incorporated in the County of Cumberland Planning Scheme approved by Parliament under the Local Government (Amendment) Act 1951. Detailed planning of the Newcastle and District Arterial Roads System is well advanced and some sections of the system have already been constructed. Surveys and designs have been advanced in the planned Wollongong-Port Kembla District Main Roads System.

In addition to its construction and maintenance work on roads, the Main Roads Department is engaged on a scheme for widening metropolitan roads. The acquisition of land required to implement approved schemes has been proceeding.

During 1953-54, 49 new bridges were completed on main roads by the Department and councils. Major bridge works under construction include steel and concrete bridges over Iron Cove between Balmain and Drummoyne, Sydney (length 1,536 feet), over

Middle Harbour at the Spit, Sydney (length 745 feet), over George's River at Liverpool (length 912 feet), and over the Clyde River at Bateman's Bay (length 1,008 feet).

(b) *Receipts and Payments.* The funds of the Department of Main Roads are derived principally from taxation of motor vehicles, contributions by the Commonwealth Government under the Commonwealth Aid Roads and Works Acts (*see* Chapter XX.—Public Finance, for some particulars of the basis and distribution of grants under these Acts and para. 1 of this section for particulars of the amounts allocated in recent years), contributions by municipal and shire councils, and special (not statutory) assistance by the State Government by way of loan moneys or special grants from revenue funds. Receipts and payments for the four years 1950–51 to 1953–54 compared with the income and expenditure for 1938–39 are shown below.

DEPARTMENT OF MAIN ROADS, NEW SOUTH WALES : RECEIPTS AND PAYMENTS.

(£.)

Item.	1938–39. (a)	1950–51.	1951–52.	1952–53.	1953–54.
RECEIPTS.					
Motor Vehicle Taxation, and Registration and Licence Fees	2,018,556	3,586,260	5,046,392	6,381,289	6,693,215
Commonwealth Aid Roads and Works Acts .. ..	1,176,039	2,560,447	2,881,122	2,916,757	3,268,949
Councils' Contributions .. ..	250,679	328,283	396,766	486,352	559,780
Consolidated Revenue (State) .. ..	..	350,000	300,000	100,000	850,000
Loans from State Government .. ..	302,643	215,000	225,000	150,000	..
Grants and Contributions from State Government and Departments, etc. .. ..	13,549	26,470	58,545	74,063	89,266
Commonwealth Funds for Special Works .. ..	..	133,140	192,566	365,574	326,197
Hire of Plant and Motor Vehicles .. ..	..	393,224	479,048	618,913	983,831
Suspense Accounts .. ..	..	..	..	39,685	10,674
Other .. ..	54,782	149,679	171,562	261,476	187,646
Total .. ..	3,816,248	7,743,203	9,751,001	11,394,109	12,969,558
PAYMENTS.					
Roads and Bridges—					
Construction .. ..	1,736,898	2,276,055	3,625,036	4,302,422	6,331,164
Maintenance .. ..	1,519,929	3,787,059	4,921,350	4,554,406	5,147,154
Other Works .. ..	..	..	..	28,178	27,156
Debt Charges—					
Interest, Exchange, etc. .. ..	152,460	120,702	123,297	122,651	136,450
Debt Redemption .. ..	200,591	25,875	27,776	(b) 129,472	31,442
Repairs and Expenses, Plant and Motor Vehicles .. ..	..	253,405	367,940	510,867	469,570
Purchase of Assets .. ..	..	435,885	816,649	548,167	973,929
Suspense Accounts .. ..	..	98,259	92,528	..	2,438
Administration, etc. .. ..	100,583	279,622	348,652	395,636	422,428
Other .. ..	914	97,181	139,341	131,216	97,651
Total .. ..	3,711,384	7,374,043	10,462,560	10,723,011	13,639,382

(a) Income and expenditure.

(b) Includes £100,000 repayment to Treasury of funds specially provided by the State Government in earlier years from Consolidated Revenue.

The figures shown above represent the aggregate receipts and payments of three funds—the County of Cumberland Main Roads Fund, the Country Main Roads Fund and the Developmental Roads Fund. From 1st January, 1925 to 30th June, 1954 receipts amounted to £138,985,137 and payments to £137,818,047. Particulars of the individual funds are—County of Cumberland, receipts £36,114,802, payments £35,531,410; Country, £98,363,263, £97,802,536; Developmental, £4,507,072, £4,484,101.

The total expenditure on roads, streets and bridges in the State by all authorities during the years 1938–39 and 1949–50 to 1952–53 was, respectively, £8,891,000, £12,377,000, £14,840,000, £19,969,000, and £22,593,000. These figures are approximate and they include expenditure on construction, maintenance and direct administration, but not on debt charges. Expenditure on the Sydney Harbour Bridge is not included.

(c) *Sydney Harbour Bridge.* The Sydney Harbour Bridge was opened for traffic on 19th March, 1932. The main span is 1,650 feet and the clearance for shipping 170 feet from high water level. The deck, 160 feet wide, carries a roadway, two railway tracks and two tramway tracks, and there is also a footway on each side. The capital cost of the bridge to the 30th June, 1954, was £9,725,507, but this amount will be reduced by approximately £260,000 on the disposal of all surplus resumed property. The portion met from repayable loan funds, over £8,000,000, is to be repaid over a period of 53 years ending approximately in 1985. The accumulated balance of the Bridge Account at 30th June, 1954, showed a surplus of £15,920, after the transfer of sums totalling £985,000 to a reserve account. Annual income, after a decline to less than £300,000 during the 1939–45 War, has risen from about £400,000 in 1938–39 to over £800,000 in 1953–54; expenditure over the same period has remained relatively stable, varying between £424,000 and £500,000. In 1953–54 income included road tolls £648,641, railway passenger tolls £139,340, and tram and omnibus passenger tolls £26,045. Expenditure amounted to £492,776, including interest, exchange, etc., £235,065, sinking fund, £62,581 and maintenance and improvement £117,666. During 1953–54, 25,056,000 rail travellers, 23,753,000 tram and omnibus travellers, and 29,384,000 road travellers in 17,786,000 road vehicles crossed the bridge, contributing respectively, 17 per cent., 3 per cent., and 80 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 the main roads, State highways, tourists' roads, etc., 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 communication or to improve the conditions of traffic.

(ii) *Length of Roads.* (a) *Declared Roads.* The total length of declared roads in Victoria at 30th June, 1953 the latest date for which details are available, was 14,448 miles, classified as follows:—State highways, 3,849 miles; main roads, 9,792 miles; tourist roads, 432 miles; forest roads, 375 miles. The total length of the surface treated (black) system included in the foregoing totals was 7,361 miles or 51 per cent.

(b) *Composition of Roads.* It is estimated that, in addition to the 14,448 miles of classified roads as above, there were approximately 90,000 miles of unclassified roads at 30th June, 1953. The latest detailed estimate of the length of roads and streets in Victoria (as at 30th September, 1948) provides the following information:—Wood or stone, 62 miles; portland cement concrete, 150 miles; asphaltic concrete and sheet asphalt, 202 miles; tar or bitumen surface seal, 10,241 miles; water-bound macadam, gravel, sand and hard loam pavements, 28,418 miles; formed only, 23,901 miles; surveyed only, 38,437 miles; total 101,411 miles.

(iii) *Country Roads Board.* (a) *General.* During 1953–54 1,198 miles of declared roads under the Board's control were treated with bitumen. In addition, 83 miles of undeclared roads, for which the Board contributed funds, were similarly treated. Work for other authorities carried out by the Board's plant amounted to 148 miles. The total length of bitumen treatment carried out in 1953–54 was 1,429 miles. Of the work on the roads under the Board's control, 568 miles related to State highways.

During 1953–54, 164 bridge projects with a total value of £646,804 were initiated. Of these new projects, 30 with a total value of £295,395 were supervised by the Board and 134 with a total value of £351,409, were supervised by municipalities.

(b) *Receipts and Payments.* The funds of the Country Roads Board are derived principally from motor vehicle registration fees, drivers' licence fees, contributions from the Commonwealth Government under Commonwealth Aid Roads and Works Acts and payments from municipalities. In addition loans have been authorized from time to time under the Country Roads Acts for permanent works on main roads and State highways and restoration of flood and bush fire damage. During the year ended 30th June, 1954, loan receipts and payments each amounted to £1,512,741, and expenditure included £245,741 for restoration of flood and bush fire damage. The total loan expenditure to 30th June, 1954 was £10,368,745. This figure does not include loan expenditure from the Developmental Roads Loan Account, which fund 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.

Total receipts and payments during each of the years 1938-39 and 1950-51 to 1953-54 are shown below :—

## COUNTRY ROADS BOARD, VICTORIA : RECEIPTS AND PAYMENTS.

(£.)

Item.	1938-39.(a)	1950-51.	1951-52.	1952-53.	1953-54.
<b>RECEIPTS.</b>					
Motor Vehicle Registration Fees ..	1,690,962	3,015,82c	3,694,012	3,702,131	3,791,643
Drivers' Licence Fees (b) ..	..	143,291	159,950	159,402	178,885
Municipalities' Payments ..	318,878	187,109	283,391	344,32c	331,605
Commonwealth Aid Roads and Works Acts (c) ..	716,019	1,988,662	2,501,150	2,446,02c	2,741,608
Loans from State Government ..	57,972	715,956	1,046,621	1,191,509	1,512,741
Stores and Materials ..	233,104	..	..	..	..
Hire of Plant ..	53,724	..	..	..	..
Other ..	117,341	3,521	4,222	2,092	1,841
<b>Total ..</b>	<b>3,188,000</b>	<b>6,054,359</b>	<b>7,689,346</b>	<b>7,845,483</b>	<b>8,558,323</b>

## PAYMENTS.

Construction and Maintenance of Roads and Bridges—					
State Highways ..	453,708	2,077,175	2,158,205	2,250,803	2,503,912
Main Roads ..	1,027,210	2,059,075	2,626,675	2,492,855	2,843,251
Tourist Roads ..	77,694	212,398	196,512	232,778	217,804
Forest Roads ..	..	63,333	69,15c	113,895	108,504
Unclassified Roads ..	468,122	937,692	773,384	918,941	995,787
Roads adjoining Commonwealth Properties ..	13,321	709	1,099	..	..
Other ..	(d) 58,729	11,641	10,775	13,843	17,032
Relief to Municipalities ..	240,170	..	..	..	..
Plant, Stores and Materials ..	310,332	578,273	701,760	840,258	670,389
Interest, Debt Redemption, etc. ..	427,445	526,845	537,870	570,001	611,154
Administration Expenditure ..	230,125	310,7c6	450,351	449,030	551,046
Other ..	..	410,853	289,471	..	..
<b>Total ..</b>	<b>3,306,856</b>	<b>7,188,700</b>	<b>7,815,252</b>	<b>7,882,409</b>	<b>8,518,879</b>

(a) Figures for 1938-39 are not directly comparable with those of succeeding years owing to a change in the method of compilation adopted by the Country Roads Board. (b) Prior to 1st July, 1949 drivers' licence fees were paid into Consolidated Revenue Fund. From that date until 31st December, 1950 the fees were credited to the funds of the Country Roads Board. Since then one half of the fees have been credited to the funds of the Country Roads Board while the remaining half have been credited to the Municipalities Assistance Fund. (c) Excludes portion of Commonwealth Aid Roads and Works Acts advances drawn by the Public Works Department for expenditure on wharfs, jetties, etc. (d) Includes £54,662 expenditure on unemployment relief works.

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 subsidized by the State Government by means of Treasury loans. Other roads are 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, 1954 was 21,050 miles, comprising State highways, 7,772 miles; main roads, 11,198 miles; developmental roads, 246 miles; secondary roads, 648 miles; mining access roads, 574 miles; farmers' roads, 312 miles; tourist roads, 298 miles; tourist tracks, 2 miles. During 1953-54, 96 miles were added to the list. The length of roads improved in Queensland from the date of commencement of work under the Main Roads Acts 1920-1952 to 30th June, 1954 was 12,237 miles (58 per cent.). At that date, also, 1,120 miles of new road construction and 980 miles of stage construction work were proceeding.

(b) *Composition of Roads*. The total length of roads and streets in Queensland at 30th June, 1954 was:—Concrete, 100 miles; bitumen, 5,612 miles; macadam, 12,744 miles; other formed, 44,341 miles; unconstructed, 62,895 miles; total, 125,692 miles.

(iii) *Department of Main Roads*. (a) *General*. During 1953-54, the Department completed 1,195 miles of roads including new construction and stage construction. Bridges of all types to a length of 6,827 linear feet were constructed, bringing the total constructed by the Department at 30th June, 1954 to 172,728 feet. In addition, at 30th June, 1954, 7,822 feet were under construction. These figures do not include particulars of the Fitzroy River and Burdekin River bridges.

The Fitzroy River Bridge (length 1,210 feet) was constructed jointly by the Main Roads Department and the Rockhampton City Council and was opened for traffic in September, 1952. The Burdekin River Bridge is a combined road and rail bridge over the Burdekin River with an overall length including approaches of 3,620 feet. The Main Roads Department is responsible for the approaches and substructure and the Co-ordinator-General's Department for the superstructure. The substructure was completed during 1953 and work is proceeding on the approaches and superstructure. Expenditure, which was adversely affected by floods in earlier years, totalled £1,559,743 to 30th June, 1954.

(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 and Works Acts and loans, grants and advances from the State Government. The total receipts and



payments, including amounts for defence works, during each of the years 1938-39 and 1950-51 to 1953-54 are shown below :—

DEPARTMENT OF MAIN ROADS, QUEENSLAND : RECEIPTS AND PAYMENTS.  
(£.)

Item.	1938-39.	1950-51.	1951-52.	1952-53.	1953-54.
RECEIPTS.					
Motor Vehicle Registration, Transport Acts Collections, Fees, etc.	938,227	1,936,656	2,573,971	3,523,958	3,766,460
Loans from State Government ..	392,225	587,500	1,313,000	825,000	100,000
Grants, Advances, Refunds, etc. from State Government ..	579,775	553,768	305,013	103,855	349,315
Commonwealth Aid Roads and Works Acts ..	806,218	2,458,763	3,141,560	3,135,034	3,454,665
Maintenance Repayments—Local Authorities ..	98,154	258,709	317,437	308,178	311,212
Hire, Rent, Sales of Plant, etc. ..	288,330	84,840	108,276	107,468	91,875
Other ..		130,999	68,572	386,210	400,676
Total ..	3,102,929	6,011,235	7,827,829	8,389,703	8,474,203
PAYMENTS.					
Permanent Road Works and Surveys ..	2,045,900	2,943,923	5,226,719	4,113,945	3,930,659
Maintenance of Roads ..	331,734	1,434,319	1,421,304	1,180,788	1,603,418
Plant, Machinery, Buildings, etc. (including Plant Maintenance)	73,632	576,845	1,133,565	666,963	837,504
Loans—Interest ..	38,861	200,258	221,271	265,074	204,619
Redemption ..	78,153	201,151	218,053	239,066	250,156
Payments to State Consolidated Revenue ..	340,244	..	..	..	..
Payments to Local Authorities ..	27,418	1,625	1,625	1,625	1,625
Commonwealth and Allied Works and Services ..	..	..	..	..	..
Other Works and Services ..	..	22,293	94,188	..	..
Administration, etc. ..	149,950	505,544	634,733	682,724	699,428
Other ..	1,750	..	..	..	..
Total ..	3,087,642	5,885,958	8,951,458	7,450,190	7,587,409

5. South Australia.—(i) *General.* The Highways Act 1926 created a Commissioner of Highways and a Highways Fund for the purpose of improving the main roads of the State. The Commissioner of Highways had the sole responsibility of determining upon which main roads moneys from the Highways Fund were to be expended. In 1953, by the Highways Act 1926-1953 the Commissioner of Highways was placed under the control of the Minister for Roads and Local Government and now has to have ministerial approval of all main road projects.

The Highways Fund is credited with the receipts from State motor taxation, fees, fines and licences, after deduction of the costs of collection, and all loans raised and appropriated for roads. All moneys received by the State from the Commonwealth under the Commonwealth Aid Roads and Works Acts are also expended by the Commissioner of Highways under the general provisions of the Highways Act.

(ii) *Length of Roads.* The total length of roads in use for general traffic at 30th June, 1953 (the latest date for which details are available) was as follows :—Within district council and corporation boundaries ; blocks (wood or stone), 6 miles ; bituminous concrete (asphalt and premix), 600 miles ; cement concrete and cement penetration, 5 miles ; penetration or surface dressed (bitumen or tar), 2,914 miles ; metalled (gravelled or rubbled), 16,829 miles ; formed, but little or no metal, 12,391 miles ; surveyed, used by traffic, but little or no improvement, 22,270 miles ; total, 55,015 miles ; outside districts (mainroads only), 565 miles ; grand total, 55,580 miles. Lengths of main roads within district council and corporation boundaries aggregated 7,575 miles.

(iii) *State Highways and Local Government Department.* (a) *General.* The Department's programme for the acquisition of land for road improvement in the metropolitan and rural areas was continued during 1953-54 when approximately 27,500 linear feet of frontages in the metropolitan area were acquired and set back. This brought the total acquisition since the inception of the metropolitan widening scheme to 28½ miles. In rural areas the policy of widening roads and improving the alignments was continued in order to provide for an expected future increase in the volume of traffic.

(b) *Receipts and Payments.* The following table shows particulars of receipts and payments, during the years 1938-39 and 1950-51 to 1953-54, of funds controlled by the Highways and Local Government Department.

**HIGHWAYS AND LOCAL GOVERNMENT DEPARTMENT, SOUTH AUSTRALIA :  
RECEIPTS AND PAYMENTS.**  
(£.)

Item.	1938-39. (a)	1950-51.	1951-52.	1952-53.	1953-54.
RECEIPTS.					
Motor Vehicle Registration, Licences, Fees, Fines, etc. . .	690,849	1,286,677	1,409,510	1,497,227	2,230,045
Commonwealth Aid Roads and Works Acts . . .	479,922	1,448,845	1,650,993	1,682,961	1,873,227
Loans from State Government . .	200,000	100,000	450,000	360,000	..
Recoups—Local and Semi-governmental Authorities . .	1,531	33,398	26,018	38,267	10,443
Other . . .		149,013	211,483	(b)864,480	263,456
Total . . .	1,372,302	3,017,933	3,748,004	4,442,935	4,377,171
PAYMENTS.					
Construction and Reconstruction of Roads and Bridges	c1,150,082	1,142,010	1,475,602	1,786,777	2,142,728
Maintenance . . .		384,939	538,634	666,239	918,582
Recoups to Consolidated Revenue Fund—Interest, Debt Redemption and Exchange . .	(d)178,273	139,796	139,811	148,651	157,749
Grants and Advances to Local and Semi-governmental Authorities	(e)	646,903	1,033,519	670,460	1,343,381
Administration . . .	45,753	141,614	199,915	231,542	267,042
Stores, Plant, Machinery, Suspense Accounts, etc. . .		175,063	531,060	252,135	161,562
Other . . .		18,126	19,578	48,506	36,644
Total . . .	1,374,108	2,648,451	3,938,119	3,804,310	5,027,688

(a) Figures for 1938-39 are not completely comparable with those for following years. (b) Includes special contribution of £620,000 from Consolidated Revenue for roads for war service land settlement and developmental roads. (c) Roads, plant, etc. (d) Interest and sinking fund payments. (e) Not separately available; included elsewhere.

The total expenditure, both revenue and loan, by State and local governments on roads, streets and bridges in South Australia during the years 1938-39 and 1951-52 to 1953-54 was, respectively, £1,966,000, £4,596,000, £4,667,000 and £6,131,000.

6. *Western Australia.*—(i) *General.* Under the Main Roads Act 1930-1939 the Main Roads Board previously existing was abolished and a Commissioner of Main Roads was appointed. His duties relate to the determination of main roads after consideration of the funds available and the services to be rendered by the roads, the declaration and provision of developmental roads, the construction and maintenance of main roads, and the carrying out of surveys, investigations and experiments connected with roads and road materials. The Act authorizes two trust accounts (Main Roads Trust Account and Main Roads Contribution Trust Account) to record the moneys prescribed as available to the Commissioner for expenditure associated with roads, etc. In addition, the Commissioner operates on those Trust Accounts which are used for funds made available under the Commonwealth Aid Roads and Works Acts

(ii) *Length of Roads and Streets.* The total known lengths of roads and streets in existence in the various municipalities at 31st October, 1954 and in road districts at

30th June, 1954, were as follows :—Bituminous, 4,840 miles ; gravel water-bound, 13,989 miles ; other constructed surfaces, 1,833 miles ; formed only, 34,229 miles ; unprepared, 28,167 miles (incomplete) ; total 83,058 miles.

The lengths of declared roads at 30th June, 1954, were :—Main roads, 3,178 miles ; important secondary roads, 7,232 miles ; developmental roads, 11,331 miles ; total, 21,741 miles.

(iii) *Main Roads Department.* During the year 1953-54 the activities of the Department included :—clearing, 1,287 miles ; forming 1,431 miles ; gravelling, 968 miles ; reconditioning 2,377 miles ; stabilizing, 180 miles ; side drains, 85 miles. In addition lengths of tar and bitumen work performed aggregated 689 miles. Bridges constructed numbered 20. Work commenced during the year on the timber bridge over the Murray River at Pinjarra which is a vital link in the road system between the Perth Metropolitan area and the south-west of the State. When completed the bridge will be 320 feet long and 30 feet wide. Construction of the Wyndham-Ord River-Nicholson road was continued during 1953-54.

(iv) *Receipts and Payments—Combined Road Funds.* The following table shows the combined transactions of the Main Roads Trust Account, the Main Roads Contributions Trust Account, the Metropolitan Traffic Trust Account, and the Commonwealth Aid Roads and Works Trust Accounts during the years ended 30th June, 1939 and 1951 to 1954.

## ROAD FUNDS, WESTERN AUSTRALIA : RECEIPTS AND PAYMENTS.

(£.)

Item.	1938-39. (a)	1950-51.	1951-52.	1952-53.	1953-54.
RECEIPTS.					
Motor Vehicle Registration, Licences, Fees, Fines, etc. ..	218,962	394,887	427,432	472,477	523,495
Commonwealth Aid Roads and Works Acts .. ..	823,162	2,476,903	2,861,389	2,886,672	3,212,454
Recoups from Local Authorities, etc. .. ..	1,958	82,467	209,352	210,777	199,591
Other .. ..		2,396	22,572	43,129	116,373
Total .. ..	1,041,082	2,956,653	3,520,745	3,613,055	4,051,913
PAYMENTS.					
Construction and Reconstruction of Roads and Bridges .. ..	922,756	2,203,645	2,527,612	3,079,210	2,492,320
Maintenance .. ..		180,996	245,558	258,289	214,217
Grants to Local Authorities, etc. ..	143,544	243,492	260,492	273,796	295,713
Transfer to State Consolidated Revenue .. ..	..	76,337	70,272	70,000	70,000
Interest, Debt Redemption and Exchange—State Consolidated Revenue .. ..	7,616	7,396	7,396	7,396	7,396
Administration .. ..	52,176	41,951	44,682	68,703	47,583
Plant, Machinery, etc. .. ..	..	..	277,660	502,444	276,686
Other .. ..	19,181	..	415,359	640,478	540,945
Total .. ..	1,145,273	2,753,817	3,849,031	4,900,316	3,944,860

(a) Figures not completely comparable with those for following years. Includes Transport Co-ordination Trust Account.

7. *Tasmania.*—(i) *General.* Under the Transport Act 1938, which came into operation on 1st July, 1939, the Transport Commission was constituted to co-ordinate, regulate, control, and improve the means of, and facilities for, transport by road, rail or air within the State. Revenues at its disposal for road and motor traffic purposes are the Commonwealth Aid Roads and Works grants, motor vehicle registration fees and tax, and licensing fees for drivers and public motor vehicles. Under the Roads and Jetties Act 1944, which provides for the classification of the whole of the roads of the State so that they will be adequately and efficiently maintained, the cost of maintenance of roads classified as State highways, tourist roads and developmental roads is borne by the Transport Commission. It is also responsible for a proportion of the cost of maintenance of main and secondary roads. Except in special cases, municipal councils bear the cost

of maintaining country roads and a proportion of the cost of main and secondary roads. The cost of construction of roads and bridges in Tasmania is borne almost entirely by the State Government. The expenditure of the Public Works Department (the construction and maintenance authority for the Transport Commission) during 1953-54 on roads, tracks and bridges amounted to £2,216,837 of which £1,341,022 was charged to road funds, £38,972 to revenue, £731,962 to loan and £104,881 to other funds.

As from 1st July, 1951 certain functions with respect to the construction and maintenance of roads and the vesting and control of certain plant were transferred from the Transport Commission to the Minister for Lands and Works. The existing Road Account and Commonwealth Aid Roads and Works Account in the books of the Transport Commission were closed and a new Fund—the State Highways Trust Fund—was opened in the Treasury books.

(ii) *Length of Roads.* (a) *Classified Roads.* The mileages of classified roads in Tasmania at 30th June, 1954 were as follows:—State highways, 1,161 miles; main roads, 651 miles; secondary roads, 186 miles; tourist roads, 45 miles; developmental roads, 50 miles; subsidized roads, 92 miles; total 2,185 miles. Country roads totalled more than 10,000 miles. The mileages of sealed roads, and their proportions to the respective totals, were:—State highways, 571 miles (49 per cent.); main roads, 196 miles (30 per cent.); secondary and other roads, 14 miles (7 per cent.); total, 781 miles (36 per cent. of all classified roads, and 6 per cent. of all roads, in Tasmania).

(b) *Composition of Roads.* The length of all roads in Tasmania, including those with surfaces of lower grade, at 30th June, 1954, was as follows:—Bituminous, 1,031 miles; concrete, 20 miles; granite, limestone, etc., water-bound, 9,079 miles; surfaces of lower grade, 2,918 miles; total, 13,048 miles.

(iii) *Receipts and Payments—Combined Road Funds.* The table hereunder shows particulars of the receipts and payments of combined Road Funds and Commonwealth Aid Roads and Works Funds under the control of the Transport Commission for the years 1939-40 and 1950-51 to 1953-54:—

### ROAD FUNDS, TASMANIA : RECEIPTS AND PAYMENTS.

(£.)

Item.	1939-40. (a)	1950-51.	1951-52.	1952-53.	1953-54.
RECEIPTS.					
Motor Vehicle Taxation and Registration, Licences, Fees, Fines, etc. . . . .	193,165	364,708	305,352	432,738	450,962
Commonwealth Aid Roads and Works Acts . . . . .	220,241	640,824	739,989	745,985	830,922
Recoups from Local Authorities, etc. . . . .	..	9,176	9,249	11,539	10,076
State Loan Fund . . . . .	..	495,914	577,931	494,125	825,502
Hire of Plant . . . . .	..	400,214	551,202	553,678	741,383
Other . . . . .	719	57,364	98,071	152,556	115,064
Total . . . . .	414,125	1,968,200	2,281,794	2,390,621	2,973,909
PAYMENTS.					
Construction and Reconstruction of Roads and Bridges . . . . .	130,924	621,905	689,370	716,223	1,070,414
Maintenance . . . . .	113,199	620,288	627,785	768,395	977,403
Jetties, etc. . . . .	22,467	..	..	..	..
Other works connected with Transport . . . . .	5,748	29,928	21,870	15,566	9,823
Grants to Local Authorities, etc. . . . .	..	4,663	2,256	2,762	3,671
Administration . . . . .	15,053	73,646	51,979	58,736	56,807
Purchase, Hire and Maintenance of Plant . . . . .	(b)	539,673	600,344	586,409	809,546
Other . . . . .	31,894	71,244	156,358	120,925	—22,558
Total . . . . .	319,285	1,961,349	2,149,962	2,269,016	2,905,106

(a) First year of operation of Transport Commission. Figures not completely comparable with those for following years. (b) Not available, included with other.

NOTE.—Minus sign (—) indicates an excess of credits.

8. *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, 1954. These proclaimed or declared roads are those for which the central road authority assumes responsibility under the Act for the whole, or a proportion, of the cost of construction and/or maintenance, 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 that therefore the condition of a road may not match its status.

PROCLAIMED OR DECLARED ROADS : LENGTHS, 30th JUNE, 1954.

(Miles.)

Class of Road.	N.S.W.	Vic. (a)	Q'land.	S. Aust. (a)	W. Aust.	Tas.	Total.
State highways .. ..	6,528	3,849 } 9,792	7,772	8,140	3,178	1,161 } 651	69,032
Trunk roads .. ..	4,229		11,198				
Ordinary main roads .. ..	12,534						
<b>Total Main Roads .. ..</b>	<b>23,291</b>	<b>13,641</b>	<b>18,970</b>	<b>8,140</b>	<b>3,178</b>	<b>1,812</b>	<b>69,032</b>
Secondary roads .. ..	77	..	648	..	7,232	186	8,143
Developmental roads .. ..	2,934	..	246	..	11,331	50	14,501
Tourist roads .. ..	..	432	298	..	..	45	775
Other roads .. ..	..	(b) 375	(c) 888	..	..	(d) 92	1,355
<b>Total Other Roads .. ..</b>	<b>3,011</b>	<b>807</b>	<b>2,080</b>	<b>..</b>	<b>18,563</b>	<b>373</b>	<b>24,834</b>
<b>Grand Total .. ..</b>	<b>26,302</b>	<b>14,448</b>	<b>21,050</b>	<b>8,140</b>	<b>21,741</b>	<b>2,185</b>	<b>93,866</b>

(a) As at 30th June, 1953. (b) Forest roads. (c) Includes mining access roads, 574 miles; farmers' roads, 312 miles; tourist tracks, 2 miles. (d) Subsidized roads.

(ii) *Composition 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 composition groups. The results are not entirely satisfactory, (i) because it is doubtful whether the whole of Australia is covered, (ii) because the dates of reference differ, and (iii) because the figures constituting each group are not wholly comparable for the States and Territories. It is hoped, however, despite these defects, that the table will provide an approximate and general idea of the main types of roads in Australia.

The data in the table for the States are obtained from the State Government Statisticians, and are derived mainly from local government sources. Unincorporated areas in some States are probably excluded and the figures on the returns supplied by the local government authorities are in some cases of doubtful accuracy. Details of the composition of roads, as far as they are available, vary to such an extent that it is considered preferable to show here only major divisions.

Groups 1-4 as shown in the table include, respectively, the following types of composition :—

1. *Wood or Stone.* Wood blocks ; stone paved.
2. *Concrete.* Cement concrete ; asphaltic concrete ; bituminous concrete ; sheet asphalt on concrete base.
3. *Bituminous.* Tar or bituminous macadam ; tar and bituminous surface seal ; surfaced water-bound macadam or gravel ; bituminous or cement penetration.
4. *Macadam and Other.* Water-bound macadam ; granite, limestone, and blast-furnace slag, water-bound ; water-bound gravel ; gravel or crushed rock ; metalled (gravel or rubble) ; gravel, sand and hard loam pavements.

Groups 5 and 6 include roads so-called mainly because they are used for general traffic, irrespective of their surfaces, prepared or otherwise.

It will be noticed that some of the terms used above are practically synonymous. Such terms are, of course, not used by any one State, but are the classifications adopted by different States.

For details of any particular State, see the respective paragraphs in the preceding pages.

#### ALL ROADS USED FOR GENERAL TRAFFIC : LENGTHS. (Miles.)

Composition of Road.	N.S.W. 30th June, 1954.	Vic. 30th Sept., 1948.	Q'land. 30th June, 1954.	S. Aust. 30th June, 1953.	W. Aust. 1954. (a)	Tas. 30th June, 1954.	N. Terr. 30th June, 1954.	A.C.T. 30th June, 1954.	Total.
1. Wood or stone	..	62	..	6	..	..	..	..	68
2. Concrete ..	605	352	100	605	..	20	..	3	1,685
3. Bituminous ..	10,126	10,241	5,612	2,914	4,840	1,031	1,287	161	36,212
4. Macadam and other ..	41,342	28,418	12,744	16,820	15,822	9,079	164	167	124,565
5. Formed only	27,279	23,901	44,341	12,956	34,229	2,918	8,944	217	354,110
6. Cleared, or natural surface, only ..	45,677	38,437	62,895	22,270	28,167		1 879	..	
<b>Total ..</b>	<b>125,029</b>	<b>101,411</b>	<b>125,692</b>	<b>55,580</b>	<b>83,058</b>	<b>13,048</b>	<b>12,274</b>	<b>548</b>	<b>516,640</b>

(a) Municipalities, 31st October and Road Districts, 30th June.

It will be seen from the foregoing table that a little more than one-quarter of the road lengths of Australia have actually been constructed, the remainder, for the greater part, being in little more than the natural state. The percentages for each group are as follows :—Group 1, 0.01 ; group 2, 0.33 ; group 3, 7.01 ; group 4, 24.11 ; groups 5 and 6, 68.54. The percentage of constructed lengths to total length in each State is as follows :—New South Wales, 42 ; Victoria, 39 ; Queensland, 15 ; South Australia, 37 ; Western Australia, 25 ; Tasmania, 77 ; Northern Territory, 12 ; Australian Capital Territory, 60. Comparisons between the States should be made with caution, however, because, in addition to the defects enumerated at the beginning of this section, factors such as the area, physiography, density and distribution of population, nature of economic activity, other facilities for transport, etc., in each State must be taken into account.

9. *Summary of Expenditure on Roads and Bridges.*—(i) *General.* In most States there are three classes of authorities—the State Government, the central road authority, and the numerous local government bodies. Most of these authorities may expend money either directly on road construction or indirectly by means of grants and miscellaneous payments to other authorities. Insufficient information is given in the

accounts of many authorities to permit the exclusion of these indirect payments which would, if included in the aggregate, duplicate the expenditure. In addition a number of authorities are not able to supply separate information concerning their expenditure on roads. For these reasons it has not been possible up to the present, to compile statistics of the aggregate expenditure on roads.

The two paragraphs following therefore represent only : (a) aggregate expenditure from the various State road funds referred to in the foregoing pages, and (b) loan fund expenditure by State Governments. Expenditure by local government bodies is not included. Paragraph 8., Finances, of § 2. Local Government Authorities, contains some particulars of local government revenue and expenditure on roads, streets and bridges (*see* pages 671 and 674).

(ii) *Aggregate Expenditure from State Road Funds.* The following table shows expenditure on the construction and maintenance of roads, including payments to local government bodies, by each State during the years 1938-39 and 1949-50 to 1953-54, as summarized from the foregoing sections. Expenditure on administration, debt charges, Commonwealth defence works, payments to State consolidated revenues, and on plant and materials is not included. In some instances expenditure on works other than roads and bridges is included. Figures are not completely comparable as between States, and, in some States, as from year to year.

**ROADS AND BRIDGES : AGGREGATE EXPENDITURE FROM ROAD FUNDS.**  
(£'000.)

Year ended 30th June—	N.S.W.(a)	Victoria.	Q'land.	S. Aust.	W. Aust.	Tasmania.	Total.
1939 ..	3,257	2,339	2,405	(b) 1,150	1,067	(c) 250	10,468
1950 ..	5,160	3,185	3,212	2,067	1,872	791	16,287
1951 ..	6,063	5,362	4,380	2,174	2,628	1,277	21,884
1952 ..	8,546	5,836	6,650	3,048	3,034	1,341	28,455
1953 ..	8,885	6,023	5,296	3,123	3,611	1,503	28,441
1954 ..	11,505	6,686	5,536	4,405	3,002	2,061	33,195

(a) Excludes Sydney Harbour Bridge.  
1939-40.

(b) Includes expenditure on plant.

(c) Year

The foregoing particulars do not represent the total expenditure on roads and bridges in each State. To obtain this information additions must be made on account of (a) State Government expenditure from revenue and loan through Departments or authorities other than the Central Road Authority and (b) local government expenditure from revenue and loan, while, on the other hand, allowances must be made for grants and miscellaneous payments to other authorities (*see* (i) above).

(iii) *State Net Loan Expenditure.* In recent years, expenditure from State loan funds on roads and bridges has not been large, and it would appear, also, that a considerable proportion passes through the funds of the central road authorities and is therefore included in the figures of their financial operations in the foregoing sections. Gross loan expenditure by all State Governments during 1953-54 amounted to over £2,000,000, while net expenditure was about £350,000 less. Aggregate net loan expenditure on roads and bridges in each State to 30th June, 1954 amounted to the following approximate sums :—New South Wales, £22,000,000 ; Victoria, £18,000,000 ; Queensland, £11,000,000 ; South Australia, £5,000,000 ; Western Australia, £3,000,000 ; Tasmania, £8,000,000 ; total, £67,000,000.

## § 5. Water Supply, Sewerage and Drainage.

NOTE.—See also Chapter XI.—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 (b) the Hunter District Water Board, serving the Newcastle area. At Broken Hill a similar board includes a representative of the mining companies. Other systems, apart from irrigation projects and water storage systems administered by the State Government, are controlled by county, municipal and shire councils.

(ii) *Water Supply—to 30th June, 1954*. (a) *Metropolitan*. The storage reservoirs of the metropolitan system, with a combined available capacity of 124,959 million gallons, drain catchment areas of 376 square miles (Upper Nepean, 347 square miles and Woronora, 29 square miles). Water is drawn also from the Warragamba River, with a catchment of 3,383 square miles. This system is being developed, and building has commenced on a dam to have an overall height of 415 feet (greatest depth of water 340 feet) having a storage capacity of 460,000 million gallons and giving a net safe draught estimated at 263 million gallons per day and in addition 11 million gallons per day for riparian purposes. The existing temporary storage is supplied by a weir 50 feet high with a maximum storage of 579 million gallons. At 30th June, 1954 there were 107 service reservoirs in use with a combined capacity of 545.6 million gallons. Rating for water for 1953-54 was 10d. in the £1 of assessed annual value and the charge for water measured by meters 1s. 9d. per 1,000 gallons.

(b) *Newcastle*. The water supply is drawn from two sources (1) the Chichester Reservoir, with a storage capacity of about 5,000 million gallons and draining a catchment of 76 square miles, and (2) the Tomago Sandbeds, which extend northerly along the coast towards Port Stephens. Service reservoirs and tanks distributed throughout the Water Supply District have a total storage capacity of 106 million gallons. Water rating for 1953-54 was 1s. 8d. in the £1 on assessed annual value. The price of water to domestic and industrial consumers is 2s. per 1,000 gallons.

(c) *Water Supplied, etc.* The following tables show, for the Sydney and Newcastle systems, the number of properties, the estimated population supplied, and other details for the years 1938-39 and 1949-50 to 1953-54 :—

WATER SUPPLY, SYDNEY(a) : SERVICES.

Year.	Improved Properties for which Water Main 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.		
	No.		Mill. gals.	Mill. gals.	Gallons.	Gallons.	Miles.	
1938-39 ..	350,161	1,466,000	106.3	38,790	304	72.5	4,539	126,754
1949-50 ..	428,392	1,870,000	130.8	47,735	305	72.1	4,992	196,121
1950-51 ..	442,913	1,940,000	138.9	50,689	314	71.6	5,114	208,712
1951-52 ..	461,294	2,000,000	155.9	57,069	338	80.0	5,252	227,850
1952-53 ..	478,598	2,032,000	149.6	54,621	313	73.6	5,357	246,383
1953-54 ..	496,025	2,069,000	163.9	59,810	330	79.2	5,502	270,230

(a) Includes part of South Coast.



## WATER SUPPLY, NEWCASTLE : SERVICES.

Year.	Properties Supplied.	Estimated Population Supplied.	Average Daily Supply.	Total Supply for Year.	Average Daily Supply.		Length of Mains.
					Per Property.	Per Head of Estimated Population.	
	No.		Mill. gals.	Mill. gals.	Gallons.	Gallons.	Miles.
1938-39.. ..	48,370	193,480	11.9	4,331	245	61.3	936
1949-50.. ..	63,289	247,992	19.6	7,176	310	79.3	1,215
1950-51.. ..	65,445	261,780	22.3	8,131	340	85.1	1,234
1951-52.. ..	67,122	268,488	25.1	9,144	373	93.1	1,257
1952-53.. ..	69,244	276,976	23.9	8,719	345	86.3	1,262
1953-54.. ..	71,307	285,228	25.5	9,415	358	90.4	1,284

(iii) *Sewerage and Drainage—to 30th June, 1954.* (a) *Metropolitan.* Sydney and suburbs are served by 3 major sewerage systems and 5 minor systems consisting of 6 outfalls discharging direct into the Pacific Ocean and 2 treatment works. A further treatment works is in course of construction near Kurnell and is designed to serve the whole of the Cronulla Peninsula. In addition 4 centres outside the metropolitan area (Camden, Campbelltown, Liverpool and Wollongong) are served by local treatment works.

Stormwater drainage channels under the Metropolitan Water, Sewerage and Drainage Board's control at 30th June, 1954 were 175 miles long. Sewerage rating for 1953-54 was 10½d. in the £1 of assessed annual value and drainage rating ¾d. in the £1.

(b) *Newcastle.* The main sewerage system of the Newcastle area discharges into the Pacific Ocean at Merewether Gulf. In some of the outlying districts treatment works have been installed.

Sewerage rates for 1953-54 were 1s. 3d. in the £1 of assessed annual value and drainage rates (on certain areas served) 2d. in the £1.

(c) *Particulars of Services.* The following table supplies, for the Metropolitan system, details of sewerage services and stormwater drains as at 30th June, 1939 and 1950 to 1954.

## SEWERAGE AND DRAINAGE, METROPOLITAN(a) : SERVICES.

At 30th June—				Improved Properties for which Sewer Available.	Estimated Population Served.	Length of Sewers.	Length of Stormwater Channels.
				No.		Miles.	Miles.
1939	..	..	..	254,632	1,066,000	2,561	87
1950	..	..	..	298,996	1,306,000	2,899	154
1951	..	..	..	303,508	1,380,000	2,951	173
1952	..	..	..	309,995	1,400,000	3,000	176
1953	..	..	..	316,439	1,427,000	3,055	174
1954	..	..	..	324,737	1,454,000	3,163	175

(a) Includes part of South Coast.

At 30th June, 1954, 47,497 premises had been connected to the Hunter District Water Board's sewerage system (Newcastle area). The total length of sewers under the Board's control was 633 miles, and the length of drains was 42 miles.

(iv) *Finances, Sydney and Newcastle 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 1953-54 and for the three services combined during the years 1938-39 and 1949-50 to 1952-53.

**WATER SUPPLY, SEWERAGE AND DRAINAGE, METROPOLITAN AND  
NEWCASTLE : FINANCES.**

(£.)

Year.	Capital Debt at 30th June.	Revenue.	Expenditure.				Surplus (+) or Deficit (-).
			Working Expenses. (a)	Interest and Exchange.	Debt Redemption.	Total.	
METROPOLITAN.(b)							
1953-54—							
Water ..	57,708,754	4,874,646	2,487,731	1,065,890	404,403	4,858,024	+ 16,622
Sewerage..	25,525,737	2,875,320	1,785,672	872,124	186,436	2,844,232	+ 31,088
Drainage ..	1,240,460	141,050	92,523	39,990	7,795	140,308	+ 742
Total, 1953-54	84,474,951	7,891,016	4,365,926	2,878,004	598,634	7,842,564	+ 48,452
1952-53	77,117,666	6,672,577	3,494,464	2,618,630	554,435	6,667,529	+ 5,048
1951-52	70,670,899	6,199,094	3,313,807	2,343,923	540,660	6,198,410	+ 684
1950-51	64,350,326	5,410,687	2,740,286	2,190,333	475,552	5,406,171	+ 4,516
1949-50	59,918,417	5,051,876	2,488,623	2,092,890	435,660	5,017,173	+ 34,703
1938-39	43,769,741	2,926,694	957,422	1,727,708	241,564	2,926,694	..

**NEWCASTLE.**

1953-54—							
Water ..	7,358,708	877,978	584,730	228,860	46,470	860,060	+ 17,915
Sewerage ..	2,910,690	341,513	224,353	98,226	18,664	341,243	+ 270
Drainage ..	169,619	25,953	18,938	5,542	1,273	25,753	+ 200
Total, 1953-54	10,439,017	1,245,444	828,021	332,628	66,407	1,227,056	+ 18,388
1952-53	9,431,309	1,119,775	726,137	294,769	59,747	1,080,653	+ 39,122
1951-52	8,794,710	858,729	572,382	278,211	55,888	906,481	+ 47,752
1950-51	8,139,512	765,790	442,239	275,875	52,479	770,593	+ 4,803
1949-50	7,767,566	695,548	359,508	285,145	50,766	695,419	+ 129
1938-39	4,574,880	385,732	167,620	188,185	20,886	376,691	+ 9,041

(a) Includes provision for renewals, long service leave, loss on exchange, etc. (b) Includes part of South Coast.  
(c) Excludes non-interest bearing capital in respect of stormwater drains transferred from Public Works Department—£2,199,223 at 30th June, 1954.

(v) *Country Water Supply and Sewerage Systems.* At 31st December, 1952, country water supply services were conducted or under construction by 64 municipalities, 60 shires and 4 county councils, and country sewerage services by 58 municipalities and 18 shires. The capital indebtedness of these schemes was £12,674,357 at 31st December, 1952, namely, £8,773,311 for water and £3,901,046 for sewerage. Of the foregoing amounts, Government advances amounted to £419,589. Debt of the municipalities amounted to £7,599,338, shires to £2,557,849 and county councils to £2,517,170. Aggregate income and expenditure, respectively, amounted to £2,378,626 and £1,688,177 in 1952.

(vi) *Other Water Supply and Sewerage Systems.* 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, 1953 was £2,810,946. In 1953 income (excluding subsidies, State Government £101,279 and Mining Companies £286,217) amounted to £164,504 and expenditure (excluding debt redemption £119,627) amounted to £428,362.

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 directly to private consumers. The capital indebtedness of these systems was £2,831,560 at 31st December, 1953.

There are also the Mulwala Water Supply and Sewerage Service constructed as an urgent war-time work for the Commonwealth, and the Bethungra Water Supply System administered by the Department of Public Works in conjunction with the Junee supply.

2. Victoria.—(i) *Melbourne and Metropolitan Board of Works—to 30th June, 1954.*

(a) *General.* The Board was established by Act of Parliament on 20th December, 1890 and entered upon its duties on 18th March, 1891. It consists of 50 members, including the chairman, who is elected every four years by the other members. The other 49 members, who are called commissioners, are from time to time elected by the councils of the municipal districts wholly or partly within the metropolis. The principal functions of the Board are to control and manage the metropolitan water supply system; to provide the metropolis with an efficient system of main and general sewerage; to deal with main drains and main drainage works; and to control and manage the rivers, creeks and watercourses within the metropolis.

(b) *Water Supply.* There are five storage reservoirs serving the metropolitan area—Yan Yean, 7,234 million gallons (available for consumption, 6,605 million gallons); Toorourrong, 60 million gallons; Maroondah, 6,274 million gallons (4,855 million gallons); O'Shannassy, 930 million gallons; Silvan, 8,853 million gallons (8,823 million gallons); total 23,351 million gallons (21,273 million gallons). Service reservoirs number 25, with a total capacity of 262 million gallons. Two major projects are under construction. One is an 18 mile conduit to carry water from the Silvan Reservoir to the existing Mt. Waverley service reservoir and to a new service reservoir which is to be built south of Glen Waverley and which when completed will be capable of supplying an additional 110 million gallons a day. The other project, which was approved by the Board in 1946, consists of a dam, 293 feet high, which will impound 44,000 million gallons of water, on the River Yarra, immediately upstream from the confluence of the Yarra and Doctors Creek, and work on the project is proceeding. This work is estimated to cost £12,628,000.

The water rate levied by the Board in 1953-54 was 8d. in the £1 on the net annual value of the property served, and from 1st July, 1953, the charge for water supplied by measure in excess of the quantity which, at 1s. per 1,000 gallons, would produce an amount equal to the water rate payable on the property, was increased from 1s. 3d. to 1s. 6d. The following table shows particulars of Melbourne metropolitan water supply services for the years 1938-39 and 1949-50 to 1953-54.

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 Reti-culation.	Number of Meters.
					Per House.	Per Head of Estimated Population.		
			Mill. gals.	Mill. gals.	Gallons.	Gallons.	Miles.	
1938-39 ..	285,408	1,133,000	66.9	24,408	234	59.0	3.234	189,617
1949-50 ..	342,742	1,363,000	91.7	33,458	267	67.3	3.875	229,238
1950-51 ..	354,415	1,409,000	102.0	37,225	288	72.4	3.966	235,883
1951-52 ..	364,248	1,488,000	107.4	39,203	295	74.2	4.075	256,462
1952-53 ..	378,439	1,505,000	102.6	37,471	271	68.2	4.134	264,916
1953-54 ..	390,035	1,551,000	110.6	40,354	264	71.3	4.213	266,393

(c) *Sewerage and Drainage.* Particulars of sewerage and drainage services for 1938-39 and 1949-50 to 1953-54 are shown below. The rate levied in 1953-54 in respect of sewerage was 1s. 1d. in the £1 on the net annual value of the property served. The drainage rate was 1d. 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.		
			Mill. gals.	Mill. gals.	Gallons.	Gallons.	Miles.	Miles.
1938-39 ..	269,411	1,070,000	48.2	17,601	179.0	45.1	2,586	97
1949-50 ..	320,006	1,272,000	66.4	24,251	207.5	52.2	2,880	126
1950-51 ..	321,548	1,278,000	67.1	24,491	208.7	52.5	2,927	128
1951-52 ..	329,872	1,311,000	67.1	24,490	203.4	51.2	2,953	128
1952-53 ..	338,314	1,345,000	73.1	26,692	216.1	54.3	2,989	131
1953-54 ..	345,370	1,373,000	70.1	25,599	203.0	51.1	3,019	134

The metropolitan sewerage system consists of the Main system (serving an area of 67,433 acres) and three subsidiary systems—the Sunshine system (serving an area of 941 acres), the Kew system (serving an area of 103 acres) and the South-eastern system (serving an area of 2,292 acres in Cheltenham, Parkdale, Mentone and Mordialloc). The Metropolitan Sewage Farm, 26,073 acres in extent and situated about 24 miles south-west of Melbourne beyond the township of Werribee, serves to purify and dispose of approximately 95 per cent. of the sewage flow of the metropolis before its discharge into Port Phillip Bay. The total capital cost (less depreciation) of the Farm to 30th June, 1954 was £2,608,337. Revenue during 1953-54 amounted to £87,833, cost of sewage disposal £185,525, trading expenses £84,770, interest £102,872, and net cost of sewerage purification £285,334. These financial particulars are included in the sewerage items of the summary below.

(d) *Finances.* The following table provides a summary, for the year 1953-54 of the financial operations of the three services conducted by the Melbourne and Metropolitan Board of Works.

#### MELBOURNE AND METROPOLITAN BOARD OF WORKS : FINANCES, 1953-54.

(£.)

Service, etc.	Capital Cost at 30th June. (a)	Revenue.	Expenditure.				Surplus (+) or Deficit (-).
			Working Expenses.	Interest and Exchange.	Debt Redemption.	Total.	
Water ..	25,564,214	2,271,269	924,326	965,799	..	1,890,125	+ 381,144
Sewerage ..	20,815,248	2,265,331	977,764	828,299	..	1,806,063	+ 459,268
Drainage ..	3,776,765	175,933	78,889	116,632	..	195,521	- 19,588
General (b) ..	..	..	333,157	..	106,796	439,948	- 439,948
Total ..	50,150,227	4,712,533	2,314,131	1,910,730	106,796	4,331,657	+ 380,876

(a) Includes depreciation, £48,031. Total loan indebtedness—1953-54, £44,595,570; (b) Statutory and general expenditure not distributed over Services.

The following table shows the financial operations of the Melbourne and Metropolitan Board of Works (all services combined) for the years 1938-39 and 1949-50 to 1953-54:—

## MELBOURNE AND METROPOLITAN BOARD OF WORKS: FINANCES.

(£.)

Year.	Capital Cost at 30th June.	Revenue.	Expenditure.				Surplus(+) or Deficit(—).
			Working Expenses.	Interest and Exchange.	Debt Redemption.	Total.	
1938-39 .. ..	27,598,603	2,214,295	762,558	1,316,603	64,269	2,143,430	+ 70,865
1949-50 .. ..	36,453,892	2,924,329	1,616,993	1,324,342	73,785	3,015,030	— 99,701
1950-51 .. ..	39,244,030	3,278,641	1,782,356	1,422,196	81,607	3,286,159	— 7,518
1951-52 .. ..	43,106,705	3,590,571	2,011,265	1,539,009	93,398	3,653,672	— 63,101
1952-53 .. ..	46,713,093	3,862,048	2,230,431	1,691,613	101,564	4,023,608	— 161,560
1953-54 .. ..	50,453,227	4,712,533	2,314,131	1,910,730	100,700	4,331,057	+ 281,676

(ii) *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 instead of five as formerly. The amount of loan money which may be raised is limited to £1,500,000 for water supply undertakings, £1,250,000 for sewerage undertakings, and £270,000 for sewerage installation to properties under the deferred payment system. The population supplied is estimated by the Trust at 72,100. This and other general information relates to 30th June, 1954.

(b) *Water Supply.* The catchment area is about 16,000 acres. There are five storage reservoirs and nine service basins whose total storage capacity is 2,746 million gallons. The length of water mains and reticulation is 399 miles. In addition, the State Rivers and Water Supply Commission has made available a supplementary supply of a minimum quantity of 545 million gallons of water per annum from the Bellarine Peninsula System. The total expenditure on water supply to 30th June, 1954 was £1,333,712. Expenditure for 1953-54 comprised £73,275 for working expenses and £69,653 for interest, redemption and reserves, while revenue amounted to £155,881. The sinking fund appropriations at June, 1954 amounted to £142,433. The replacement and contingencies reserve amounted to £209,175. There is a water rate of 1s. 5d. in the £1 (with minima of 5s. for unbuilt-on 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 at Black Rock, about 9 miles from Geelong, and 186 miles of main and reticulation sewers. The sewerage area is 10,219 acres, and the number of buildings within the sewered areas is 15,789 of which 15,777 have been connected. The total expenditure to 30th June, 1954 on sewerage works was £980,414, and on the cost of sewerage installation under deferred payment conditions £260,349 of which £1,809 was outstanding. The revenue in 1953-54 amounted to £99,089 and the expenditure comprised £40,064 on working expenses and £50,165 on interest, redemption and reserves. Sinking fund appropriations at June, 1954 were £122,080. Replacement and contingencies reserve amounted to £199,295. A general rate of 1s. 4d. in the £1 is levied on the net annual value of ratable properties.

(iii) *The Ballarat Water Commission and the Ballarat Sewerage Authority.* (a) *General.* The Ballarat Water Commission was constituted on 1st July, 1880, and the Ballarat Sewerage Authority on 30th November, 1920. The members of the Water Commission constitute the Sewerage Authority. The Commissioners number eight, three (one of whom is chairman) being appointed by the Government, four being elected by the Council of the City of Ballarat and one being elected by the Councils of the Borough of Sebastopol and the Shires of Ballarat, Bungaree, Bunninyong and Grenville. General and financial information given herein relates to the year ended 31st December, 1954.

(b) *Water Supply.* The Water Supply District embraces an area of about 65 square miles, containing a population of about 50,000. The total storage capacity of the seven reservoirs is 5,563 million gallons and the catchment area is 18,695 acres.

The capital cost of construction of the waterworks was £2,068,695 to 31st December, 1954. The liabilities amounted to £1,122,293 at 31st December, 1954 including loans due to the Government totalling £1,072,443. The revenue for the year 1954 was £129,684. Working expenses during 1954 amounted to £77,346 and interest and other charges to £53,692. A rate of 1s. 2d. in the £1 is levied on the net annual value of all ratable properties, with a minimum of £1 per annum for land on which there is a building or water supply.

(c) *Sewerage.* The Ballarat sewerage district embraces the City of Ballarat and parts of the Shires of Ballarat and Bungaree and the Borough of Sebastopol. Work was commenced in 1922 and up to 31st December, 1954 the Authority had constructed a disposals works, a nightsoil depot, an ejector station and more than 100 miles of sewers. The capital cost of sewerage construction works to 31st December, 1954 was £668,027. The method of sewage disposal is by sedimentation, oxidation and sludge digestion. One hundred and thirty-nine sewered areas had been declared as at 31st December, 1954. Assessments in the sewerage district numbered 15,023, while those in sewered areas numbered 11,557. There were 10,027 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, 1954, amounted to £537,788, redemption payments at that date totalling £203,830. An expenditure of £157,122 was incurred for house connexions, the whole of which has been redeemed. Revenue during 1954 amounted to £65,851 and expenditure, including £29,799 on interest and redemption, to £63,293.

A sewerage rate of 1s. 4d. in the £1, with a minimum rate of £2 4s., is levied on the net annual value of any ratable sewered property on which there is a building and £1 on any ratable sewered property on which there is no building.

(iv) *Other Sewerage Authorities.* At 30th June, 1954, 60 sewerage authorities had been constituted under the provisions of the Sewerage Districts Acts in districts outside the areas under the control of the Melbourne and Metropolitan Board of Works and the Geelong Waterworks and Sewerage Trust, and systems were in operation in 30 districts (including five partly operating) serving a population of 229,050 persons.

In addition, sewerage authorities were constituted in a further 30 districts at this date, but their operations had either been suspended or had not commenced.

(v) *Water Supply in Country Towns and Districts.* Most of the country waterworks are controlled by the State Rivers and Water Supply Commission, but in some instances the control is by waterworks trusts or by municipal corporations.

The waterworks controlled by the State Rivers and Water Supply Commission at 30th June, 1954, included 37 large reservoirs and 241 subsidiary reservoirs and service basins with a total storage capacity of 661,785 million gallons (2,430,800 acre feet). Length of channels was 15,027 miles (irrigation, 4,884 miles, domestic and stock 8,049 miles, drainage and flood protection, 2,094 miles) and of pipe lines 1,224 miles. The quantity of water delivered to water users during 1953-54 was 1,011,556 acre feet. The Commission administered 65 rural districts during 1953-54 (29 irrigation districts, 31 waterworks districts, 4 flood protection districts and 1 drainage district), and the reticulated pipe supplies for domestic and industrial purposes in 130 urban districts. In addition, 127 urban districts were administered by waterworks trusts and 16 by local governing bodies. The population served in these groups of urban districts numbered, respectively, 175,310, 339,270 and 100,510 persons. The table below is a summary of the Commission's finances for operations in districts under its control for the years 1938-39 and 1949-50 to 1953-54.

STATE RIVERS AND WATER SUPPLY COMMISSION, VICTORIA : FINANCES.(a)  
(£.)

Year.	Total Loan Capital Expenditure to 30th June.	Receipts.	Payments.				Total.
			Operating Expenses.	Interest on Capital Allotted.	Depreciation.	Debt Redemption.	
1938-39 ..	24,223,037	560,680	476,085	145,105	27,553	4,922	653,665
1949-50 ..	35,041,827	1,433,561	1,519,659	38,117	66,441	3,055	1,627,272
1950-51 ..	41,318,382	1,592,333	1,810,264	37,950	97,425	1,383	1,947,022
1951-52 ..	51,082,707	1,871,810	2,292,995	47,547	92,573	1,497	2,434,612
1952-53 ..	57,464,776	1,989,289	2,669,419	26,555	90,024	3,284	2,789,282
1953-54 ..	65,143,250	2,412,382	2,717,862	75,101	90,616	5,181	2,888,760

(a) Excludes waterworks and river improvement trusts and local governing bodies.

The total loan capital expenditure of waterworks and river improvement trusts and local governing bodies at 30th June, 1954 was £8,767,113, making a grand total of £73,910,363 when added to the figure for works under the control of the Commission. The net loan capital after redemption payments of £2,115,292 was £71,795,071.

The financial operations of the State Rivers and Water Supply Commission form part of the Consolidated Revenue Fund, but are included in this section for convenience. The major proportion of the interest payable is borne by the State and is additional to that shown above. The net expenditure borne by the State during 1953-54 was £3,052,155.

3. Queensland.—(i) *Brisbane City Council—to 30th June, 1954.* (a) *General.* This organization conducts the water supply and sewerage systems of the City of Brisbane. Prior to 1928, water and sewerage activities had been controlled by the Metropolitan Water and Sewerage Board, but were then absorbed by the Brisbane City Council, which also supplies, in bulk, the whole of the water used by the City of Ipswich and the Town of Redcliffe.

(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 (5,725 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 eleven service reservoirs with a capacity of approximately 36.6 million gallons. The Somerset reservoir is under the control of Stanley River Works Board and 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 at 30th June, 1954 was 3½d. in the £1 of unimproved capital value for improved properties, and 2d. in the £1 for vacant lands, with a minimum of £3 10s. and £2 6s. 8d. respectively. The following table is a summary of operations of the complete Brisbane City Council system (metropolitan area, Ipswich and Redcliffe) for the years 1938-39 and 1949-50 to 1953-54 :—

## 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 Retention Mains.	Number of Meters.
					Per Service.	Per Head of Estimated Population.		
			Mill. gals.	Mill. gals.	Gallons.	Gallons.	Mill-s.	
1938-39 ..	81,389	345,903	15.9	5,791	195	45.9	1,169	(b)
1949-50 ..	111,363	445,897	26.1	9,540	235	58.6	1,376	52,807
1950-51 ..	117,904	472,145	27.9	10,193	237	60.8	1,429	52,691
1951-52 ..	124,992	489,266	32.4	11,860	259	66.2	1,479	52,496
1952-53 ..	131,895	516,186	31.5	11,486	239	61.0	1,535	52,360
1953-54 ..	139,172	544,183	33.9	12,379	244	62.3	1,581	51,976

(a) Includes Ipswich and Redcliffe.

(b) Not available.

(c) *Sewerage.* The sewage treatment works are situated at Luggage Point on the north bank at the entrance to the Brisbane River. The treatment plan is the activated sludge system, but this has not been put into operation, and since the commencement of pumping operations in 1923 a sedimentation plant only has been used. Sewerage rating at 30th June, 1954 was 2½d. in the £1 of unimproved capital value for improved properties, and 2d. in the £1 for vacant lands, with a minimum of £3 15s. and £3 5s. respectively. The following table is a summary of operations of the Brisbane sewerage scheme for the years 1938-39 and 1949-50 to 1953-54 :—

## SEWERAGE, BRISBANE : SERVICES.

Year.	Premises Connected.	Estimated Population Served.	Total Sewage Pumped for the Year.	Length of Main, Branch, Reticulation, etc., Sewers.
			Mill. gals. (a)	Miles.
1938-39 .. .. .	33,248	149,616		484
1949-50 .. .. .	46,330	189,953	4,967	590
1950-51 .. .. .	47,808	196,013	5,351	608
1951-52 .. .. .	49,368	197,472	4,663	615
1952-53 .. .. .	50,653	202,612	4,791	630
1953-54 .. .. .	51,832	207,328	4,868	647

(a) Not available.

(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 1938-39 and 1949-50 to 1953-54 :—

## WATER SUPPLY AND SEWERAGE, BRISBANE : FINANCES.

(£.)

Service and Year.	Gross Capital Cost at 30th June.	Revenue.	Expenditure.			Surplus (+) or Deficit (-).
			Working Expenses.	Interest Redemption, etc. Charges.	Total.	
Water Supply—						
1938-39 .. ..	4,849,732	606,244	129,219	280,827	422,366	+ 183,878
1949-50 .. ..	7,579,798	866,366	353,805	276,796	700,237	+ 166,129
1950-51 .. ..	8,116,654	926,954	383,700	333,210	805,903	+ 121,051
1951-52 .. ..	8,915,401	1,036,944	494,136	347,000	979,916	+ 57,028
1952-53 .. ..	9,861,885	1,280,390	587,695	403,349	1,164,278	+ 116,112
1953-54 .. ..	10,672,306	1,326,644	640,838	434,073	1,237,040	+ 89,604
Sewerage—						
1938-39 .. ..	5,992,936	240,963	52,792	403,386	485,974	- 245,011
1949-50 .. ..	8,117,835	412,833	87,100	264,972	379,299	+ 33,534
1950-51 .. ..	8,821,671	483,854	105,928	313,308	472,745	+ 11,109
1951-52 .. ..	9,794,052	499,935	127,417	302,252	467,774	+ 32,161
1952-53 .. ..	10,863,167	591,584	171,614	330,642	564,704	+ 26,880
1953-54 .. ..	11,893,902	603,141	163,397	349,692	552,651	+ 50,490

(ii) *Country Towns.* (a) *Water Supply.* In addition to the City of Brisbane there were, at 30th June, 1953, 107 cities and towns in Queensland provided with water supply systems controlled by municipal and shire councils.

(b) *Sewerage Systems.* At 30th June, 1953, there were 13 cities and towns outside the metropolitan area—Bundaberg, Charleville, Cunnamulla, Goondiwindi, Hughenden, Ipswich, Mackay, Maryborough, Quilpie, Rockhampton, Toowoomba, Townsville and Warwick—with sewerage systems. Sewerage systems were in course of construction at Mt. Isa, Dalby, Barcaldine and Longreach.



(c) *Finances.* The receipts (other than loan) of water undertakings controlled by the cities and towns referred to above amounted to £2,880,173 in 1952-53. Expenditure amounted to £2,699,087, including £270,024 for debt charges. In addition, loan expenditure amounted to £1,466,640.

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 and are maintained by the Engineering and Water Supply Department under the control of the Minister of Works. The works controlled comprise the Adelaide, Barossa, Baroota Creek, Beetaloo, Bundaleer, Tod River, Warren and other country water districts systems, the Morgan-Whyalla water supply system, the Adelaide metropolitan sewerage system, the Murray River Weirs, water conservation, and the Metropolitan Flood Waters Scheme.

(ii) *South Australian Waterworks. (a) Services.* The table hereunder shows particulars of the area, capacity, etc. of combined metropolitan and country waterworks for the years 1938-39 and 1950-51 to 1954-55:—

## 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.	
1938-39 ..	185,625	6,302,445	11,857,968	23,814	6,384	97,074
1950-51 ..	216,989	8,556,078	11,968,452	23,943	7,203	109,433
1951-52 ..	227,082	12,202,222	11,974,297	23,984	7,368	114,222
1952-53 ..	234,269	13,366,875	11,976,503	24,009	7,478	119,349
1953-54 ..	237,742	14,319,989	11,985,353	24,013	7,555	125,144
1954-55 ..	239,389	15,307,092	12,100,784	24,014	7,700	134,058

(a) Excludes Morgan-Whyalla Water Supply—water sold by measure.

(b) *Finances.* Figures for 1938-39 and 1950-51 to 1954-55 are shown in the following table.

## WATERWORKS, SOUTH AUSTRALIA : FINANCES.

(£.)

Year.	Invested Capital at 30th June.	Revenue.	Expenditure.			Deficit.
			Working Expenses.	Interest and Debt Redemption.	Total.	
1938-39 ..	14,649,052	654,688	242,528	651,972	894,500	239,812
1950-51 ..	22,591,460	1,098,360	1,068,102	720,250	1,788,352	680,992
1951-52 ..	25,718,681	1,301,075	1,279,742	747,386	2,027,128	726,053
1952-53 ..	28,573,826	1,415,713	1,377,212	789,517	2,166,729	751,016
1953-54 ..	32,156,877	1,505,690	1,424,169	883,876	2,308,045	802,355
1954-55 ..	37,353,231	1,725,017	1,855,026	1,095,914	2,950,940	1,225,923

(iii) *Adelaide Waterworks.* At 30th June, 1954 the Adelaide waterworks supplied a district of 144,711 acres. The capacity of its five reservoirs was 14,469 million gallons and there were 1,886 miles of mains.

The piping of River Murray water to Adelaide was completed in November, 1954. This water supplements the Metropolitan and Warren system areas and serves country areas en route. Another major project—the construction of a large reservoir on the South Para River—is still under construction but is nearing completion. This reservoir will provide additional storage to serve the lower northern areas of the State and will make some additional provision for the metropolitan area. The capacity of this new reservoir will be about 10,000 million gallons.

Particulars of finances for the years 1938-39 and 1950-51 to 1954-55 are shown below :—

ADELAIDE WATERWORKS : FINANCES.

(£.)

Year.	Invested Capital at 30th June.	Revenue.	Expenditure.			Surplus (+) or Deficit (-)
			Working Expenses.	Interest and Debt Redemption.	Total.	
1938-39 ..	4,676,110	446,459	111,347	202,279	313,626	+ 132,833
1950-51 ..	7,814,093	680,275	400,600	230,821	631,421	+ 48,854
1951-52 ..	10,101,923	860,492	507,444	260,752	768,196	+ 92,296
1952-53 ..	11,849,046	908,177	534,074	313,252	847,326	+ 60,851
1953-54 ..	14,438,595	968,575	614,308	377,909	992,217	- 23,642
1954-55 ..	17,922,472	1,078,614	939,317	511,127	1,450,444	- 371,830

(iv) *Adelaide Metropolitan Sewerage.* The Adelaide metropolitan sewerage system, comprising the Adelaide, Glenelg and Port Adelaide areas, with drainage areas of 100 square miles in all, includes a sewage farm, and treatment works at Glenelg and Port Adelaide. The total quantity of sewage pumped by the various stations was 4,665 million gallons during 1954-55. Other particulars for 1938-39 and 1950-51 to 1954-55 are shown hereunder :—

ADELAIDE METROPOLITAN SEWERAGE : SUMMARY.

Year.	Length of Sewers.	Number of Con-nexions.	Invested Capital at 30th June.	Revenue.	Expenditure.			Surplus (+) or Deficit (-).
					Working Expenses.	Interest and Debt Redemption.	Total.	
	Miles.		£	£	£	£	£	£
1938-39 ..	923	80,745	3,361,034	268,880	77,023	150,273	227,296	+ 41,584
1950-51 ..	1,133	107,634	4,855,351	371,835	255,009	160,253	415,262	- 43,427
1951-52 ..	1,163	113,432	5,372,988	515,303	358,002	161,780	519,782	- 4,479
1952-53 ..	1,206	120,510	5,860,255	551,843	399,327	162,015	561,342	- 9,499
1953-54 ..	1,244	126,375	6,325,084	601,253	440,028	179,435	619,463	- 18,210
1954-55 ..	1,292	131,932	6,974,042	641,194	468,969	205,594	674,563	- 33,369

(v) *Country Water Supply.* Water district systems outside Adelaide at 30th June, 1955 comprised an area of 11,956,073 acres, and the capacity of the reservoirs was 9,545 million gallons. These figures exclude the Morgan-Whyalla supply system, which obtains its water from the River Murray. The storage tanks of this system had a capacity of 44 million gallons.

The Uley-Wanilla sub-artesian basin has been utilised to augment the Tod River District supplies. Pumping began in 1947. In 1954-55 nine bores were in operation and 379 million gallons were pumped from the basin to meet the needs of Port Lincoln. At 30th June, 1955, £5,014,866 had been invested in the Tod River District.

Construction work is proceeding on the scheme to reticulate water to Yorke Peninsula. The section of the new 20 inch to 26 inch steel main between Bundaleer Reservoir and Bute has been completed and is in service.

The following table gives financial information on country waterworks for 1938-39 and 1950-51 to 1954-55:—

**COUNTRY WATERWORKS, SOUTH AUSTRALIA : FINANCES.(a)**  
(£.)

Year.	Invested Capital at 30th June.	Revenue.	Expenditure.			Deficit.
			Working Expenses.	Interest.	Total.	
1938-39 ..	10,015,613	207,569	130,523	449,691	580,214	372,645
1950-51 ..	12,289,918	310,396	647,994	407,810	1,055,804	736,408
1951-52 ..	13,123,855	339,155	727,174	405,334	1,132,508	793,353
1952-53 ..	14,018,673	407,944	757,727	394,750	1,152,477	744,533
1953-54 ..	17,718,282	630,466	903,212	505,957	1,409,179	778,713
1954-55 ..	19,430,759	646,193	915,709	584,787	1,500,496	854,093

(a) Excludes Morgan-Whyalla system.

(vi) *Morgan-Whyalla Water Supply Scheme.* This scheme, which involved the laying of 223 miles of main, was officially opened on 31st March, 1944, the capital invested to 30th June, 1955 being £2,577,469. Particulars of this scheme, where applicable, are included in the tables of the combined waterworks in (ii) above. During 1954-55 the water used from the system between Hanson and Whyalla amounted to 1,264 million gallons. Revenue for the year 1954-55 was £173,880, working expenses, etc. £155,195, interest charges, £82,200 and deficit, £63,515. Corresponding figures for 1953-54 were respectively, £203,889, £160,721, £81,674 and £38,506.

5. Western Australia.—(i) *General.* The water supply and sewerage systems of Western Australia are principally under the management of Government Departments, and are divided into the following categories:—(a) Metropolitan Water Supply, Sewerage and Drainage, covering Perth, Fremantle, Claremont, Guildford, Midland Junction and Armadale District; (b) Country Areas (previously Goldfields) Water Supply; (c) Water Supply of other towns, etc.; (d) Agricultural Water Supply, and (e) Artesian and sub-artesian waters.

(ii) *Metropolitan Water Supply, Sewerage and Drainage.* (a) *General.* The sources of the metropolitan water supply are the Canning Dam, Churchman's Brook, Wongong Brook, Victoria Reservoir, Armadale Pipe Head Dam and Well, and certain bores. The largest reservoir, the Canning Dam, has a capacity of 20,550 million gallons, about 5,000 million gallons more than that of the Mundaring Reservoir to which it is linked by a pipeline.

The sewage treatment works of Perth and suburbs consist of primary sedimentation with separate sludge digestion and discharge of all effluent direct to the ocean. Fremantle treatment works consist of septic tanks with ocean outfall for effluent. There are three treatment works, situated at West Subiaco, Swanbourne and Fremantle.

(b) *Water Supply.* The following table shows particulars of water supply services for 1938-39 and 1949-50 to 1953-54:—

**METROPOLITAN WATER SUPPLY, WESTERN AUSTRALIA : SERVICES.**

Year.	Number of Services.	Estimated Population Supplied.	Average Daily Consumption.	Total Consumption for Year.	Average Daily Consumption.		Length of Mains.	Number of Meters.
					Per Service.	Per Head of Estimated Population.		
			Mill. gals.	Mill. gals.	Gallons.	Gallons.	Miles.	
1938-39 ..	61,467	248,248	14.1	5,147	229	56.8	953	40,014
1949-50 ..	79,835	297,123	29.1	10,618	364	97.9	1,224	49,370
1950-51 ..	84,926	303,422	28.4	10,354	334	93.5	1,271	52,277
1951-52 ..	90,436	309,851	31.0	11,337	343	100.0	1,327	61,146
1952-53 ..	96,155	316,423	30.7	11,201	319	97.0	1,422	69,262
1953-54 ..	102,093	323,131	31.0	11,713	342	108.0	1,500	73,780

Water rating for 1953-54 was 1s. 9d. in the £1 on annual valuation.

(c) *Sewerage and Drainage.* Some particulars of the metropolitan sewerage and drainage services for 1938-39 and 1949-50 to 1953-54 are shown below :—

**METROPOLITAN SEWERAGE AND DRAINAGE, WESTERN AUSTRALIA : SERVICES.**

Year.	Houses Connected.	Estimated Population Served.	Sewage Pumped for the Year.(a)	Length of Sewers.	Length of Stormwater Drains.
			Mill. gals.	Miles.	Miles.
1938-39.. ..	36,652	162,457	1,030	444	31
1949-50.. ..	48,909	205,418	2,326	588	34
1950-51.. ..	50,480	212,016	3,809	605	34
1951-52.. ..	52,171	224,000	3,080	626	34
1952-53.. ..	54,467	229,700	3,333	648	34
1953-54.. ..	56,526	238,400	3,372	654	34

(a) Aggregate of quantities pumped by the various stations.

Sewerage rating for 1953-54 was 1s. 11d in the £1 on annual valuation, while stormwater drainage rating was 5d.

(d) *Finances.* The following table shows particulars of the finances of the Western Australian Metropolitan Water Supply, Sewerage and Drainage Department for the years 1938-39 and 1949-50 to 1953-54 :—

**METROPOLITAN WATER SUPPLY AND SEWERAGE AND DRAINAGE, WESTERN AUSTRALIA : FINANCES.**  
(£.)

Service and Year.	Capital Cost at 30th June.	Revenue.	Expenditure.			Surplus (+) or Deficit (-).
			Working Expenses.	Interest and Debt Redemption.	Total.	
<b>Water Supply—</b>						
1938-39 .. ..	4,898,167	285,313	50,975	228,527	279,502	+ 5,811
1949-50 .. ..	6,200,989	452,956	186,219	224,958	411,177	+ 41,779
1950-51 .. ..	6,771,509	488,396	228,442	243,807	472,249	+ 16,147
1951-52 .. ..	7,665,863	543,872	288,525	284,820	573,345	- 29,473
1952-53 .. ..	8,817,351	618,603	364,638	324,107	688,745	- 70,142
1953-54 .. ..	9,874,822	811,500	408,714	380,729	789,443	+ 22,057
<b>Sewerage and Drainage—</b>						
1938-39 .. ..	3,497,938	174,950	30,630	149,714	180,344	- 5,394
1949-50 .. ..	4,567,278	274,113	84,988	196,234	281,222	- 7,109
1950-51 .. ..	4,884,224	288,598	119,125	206,701	325,826	- 37,228
1951-52 .. ..	5,169,227	339,917	156,507	238,599	395,106	- 55,189
1952-53 .. ..	5,449,248	402,808	182,184	252,256	434,440	- 31,632
1953-54 .. ..	5,749,506	542,476	235,826	263,713	499,539	+ 42,937

(iii) *Country Areas Water Supply (Previously Goldfields Water Supply).* The source of supply for Kalgoorlie, Coolgardie and adjacent goldfields, as well as for the towns and districts on or near the pipeline, is the Mundaring Reservoir, whose capacity is 15,100 million gallons. This scheme is linked by pipeline with the Canning Dam.

Work is proceeding for a comprehensively reticulated water scheme at an estimated cost of approximately £4,300,000 to serve an area of about 4,500,000 acres of farm lands and some 23 agricultural towns, including the principal towns on the Great Southern Railway. The supply to the Eastern Goldfields will be increased to permit expansion of the gold-mining industry, the already increased capacity of the Mundaring Reservoir being part of this scheme. It is also planned to increase the storage capacity of the Willington Dam to 38,000 million gallons. Financing of the scheme is being shared by the Commonwealth and the State Governments on a £1 for £1 basis. Expenditure on this work to 30th June, 1954 totalled £2,283,122.

The following table shows details of the Country Areas Water Supply for 1938-39 and 1949-50 to 1953-54 :—

**COUNTRY AREAS WATER SUPPLY(a), WESTERN AUSTRALIA : SUMMARY.**

Year.	Number of Services.	Total Consumption.	Length of Water Mains.	Number of Meters.	Capital Cost.	Revenue.	Expenditure. (b)	Surplus (+) or Deficit (-)
		Mill. gals.	Miles.		£	£	£	£
1938-39 ..	13,670	1,735	1,720	10,872	5,527,890	331,457	298,531	+ 32,926
1949-50 ..	16,063	2,208	1,777	13,991	6,803,271	346,660	566,614	- 219,954
1950-51 ..	16,229	2,762	1,793	14,180	7,461,331	359,468	673,318	- 313,850
1951-52 ..	16,598	2,314	1,802	14,640	7,916,564	366,755	806,398	- 439,643
1952-53 ..	17,124	2,374	1,810	15,289	8,314,816	398,057	1,010,036	- 611,979
1953-54 ..	17,375	2,565	1,818	15,500	8,770,042	432,502	1,071,597	- 639,095

(a) Previously Goldfields Water Supply.

(b) Includes interest and debt redemption.

(iv) *Water Supply of Other Towns, etc.* (a) *Controlled by Public Works Department.* During 1953-54, water supplied to other towns and districts, excluding minor water supplies, amounted to 910 million gallons, including service to adjacent mines, 14 million gallons, and railways 73 million gallons. There were in all, 16,097 services connected.

(b) *Controlled by Commonwealth and State Government Railways.* Consumption for the year ended 30th June, 1954 was 299 million gallons. In addition, 371 million gallons were obtained from other sources, mainly the Country Areas Water Supply and the Metropolitan Water Supply.

(c) *Water Boards not Controlled by Government.* During 1953-54, approximately 424 million gallons of water were supplied to an estimated population of 18,399.

(v) *Agricultural Water Supply.* During the fifty years from 1st July, 1904 to 30th June, 1954, 584 tanks were built, 1,159 wells sunk, and 5,611 bores (including artesian) put down. Of the bores put down, 1,588 yield fresh or stock water.

(vi) *Artesian and Sub-artesian Waters.* Up to 30th June, 1954 the total number of bores put down in search of artesian or sub-artesian water (inclusive of operations by Defence Services) was 341 ranging in depth from 21 to 4,006 feet. Water (fresh or stock) was struck in 290 bores, 174 of which were artesian and 116 sub-artesian.

6. *Tasmania.*—(i) *Waterworks.* At the end of 1952-53 (1951-52 in parentheses) there were 38 (37) municipal waterworks in Tasmania. The capacity of the reservoirs was 887 (881) million gallons, the estimated population served was 210,291 (201,281), the number of properties assessed was 66,857 (64,088) and the length of aqueducts, mains and reticulation was 1,199 (1,122) miles. Costs of construction amounted to £3,038,190 (£2,538,256). The largest of these undertakings is Hobart, with a reservoir capacity at the end of 1952-53 of 578 million gallons, and 161 miles of reticulation and 92 miles of aqueduct and main.

(ii) *Sewerage.* In Tasmania sewerage also is the concern of local authorities.

## § 6. Harbour Boards and Trusts.

NOTE.—The number and net tonnage of all vessels which entered the major ports in each State during the years 1953-54 and 1954-55 are shown in Chapter VII.—Transport and Communication, A. §3. Shipping at Principal Ports. Particulars of overseas and interstate cargo discharged and shipped during 1954-55 are shown in A. § 6 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 five Commissioners, three of whom are full-time members and two, representing shipping and

other interests, part-time members. The Board was brought into existence on 1st February, 1936 by the Maritime Services Act 1935 in order 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; 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 Port of Sydney 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) *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 4 miles, there are two separate channels, each 700 feet wide, the Western Channel not less than 42 feet deep (low water ordinary spring tides) and the Eastern Channel 40 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 in close proximity to the business centre of the city, about four or five miles from the Heads. At present there are 6 dolphin berths each 550 feet long, and 122 effective commercial cargo berths with a total length of 50,432 feet controlled by the Board. Accommodation for harbour craft amounts to 4,835 feet while the length of other berths including oil and private wharves totals 19,532 feet. Depth of water at wharves is up to 40 feet. Special facilities for the storage and handling of staple products such as wheat, wool, 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, opened in March, 1945, ranks amongst the largest graving docks in the world being 1,133 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.

The following table shows particulars of the finances of the Board in respect of the Port of Sydney for 1938-39 and 1949-50 to 1953-54 :—

#### MARITIME SERVICES BOARD : FINANCES OF THE PORT OF SYDNEY.

(£.)

Year.	Total Capital Debt at 30th June.	Revenue.			Expenditure.			Surplus (+) or Deficit (—).
		Wharfage and Transhipment Rates.	Tonnage Rates and Berthing Charges.	Total.	Administration and Maintenance.	Interest, Debt Redemption, Exchange, etc.	Total. (a)	
1938-39..	11,276,399	773,501	38,180	1,155,627	380,120	536,781	916,901	+238,726
1949-50..	11,571,669	925,144	229,092	1,658,203	957,510	526,171	1,483,681	+174,522
1950-51..	11,779,317	1,032,685	333,902	1,955,073	1,155,004	528,928	1,683,932	+271,141
1951-52..	12,194,585	1,107,933	334,530	2,354,154	1,455,711	533,401	1,989,112	+365,042
1952-53..	12,562,700	971,553	254,637	2,021,121	1,529,050	546,590	2,075,640	- 54,519
1953-54..	12,799,104	1,482,492	333,320	2,471,540	1,517,811	550,654	2,068,465	+403,075

(a) Excludes capital expenditure (1938-39, £28,576; 1949-50, £287,211; 1950-51, £384,911; 1951-52, £495,443; 1952-53, £465,764; 1953-54, £468,010) and expenditure on renewals and replacements (1949-50, £159,935; 1950-51, £196,102; 1951-52, £291,454; 1952-53, £299,286; 1953-54, £317,493.)

(c) *Port of Newcastle.* The Maritime Services Board of New South Wales is the port authority but other government bodies are responsible for certain functions and activities of a maritime character at Newcastle. These include—

- (i) The Department of Public Works, which is the constructing, dredging and maintenance authority at Newcastle as well as at other New South Wales ports except Sydney ;
- (ii) The Department of Railways, which is responsible for the control of wharfage and shipping arrangements in connexion with the coal industry and the provision and maintenance of appliances necessary for the transport and shipment of coal.

An Advisory Committee consisting of eight members, appointed by the Governor, assists the Board in matters associated with the operation of the port. In regard to volume of trade, Newcastle ranks second in importance in New South Wales and third in Australia. 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 16,100 feet, the Maritime Services Board controlling 6,500 feet and the Railways Department 7,000 feet while 2,600 feet is privately owned. There are also a number of dolphin berths available for tie-up purposes. A floating dock of 15,000 tons capacity is available at the port.

(d) *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 continues however to be the constructing authority in respect of works, dredging and maintenance. In respect of volume of trade, Port Kembla ranks third in the ports of New South Wales, and about fifth in those of Australia. It has an area of approximately 330 acres, with depths ranging from 20 to 50 feet (low water ordinary spring tide), and wharfage accommodation totalling 4,800 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.

(e) *Other Ports.* In addition to the ports of Sydney, Newcastle and Port Kembla, 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 Federal 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 £3,614,233 in 1953-54. These figures include the Port of Sydney revenue (see table above) and State navigation service collections (£1,142,693 in 1953-54). Commonwealth Government revenue from light dues and navigation receipts, for the whole of Australia, amounted to £224,654 in 1953-54.

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, p. 970 *et seq.* The composition of the Board of the Melbourne Harbor Trust Commissioners was increased to five during 1954 by the appointment of a further part-time Commissioner to represent waterside workers' interests. At 31st

December, 1954, the sheds available for wharfage accommodation had a length of 21,244 feet, covering an area of 1,506,083 square feet. The area of water in the bay and River Yarra under the control of the Trust is approximately 5,327 acres and the total length of wharves, piers and jetties in the port is 62,703 feet, giving an area of over 58 acres of wharfage, and 54,795 feet of effective berthing space. During 1954, work was continued on the new berths at Appleton Dock (ultimately to have eighteen berths), Victoria Docks, South Wharf and Williamstown. The depth of water (low water ordinary spring tide) from the main channels to the principal wharves is about 31 to 34 feet, the maximum being about 40 feet.

(b) *Finances.* The following table shows particulars of the financial operations of the Trust during the years 1939 and 1950 to 1954:—

#### 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)	
1939 ..	4,018,527	689,100	843,899	282,533	270,650	129,160	837,577	+ 6,322
1950 ..	3,972,029	1,293,923	1,771,074	675,830	187,582	162,883	1,301,687	+ 469,387
1951 ..	5,883,857	1,493,423	2,129,432	1,036,842	235,881	175,263	1,768,105	+ 361,327
1952 ..	7,914,146	1,256,581	1,941,252	1,204,863	292,485	179,047	1,947,085	— 5,833
1953 ..	9,581,933	1,423,345	2,052,272	1,230,195	381,914	98,182	2,013,554	+ 38,718
1954 ..	9,641,361	1,800,811	2,593,347	1,232,574	418,818	479,393	2,509,947	+ 83,400

(a) Includes statutory payments to Consolidated Revenue and Geelong Harbor Trust:—1939 £155,234; 1950, £275,383; 1951, £320,119; 1952, £270,690; 1953, £303,263. 1954, £379,162. Excludes capital expenditure:—1939 £128,567; 1950, £1,589,392; 1951, £2,058,921; 1952, £2,246,097; 1953 £1 255,613; 1954, £1,255,625.

(ii) *Geelong Harbor Trust.* The Geelong Harbor Trust was constituted in 1905, and reconstituted in 1934 under the provisions of the Melbourne and Geelong Harbor Trusts Act 1934. The Trust is under the control of three Commissioners appointed by the Governor-in-Council. The port dredging programme was nearing completion at the end of 1954 and will provide a minimum depth of water throughout approaches and at all berths of 32 feet (mean low water spring tides).

Revenue for the year 1954 was £544,401, and revenue expenditure was £370,440. The gross value of the Trust's fixed assets increased by £727,863 in 1954 and loans outstanding at the end of the year amounted to £2,695,862.

(iii) *Other Ports.* Apart from Melbourne and Geelong, Portland is the only Victorian port of more than minor importance.

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. The maximum depths (low water ordinary spring tide) of the shipping channel decrease from 32 feet in the North-West channel to 20 feet in



the Bulimba Reach to Victoria Bridge section. Depths at wharves vary between 23 and 29 feet. Adequate dry-docking facilities are available. The finances of Brisbane Harbour for the years 1938-39 and 1948-49 to 1952-53 are shown below :—

## BRISBANE HARBOUR : FINANCES.

(£'000.)

Year.	Loan Indebtedness at 30th June.	Receipts.		Payments.	
		Harbour Dues.	Total.	Working Expenses.	Total (including Interest and Redemption)
1938-39 .. ..	1,179	165	173	36	112
1948-49 .. ..	1,256	190	209	162	250
1949-50 .. ..	1,325	219	299	168	260
1950-51 .. ..	1,572	221	253	237	329
1951-52 .. ..	1,862	276	326	348	463
1952-53 .. ..	2,168	318	393	426	556

In addition to Brisbane Harbour, the Department of Harbours and Marine also controls the Brisbane Dry Dock, the Cairncross Dock, the Brisbane River, and ten smaller harbours not administered by harbour boards.

(iii) *Harbour Boards.* Harbour boards control the ports of Bowen, Bundaberg, Cairns, Gladstone, Mackay, Rockhampton and Townsville. After 1st January 1953, the harbour boards adopted the financial year ended 30th June for accounting purposes instead of the calendar year as previously. Finances for each port for the eighteen months ended 30th June, 1954 are shown below, together with a summary for the years 1939 and 1949 to 1952.

## HARBOUR BOARDS, QUEENSLAND : FINANCES.

(£.)

Harbour Board.	Loan Indebted- ness at 30th June (a)	Revenue.		Expenditure (excluding Loan).		Surplus (+) or Deficit (-)
		Wharf- age and Harbour Dues.	Total.	Working Expenses.	Total (including Int' rest and Redemp- tion).	
Bowen .. ..	352,933	59,178	69,955	40,308	70,508	— 553
Bundaberg .. ..	42,143	7,778	14,051	9,921	14,482	— 431
Cairns .. ..	201,368	256,899	416,520	303,946	372,454	+ 44,066
Gladstone .. ..	353,355	39,984	195,398	69,021	191,875	+ 3,523
Mackay .. ..	783,017	225,092	247,103	42,555	96,557	+ 150,546
Rockhampton .. ..	563,393	78,252	99,729	73,186	102,226	— 2,497
Townsville .. ..	417,470	288,281	371,138	250,409	310,834	+ 51,304
Total, 1954(b) .. ..	2,713,679	955,464	1,413,894	789,346	1,167,936	+ 245,958
„ 1952 .. ..	2,059,080	455,677	713,312	440,784	696,843	+ 16,469
„ 1951 .. ..	1,786,774	402,903	599,505	370,040	534,095	+ 65,410
„ 1950 .. ..	1,611,241	378,949	510,719	284,896	408,561	+ 102,158
„ 1949 .. ..	1,523,644	347,843	464,450	307,716	431,359	+ 33,091
„ 1939 .. ..	1,548,144	249,510	410,439	139,752	343,083	+ 58,356

(a) Years 1939 and 1949 to 1952, 31st December.

(b) Eighteen months ended 30th June, 1954.

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 5 deep sea ports of Adelaide, Pirie, Wallaroo, Lincoln and Thevenard. At several ports, the wharves or jetties are privately controlled, the principal of these being Whyalla (controlled by the Broken Hill Pty. Co. Ltd. under a Private Act of Parliament) and Augusta (controlled by the Commonwealth Railways) whilst at Ardrossan the Broken Hill Pty. Co. Ltd. has installed a bulk loading plant for handling dolomite and grain. Maximum depths of water (low water ordinary spring tide) at the wharves of the main ports range from 20 to 24 feet at Pirie to 35 feet at Adelaide (Outer Harbour). The following table shows the finances of the Board for 1938-39 and 1949-50 to 1953-54 :—

### SOUTH AUSTRALIAN HARBORS BOARD : FINANCES.

(£.)

Year.	Capital at 30th June. (a)	Revenue.	Expenditure from Revenue.				Surplus(+) or Deficit (-).
			Working Expenses.	Interest.	Debt Redemption.	Total.	
1938-39 ..	8,026,441	664,915	205,848	326,719	50,000	582,567	+ 82,348
1949-50 ..	8,545,084	1,050,742	583,965	281,691	33,327	898,983	+ 151,759
1950-51 ..	8,896,281	1,141,174	784,191	281,657	..	1,065,848	+ 75,326
1951-52 ..	9,581,786	1,336,504	1,039,801	280,872	..	1,320,673	+ 15,831
1952-53 ..	10,017,582	1,240,679	1,083,322	286,456	..	1,369,778	- 120,099
1953-54 ..	10,782,702	1,382,276	1,280,709	312,333	..	1,593,042	- 210,766

(a) State Treasurer's Funds and Reserve employed.

5. *Western Australia.*—(i) *Fremantle Harbour Trust.* Fremantle Harbour is controlled by a board of five Commissioners appointed by the Governor-in-Council. Maximum depth of water (low water ordinary spring tide) at the entrance to the harbour is 30 feet, and at the wharves 33 feet. The length of wharf berth accommodation is 10,495 feet.

Gross earnings for the year 1953-54 amounted to £2,029,053, working expenses to £1,579,741, interest £159,642, debt redemption £45,174, renewals fund £2,000, and payment of surplus cash to Consolidated Revenue £51,785. There was also a special loan repayment from revenue amounting to £236,460. The total amount debited to loan capital account at 30th June, 1954 was £4,128,140.

(ii) *Bunbury Harbour Board.* The Bunbury Harbour Board consists of five members appointed by the Government. The depth of water at the entrance to the harbour and at the wharf is 27 feet (low water ordinary spring tide). Berthage accommodation is 3,700 feet. Gross earnings in 1953-54 were £34,147, working expenses £73,804, and interest £53,314. The total amount debited to loan capital account at 30th June, 1954 was £1,371,970.

(iii) *Other Ports.* Only the ports of Fremantle, Bunbury and Albany in Western Australia are under the control of trusts, the remainder are Government operated. Of these, Carnarvon, Geraldton and Onslow have the largest amount of shipping movement.

6. *Tasmania.*—There are eight marine boards and two harbour trusts in Tasmania. The marine boards control the ports of Hobart, Launceston, Stanley (Circular Head), Burnie, Wynyard (Table Cape), Devonport, Strahan, Currie (King Island) and Whitemark (Flinders Island) and the harbour trusts those of Smithton and Leven. Aggregate receipts of revenue accounts of all these authorities during the year 1953-54 were £833,589, and expenditures £743,270 including loan charges £115,602. The total receipts of the Hobart Marine Board during 1953-54 were £360,741, loan charges amounted to £32,913 and total expenditure to £353,600. Launceston Marine Board receipts during 1953-54 amounted to £225,225, loan charges to £15,386 and total expenditure to £177,969. Loan indebtedness of all marine boards and trusts at 30th June, 1954 was £2,213,951, of which £782,782 was in respect of Hobart and £184,722 in respect of Launceston.

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.*—(i) *General.* A Board of Fire Commissioners, consisting of eight members, operates under the Fire Brigades Act 1909–1949, and 153 fire districts had been constituted at the end of 1954. Up to the end of 1949, the cost of maintenance of fire brigades was borne in proportions of one quarter, one quarter, and one half respectively by the Government, the municipalities, and the insurance companies concerned, the expenditure so regulated that the proportion payable by the councils in a fire district should not, except in special circumstances, exceed the amount obtainable from ½d. in the £1 rate on the unimproved capital value of ratable land in the fire district. In June, 1949 legislation was introduced (i) increasing the limit of the Board's borrowing power from £250,000 to £500,000, (ii) providing for the varying of the maximum rate that may be levied by councils, and (iii) altering the basis of contributions so that from 1st January, 1950, local councils and the Government will each pay one-eighth and the insurance companies three-quarters.

Other legislation, introduced in September, 1949 to improve and modernize the law dealing with the prevention of bush fires and to build up the organization of the bush fire-fighting services, provided for the establishment of Fire Regions and a Bush Fire Fighting Fund to be financed from contributions by the Government, councils and insurance companies in the proportion of one-quarter, one-quarter and one-half, respectively. The contribution of any council shall not exceed one-twentieth of a penny in the £1 on the unimproved capital value of ratable land in the area of the council not being land within a fire district constituted under the Fire Brigades Act 1909–1949.

(ii) *Board of Fire Commissioners of New South Wales.* At 31st December, 1954 the authorised strength of the Fire Brigade throughout the fire districts of New South Wales was 294 officers and 823 permanent and 2,239 volunteer firemen. Corresponding figures for the Sydney Fire District were 242, 774 and 349. The revenue for the year 1954 was £1,873,407, made up as follows:—From the Government, £231,254; municipalities and shires, £231,254; fire insurance companies and firms, £1,387,521; and from other sources, £23,378. The disbursements for the year were £1,788,749.

2. *Victoria.*—(i) *General.* The Fire Brigades Act of 1928 provided for a Metropolitan Fire Brigades Board and a Country Fire Brigades Board each consisting of nine members. In December, 1944 the latter Board was superseded by the Country Fire Authority under an Act of that title, and the number of members was increased to ten.

(ii) *Metropolitan Fire Brigades Board.* Since 1st October, 1952, the Metropolitan Fire Brigades Board has received contributions from the municipalities and the insurance companies in the proportion of one-third and two-thirds respectively. Prior to 1st October, 1952, the Board received contributions in equal proportions from the Treasury, the municipalities and the insurance companies. On 30th June, 1954 the Board had under its control 43 stations, 670 permanent staff, 61 special service and clerical, etc. staff, and 15 part-time firemen. The total receipts for 1953–54 were £1,076,175 comprising contributions, £877,311, receipts for services, £102,534, and interest and sundries, £96,330. The expenditure was £1,015,775.

(iii) *Country Fire Authority.* This authority, constituted in 1944, 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 has received contributions in the proportion of two-thirds from insurance companies and one-third from the Treasury as from 1st January, 1954. Prior to that date the Treasury contributed two-thirds while the insurance companies contributed one-third. At 30th June, 1954 there were 150 insurance companies included in the operation of the Act, and 198 urban and 1,007 rural fire brigades. The effective registered strength of the brigades was 91,875 members.

The receipts for the year 1953–54 amounted to £328,173. Total expenditure other than loan amounted to £323,506.

3. *Queensland.*—(i) *General.* The Acts of 1920–1931 made provision for the retention of existing fire districts, and for the constitution of new districts. 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 :—The Treasury two-sevenths, insurance companies three-sevenths, and local authorities two-sevenths. All volunteer fire brigades in a district must be registered.

(ii) *Fire Brigades Boards.* At 30th June, 1953, the latest year for which figures are available, there were 68 Fire Brigades Boards. The total number of stations was 116, and full-time staff numbered 467, including 15 administrative, 85 officers and 367 firemen. Workshop staff numbered 17. Part-time staff numbered 596, including 69 administrative, 96 officers and 431 firemen. Volunteers numbered 336. The total revenue for the year 1952–53 was £563,740 received mainly from the following sources—Government £151,478, local authorities £151,081, insurance companies £227,220 and loans (Government and other) £30,011. The total expenditure for the year was £556,941 the chief items being salaries and wages £387,729 and interest and redemption of loans £28,739.

4. *South Australia.*—The Fire Brigades Act 1936–1944 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 (subject to certain limits when the contribution exceeds £10,000), five-ninths by insurance companies, and two-ninths by the municipalities concerned. At 30th June, 1954 there were altogether 35 fire brigade stations, of which 12 were metropolitan and 23 country.

The authorized strength of the permanent staff was 376, including 271 officers and men and 85 country auxiliary firemen. The total revenue for the year 1953–54 was £305,307, made up as follows :—insurance companies £183,899, Treasury £47,849, and municipalities £73,559. The Treasury contribution includes an additional grant of £35,853.

5. *Western Australia.*—In 1942 certain municipal and road board districts were constituted fire districts under the control of the Western Australian Fire Brigades Board. There were 31 at 30th September, 1954. 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 55 and 127 respectively. The brigades throughout the State controlled by the Western Australian Fire Brigades Board at 30th September, 1954 numbered 48, with a staff of 1,443, including 218 permanent officers and firemen and 1,197 volunteer brigade officers and firemen. The revenue for the year ended 30th September, 1954, was £275,419 and the expenditure £273,861.

Under the Bush Fires Act a Rural Fires Prevention Advisory Committee, consisting of ten members, four of whom are nominated by the Road Board 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 1,147 at 30th June, 1954 and the establishment of bush fire brigades, the number of which was 549 at 30th June, 1954.

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 brigades boards, while leaving the responsibility for individual control and management with the boards. The Commission consists of five members nominated or elected by the fire brigades boards and one member nominated by the Minister. Contributions towards the cost of operations are on the basis of one-third each from the Treasury the municipalities and the insurance companies concerned. The cost for the year 1953–54 amounted to £98,829. There were at 30th June, 1954, 31 stations amongst the 23 brigades, and their aggregate staffs numbered 432, including 79 permanent officers and 337 part-time firemen, including officers.

## CHAPTER XIX.

### PRIVATE FINANCE.

#### A. CURRENCY.

##### § 1. General.

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  $\frac{11}{18}$ 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 19th 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 were vested in the Commonwealth. The Commonwealth assumed these powers by enacting the Coinage Act 1909 and the Australian Notes Act 1910.

Imperial gold coins of the specified weight and fineness and 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 alloy) and those issued since 1st July, 1947 (dated 1946 and later) have a millesimal fineness of 500 (one-half silver and one-half alloy).

From 1910 to 1916 Australian coins were minted in England by the Royal Mint, London, and the Mint, Birmingham Ltd., and in 1916 and 1917 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 since 1940.

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, 1955, are as follows:—Melbourne, £37,917,000; Perth, £1,226,000; Sydney, £488,000; United Kingdom Mints, £3,016,000; United States Mints, £6,000,000; Indian Mints, £169,000; Total, £48,816,000.

2. **Issues of Australian Coins.**—The net issues of Australian silver and bronze coin; from 1910 to 30th June, 1955 were:—Crown (5s.), £276,000; Florin (2s.), £17,998,000; Shilling (1s.), £6,382,000; Sixpence (6d.), £4,557,000; Threepence (3d.), £5,036,000; Total silver coins, £34,249,000; Penny (1d.), £2,089,000; Half-penny ( $\frac{1}{2}$ d.), £620,000; Total bronze coins, £2,709,000. No allowance has been made for £52,000 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 1938–39 and 1950–51 to 1954–55.

### AUSTRALIAN SILVER AND BRONZE COINS : PROFITS FROM ISSUE.

(£.)

Year.	Coin issued.	Cost of Bullion.	Gross Profit. (a)	Cost of Minting and Sundry Charges.	Net Profit. (a)
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#### SILVER COIN.

1938–39	..	219,600	81,314	138,286	18,459	119,827
1950–51	..	1,553,200	860,367	692,833	158,457	534,376
1951–52	..	3,003,600	1,663,384	1,340,216	316,970	1,023,246
1952–53	..	1,709,600	971,471	738,129	180,608	557,521
1953–54	..	2,469,400	1,381,027	1,088,373	233,151	855,222
1954–55	..	2,127,800	1,187,041	940,759	172,552	768,207

#### BRONZE COIN.

1938–39	..	41,800	7,838	33,962	26,025	7,937
1950–51	..	208,066	100,922	107,144	142,848	— 35,704
1951–52	..	249,639	125,514	124,125	251,991	— 127,866
1952–53	..	327,620	413,263	— 85,643	161,640	— 247,283
1953–54	..	61,368	71,421	— 10,053	94,963	— 105,016
1954–55	..	14,616	12,665	1,951	45,590	— 43,639

#### TOTAL.

1938–39	..	261,400	89,152	172,248	44,484	127,764
1950–51	..	1,761,266	961,289	799,977	301,305	498,672
1951–52	..	3,253,239	1,788,898	1,464,341	568,961	895,380
1952–53	..	2,037,220	1,384,734	652,486	342,248	310,238
1953–54	..	2,530,768	1,452,448	1,078,320	328,114	750,206
1954–55	..	2,142,416	1,199,706	942,710	218,142	724,568

(a) 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.

(ii) *Gold Receipts and Issues.* (a) *Receipts.* The receipts of gold at Australian mints during 1954 amounted to 1,013,000 fine ounces (Melbourne, 168,000 fine ounces; Perth, 845,000 fine ounces) making the aggregate received to the end of 1954, 124,888,000 fine ounces, (Melbourne, 43,101,000 fine ounces, Perth, 44,880,000 fine ounces, and Sydney, until 1926 when it was closed, 36,907,000 fine ounces).

(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 Commonwealth Bank and the export and use of gold has 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 (see para. 5 below). The issues from Australian mints during 1954 (valued at £3 17s. 10½d. per standard ounce) amounted to £4,300,000 (Melbourne, £709,000, Perth, £3,591,000) making the aggregate issues of bullion and coin to the end of 1954, £530,549,000 (Melbourne, £183,079,000, Perth, £190,679,000, and Sydney, £156,791,000).

5. *Price of Gold.*—The following table shows the average prices of gold and the average value of the sovereign in London and Australia for the years 1938-39 and 1950-51 to 1954-55. The average price of gold in Australia is based on the Commonwealth 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.	Average price per fine oz.	Sovereign.		Equivalent to a premium of—
				Average value.		
	£stg. s. d.	£stg. s. d.	£A. s. d.	£A. s. d.		%
1938-39 ..	7 6 9	1 14 7	9 2 9	2 3 0		115.0
1950-51 ..	12 8 0	2 18 5	15 9 10	3 12 0		260.0
1951-52 ..	12 8 0	2 18 5	15 9 10	3 12 0		260.0
1952-53 ..	12 8 0	2 18 5	15 9 10	3 12 0		260.0
1953-54 ..	12 8 3	2 18 5	15 10 4	3 12 1		260.4
1954-55 ..	12 10 0	2 18 10	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 oversea premium markets. Under the arrangements, gold is acquired by the Commonwealth 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 only be sold 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 Commonwealth 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 ( $\frac{11}{12}$ ths.).

The average prices in Australian currency (f.o.b.) obtained for gold exported under this scheme for each month during 1954-55 were :—July, £15 10s. 1d; August, no sales; September, no sales; October, £15 13s. 1d.; November, £15 14s. 2d.; December, £15 12s. 11d.; January, £15 13s. 2d.; February, £15 13s. 5d.; March, £15 12s. 11d.; April, £15 12s. 10d.; May, £15 12s. 9d.; June, £15 12s. 11d.

From 1st May, 1954 the Commonwealth Bank increased its buying price for gold from £15 9s. 10d. to £15 12s. 6d. per fine ounce. The previous gold price was a realization price based upon the price for which the Commonwealth Bank could sell gold abroad in official markets, less costs of movement. Changes affecting gold abroad, including the reopening of the London gold market on 22nd March, 1954, made it necessary to review the Australian price of gold. The new price of £15 12s. 6d. per fine ounce reflects the "parity" value of Australian currency as established by the International Monetary Agreements Act, 1947.

### § 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 Commonwealth Bank is prohibited.

2. **The Australian Note Issue.**—(i) *General.* Notes in circulation in Australia are issued by the Commonwealth 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 Commonwealth 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. All profits of the Note Issue Department, with the exception of an amount not exceeding £500,000 each year which may be paid to the other departments or divisions of the Commonwealth Bank, are paid to the Commonwealth Consolidated Revenue Fund.

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.

(ii) *Australian Notes in Circulation.* Particulars of the average values of notes in circulation for the years 1938-39 and 1950-51 to 1954-55 are given in the following table :—

#### AUSTRALIAN NOTE ISSUE. (£'000.)

Denomination.	Average of monthly statements for year—					
	1938-39.	1950-51.	1951-52.	1952-53.	1953-54.	1954-55.
10s. .. ..	4,141	8,919	9,454	9,738	9,136	10,175
£1 .. ..	21,124	67,841	69,399	68,286	69,238	69,646
£5 .. ..	11,718	106,063	132,432	152,679	168,232	176,383
£10 .. ..	5,126	70,671	83,131	88,257	91,911	101,443
£20 .. ..	111	8	7	6	6	6
£50 .. ..	1,259	65	59	55	51	49
£100 .. ..	2,238	69	63	60	57	55
£1,000 .. ..	2,855	447	572	649	683	799
Held by Banks	15,454	32,478	37,745	36,400	38,996	40,880
Held by Public	33,118	221,605	257,372	283,330	300,718	317,676
Total .. ..	48,572	254,083	295,117	319,730	339,714	358,556



(iii) *Commonwealth Bank—Note Issue Department.* The following statement shows particulars of liabilities and assets of the Note Issue Department of the Commonwealth Bank as at 30th June, 1954 and 1955.

NOTE ISSUE DEPARTMENT : LIABILITIES AND ASSETS, 30th JUNE.  
(£'000.)

Liabilities.	1954.	1955.	Assets.	1954.	1955.
Notes on Issue(a) ..	343,827	362,753	Gold and Balances held abroad (including money at short call) ..	120,736	120,926
Special Reserve—Premium on gold sold ..	4,755	4,755	Government Securities (including Commonwealth Treasury Bills) ..	231,002	250,041
Other Liabilities(a) ..	3,204	3,531	Other Assets ..	48	72
Total Liabilities ..	351,786	371,039	Total Assets ..	351,786	371,039

(a) Notes of a denomination not exceeding one pound which have been on issue for more than twenty 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 1954-55 the net profits of the Note Issue Department amounted to £6,016,409 of which £5,516,409 was paid to the Commonwealth Treasury and £500,000 to the Capital Accounts of sections of the Commonwealth Bank and the Commonwealth Trading Bank as follows:—Mortgage Bank Department £143,000, Rural Credits Department £71,000, Industrial Finance Department £143,000, and the Commonwealth Trading Bank £143,000. For the basis of distribution of the net profits of the Note Issue Department see page 721.

## § 4. Legal Tender Extant.

Accurate information regarding the amount of legal tender in circulation is not available, but the estimated amount extant about the middle of the years 1939 and 1951 to 1955, is as follows:—1939, £58 millions; 1951, £307 millions; 1952, £336 millions; 1953, £360 millions; 1954, £378 millions; and 1955, £399 millions. Details of the amounts of coin and notes in circulation are shown in § 2 and § 3, Part A, of this chapter.

## B. BANKING.

### § 1. Cheque-Paying Banks.

1. *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 Commonwealth Bank Act 1945-1953 which provides for the constitution and management of the Commonwealth Bank, Commonwealth Trading Bank and Commonwealth Savings Bank and the management of the Australian note issue; and
- (b) The Banking Act 1945-1953, which provides for the regulation of banking and for the protection of the currency and the public credit of the Commonwealth.

The Banking Act 1945 was assented to on 3rd August, 1945, and came into operation on 21st August, 1945. It applies to all banks, except State banks, operating in Australia or 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 Commonwealth 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. 37, page 565.

The Banking Act 1953, assented to on 1st April, 1953, amended the Banking Act 1945. Details of the main amendments are given in Official Year Book No. 40, page 616.

(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.

2. *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, p. 1010.

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 four groups and a separate series is presented for each. These groups are:—

- (a) *The Commonwealth Bank.* This is the Central Bank. It also provides special banking facilities through the Rural Credits, Mortgage Bank and Industrial Finance Departments. It transacted general banking business through a General Banking Division up to 3rd December, 1953, when that business was transferred to the Commonwealth Trading Bank of Australia. Statistics of the Central Banking Business (including the Note Issue Department), and Rural Credits, Mortgage Bank and Industrial Finance Departments are presented in separate series.
- (b) *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. The statistics presented in the Commonwealth Trading Bank series include averages for the General Banking Division of the Commonwealth Bank up to 3rd December, 1953.
- (c) *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 Bank of New South Wales,

The Commercial Banking Company of Sydney Ltd., The National Bank of Australasia Ltd. (which has absorbed the Queensland National Bank Ltd., and The Ballarat Banking Co. Ltd.), The Commercial Bank of Australia Ltd., The Bank of Adelaide, the Australia and New Zealand Bank Ltd. (an amalgamation of The Bank of Australasia Ltd. and The Union Bank of Australia Ltd.), and The English, Scottish and Australian Bank Ltd.

- (d) *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 which, in their general banking business, specialize mainly in financing rural industries, (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 overseas 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 overseas 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 fourth 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 several 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, 1955 the 15 banks operating in Australia transacted all classes of banking business at 3,298 branches and 1,210 agencies. The Commonwealth Trading Bank and the Private Trading Banks have branches throughout the Commonwealth. 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 specializing mainly in financing rural industries, have branches only in those States. The Brisbane Permanent Building and Banking Co. Ltd., transacts business in Brisbane only. The remaining three banks are branches of overseas banks.

CHEQUE-PAYING BANKS : NUMBER OF BRANCHES(a) AT 30th JUNE, 1955.

Banks.	New South Wales.	Victoria.	Q'land.	South Aust.	West. Aust.	Tasmania.	Nor. Terr.	Aust. Cap. Terr.	Total.
Commonwealth Trading Bank of Australia ..	256	62	67	18	45	7	2	2	459
Private Trading Banks ..	881	794	433	259	219	64	8	8	2,666
Other Cheque-paying Banks ..	108	2	1	28	34	..	..	..	173
All Cheque-paying Banks—									
Metropolitan areas ..	477	385	102	104	110	15	1	..	1,194
Elsewhere ..	768	473	399	201	188	56	9	10	2,104
Total ..	1,245	858	501	305	298	71	10	10	3,298

(a) Includes Head Offices. Excludes agencies, 1,210.

(ii) *Capital Resources, Profits and Dividends.* The paid-up capital of cheque-paying banks (excluding the three overseas 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, 1954. All amounts are expressed in Australian currency.

## CHEQUE-PAYING BANKS: CAPITAL RESOURCES, PROFITS AND DIVIDENDS.

1953-54.

(£'000.)

Bank.	Paid-up Capital. (a)	Re-serves.	Balance of Profit and Loss Account. (b)	Total Shareholders' Funds. (c)	Reserve Liability of Shareholders. (d)	Net Profit for year.	Net Dividends. (e)
Commonwealth Trading Bank of Australia .. ..	4,857	1,860	..	6,717	..	661	..
Commonwealth Bank of Australia—							
Central Banking Business ..	4,000	4,810	..	8,810	..	3,918	..
Note Issue Department ..	..	(f) 4,755	..	4,755	..	6,207	..
Rural Credits Department ..	2,429	821	..	3,250	..	171	..
Mortgage Bank Department ..	4,857	378	..	5,235	..	59	..
Industrial Finance Department ..	4,857	1,717	..	6,574	..	346	..
Total .. ..	16,143	12,481	..	28,624	..	10,701	..
Private Trading Banks—							
Australia and New Zealand Bank Ltd. .. ..	12,801	8,120	1,749	22,670	10,667	919	704
The Bank of Adelaide .. ..	1,750	1,437	171	3,358	1,750	164	137
Bank of New South Wales ..	13,170	10,000	1,066	24,236	13,170	1,688	1,079
The Commercial Bank of Australia Ltd. .. ..	5,170	3,000	382	8,552	..	500	353
The Commercial Banking Co. of Sydney Ltd. .. ..	5,926	4,850	422	11,198	5,926	529	379
The English, Scottish and Australian Bank Ltd. .. ..	3,765	3,765	662	8,192	2,510	320	242
The National Bank of Australasia Ltd. (g) .. ..	6,726	5,500	708	12,934	1,800	741	605
The Queensland National Bank Ltd. (in vol. liq.) (g) .. ..	..	..	130	130	..	..	..
Total .. ..	49,308	36,672	5,200	91,270	35,823	4,861	3,490
Other Cheque-paying Banks—							
The Ballarat Banking Co. Ltd. ..	159	165	14	338	141	17	12
The Brisbane Permanent Building and Banking Co. Ltd. ..	1,000	275	62	1,337	..	78	75
The Rural Bank of New South Wales .. ..	17,510	8,857	..	26,367	..	105	..
State Bank of South Australia ..	2,983	1,020	..	4,003	..	191	..
The Rural and Industries Bank of Western Australia .. ..	8,554	168	..	8,722	..	304	..
Total .. ..	30,206	10,485	76	40,767	141	695	87
Grand Total .. ..	100,514	61,498	5,366	167,378	35,964	16,918	3,586

(a) For the Commonwealth Bank and Commonwealth Trading Bank the amount shown in this column is the amount specified as capital in the Commonwealth Bank Act 1945-1953. For these two Banks all capital has been provided from accumulated profits. 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. (b) Includes dividends declared but not paid at date of balance-sheet. (c) For the Commonwealth Bank, Commonwealth Trading Bank and the State Banks the amount shown in this column is total capital and reserves. (See footnote (a).) (d) Includes uncalled capital. (e) Dividends paid and payable out of profits earned during 1953-54. (f) Special Reserve—Premium on gold sold. (g) The business of The Queensland National Bank Ltd. was taken over by The National Bank of Australasia Ltd. in January, 1948.

5. Commonwealth Bank of Australia.—(i) General. An account of the progress and development of the Commonwealth Bank is given in earlier issues of the Official Year Book (see No. 37, pages 570 to 573). The general functions of the Bank are set out in section 8 of the Commonwealth Bank Act 1945-1953 which states—

“8. It shall be the duty of the Commonwealth Bank, within the limits of its powers, to pursue a monetary and banking policy directed to the greatest advantage of the people of Australia, and to exercise its powers under this Act and the Banking Act 1945 in such a manner as, in the opinion of the Bank, 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 and provides special services through the Rural Credits Department, Mortgage Bank Department and Industrial Finance Department. The Commonwealth Bank also provided general banking facilities through the General Banking Division up to 3rd December, 1953. In accordance with the provisions of the Commonwealth Bank Act, 1953, the Commonwealth Trading Bank, on that date, took over the business of the General Banking Division of the Commonwealth Bank. The Commonwealth Savings Bank, a separate institution providing for small depositors, is controlled by the Commonwealth Bank Board and is operated in conjunction with the Commonwealth Bank.

(ii) *Management.* Under the Commonwealth Bank Act 1911 the Bank was managed by a Governor. From 1924 to August, 1945 it was controlled by a Board of Directors. Under the Commonwealth Bank Act 1945 control was vested in a Governor, assisted by an Advisory Council. Since 21st August, 1951, under the Commonwealth Bank Act 1951, the policy of the Commonwealth Bank and the Commonwealth Savings Bank has been determined by the Commonwealth Bank Board consisting of the Governor (Chairman), the Deputy Governor, the Secretary of the Department of the Treasury and seven other members appointed by the Governor-General. The Bank is managed by the Governor who shall act in accordance with the policy of the Bank and with any directions of the Board. The Board is required to inform the Government of the monetary and banking policy of the Bank. 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. The Commonwealth Trading Bank is managed by a General Manager under the Governor of the Commonwealth Bank and its policy is determined by the Commonwealth Bank Board.

(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 had gradually assumed the functions of a Central Bank. Part III. of the Commonwealth Bank Act 1945 formally constituted the Commonwealth Bank as a Central Bank and granted the Bank the necessary powers to carry on the business of a Central Bank. The capital for the Central Banking Business is £4,000,000 and such other sums as are transferred from the Reserve Fund. Since 1951 the profits of the Commonwealth Bank have been distributed as follows:—(a) One-half to the National Debt Sinking Fund; (b) for a period of five years, an amount not exceeding £500,000 per annum may be paid to the capital of the several departments of the Bank and the Commonwealth Trading Bank, this amount to be distributed as follows:—Commonwealth Trading Bank Mortgage Bank Department and Industrial Finance Department each two-sevenths and the Rural Credits Department one-seventh; and (c) the balance to be paid to the Commonwealth Bank Reserve Fund.

(iv) *Note Issue Department.* This Department was established in 1920 when the control of the Australian note issue was transferred from the Commonwealth Treasury to the Commonwealth Bank. The Bank may, through this department, issue, re-issue and cancel Australian notes. Until 30th June, 1951, all profits of this Department, with

the exception of £2,000,000 paid to the Capital Account of the Rural Credits Department and £1,200,000 paid to the Capital Account of the Mortgage Bank Department, were paid to the Commonwealth Consolidated Revenue Fund. In 1951 provision was made for an amount, not exceeding £500,000 per annum for five years, to be paid to the Capital Accounts of the Commonwealth Trading Bank and the Rural Credits, Industrial Finance and Mortgage Bank Departments of the Commonwealth Bank. This amount is payable only if a similar amount is paid from the profits of the Central Banking Business and is to be distributed to the various sections in the same proportions as the amount payable from the profits of the Central Banking Business. The balance of the profits is to be paid to the Commonwealth Consolidated Revenue Fund.

(v) *General Banking Division.* Under the Commonwealth Bank Act 1911-1943 no provision was made for the separation of the general banking business of the bank from its central banking business. Under the Commonwealth Bank Act 1945 the General Banking Division was set up to carry on the general banking business of the Bank and the accounts and transactions of this division were kept separate and distinct from the other accounts of the Bank. The capital of the General Banking Division was £4,000,000, and such other sums as were transferred from the General Banking Division Reserve Fund, or from the profits of the Central Banking Business and the Note Issue Department. Transfers from each of these two sources increased the total capital to £4,572,000 at 30th June, 1953. The profits of the General Banking Division were distributed as follows :—(a) one-half was credited to the General Banking Division Reserve Fund, and (b) one-half was paid to the National Debt Sinking Fund. Under the Commonwealth Bank Act 1953 the business of the General Banking Division was transferred to the Commonwealth Trading Bank on 3rd December, 1953. *See also* para. 6 below—Commonwealth Trading Bank of Australia.

(vi) *Rural Credits Department.* The Rural Credits Department was established in 1925 for the purpose of making short-term credit available for the orderly marketing of primary produce. The 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 of a State or Territory of the Commonwealth or other bodies specified by proclamation. The period of the advance shall not be more than one year. The capital of the Rural Credits Department is £2,000,000 and such amounts as are transferred from the profits of the Central Banking Business and the Note Issue Department. Transfers from each of these two sources have increased the total capital to £2,571,000 at 30th June, 1955. Profits are distributed as follows :—(a) one-half is credited to the Rural Credits Department Reserve Fund, and (b) one-half is credited to the Rural Credits Department Development Fund for the promotion of primary production.

(vii) *Mortgage Bank Department.* The Mortgage Bank Department was established in 1943 for the purpose of making long-term loans to primary producers. Through this Department the Bank may make a loan to any person engaged in farming, agricultural, horticultural, pastoral or grazing operations or other form of primary production, upon the security of a mortgage to the Bank of an estate or interest in land in the Commonwealth owned by the borrower. The term of the loan shall not be less than five years nor more than forty-one years. The capital of the Department is £4,000,000 plus any amount transferred from the profits of the Central Banking Business and the Note Issue Department. Transfers from each of these two sources have increased the total capital to £5,143,000 at 30th June, 1955. Profits are credited to the Mortgage Bank Department Reserve Fund.

(viii) *Industrial Finance Department.* The functions of the Industrial Finance Department established in January, 1946 are :—(a) to provide finance for the establishment and development of industrial undertakings; (b) to assist in the establishment

and development of industrial undertakings; and (c) to provide advice on the operations of industrial undertakings with a view to promoting the efficient organization and conduct thereof. To exercise these functions the Bank may, through the Industrial Finance Department, lend money and purchase and sell shares or securities in an industrial undertaking. The capital of this department is £4,000,000 plus any amount transferred from the profits of the Central Banking Business and Note Issue Department. Transfers from each of these two sources have increased the total capital to £5,143,000 at 30th June, 1955. The Treasurer, the Bank and the Savings Bank may advance money to the Industrial Finance Department. The amount that may be advanced by the Bank is limited to £1,000,000. The profits of the Department are credited to the Industrial Finance Department Reserve Fund.

(ix) *Housing Loans.* Provision is made for the Bank, through the Commonwealth Trading Bank, to make loans to individuals or building societies for the erection or purchase of homes or for the discharge of mortgages on homes. These loans must be made at the lowest possible rate of interest. Loans to individuals are to be on *crédit foncier* terms, to be secured by first mortgage on an estate or interest in land owned by the borrower and to be repaid in periods of not less than five years nor more than 35 years. Loans to building societies are to be made on such security and on such terms and conditions as the Bank determines.

(x) *Liabilities and Assets—All Departments.* Liabilities and assets of each Department of the Commonwealth Bank at 30th June, 1955 are shown in the following table. The Commonwealth Trading Bank and the Commonwealth Savings Bank, which are operated as separate institutions, are not included (*see* § 1, para. 6 (ii) and § 2, para 8 (ii), following):—

**COMMONWEALTH BANK OF AUSTRALIA : LIABILITIES AND ASSETS,**  
30th JUNE, 1955.  
(£'000.)

Item.	Central Banking Business.	Note Issue Depart- ment.	Rural Credits Depart- ment.	Mortgage Bank Depart- ment.	Industrial Finance Depart- ment.	Total.(a)
<b>LIABILITIES.</b>						
Capital .. .. .	4,000	..	2,571	5,143	5,143	16,857
Reserve Funds .. .. .	6,569	..	917	444	2,114	10,044
Special Reserve—Premium on gold sold .. .. .	..	4,755	..	..	..	4,755
Development Fund .. .. .	..	..	137	..	..	137
Notes on Issue .. .. .	..	362,753	..	..	..	362,753
Deposits, bills payable and other liabilities—						
Special Accounts of Trading Banks .. .. .	280,559	..	..	..	..	280,559
Other deposits of Trading Banks .. .. .	29,782	..	..	..	..	29,782
Other (including provision for contingencies) .. .. .	251,540	3,531	57,101	563	21,596	280,874
Total Liabilities .. .. .	571,450	371,039	60,726	6,150	28,853	985,761
<b>ASSETS.</b>						
Gold and balances held abroad (including money at short call) .. .. .	246,333	120,926	..	..	..	367,259
Australian notes and coin and cash balances .. .. .	2,869	..	..	111	453	3,433
Cheques and bills of other banks .. .. .	12,290	..	..	..	..	12,290
Commonwealth Government securities (including Commonwealth Treasury Bill) .. .. .	196,982	250,041	..	698	2,072	449,793
Securities of other Governments, and of local and semi-governmental authorities .. .. .	39,681	..	..	..	..	39,681
Bills receivable and remittances in transit .. .. .	8,611	..	..	..	..	8,611
Bank premises at cost less amounts written off .. .. .	593	..	..	..	..	593
Loans, advances, bills discounted, and other assets (after deducting debts considered bad or doubtful) .. .. .	67,091	72	60,726	5,441	26,328	104,101
Total Assets .. .. .	571,450	371,039	60,726	6,150	28,853	985,761

(a) Inter-departmental accounts totalling £55,457,000 have been offset in the combined figures.

(xi) *Profits.* Net profits of the various Departments of the Commonwealth Bank for the years ended 30th June, 1939 and 1951 to 1955 were as follows :—

**COMMONWEALTH BANK OF AUSTRALIA : NET PROFITS.**  
(£'000.)

Year ended 30th June—	General Bank Department.	Central Banking Business. (a)	Note Issue Department.	General Banking Division. (a) (b)	Rural Credits Department.	Mortgage Bank Department. (c)	Industrial Finance Department. (d)	Total
1939 .. ..	356	..	767	..	32	..	..	1,155
1951 .. ..	..	1,282	3,544	445	85	47	287	5,690
1952 .. ..	..	2,274	3,881	352	97	49	290	6,943
1953 .. ..	..	2,892	5,361	457	160	52	292	9,214
1954 .. ..	..	3,918	6,207	..	171	50	346	10,701
1955 .. ..	..	4,518	6,017	..	192	65	398	11,190

(a) Created 21st August, 1945. Previously combined under General Bank Department. (b) From 3rd December, 1953 business transferred to Commonwealth Trading Bank. (c) Commenced business 27th September, 1943. (d) Commenced business 2nd January, 1946.

The distribution of these profits for the years ended 30th June, 1951 to 1955 is given in the following table :—

**COMMONWEALTH BANK OF AUSTRALIA : DISTRIBUTION OF PROFITS.**  
(£'000.)

To—	1951.	1952.	1953.	1954.	1955.
National Debt Sinking Fund	863	1,313	1,675	1,959	2,259
Commonwealth Consolidated Revenue Fund ..	3,394	3,381	4,861	5,707	5,517
Commonwealth Trading Bank Capital Account ..	..	..	..	285	286
Commonwealth Bank Reserve Fund .. ..	345	637	946	1,459	1,739
General Banking Division—					
Capital Account ..	..	286	286	..	..
Reserve Fund ..	222	176	229	..	..
Rural Credits Department—					
Capital Account ..	..	143	143	143	142
Reserve Fund ..	43	48	80	85	96
Development Fund ..	43	48	80	86	96
Mortgage Bank Department—					
Capital Account ..	446	285	286	286	286
Reserve Fund ..	47	50	51	59	65
Industrial Finance Department—					
Capital Account ..	..	286	285	286	286
Reserve Fund ..	..	287	292	346	398
<b>Total .. ..</b>	<b>5,690</b>	<b>6,943</b>	<b>9,214</b>	<b>10,701</b>	<b>11,190</b>

(xii) *Central Banking Business—Average Liabilities and Assets.* The average liabilities and assets of the Central Banking Business and Note Issue Department of the Commonwealth Bank for the years ended June, 1951 to 1955 are shown in the two tables which follow.



COMMONWEALTH BANK OF AUSTRALIA: CENTRAL BANKING BUSINESS  
(INCLUDING NOTE ISSUE DEPARTMENT)—AVERAGE LIABILITIES.

(£'000.)

Year ended June—	Capital and Reserve Funds.	Notes on Issue.	Special Accounts of Trading Banks.	Other Deposits of Trading Banks.	Other Liabilities.	Total Liabilities.
1951 .. .. .	10,127	251,770	503,248	34,696	238,230	1,038,071
1952 .. .. .	10,450	293,639	468,800	31,112	270,937	1,074,938
1953 .. .. .	11,023	318,192	212,890	45,447	(a)287,361	874,913
1954 .. .. .	11,906	338,223	306,820	41,731	(a)283,397	982,077
1955 .. .. .	13,279	357,023	300,286	36,795	243,408	956,851

(a) Includes special deposit of General Banking Division 1952-53, £21,731,000; 1953-54, £14,265,000.

COMMONWEALTH BANK OF AUSTRALIA: CENTRAL BANKING BUSINESS  
(INCLUDING NOTE ISSUE DEPARTMENT)—AVERAGE ASSETS.

(£'000.)

Year ended June—	Gold and Balances held Abroad.	Australian Coin.	Cheques and Bills of other Banks.	Government and other Securities (including Commonwealth Treasury Bills.)	Bills Receivable and Remittances in Transit.	Other Assets.	Total Assets.
1951 .. .. .	596,276	3,370	5,791	366,570	105	65,959	1,038,071
1952 .. .. .	470,644	2,164	6,321	503,089	85	92,635	1,074,938
1953 .. .. .	363,576	2,538	6,595	434,771	130	67,303	874,913
1954 .. .. .	512,615	2,105	6,895	407,979	2,514	49,960	982,077
1955 .. .. .	415,896	2,380	7,009	459,839	3,488	68,239	956,851

6. Commonwealth Trading Bank of Australia.—(i) *General.* The Commonwealth Trading Bank was established under the Commonwealth Bank Act, 1953. On 3rd December, 1953, it took over the business of the General Banking Division of the Commonwealth Bank. The Commonwealth Trading Bank is a body corporate with its own General Manager who is appointed by the Governor-General on the recommendation of the Commonwealth Bank Board for a term of seven years. The General Manager, under the Governor of the Commonwealth Bank, is responsible for the administration of the Commonwealth Trading Bank in accordance with policy determined by the Commonwealth Bank Board. Under the Banking Act 1945-1953 the Commonwealth Trading Bank is subject to the same central banking controls as the private trading banks and is required to maintain a Special Account with the Commonwealth Bank on the same basis as those of the private trading banks. The capital of the Commonwealth Trading Bank is the total of the capital of the General Banking Division of the Commonwealth Bank immediately before 3rd December, 1953 and such other sums as are transferred from the Commonwealth Trading Bank Reserve Fund, or from the profits of the Central Banking Business and the Note Issue Department of the Commonwealth Bank. The net profits of the Commonwealth Trading Bank are divided as follows :—(a) one-half placed to the credit of the Commonwealth Trading Bank Reserve Fund, and (b) one-half paid into the National Debt Sinking Fund.

(ii) *Liabilities and Assets.* The liabilities and assets of the Commonwealth Trading Bank at 30th June, 1954 and 1955 are shown in the following table :—

**COMMONWEALTH TRADING BANK OF AUSTRALIA : LIABILITIES AND ASSETS, 30TH JUNE.**

( £'000.)

Liabilities.	1954.	1955.	Assets.	1954.	1955.
Capital .. ..	4,857	5,143	Coin, bullion, notes and cash at bankers ..	18,817	14,498
Reserve Fund ..	1,860	2,160	Money at short call in London .. ..	1,850	1,800
Deposits, bills payable and other liabilities (including provision for contingencies) ..	210,286	225,493	Special Account with Commonwealth Bank	38,650	33,850
Balances due to other banks .. ..	241	454	Cheques and bills of other banks and balances with and due from other banks	1,863	2,313
			Treasury bills ..	10,000	7,500
			Public securities of Australian Governments	35,078	40,019
			Bills receivable and remittances in transit	26,974	27,138
			Bank premises (at cost less amounts written off) .. ..	2,950	3,506
			Loans, advances and bills discounted (after deducting provision for debts considered bad or doubtful) ..	78,812	99,961
			Other assets ..	2,250	2,665
<b>Total ..</b>	<b>217,244</b>	<b>233,250</b>	<b>Total ..</b>	<b>217,244</b>	<b>233,250</b>

(iii) *Average Liabilities and Assets within Australia.* The average liabilities and assets within Australia of the General Banking Division of the Commonwealth Bank for the years ended 30th June, 1951 to 1953, and of the Commonwealth Trading Bank for the years ended 30th June, 1954 and 1955, are shown in the tables below.

**COMMONWEALTH TRADING BANK OF AUSTRALIA(a)—AVERAGE LIABILITIES WITHIN AUSTRALIA.(b)**

( £'000.)

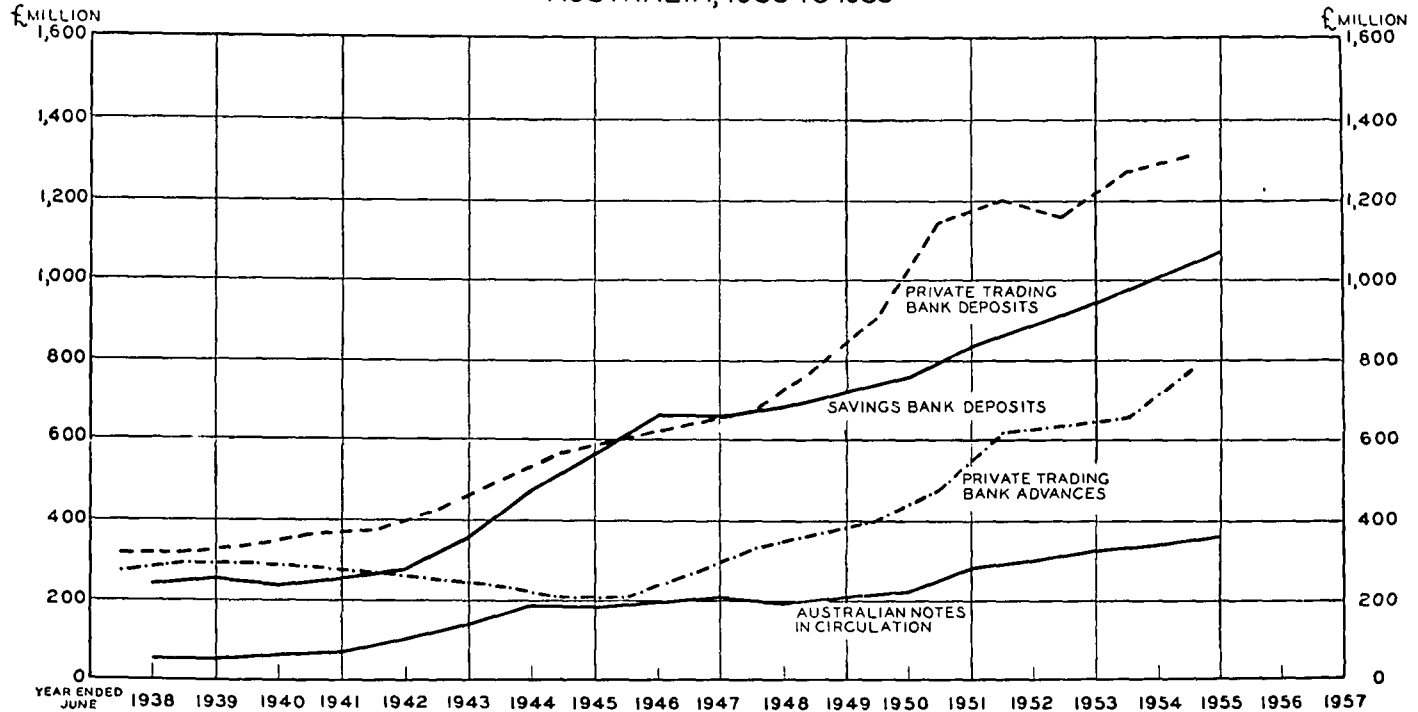
Year ended June—	Inter- minable Deposits or Deposit Stock.	Deposits.			Notes in Cir- culation.	Balances due to other Banks.	Bills payable and all other Lia- bilities to the Public.	Total Lia- bilities.
		Not Bearing Interest.	Bearing Interest.	Total.				
1951 .. ..	..	89,234	19,405	108,639	..	3,014	7,950	119,603
1952 .. ..	..	90,595	20,093	110,688	..	2,644	8,524	121,856
1953 .. ..	..	96,664	22,817	119,481	..	3,820	8,560	131,870
1954 .. ..	..	120,885	35,352	156,237	..	2,034	11,766	170,037
1955 .. ..	..	130,909	43,549	174,458	..	309	16,148	190,915

(a) General Banking Division of Commonwealth Bank prior to 3rd December, 1953.  
Territories of Papua and New Guinea.

(b) Includes

# BANK DEPOSITS AND ADVANCES AND NOTES IN CIRCULATION

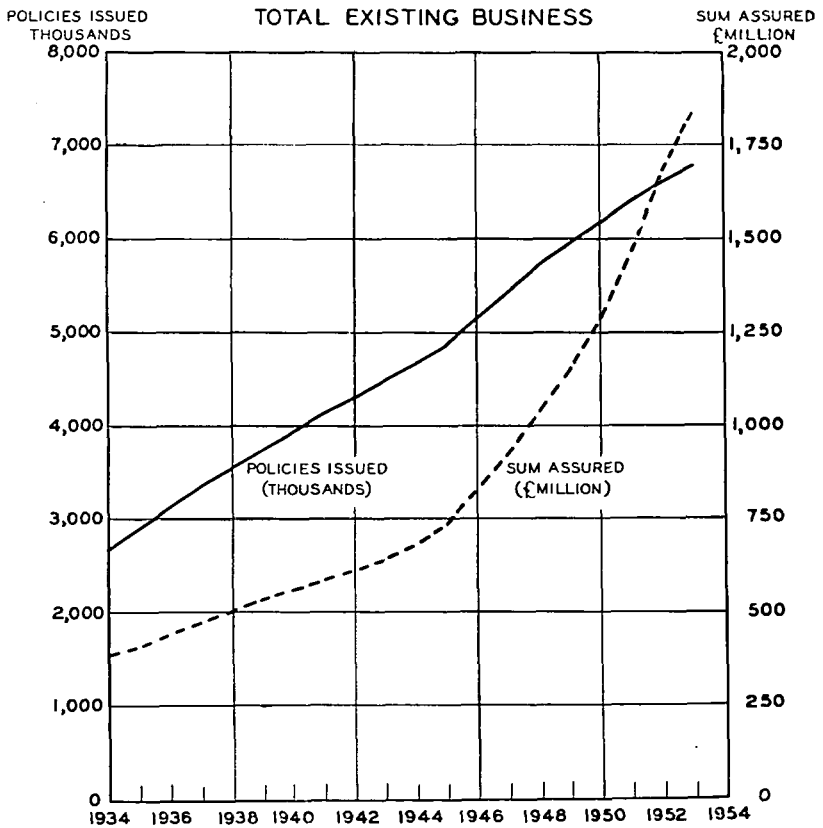
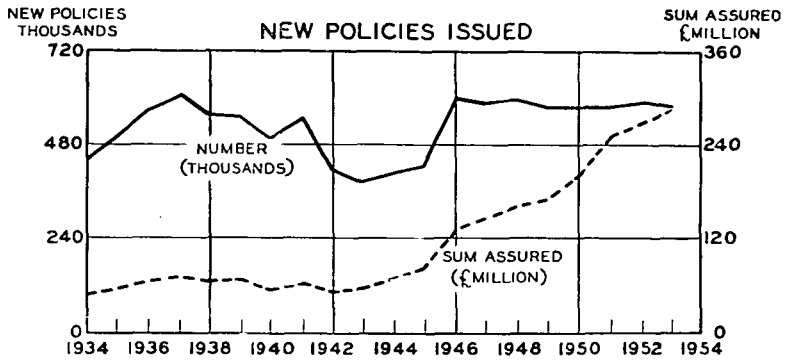
AUSTRALIA, 1938 TO 1955



## LIFE ASSURANCE: AUSTRALIA

1934 TO 1953

## POLICIES ISSUED AND SUM ASSURED



COMMONWEALTH TRADING BANK OF AUSTRALIA(a)—AVERAGE ASSETS  
WITHIN AUSTRALIA.(b)  
(£'000.)

Year ended June—	Cash and Cash Balances.	Special Account with Commonwealth Bank.	Balances with other Banks. (c)	Australian Public Securities.		Other Securities.	Loans, Advances, and Bills Discounted.	All other Assets.	Total Assets.
				Treasury Bills.	Other.				
1951 .. ..	7,176	..	820	24,049	26,868	..	62,491	2,348	123,752
1952 .. ..	6,581	..	994	26,392	13,274	2	76,407	3,230	126,880
1953 .. ..	8,784	(d) 21,731	1,600	17,239	25,840	92	59,492	3,954	138,762
1954 .. ..	11,000	(e) 34,800	787	23,404	29,924	1,284	69,204	4,360	174,763
1955 .. ..	10,456	36,061	870	12,260	38,165	1,606	89,138	5,075	194,231

(a) General Banking Division of Commonwealth Bank prior to 3rd December, 1953. (b) Includes Territories of Papua and New Guinea. (c) Includes notes, cheques and bills of other banks. (d) Special deposit of General Banking Division. (e) Includes special deposit of General Banking Division. £14,265,000.

(iv) *Profits.* The net profits of the Commonwealth Trading Bank for the years ended 30th June, 1954 and 1955 were £660,778 and £734,185 respectively. These profits were distributed as follows (1954 figures shown in parenthesis):—£134,160 (£110,320) was applied to writing off bank premises; £300,012 (£275,229) was appropriated to the Commonwealth Trading Bank Reserve Fund; and £300,013 (£275,229) was paid to the National Debt Sinking Fund.

7. *Private Trading Banks.*—(i) *Average Liabilities and Assets in Australia.* The average liabilities and assets within Australia of the Private Trading Banks (see page 718 for list of banks) for the years ended June, 1939 and 1951 to 1955 are shown in the following tables:—

PRIVATE TRADING BANKS : AVERAGE LIABILITIES WITHIN AUSTRALIA.  
(£'000.)

Year ended June—	Inter- minable Deposits or Deposit Stock.	Deposits.			Notes in Cir- culation.	Balances due to other Banks.	Bills payable and all other Liabilities to the Public.	Total Li- abilities.
		Not Bearing Interest.	Bearing Interest.	Total.				
1939 .. ..	2,644	a 118,868	198,793	317,661	167	921	(b) 3,005	324,398
1951 .. ..	729	896,499	247,727	1,144,226	158	50,259	18,240	1,213,612
1952 .. ..	729	963,524	238,217	1,201,741	158	61,527	14,970	1,270,125
1953 .. ..	226	943,747	218,699	1,162,446	158	10,628	14,247	1,187,705
1954 .. ..	14	1,035,707	239,774	1,275,481	158	3,360	14,980	1,293,993
1955 .. ..	9	1,047,677	262,986	1,310,663	158	3,282	16,432	1,330,544

(a) Includes other Liabilities. (b) Excludes other Liabilities.

PRIVATE TRADING BANKS : AVERAGE ASSETS WITHIN AUSTRALIA.  
(£'000.)

Year ended June—	Cash and Cash Balances.	Special Account with Commonwealth Bank.	Balances with other Banks. (a)	Australian Public Securities.		Other Securities.	Loans, Advances and Bills Discounted.	All other Assets.	Total Assets.
				Treasury Bills.	Other. (b)				
1939 .. ..	33,597	..	3,938	21,533	20,477	(c)	d 288,109	(e) 9,421	377,075
1951 .. ..	59,333	500,317	23,761	36,887	90,244	1,126	479,322	18,988	1,209,978
1952 .. ..	60,589	465,991	29,140	32,402	63,416	1,124	621,435	33,511	1,312,248
1953 .. ..	74,712	211,737	22,586	123,059	86,513	2,313	638,092	29,693	1,183,699
1954 .. ..	71,244	285,226	17,346	99,368	130,306	3,588	658,134	36,519	1,302,161
1955 .. ..	66,908	267,117	18,436	51,602	121,927	3,425	776,762	43,925	1,357,102

(a) Includes notes, cheques and bills of other banks. (b) Government and Municipal Securities. (c) Included with Loans, Advances and Bills Discounted. (d) See footnotes (c) and (e). (e) Landed and House Property only. Other assets included with Loans, Advances and Bills Discounted.

(ii) *Ratios of Assets and Liabilities to Total Deposits.* The following table shows, for the Private Trading Banks, the ratios of certain assets and liabilities to total deposits for the years ended June, 1939 and 1951 to 1955. The ratios are based on the average liabilities and assets for the years shown.

**PRIVATE TRADING BANKS : RATIOS OF AVERAGE ASSETS AND LIABILITIES TO AVERAGE TOTAL DEPOSITS.**

(Per cent.)

Year ended June—	Cash and Cash Balances.	Treasury Bills.	Government and Municipal Securities. (a)	Special Account with Commonwealth Bank.	Advances.	Deposits.	
						Not Bearing Interest.	Bearing Interest.
1939 .. ..	10.6	6.8	6.5	..	90.7	37.4	62.6
1951 .. ..	5.2	3.2	7.8	43.7	41.9	78.4	21.6
1952 .. ..	5.0	2.7	5.7	38.8	51.7	80.2	19.8
1953 .. ..	6.4	10.6	7.4	18.2	54.9	81.2	18.8
1954 .. ..	5.6	7.8	10.2	22.4	51.6	81.2	18.8
1955 .. ..	5.1	3.9	9.3	20.5	59.3	79.9	20.1

(a) Excludes Treasury Bills.

(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 the Private Trading Banks for each of the years ended June, 1939 and 1951 to 1955. The ratios are based on the average deposits for the years shown.

**PRIVATE TRADING BANKS : PROPORTION OF NON-INTEREST BEARING DEPOSITS TO TOTAL DEPOSITS.**

(Per cent.)

Year ended June—	N.S.W.	Vic.	Q'land.	S. Aust.	W. Aust.	Tas.	Nor. Terr.	Aust. Cap. Terr.	Total. (a)
1939 .. ..	43.5	30.3	45.4	26.1	45.7	36.5	61.1	23.2	37.4
1951 .. ..	81.3	75.8	80.9	69.8	80.5	74.6	83.2	76.2	78.4
1952 .. ..	83.1	77.8	82.5	72.0	83.1	75.6	84.7	78.4	80.2
1953 .. ..	84.3	79.2	82.5	72.4	84.4	78.5	87.0	82.6	81.2
1954 .. ..	83.9	79.6	82.7	72.3	83.1	79.7	89.5	88.2	81.2
1955 .. ..	81.9	78.1	82.6	71.6	84.1	80.1	88.7	89.6	79.9

(a) Includes Papua and New Guinea for 1951 and following years.

(iv) *Ratio of Advances to Total Deposits.* The ratio of advances to total deposits, for each State for the years ended June, 1939 and 1951 to 1955, is shown in the following table. The ratios are based on the averages of deposits and advances for the years shown.

**PRIVATE TRADING BANKS : RATIO OF ADVANCES TO TOTAL DEPOSITS.**

(Per cent.)

Year ended June—	N.S.W.	Vic.	Q'land.	S. Aust.	W. Aust.	Tas.	Nor. Terr.	Aust. Cap. Terr.	Total. (a)
1939 .. ..	104.5	71.6	99.2	77.6	155.5	57.0	24.5	37.7	90.7
1951 .. ..	41.9	43.0	49.0	28.3	36.4	44.0	30.5	21.3	41.9
1952 .. ..	54.5	52.1	60.0	33.0	41.5	48.4	29.6	26.4	51.7
1953 .. ..	60.2	52.8	63.7	35.2	46.1	54.0	24.0	27.6	54.9
1954 .. ..	56.4	47.8	59.7	32.2	52.7	57.3	30.0	35.6	51.6
1955 .. ..	66.1	51.8	68.5	37.2	71.6	61.9	55.8	49.5	59.3

(a) Includes Papua and New Guinea for 1950 and following years.

**8. Other Cheque-paying Banks.—Average Liabilities and Assets within Australia.** The average liabilities and assets within Australia of "Other Cheque-paying Banks" (see page 719 for list of these banks) for the years ended June, 1951 to 1955 are shown in the following tables.

OTHER CHEQUE-PAYING BANKS : AVERAGE LIABILITIES WITHIN AUSTRALIA.  
(£'000.)

Year ended June—	Inter- minable Deposits or Deposit Stock.(a)	Deposits			Notes in Cir- culation.	Bal- ances due to other Banks.	Bills payable and all other Liabilities to the Public.	Total Li- abilities.
		Not Bearing Interest.	Bearing Interest.	Total.				
1951 .. ..	20,056	31,947	12,421	44,368	..	194	1,594	66,212
1952 .. ..	19,336	37,445	13,369	50,814	..	504	1,478	72,132
1953 .. ..	19,286	35,848	15,302	51,150	..	622	525	71,583
1954 .. ..	19,734	39,408	15,309	54,717	..	664	454	75,569
1955 .. ..	20,520	41,115	16,069	57,484	..	554	461	79,019

(a) 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 ended June—	Cash and Cash Bal- ances.	Special Account with Com- mon- wealth Bank.	Bal- ances with other Banks. (a)	Australian Public Securities.		Other Securi- ties.	Loans, Ad- vances and Bills Dis- counted.	All other Assets. (b)	Total Assets.
				Trea- sury Bills.	Other.				
1951 .. ..	4,852	3,271	1,760	3,087	12,375	185	56,604	4,613	86,747
1952 .. ..	5,104	2,612	1,800	2,925	14,880	111	61,816	5,423	94,671
1953 .. ..	4,640	1,153	2,176	3,911	13,874	149	64,731	3,792	94,426
1954 .. ..	5,091	1,090	2,409	7,326	13,977	432	65,982	3,815	100,122
1955 .. ..	4,586	1,108	2,193	5,641	13,972	701	72,189	4,923	105,318

(a) Includes notes, cheques and bills of other banks. (b) Includes The Rural and Industries Bank of Western Australia and State Bank of South Australia accounts with State Treasuries.

9. All Cheque-paying Banks.—Average Liabilities and Assets within Australia. Particulars of the average liabilities and assets within Australia of all cheque-paying banks in Australia for the years ended 30th June, 1951 to 1955 are shown in the following tables. The series includes the Commonwealth Trading Bank (General Banking Division of the Commonwealth Bank to 3rd December, 1953), but the Central Banking business of the Commonwealth Bank is excluded.

ALL CHEQUE-PAYING BANKS : AVERAGE LIABILITIES WITHIN AUSTRALIA.(a)  
(£'000.)

Year ended June—	Inter- minable Deposits or Deposit Stock.	Deposits.			Notes in Cir- culation.	Bal- ances due to other Banks.	Bills payable and all other Liabilities to the Public.	Total Li- abilities.
		Not Bearing Interest.	Bearing Interest.	Total.				
1951 .. ..	20,785	1,017,680	279,553	1,297,233	158	53,467	27,784	1,399,427
1952 .. ..	20,065	1,091,564	271,679	1,363,243	158	64,675	24,972	1,473,113
1953 .. ..	19,512	1,076,259	256,818	1,333,077	158	15,070	23,341	1,391,158
1954 .. ..	19,748	1,106,000	290,435	1,486,435	158	6,058	27,200	1,539,599
1955 .. ..	20,520	1,220,001	322,604	1,542,605	158	4,145	33,041	1,600,478

(a) Includes Territories of Papua and New Guinea.

ALL CHEQUE-PAYING BANKS : AVERAGE ASSETS WITHIN AUSTRALIA.(a)  
(£'000.)

Year ended June—	Cash and Cash Bal- ances.	Special Account with Com- mon- wealth Bank.	Bal- ances with other Banks.	Australian Public Securities.		Other Securi- ties.	Loans, Ad- vances and Bills Dis- counted.	All other Assets.	Total Assets.
				Trea- sury Bills.	Other.				
1951 .. ..	71,361	503,588	26,341	64,023	129,487	1,311	598,417	25,949	1,420,477
1952 .. ..	72,274	468,603	31,934	61,719	96,570	1,237	759,658	41,804	1,533,709
1953 .. ..	88,136	234,621	26,356	144,209	126,227	2,554	762,315	37,499	1,421,887
1954 .. ..	87,335	321,116	20,542	130,098	174,207	5,304	793,720	44,774	1,577,046
1955 .. ..	81,950	306,286	21,504	69,503	174,064	5,732	938,089	59,523	1,656,651

(a) Includes Territories of Papua and New Guinea.

10. **Classification of Advances within Australia.—Commonwealth Trading Bank of Australia and Private Trading Banks.**—(i) *States, June, 1955.* A dissection of advances made by the Commonwealth Trading Bank and the Private Trading Banks at the end of June, 1955, is shown in the following table. Business advances, which have been classified according to the main industry of the borrower, are those made mainly for business purposes and include all loans to corporate bodies other than public authorities. Advances made to public authorities are those made to Commonwealth and State Governments, Government Agencies and Local and Semi-governmental Authorities irrespective of the purpose of the advance or the industry in which the authority is engaged. Personal advances, which have been classified according to purpose, include advances to persons in their private capacity for such purposes as the purchase of a house or of household equipment, repayment of personal debts, etc.

**COMMONWEALTH TRADING BANK OF AUSTRALIA AND PRIVATE TRADING BANKS : CLASSIFICATION OF ADVANCES WITHIN AUSTRALIA(a)—STATES, END OF JUNE, 1955.**

(£'000.)

Classification.	N.S.W. (b)	Vic.	Q'land. (a)	S. Aust. (c)	W.Aust.	Tas.	Total Aust. (a)	Pro- portion of Total.
<b>A. BUSINESS ADVANCES CLASSIFIED ACCORDING TO MAIN INDUSTRY OF BORROWER.</b>								
1. Agriculture, Dairying and Grazing ..	87,119	44,063	55,288	12,409	17,527	4,473	220,879	23.8
2. Manufacturing ..	83,320	65,720	21,801	8,953	6,994	3,940	190,728	20.6
3. Transport, Storage and Communication ..	5,370	5,093	3,498	1,512	1,177	594	17,244	1.9
4. Finance and Property ..	43,195	29,350	11,333	4,310	3,446	2,901	94,535	10.2
5. Commerce—								
Retail Trade ..	33,836	23,954	11,797	6,339	7,775	3,261	86,962	9.4
Wholesale Trade ..	35,883	23,664	4,625	4,660	3,622	1,373	73,827	7.9
Total Class 5 ..	69,719	47,618	16,422	10,999	11,397	4,634	160,789	17.3
6. Miscellaneous(d) ..	22,171	17,671	10,348	3,011	5,206	1,783	60,190	6.5
7. Not elsewhere specified	4,051	3,411	1,683	667	689	122	10,623	1.1
Total ..	314,945	212,926	120,373	41,861	46,436	18,447	754,988	81.4
<b>B. ADVANCES TO PUBLIC AUTHORITIES.</b>								
Public Authority Advances (Including Government, Semi-Governmental and Municipal Bodies) ..	6,346	3,535	1,032	177	229	59	11,378	1.2
<b>C. PERSONAL ADVANCES CLASSIFIED ACCORDING TO MAIN PURPOSE OF ADVANCE.</b>								
1. Advances for building or purchasing own home (Individuals) ..	48,962	28,649	12,716	3,748	9,480	2,121	105,676	11.4
2. All other (including Per- sonal Loans) ..	24,751	16,667	5,925	2,755	4,206	1,095	55,390	6.0
Total ..	73,713	45,316	18,641	6,503	13,686	3,216	161,075	17.4
<b>TOTAL ADVANCES.</b>								
Grand Total ..	395,004	261,777	140,046	48,541	60,351	21,722	927,441	100.0

(a) Includes Papua and New Guinea. (b) Includes Australian Capital Territory. (c) Includes Northern Territory. (d) Includes (i) fishing, hunting, trapping and forestry; (ii) mining and quarrying; (iii) legal and other professions, religious, charitable and benevolent institutions, hospitals, schools and industrial and trade associations; (iv) amusements, wireless broadcasting, sporting associations and promoters; and (v) hotels, boarding houses and restaurants, laundries, social clubs, etc.

(ii) *Australia, June, 1952 to June, 1955.* The following table provides a dissection of advances within Australia (including Papua and New Guinea). The figures for June, 1954 and 1955 include advances made by the Commonwealth Trading Bank, and the



earlier years include advances made by the General Banking Division only of the Commonwealth Bank. As the Commonwealth Trading Bank took over the business of the General Banking Division on 3rd December, 1953, the figures are comparable from year to year.

**COMMONWEALTH TRADING BANK OF AUSTRALIA(a) AND PRIVATE TRADING BANKS : CLASSIFICATION OF ADVANCES WITHIN AUSTRALIA(b)—AMOUNT AND PROPORTION OF EACH CLASS TO TOTAL**

Classification.	At End of—							
	June, 1952.		June, 1953.		June, 1954.		June, 1955.	
	Amount (£'000).	Per cent.	Amount (£'000).	Per cent.	Amount (£'000).	Per cent.	Amount (£'000).	Per cent.
<b>BUSINESS ADVANCES CLASSIFIED ACCORDING TO MAIN INDUSTRY OF BORROWER.</b>								
1. Agricultural, Dairying and Grazing ..	143,008	19.1	148,279	22.1	192,340	24.3	220,879	23.8
2. Manufacturing ..	193,344	25.7	141,481	21.1	139,314	17.6	190,728	20.6
3. Transport, Storage and Communication ..	13,285	1.8	12,710	1.9	16,690	2.1	17,241	1.9
4. Finance and Property	70,394	9.3	64,615	9.6	84,475	10.7	94,535	10.2
5. Commerce—								
Retail Trade ..	62,857	8.3	50,433	7.6	74,861	9.4	86,962	9.4
Wholesale Trade ..	78,424	10.4	59,132	8.8	57,678	7.3	73,827	7.9
Total Class 5 ..	141,281	18.7	109,565	16.4	132,539	16.7	160,789	17.3
6. Miscellaneous(c) ..	40,570	5.4	42,618	6.4	52,400	6.6	60,190	6.5
7. Not elsewhere specified	7,239	1.0	9,345	1.4	9,874	1.2	10,623	1.1
Total ..	610,021	81.0	528,613	78.9	627,692	79.2	754,988	81.4

**ADVANCES TO PUBLIC AUTHORITIES.**

Public Authority Advances (including Government, Semi-Governmental and Municipal Bodies) ..	15,919	2.1	13,551	2.0	9,871	1.2	11,378	1.2
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**PERSONAL ADVANCES CLASSIFIED ACCORDING TO MAIN PURPOSE OF ADVANCE.**

1. Advances for Building or purchasing own home (Individuals) ..	87,591	11.6	86,587	12.9	102,872	13.0	105,676	11.4
2. All other (including Personal Loans) ..	39,955	5.3	41,325	6.2	52,083	6.6	55,399	6.0
Total ..	127,546	16.0	127,912	19.1	154,955	19.6	161,075	17.4

**TOTAL ADVANCES.**

Grand Total ..	753,486	100.0	670,076	100.0	792,518	100.0	927,441	100.0
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(a) Prior to 3rd December, 1953, General Banking Division of the Commonwealth Bank.  
 (b) Includes Papua and New Guinea. (c) Includes (i) fishing, hunting, trapping and forestry; (ii) mining and quarrying; (iii) legal and other professions, religious, charitable and benevolent institutions, hospitals, schools and industrial and trade associations; (iv) amusements, wireless broadcasting, sporting associations and promoters; and (v) hotels, boarding houses and restaurants, laundries, social clubs, etc.

**II. Interest on Deposits : Rates—Cheque-Paying Banks.—Particulars of interest rates for fixed deposits since 1944 are shown hereunder.**

**BANK FIXED DEPOSIT RATES : AUSTRALIA.**

(Per cent. per annum.)

Dates from which Rates Operated.	Deposits for—			
	Three Months.	Six Months.	Twelve Months.	Two Years.
11th August, 1944 ..	$\frac{1}{2}$	$\frac{3}{4}$	$1\frac{1}{4}$	$1\frac{3}{4}$
1st December, 1945 ..	$\frac{1}{2}$	$\frac{3}{4}$	1	$1\frac{1}{4}$
29th July, 1952 ..	1	$1\frac{1}{4}$	$1\frac{1}{2}$	(a) $1\frac{3}{4}$
1st January, 1955 ..	$1\frac{1}{4}$	$1\frac{1}{2}$	$1\frac{3}{4}$	(b) 2

(a) On first £10,000; rate on amount in excess of £10,000 is 1 per cent.  
 (b) On first £10,000; rate on amount in excess of £10,000 is  $1\frac{1}{4}$  per cent.

12. **Clearing House Returns—Average Weekly Clearings.**—The average weekly clearings in each capital city for the years ended June, 1939 and 1951 to 1955 are shown in the following table.

**BANK CLEARINGS(a) : AVERAGE WEEKLY CLEARINGS.**  
(£'000.)

Year ended June—	Sydney.	Melbourne.	Brisbane.	Adelaide.	Perth.	Hobart.	Total.
1939 .. ..	17,832	15,415	4,212	2,953	2,055	623	43,090
1951 .. ..	88,588	82,022	18,046	15,957	10,809	2,885	218,307
1952 .. ..	92,557	86,022	17,478	17,226	11,425	2,980	227,688
1953 .. ..	88,557	78,965	17,886	16,794	11,441	2,985	216,628
1954 .. ..	97,191	87,505	20,736	18,027	13,249	3,393	240,101
1955 .. ..	102,891	94,520	21,840	19,534	13,547	3,639	255,971

(a) Excludes transactions connected with the issue and redemption of Treasury Bills.

13. **Debits to Customers' Accounts—All 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 are shown the average weekly debits to customers' accounts of all cheque-paying banks for each State for the years ended June, 1951 to 1955. 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.

**AVERAGE WEEKLY DEBITS TO CUSTOMERS' ACCOUNTS : ALL CHEQUE-PAYING BANKS.**

(Excluding Debits to Australian Government Accounts in Capital Cities.)  
(£'000.)

Year ended June—	N.S.W.	Vic.	Q'land.	S. Aust.	W. Aust.	Tas.	A.C.T.	Total
1951 .. ..	145,110	134,925	39,011	26,844	19,250	7,370	373	372,883
1952 .. ..	156,602	142,358	41,516	30,792	21,810	8,872	471	402,421
1953 .. ..	151,938	131,998	43,796	30,063	22,091	8,850	580	389,316
1954 .. ..	171,709	154,885	51,032	32,802	25,339	9,938	775	446,480
1955 .. ..	187,471	176,146	53,873	36,288	26,247	10,716	821	491,562

14. **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 Bank, but where these were not available rates issued by the Department of Trade and Customs have been used.

**OVERSEA EXCHANGE RATES : PAR OF EXCHANGE AND AVERAGE TELEGRAPHIC TRANSFER SELLING RATES FOR SYDNEY ON OVERSEA COUNTRIES.**

Country.	Basis of Quotation.	Par of Ex- change.(a)	Selling Rate 1954-55.	Country.	Basis of Quotation.	Par of Ex- change.(a)	Selling Rate 1954-55.
Belgium ..	Francs to £A.1 ..	112.00	110.60	Netherlands ..	Guilders to £A.1 ..	8.5120	8.4168
Canada ..	Dollars to £A.1 ..	(b)	2.1707	New Zealand ..	£A. to £NZ.100 ..	(c)	124.54
Ceylon ..	Pence A. to Rupee ..	22.500	22.795	Norway ..	Kroner to £A.1 ..	16.000	15.84
Denmark ..	Kroner to £A.1 ..	15.472	15.358	Pakistan ..	Pence A. to Rupee ..	32.384	32.688
Egypt ..	Piastres to £A.1 ..	78.006	77.490	Portugal ..	Escudos to £A.1 ..	(c)	63.773
Fiji ..	£A. to £F.100 ..	112.61	113.00	Singapore ..	Pence A. to Dollar ..	35.000	35.420
Finland ..	Marks to £A.1 ..	515.20	509.96	South Africa, Union of ..	£A. to £SA.100 ..	125.00	125.79
France ..	Francs to £A.1 ..	(b)	776.71	Sweden ..	Kroner to £A.1 ..	11.588	11.506
French Oceania	Francs to £A.1 ..	(b)	138.61	Switzerland ..	Francs to £A.1 ..	(c)	9.7125
Germany, Fed.	Deutsche Marks to £A.1 ..	9.408	9.306	United Kingdom	£A. to £Eng.100 ..	125.00	125.50
Hong Kong ..	Pence A. to Dollar ..	18.750	18.844	United States of America ..	Dollars to £A.1 ..	2.2397	2.226
India ..	Pence A. to Rupee ..	22.500	22.734	U.S.S.R. ..	Roubles to £A.1 ..	(c)	8.924
Indonesia ..	Rupiahs to £A.1 ..	(c)	25.067				
Japan ..	Yen to £A.1 ..	806.40	797.80				

(a) As at 30th June, 1954, established under International Monetary Fund Agreement.  
(c) Not a member of International Monetary Fund.

(b) No par value established.

(ii) *Interstate Exchange Rates.* Exchange rates between the capital cities and towns of each of the States and other States or parts thereof at 30th June, 1955, are shown below. Rates varied from 2s. per £100 between the nearer locations to 10s. per £100 between those more widely separated.

INTERSTATE BANK EXCHANGE RATES, 30th JUNE, 1955.(a)  
(s. d. per £100.)

Between—	And—						
	New South Wales.	Vic.	Brisbane and adjacent towns.	South Aust.	Perth and all but distant towns.	Tas.	Aust. Cap. Terr.
Sydney and New South Wales towns	..	2 6	2 6	5 0	7 6	5 0	2 0
Melbourne and Victorian towns ..	2 6	..	5 0	2 6	5 0	2 6	2 0
Brisbane and adjacent towns ..	2 6	5 0	..	7 6	10 0	7 6	2 6
Adelaide and South Australian towns	5 0	2 6	7 6	..	2 6	5 0	5 0
Perth and all but distant towns ..	7 6	5 0	10 0	2 6	..	7 6	7 6
Hobart and Tasmanian towns ..	5 0	2 6	7 6	5 0	7 6	..	5 0
Australian Capital Territory ..	2 0	2 0	2 6	5 0	7 6	5 0	..

(a) Unchanged since 1st January, 1940.

There is no charge for transfers within a city or a town. In all States excepting Queensland and Western Australia, the exchange for transfers between towns in the same State is 2s. per £100. Queensland and Western Australia are divided into zones. The exchange rate for transfers between towns in the same zone is 2s. per £100, with higher rates for inter-zone transfers.

The exchange rate between Papua and New Guinea and the mainland is 10s. per £100 for all points.

## § 2. Savings Banks.

1. *General.*—The inauguration of Savings Banks in Australia dates from 1819, when a private Savings Bank was opened in Sydney. In 1832 the legislature created "The Savings Bank of New South Wales" under the control of trustees, and shortly after its establishment the funds of the private Savings Bank were transferred to the new institution. In the other States provision for placing deposits with savings banks dates from 1841 in Victoria; 1854 in Queensland; 1848 in South Australia; 1863 in Western Australia (a Savings Bank was opened in 1856 but was closed a year later); 1835 in Launceston; and 1845 in Hobart. These early banks functioned as Trustee Savings Banks, but, with the exception of the Hobart and Launceston institutions, were later absorbed by, or amalgamated with, Government Savings Banks.

Post Office Savings Banks were established in all States from 1864 onwards. These were separate Government institutions except in South Australia, where the Post Office acted as agent for the Savings Bank. Since the federation of the Australian States in 1900, post offices have been controlled by the Commonwealth Government, but they continued to act as savings bank agencies for the State institutions until the establishment of the Commonwealth Bank in 1912. They now act as agents for the Commonwealth Savings Bank.

Savings banks at present operating are the Commonwealth Savings Bank (all States and Territories); State Savings Bank of Victoria; Savings Bank of South Australia; and the two Trustee Banks—Hobart and Launceston.

The prime object of the foundation of savings banks in Australia was the encouragement of thrift, deposits of one shilling and upwards being accepted; nevertheless, the facilities offered, while preserving the original object, have led to developments in another direction. Although depositors may not operate on their accounts by means of cheques, they have practically all the other advantages of a current account and in addition receive interest on their minimum monthly balances. No charge is made by the banks for keeping the accounts.

Commencing with July, 1931, monthly returns of statistics have been furnished by savings bank authorities. The information given in the following paragraphs relates to the deposits at 30th June in each year. For convenience of reference the information has been grouped under the following headings :—

- (i) Commonwealth Savings Bank ; (ii) State Savings Banks (including Trustee Banks in Tasmania) ; and (iii) All Savings Banks.

2. Number of Accounts.—The following table shows the number of savings bank accounts in existence at 30th June, 1954 and 1955. It should be noted that these figures relate to the number of accounts and not necessarily to the number of depositors.

#### SAVINGS BANKS : NUMBER OF ACCOUNTS.(a)

Bank.	30th June, 1954.		30th June, 1955.	
	Operative.	Inoperative. (b)	Operative.	Inoperative. (b)
Commonwealth Savings Bank ..	4,495,323	2,165,141	4,576,280	2,257,832
State Savings Bank of Victoria ..	1,513,109	585,108	1,524,989	601,227
Savings Bank of South Australia ..	572,838	(c) 167,806	585,696	(c) 171,573
Hobart Savings Bank ..	93,430	(c) 34,221	95,121	(c) 34,841
Launceston Bank for Savings ..	80,821	23,436	79,374	27,804
Total .. ..	6,755,521	2,975,712	6,861,460	3,093,277

(a) Excludes special purpose and school bank accounts. (b) Inoperative accounts are those accounts with balances of less than £1 which have not been operated on for a period of over two years. (a) Estimated.

3. Business Transacted.—The following table shows details of the business transacted in Australia by savings banks during the years ended 30th June, 1954 and 1955 :—

#### BUSINESS TRANSACTED IN AUSTRALIA. (£'000.)

State or Territory.	Year ended 30th June, 1954.				Year ended 30th June, 1955.			
	Deposits During Year.	With- drawals During Year.	Interest Added During Year.	Amount on Deposit at 30th June, 1954.	Deposits During Year.	With- drawals During Year.	Interest Added During Year.	Amount on Deposit at 30th June, 1955.
<b>COMMONWEALTH SAVINGS BANK.</b>								
New South Wales ..	291,765	276,915	5,797	339,796	322,797	310,423	6,475	358,645
Victoria ..	90,606	83,140	1,571	94,174	104,653	96,063	1,833	104,597
Queensland ..	111,454	105,413	2,005	117,406	119,382	114,244	2,270	124,814
South Australia ..	24,073	21,842	478	28,192	26,839	25,036	552	30,547
Western Australia ..	51,587	49,679	912	52,614	53,136	53,117	996	53,629
Tasmania ..	11,165	10,691	225	12,869	12,653	12,010	251	13,763
Northern Territory ..	1,889	1,716	19	1,308	2,111	1,959	22	1,482
Australian Capital Ter- ritory ..	3,312	3,177	39	2,328	3,503	3,300	44	2,575
Total ..	585,851	552,573	11,046	648,687	645,074	616,152	12,443	690,052

#### STATE SAVINGS BANKS.

Victoria ..	189,832	183,467	4,408	245,667	209,481	199,819	4,882	260,151
South Australia ..	64,061	59,621	1,925	94,757	70,770	66,510	2,128	101,145
Tasmania ..	14,580	13,868	458	21,078	15,675	15,195	488	22,046
Total ..	268,473	256,956	6,791	361,442	295,926	281,524	7,498	383,342

#### ALL SAVINGS BANKS.

New South Wales ..	291,765	276,915	5,797	339,796	322,797	310,423	6,475	358,645
Victoria ..	280,438	266,607	5,979	339,781	314,134	295,882	6,715	364,748
Queensland ..	111,454	105,413	2,005	117,406	119,382	114,244	2,270	124,814
South Australia ..	88,124	81,463	2,403	122,949	97,609	91,546	2,680	131,692
Western Australia ..	51,587	49,679	912	52,614	53,136	53,117	996	53,629
Tasmania ..	25,745	24,559	683	33,947	28,328	27,205	739	35,809
Northern Territory ..	1,889	1,716	19	1,308	2,111	1,959	22	1,482
Australian Capital Ter- ritory ..	3,312	3,177	39	2,328	3,503	3,300	44	2,575
Total ..	854,324	809,529	17,837	1,010,129	941,000	897,676	19,941	1,073,394

4. Deposits.—The amount at credit of depositors' accounts and the average deposits per head of population for each State and Territory at 30th June, 1939 and 1951 to 1955 are shown in the following table:—

## TOTAL DEPOSITS IN AUSTRALIA.

At 30th June.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas.	N. Terr.	A.C.T.	Total.
COMMONWEALTH SAVINGS BANK.(a)									
(£'000.)									
1939	87,474	11,242	29,045	3,167	12,396	2,358	99	319	146,100
1951	284,467	68,092	98,840	20,203	44,672	10,497	965	1,717	529,453
1952	304,532	76,485	102,661	22,502	47,171	11,406	1,036	1,821	567,614
1953	319,149	85,137	109,360	25,483	49,790	12,171	1,116	2,154	604,363
1954	339,796	94,174	117,406	28,192	52,613	12,864	1,308	2,325	648,687
1955	358,645	104,597	124,814	30,547	53,620	13,76	1,482	2,575	690,052

## STATE SAVINGS BANKS.(b)

(£'000.)									
1939	..	69,219	..	24,230	..	6,038	..	..	99,487
1951	..	213,687	..	77,646	..	16,658	..	..	307,991
1952	..	224,347	..	81,224	..	18,713	..	..	324,284
1953	..	234,834	..	88,392	..	19,908	..	..	343,134
1954	..	245,607	..	94,757	..	21,078	..	..	361,442
1955	..	260,151	..	101,145	..	22,046	..	..	383,342

## ALL SAVINGS BANKS.

(£'000.)									
1939	87,474	80,461	29,045	27,397	12,396	8,396	99	319	245,587
1951	284,467	281,779	98,840	97,849	44,672	27,155	965	1,717	837,444
1952	304,532	300,832	102,661	103,726	47,171	30,119	1,036	1,821	891,898
1953	319,149	319,971	109,360	113,875	49,794	32,078	1,116	2,154	947,197
1954	339,796	339,781	117,406	122,949	52,614	33,947	1,308	2,325	1,070,129
1955	358,645	364,748	124,814	131,69	53,620	35,806	1,482	2,575	1,073,394

## PER HEAD OF POPULATION.

(£ s. d.)									
1939	31 16 7	42 16 8	28 10 7	45 18 6	26 7 5	35 1 5	15 14 8	25 7 4	35 4 11
1951(c)	86 15 7	123 15 6	80 10 2	133 11 11	76 19 6	94 17 8	61 16 10	68 19 7	99 8 9
1952(c)	91 3 10	128 6 3	81 10 3	137 7 6	78 12 9	101 13 0	67 0 5	69 1 5	103 5 5
1953(c)	94 6 4	133 11 8	84 13 8	146 15 9	80 4 10	105 9 10	70 8 3	75 3 8	107 9 8
1954(c)	99 5 1	138 11 1	89 1 3	154 4 11	82 4 9	109 19 0	79 8 8	76 15 8	112 8 1
1955	102 15 1	144 11 4	92 16 7	160 13 9	81 8 9	113 15 11	84 6 5	79 8 4	116 13 3

(a) In addition to the amounts shown above, the Commonwealth Bank had deposits at offices in Papua, New Guinea, London and British Solomon Islands totalling: 1939, £78,000; 1951, £2,841,000; 1952, £3,285,000; 1953, £3,785,000; 1954, £4,190,000; and 1955, £1,688,000. (b) The State savings banks in New South Wales, Queensland, Western Australia and Tasmania were absorbed by the Commonwealth Savings Bank. (c) Revised.

5. Deposits per head and Purchasing Power.—Particulars of the deposits per head of population, actual and adjusted to purchasing power by the application of retail price index-numbers, at 30th June, in each of the years 1939 and 1951 to 1955 are shown in the following table. In calculating the index-numbers in this table the average of deposits per head of population at 30th June, 1937, 1938 and 1939 has been used as a base and made equal to 1,000.

## ALL SAVINGS BANKS : DEPOSITS PER HEAD OF POPULATION, AUSTRALIA.

At 30th June—				Actual		Adjusted to Purchasing Power.(a)	
				Deposits per head of population.	Index-Number.	Deposits per head of population.	Index-Number.
				£	1937-1939 = 1000	£	1937-1939 = 1000
1939	..	..	.	35.25	1,018	34.32	991
1951	..	..	..	99.44	2,872	48.44	1,390
1952	..	..	..	103.27	2,983	41.80	1,207
1953	..	..	..	107.48	3,104	41.86	1,209
1954	..	..	..	112.40	3,246	43.19	1,247
1955	..	..	..	116.66	3,369	43.87	1,267

(a) On the basis of the All Items ("C") Series of Retail Price Index-numbers (6 capitals) for June quarter in each year.

In interpreting the figures above it should be remembered that savings bank accounts are used to some extent by institutions and business people, as well as by individuals for the investment of personal savings. The relative extent to which savings bank accounts are used for business purposes, etc., may, and probably does, fluctuate considerably from time to time.

6. **School Banking.**—With the object of encouraging principles of thrift amongst children, agencies of the Savings Banks have been established at most of the schools throughout Australia. Particulars of operative accounts for the Commonwealth at 30th June of the years 1939 and 1951 to 1955 appear below :—

## SCHOOL SAVINGS BANKS : AUSTRALIA.

At 30th June—				Number of School Agencies.	Number of Operative Accounts.	Deposits.	Deposits per Operative Account.
						£	£ s. d.
1939	..	..	..	9,535	560,116	1,090,703	1 18 11
1951	..	..	..	8,239	591,915	3,369,872	5 13 10
1952	..	..	..	8,219	638,476	3,866,793	6 1 2
1953	..	..	..	8,148	684,527	4,375,185	6 7 10
1954	..	..	..	8,179	724,038	4,831,538	6 13 6
1955	..	..	..	8,210	761,974	5,280,808	6 18 7

7. **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 Official Year Book (*see* No. 37, page 586), were discontinued after 31st January, 1949, except for some sales made to wind up savings groups, etc. This method of saving was replaced by special savings schemes to operate through the savings banks. Employers were asked to co-operate by forming employee savings groups and by making regular deductions from wages and salaries for payment into group savings bank accounts, and thence, at the end of each quarter to individual accounts. The total value of certificates outstanding at 30th June in each of the last five years was :—1951, £48,115,000; 1952, £41,809,000; 1953, £35,601,000; 1954, £30,310,000; 1955, £26,615,000.

8. **Commonwealth Savings Bank of Australia.**—(i) *General.* The Savings Bank Department of the Commonwealth Bank opened for business in Victoria on 15th July, 1912; in Queensland on 16th September, 1912; in the Northern Territory on 21st October, 1912; in Tasmania on 1st January, 1913, and in New South Wales, South Australia and Western Australia on 13th January, 1913. The Tasmanian State Savings

Bank was absorbed by the Commonwealth Bank on 1st January, 1913, the Queensland State Savings Bank was taken over in 1920 and the New South Wales and Western Australian State Savings Banks in 1931. The Savings Bank Department was separated from the General Bank on 9th June, 1928, and established as a separate institution known as the "Commonwealth Savings Bank of Australia". 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.

(ii) *Balance-sheet, 30th June, 1954 and 1955.* Particulars of the liabilities and assets of the Commonwealth Savings Bank as at 30th June, 1954 and 1955 were as follows :—

**COMMONWEALTH SAVINGS BANK(a) : LIABILITIES AND ASSETS, 30th JUNE.**  
(£'000.)

Liabilities.	1954.	1955.	Assets.	1954.	1955.
Reserve Fund ..	8,276	8,828	Cash Balances and Money at Short Call	67,856	72,719
Depositors' Balances and Accrued Interest	653,910	695,930	Australian Notes and Coin ..	709	692
Contingency Account and other Liabilities	19,036	20,675	Government Securities	451,331	470,778
			Securities of Municipal and other Public Authorities ..	67,668	72,709
			Bank Premises ..	3,492	4,667
			Loans and Advances..	80,671	92,821
			Other Assets ..	9,495	11,047
<b>Total ..</b>	<b>681,222</b>	<b>725,433</b>	<b>Total ..</b>	<b>681,222</b>	<b>725,433</b>

(a) Includes branches in London, Territories of Papua and New Guinea, and British Solomon Islands.

(iii) *Profile.* Under the terms of the Savings Bank Amalgamation Agreements the profits of the 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. Net profits for the years ended 30th June, 1939 and 1951 to 1955 and the distribution of those profits are shown in the following table.

**COMMONWEALTH SAVINGS BANK : DISTRIBUTION OF PROFITS.**  
(£.)

Year ended 30th June—	Total Profit.	Payments to State Authorities under Savings Bank Amalgamation Agreements.					Pub- lished Profit.	Distribution of Published Profit.	
		New South Wales. (a)	Queens- land. (b)	Western Aus- tralia. (b)	Tas- mania. (b)	Total.		National Debt Sinking Fund.	Savings Bank Reserve Fund.
1939 ..	532,736	168,878	30,464	13,251	3,861	216,454	316,282	158,141	158,141
1951 ..	1,616,082	459,959	170,191	30,370	9,321	669,841	946,241	473,120	473,121
1952 ..	1,522,507	453,200	140,443	20,122	7,024	620,789	901,718	450,859	450,859
1953 ..	1,525,475	497,082	94,795	23,544	4,984	620,405	905,070	452,535	452,535
1954 ..	2,031,371	629,614	155,365	33,217	12,439	830,635	1,200,736	600,368	600,368
1955 ..	1,855,901	587,959	130,415	26,284	6,327	750,985	1,104,916	552,458	552,458

(a) Paid to Rural Bank of New South Wales.

(b) Paid to State Consolidated Revenue Funds.

9. State Savings Banks.—(i) *Assets, 1955.* At 30th June, 1955 or in the case of Tasmania, 31st August, 1955, the assets of State savings banks amounted to £406,563,000, distributed as shown in the following table.

**STATE SAVINGS BANKS : ASSETS, 30th JUNE, 1954 AND 1955.**  
(£'000.)

Particulars.	30th June, 1955.				30th June, 1954.
	Victoria.	South Australia.	Tasmania. (a)	Total.	Total.
Cash in hand, in transit and on Current Account .. ..	4,855	2,008	1,320	8,183	8,425
Fixed Deposits .. ..	42,812	13,510	1,705	58,027	56,627
Outstanding Interest, Dividends and Rents .. ..	2,090	708	238	3,036	2,732
Government Securities .. ..	117,457	54,666	6,629	178,752	180,102
Municipal and other Public Securities .. ..	91,571	17,905	7,926	117,402	99,037
Mortgages .. ..	14,869	18,246	6,027	39,142	34,713
Landed and House Property ..	1,100	630	283	2,013	1,782
All other Assets .. ..	..	..	8	8	5
<b>Total Assets .. ..</b>	<b>274,754</b>	<b>107,673</b>	<b>24,136</b>	<b>406,563</b>	<b>383,423</b>

(a) At 31st August, 1955.

(b) State totals were: Victoria, £259,554,000; South Australia, £100,815,000; and Tasmania, £23,054,000.

(ii) *Profit and Loss Accounts, 1954-55.* Details of the profit and loss accounts of the several State savings banks for the year 1954-55 are given below :—

**STATE SAVINGS BANKS : PROFIT AND LOSS ACCOUNTS, 1954-55.**  
(£'000.)

Particulars.	1954-55.				1953-54.
	Victoria.	South Australia.	Tasmania. (a)	Total.	Total.
<b>Receipts—</b>					
Total, Interest, Dividends, Rents, and all other ..	7,998	3,400	814	12,212	11,134
<b>Expenditure—</b>					
Interest allotted to Depositors	4,498	2,179	531	7,208	6,294
Provision for accrued interest on Depositors' Balances ..	451	..	..	451	594
Expenses of Management ..	2,391	753	187	3,331	3,057
All other Expenditure ..	439	65	3	507	297
<b>Total .. ..</b>	<b>7,779</b>	<b>2,997</b>	<b>721</b>	<b>11,497</b>	<b>10,242</b>
Profit for year .. ..	219	403	93	715	892
Balance of profit and loss account brought forward .. ..	127	150	106	383	413
<b>Total .. ..</b>	<b>346</b>	<b>553</b>	<b>199</b>	<b>1,098</b>	<b>1,305</b>
<b>Distribution of Profits—</b>					
Amount written off Bank Premises .. ..	63	25	36	124	138
Amount carried to Reserves and Depreciation Funds ..	150	370	57	577	784
Balance of Profit and Loss Account carried forward ..	133	158	106	397	383

(a) Year ended 31st August, 1955.



10. *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 information supplied to the Royal Commission on Monetary and Banking Systems, for all savings banks except the Hobart Trustee Savings Bank, shows that at 30th June, 1936 the amount on deposit in accounts with balances of less than £100 represented 21 per cent. of the total deposits; balances of over £100 but under £250, 21 per cent.; over £250 but under £500, 23 per cent.; over £500 but under £1,000, 25 per cent.; while those of over £1,000 accounted for 10 per cent. School, penny bank and small inoperative accounts were excluded in determining these percentages.

A similar classification as at 30th June, 1936, 1939 and 1951 to 1955, but relating only to the combined State Savings Banks of Victoria and South Australia, is shown below.

## STATE SAVINGS BANKS : CLASSIFICATION OF DEPOSITS.

(Per cent.)

At 30th June—	£100 and under.	£101-£300.	£301-£500.	Total under £501.	£501-£1,000.	Over £1,000.
1936.. ..	19.54	26.13	17.84	63.51	27.42	9.07
1939.. ..	20.27	27.15	17.90	65.32	26.14	8.54
1951.. ..		47.45		47.45	32.22	20.33
1952.. ..		45.85		45.85	32.33	21.82
1953.. ..		43.88		43.88	32.73	23.39
1954.. ..		42.17		42.17	32.03	25.80
1955.. ..		40.45		40.45	30.34	29.21

11. *Rates of Interest on Deposits.*—The following tables show the rates of interest allowed at 30th June, 1939 and 1950 to 1955 by State and trustee savings banks and by the Commonwealth Savings Bank.

## SAVINGS BANKS : INTEREST RATES(a) ON DEPOSITS.

(Per cent. per annum.)

Particulars.	Interest Rate at 30th June.					
	1939.	1951.	1952.	1953.	1954.	1955.
Part of Balance not exceeding £500—						
Commonwealth Savings Bank .. ..	2	2	2	2½	2½	2½
State Savings Bank of Victoria .. ..	2	2	2	2½	2½	2½
Savings Bank of South Australia .. ..	(b) 3	2½	2½	2½	2½	(c) 2½
The Hobart Savings Bank(d) .. ..	3	2½	2½	2½	2½	2½
The Launceston Bank for Savings(d) ..	3	2½	2½	2½	2½	2½
Part of balance in excess of £500 but not exceeding £1,500(e)—						
Commonwealth Savings Bank(f) .. ..	1½	1	1	1½	1½	1½
State Savings Bank of Victoria .. ..	2	1	1	1½	1½	1½
Savings Bank of South Australia .. ..	2½	1½	1½	1½	1½	(g) 1½
Deposit Stock—						
State Savings Bank of Victoria .. ..	2½	1	1	1½	1½	2
Savings Bank of South Australia .. ..	..	1	1	1½	1½	2

(a) Rates on ordinary accounts. On Friendly and other Society Accounts the rates at 30th June, 1955 were:— Commonwealth Savings Bank, State Savings Bank of Victoria and Savings Bank of South Australia, 2½ per cent. on £2,000, 1½ per cent. on balance. (b) £1-£200. Rate on £201 to £500 was 2½ per cent. (c) The interest bearing limit for this bank was increased from £500 to £750 from 1st January, 1955.

(d) The interest bearing limit for these banks was increased from £300 to £450 from 1st April, 1951, and from £450 to £500 from 1st January, 1955. (e) The interest bearing limit was increased from £1,000 to £1,500 from 1st June, 1954. (f) Up to 1911 the interest bearing limit in all States except Queensland was £1,300. In Queensland it was £2,000. The limit from 1942 to 1953 was £1,000 in all States. (g) £751-£1,500.

## C. COMPANIES.

NOTE.—Statistics available in regard to companies relate to (a) Trustee, Executor and Agency Companies; (b) Building and Investment Societies; and (c) Co-operative Societies.

## § 1. Trustee, Executor and Agency Companies.

The following table shows, for the years 1939 and 1950 to 1954, particulars of the assets and liabilities of certain trustee companies transacting business in Australia and New Zealand. Details have been extracted from a summary of the last published balance-sheets for the various years, as shown in the *Australasian Insurance and Banking Record*.

TRUSTEE, EXECUTOR AND AGENCY COMPANIES.  
AUSTRALIA AND NEW ZEALAND.

Particulars.	1939.	1950.	1951.	1952.	1953.	1954.
Number of Companies ..	23	24	24	24	24	24
<b>Liabilities—</b>	£	£	£	£	£	£
Capital paid-up ..	1,408,452	1,528,452	1,528,452	1,528,452	1,528,452	1,528,452
Reserves and undistributed						
Profits ..	1,254,262	1,483,424	1,508,912	1,511,596	1,533,107	1,583,874
Other Liabilities ..	621,069	867,364	901,314	1,000,752	1,107,642	1,133,959
<b>Total Liabilities ..</b>	<b>3,283,783</b>	<b>3,879,240</b>	<b>3,938,678</b>	<b>4,040,800</b>	<b>4,169,201</b>	<b>4,246,285</b>
<b>Assets—</b>						
Deposits with Government,						
Public Securities, Fixed						
Deposits, etc. ..	966,847	1,450,221	1,511,739	1,393,241	1,463,523	1,479,961
Mortgages ..	547,705	412,203	313,295	294,206	276,590	262,155
Property ..	1,104,216	1,111,837	1,117,672	1,140,149	1,149,450	1,170,703
Cash ..	102,300	206,538	265,985	478,812	481,606	559,982
Other Assets ..	562,715	698,441	729,987	734,392	797,992	773,479
<b>Total Assets ..</b>	<b>3,283,783</b>	<b>3,879,240</b>	<b>3,938,678</b>	<b>4,040,800</b>	<b>4,169,201</b>	<b>4,246,285</b>
<b>Total Trust Fund Assets</b>	<b>(a)157,256</b>	<b>(a)195,982</b>	<b>(a)203,585</b>	<b>(a)208,168</b>	<b>(b)219,155</b>	<b>(b)219,466</b>

(a) Nine offices only.

(b) Ten offices only.

## § 2. Building and Investment Societies.

1. Summary.—During 1953 returns were received from 1,017 societies, but the information is not exhaustive, as particulars regarding a number of organizations are not included. In the following table general information is given relating to the societies for the year 1952–53.

## BUILDING AND INVESTMENT SOCIETIES : SUMMARY, 1952-53.

Particulars.		N.S.W.	Vic.(a)	Q'land.	S. Aust.	W. Aust.	Tas.	Total.
<b>Societies making returns—</b>								
Permanent ..	No.	25	18	5	5	6	5	64
Terminating ..	No.	926	2	6	17	2	..	953
<b>Total ..</b>	<b>No.</b>	<b>951</b>	<b>20</b>	<b>11</b>	<b>22</b>	<b>8</b>	<b>5</b>	<b>1,017</b>
Number of shareholders ..		110,147	11,821	25,666	23,801	25,460	7,966	204,861
„ shares ..	b	1,881,965	1,190,098	8,027,767	113,079	(c)	92,653	(c)
„ borrowers ..	(d)	10,310	17,542	9,721	3,664	4,140	2,404	47,781
Income for year from interest, etc. ..	£	1,053,266	735,956	207,543	67,975	123,540	92,438	2,280,718
Working expenses for year ..	£	742,504	577,957	297,499	26,365	34,204	26,332	1,704,921
Amounts of deposits during year ..	£	473,931	1,063,458	826,587	501,486	597,423	163,808	3,626,693
Repayment of loans during year ..	£	1,631,501	2,733,114	961,575	306,475	608,808	373,844	6,615,317
Loans granted during year ..	£	2,901,620	2,512,518	1,380,944	530,781	773,813	490,317	8,589,993

(a) Year 1953; excludes Co-operative Housing Societies, for details of which see para. 3.  
 (b) Terminating societies only. (c) Not available. (d) Permanent societies only. (e) Incomplete  
 —“ Other terminating societies ” not available.

2. **Liabilities and Assets.**—Particulars of liabilities and assets in 1952-1953 of the 1,017 societies mentioned in the previous paragraph are shown below.

## BUILDING AND INVESTMENT SOCIETIES : LIABILITIES, 1952-53.

(£.)

State.	Paid-up Capital and Subscriptions.	Reserve Funds.	Deposits.	Bank Overdrafts and other Liabilities.	Total Liabilities.
New South Wales ..	18,887,065	2,051,733	1,055,603	64,108,990	86,103,391
Victoria (a) ..	4,194,149	b 1,394,189	3,403,082	5,631,390	14,622,810
Queensland ..	4,445,063	98,794	84,391	613,372	5,241,620
South Australia ..	1,848,594	200,761	273,613	26,559	2,349,527
Western Australia ..	2,115,134	65,406	505,159	(c) 175,945	2,861,644
Tasmania ..	1,299,766	150,934	310,134	117,047	1,877,881
<b>Total ..</b>	<b>32,789,771</b>	<b>3,961,817</b>	<b>5,631,982</b>	<b>70,673,303</b>	<b>113,056,873</b>

(a) Year 1953. (b) Includes balance of Profit and Loss account, £126,000. (c) Includes net accumulated profits, £80,335.

## BUILDING AND INVESTMENT SOCIETIES : ASSETS, 1952-53.

(£.)

State.	Advances on Mortgage.	Landed and House Property, Furniture, etc.	Cash in Hand and on Deposit.	Other Assets.	Total Assets.
New South Wales ..	a 84,195,819	(b)	568	1,907,004	86,103,391
Victoria (c) ..	14,252,810	183,990	32,111	153,899	14,622,810
Queensland ..	a 5,041,536	90,048	48,040	61,996	5,241,620
South Australia ..	2,091,386	44,649	94,178	119,314	2,349,527
Western Australia ..	2,674,793	45,006	51,911	89,934	2,861,644
Tasmania ..	1,796,227	10,803	1,798	69,053	1,877,881
<b>Total ..</b>	<b>110,052,571</b>	<b>374,496</b>	<b>228,606</b>	<b>2,401,200</b>	<b>113,056,873</b>

(a) Includes Starr-Bowkett and other terminating societies:—New South Wales, £75,233,075; Queensland, £936,666. (b) Not available. Included in Other Assets. (c) Year 1953.

3. Co-operative Housing Societies, Victoria.—In addition to the information shown above, the following details of co-operative housing societies in Victoria have been extracted from the 8th Annual Report of the Registrar of Co-operative Housing Societies. At 30th June, 1953, 234 co-operative housing societies were registered in Victoria with 22,648 members who had subscribed for 744,530 shares giving a nominal share capital subscribed of £39,477,299. For the twelve months ended 30th April, 1953, returns were submitted by 217 societies, the total income of those societies being £156,206, and total expenditure £142,205. The liabilities at 30th April, 1953 of the societies submitting returns were:—bank overdraft, £20,001,888; subscriptions, £2,620,049; surplus interest and management expenses, £261,956; other liabilities, £375,032; total liabilities, £23,258,925. Assets at the same date consisted of:—advances, £22,973,234; other assets, £285,691; total assets, £23,258,925.

### § 3. 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-operative Act 1923-1950. A summary of the business of all co-operative societies for the years 1952-53 or 1953 for all States except Western Australia is given in the following tables. For Western Australia details of the business during 1940-41 (the latest year available) are given. Separate particulars for each of the three types of Co-operative Societies is given in the *Annual Finance Bulletin* (see No. 45, pages 176 and 177).

#### CO-OPERATIVE SOCIETIES.

Particulars.	N.S.W. 1952-53.	Vic. 1952-53.	Q'land. 1952-53.	S. Aust. 1953.	W. Aust. 1940-41.	Tas. 1952-53.
SUMMARY.						
Number of Societies ..	292	97	178	72	85	10
" Branches ..	(a)	83	89	(a)	36	6
" Members ..	187,215	64,761	116,698	100,323	21,663	13,012
Gross Turnover (Sales) ..	£ 95,354,598	24,578,278	50,633,258	11,622,505	2,548,776	3,232,496
Other Income ..	£ 417,139	1,278,348	1,543,625	886,132	698,449	128,203
Total Income ..	£ 95,771,737	25,856,626	52,176,883	12,508,637	3,247,225	3,360,699
Total Purchases during Year ..	£ 93,195,993	20,512,701	42,523,884	9,451,666	2,254,119	2,404,853
Other Expenditure ..	£ 93,195,993	4,297,710	9,434,968	2,525,159	850,741	800,861
Total Expenditure ..	£ 93,195,993	24,810,411	51,958,852	11,976,825	3,105,160	3,205,714
Rebates and Bonuses ..	£ 994,220	204,680	492,158	458,791	15,472	42,913
Dividends on Share Capital ..	£ 248,992	125,421	136,383	62,099	19,097	14,078

#### LIABILITIES AND ASSETS.

(£.)

<b>Liabilities—</b>						
Paid-up Capital ..	7,198,206	2,450,686	3,944,196	1,613,231	469,144	332,850
Loan Capital ..	..	342,727	1,911,482	1,279,889	225,009	123,230
Bank Overdrafts ..	..	1,367,413	3,970,191	799,315	61,386	435,992
Accumulated Profits ..	5,051,273	689,141	916,771	393,941	22,814	149,335
Reserve Funds ..	4,242,557	2,105,548	4,419,539	1,006,001	322,255	143,885
Sundry Creditors ..	..	1,953,670	6,915,476	745,470	374,553	504,351
Other Liabilities ..	9,807,776	594,908	369,229	1,962,164	457,371	45,201
Total Liabilities ..	26,299,812	9,504,093	22,446,875	7,800,011	1,932,514	1,734,844
<b>Assets—</b>						
Land and Buildings ..	..	..	4,347,660	1,178,749	510,279	526,259
Machinery, Plant and other fixed Assets ..	9,556,528	3,982,074	5,509,640	866,427	247,143	141,970
Stocks ..	8,522,090	2,178,243	4,061,915	2,976,248	351,437	589,539
Sundry Debtors ..	5,711,670	2,351,708	6,850,354	985,599	468,668	413,670
Cash in hand and on deposit ..	..	254,824	776,398	549,164	191,383	2,831
Profit and Loss Account ..	..	113,594	82,942	3,009	50,025	..
Other Assets ..	2,500,524	623,650	817,966	1,240,815	113,639	60,575
Total Assets ..	26,299,812	9,504,093	22,446,875	7,800,011	1,932,514	1,734,844

(a) Not available.

**D. 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 1932–1937 requiring the lodgment of deposits by insurance companies, and the Life Insurance Act 1945–1953 generally regulating life insurance business in Australia. The Marine Insurance Act 1909 and the Insurance Act 1932–1937 have limited application, and, except for life insurance business which is regulated by the Life Insurance Act 1945–1953, insurance business is conducted under State laws.

2. **Insurance Act 1932–1937.**—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 businesses under the Act :—

Staff superannuation schemes; schemes of religious organizations solely for insurance of their property; and 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 1945–1953, ceased to apply to life insurance business.

3. **Life Insurance Act 1945–1953.**—The objects of this Act are :—(a) To replace all State legislation on the subject of life insurance 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 Official Year Book No. 37 (pages 595 to 597).

The main amendment by the Life Insurance Act, No. 94 of 1953 was to repeal Part VI. of the principal Act, which provided for the establishment of a Commonwealth Government Insurance Office.

4. **Deposits under Insurance Acts.**—Deposits lodged under the Insurance Acts at 30th June, 1954, totalled £5,381,991, comprising £1,092,282 held by the Commonwealth in respect of life insurance and £4,006,379 held by the Commonwealth and £283,330 held by the States in respect of other forms of insurance.

The deposits comprise cash £25,000, government, municipal and other securities £4,373,841, fixed deposits £1,000, bank guarantees and undertakings £618,000, titles and mortgages £364,150.

**§ 2. Life Assurance.**

1. **General.**—Statistical returns have been collected from life assurance institutions since 1907. Until 1946 these returns were collected under the Census and Statistics Act. Since 1947 returns lodged under the Life Insurance Act 1945–1953 have been used to

compile life assurance statistics. This change in method of collection has resulted in some slight changes in definition and, as a result, the statistics for 1947 and later years are not in all cases strictly comparable with those for earlier years. In earlier years statistics of revenue and expenditure and of assets and liabilities, although generally related only to the life assurance business of the offices making the returns, included, in some cases, a small amount of other classes of business. Under the Life Insurance Act 1945-1953 companies transacting life assurance business are required to set up separate statutory funds for their life assurance business. As a result of this, it has been possible to separate life assurance business from other classes of business. Except where otherwise indicated, the figures in the succeeding paragraphs refer to Australian business only. Business in the Territories of Papua and New Guinea is, however, included in the Australian figures.

2. **Offices Transacting Business.**—The number of offices which transacted life assurance business in Australia during 1953 was 24, including three overseas companies. Of the twenty-one Australian offices, six are purely mutual, including one which transacts general business in respect of which share capital is used, thirteen are public companies, and two are State Government institutions. Of the total offices, fourteen transacted both ordinary and industrial business, and one industrial business only. Ordinary and industrial business has, where possible, been kept separate.

3. **Australian Business—Policies in Existence.**—In the following table details of policies on the registers in each State and the Australian Capital Territory are given for the year 1953:—

**LIFE ASSURANCE : POLICIES EXISTING IN AUSTRALIA, 1953.**

State or Territory.(a)	Assurance and Endowment Policies.				Annuity Policies.		
	Number of Policies.	Sum Assured. (£'000.)	Bonus Additions. (£'000.)	Annual Premiums. (£'000.)	Number of Policies.	Annuities Per Annum. (£.)	Annual Premiums. (£.)
<b>ORDINARY DEPARTMENT.</b>							
New South Wales ..	1,047,470	540,692	47,599	18,826	5,064	1,158,082	343,351
Victoria ..	805,694	453,225	38,073	15,954	7,136	4,339,483	913,557
Queensland(b) ..	485,906	242,593	17,959	7,746	921	80,581	18,709
South Australia ..	268,373	140,192	11,089	5,004	923	80,963	16,884
Western Australia ..	184,044	97,751	8,651	3,528	617	67,338	13,643
Tasmania ..	91,976	51,513	4,049	1,710	696	78,139	21,363
Australian Capital Territory ..	9,379	26,830	608	418	1,614	171,197	16,491
<b>Total ..</b>	<b>2,892,842</b>	<b>1,552,706</b>	<b>128,928</b>	<b>53,186</b>	<b>16,971</b>	<b>5,975,783</b>	<b>1,343,998</b>
<b>INDUSTRIAL DEPARTMENT.</b>							
New South Wales ..	1,431,843	106,653	2,803	5,300	..	..	..
Victoria ..	1,243,157	90,257	2,604	4,547	..	..	..
Queensland(b) ..	451,023	34,351	857	1,697	..	..	..
South Australia ..	407,912	27,537	793	1,379	..	..	..
Western Australia ..	243,205	19,054	478	933	..	..	..
Tasmania ..	98,406	7,277	215	354	..	..	..
Australian Capital Territory ..	5,222	465	18	22	..	..	..
<b>Total ..</b>	<b>3,880,768</b>	<b>285,594</b>	<b>7,768</b>	<b>14,232</b>	<b>..</b>	<b>..</b>	<b>..</b>

(a) Location of register of policies.

(b) Includes Territories of Papua and New Guinea.

The following table shows particulars of policies existing at the end of the years 1939 and 1949 to 1953 inclusive :—

## LIFE ASSURANCE : POLICIES EXISTING IN AUSTRALIA.

At End of Year—	Assurance and Endowment Policies.				Annuity Policies.	
	Number of Policies.	Sum Assured.	Average per Policy.	Annual Premiums.	Number of Policies.	Annuities per Annum.
		(£'000.).	(£.).	(£'000.).		(£.).
ORDINARY DEPARTMENT.						
1939 ..	1,243,378	427,291	344	(a) 13,954	3,820	304,584
1949 ..	2,224,240	930,791	419	32,109	14,138	2,802,424
1950 ..	2,377,032	1,047,145	441	36,081	12,748	3,406,314
1951 ..	2,553,710	1,211,970	475	41,868	14,459	4,346,634
1952 ..	2,731,284	1,378,474	505	47,634	16,240	5,587,112
1953 ..	2,892,842	1,552,706	537	53,186	16,971	5,975,783
INDUSTRIAL DEPARTMENT.						
1939 ..	2,491,742	111,862	45	(a) 6,490	2	58
1949 ..	3,725,017	224,012	60	12,001	2	39
1950 ..	3,793,074	238,321	63	12,517	1	13
1951 ..	3,842,716	253,594	66	13,069	1	13
1952 ..	3,872,726	270,323	70	13,682	1	13
1953 ..	3,880,768	285,594	74	14,232	..	..

(a) Annual premium income.

4. New Policies issued in Australia. During 1953, 300,295 new policies for £252,080,000 were issued in the Ordinary Department. The average amount per policy was £839 as compared with an average of £505 per policy for all ordinary policies existing at the end of 1952.

In the Industrial Department, 260,948 new policies were issued during 1953 assuring £34,570,000. The average amount per policy was £132 as compared with an average of £70 per policy for all industrial policies existing at the end of 1952.

In the following table details are given of new policies issued in each State and the Australian Capital Territory during 1953 for each class of business :—

## LIFE ASSURANCE : NEW POLICIES ISSUED IN AUSTRALIA, 1953.

State or Territory.(a)	Assurance and Endowment Policies.				Annuity Policies.			
	Number of Policies.	Sum Assured.	Premiums.		Number of Policies.	Annuities per Annum.	Premiums.	
			Single.	Annual.			Single.	Annual.
		(£'000.).	(£'000.).	(£'000.).		(£'000.).	(£'000.).	(£'000.).
ORDINARY DEPARTMENT.								
New South Wales ..	111,437	86,501	96	3,094	678	191	101	64
Victoria ..	80,547	69,763	99	2,547	801	701	411	148
Queensland(b) ..	50,356	38,614	122	1,229	44	9	6	3
South Australia ..	25,939	22,737	33	849	46	8	16	2
Western Australia ..	19,854	16,635	12	625	35	8	7	2
Tasmania ..	10,988	9,960	5	334	24	10	7	3
Australian Capital Territory ..	1,174	7,870	151	87	06	41	4	2
Total ..	300,295	252,080	518	8,765	1,724	968	552	224
INDUSTRIAL DEPARTMENT.								
New South Wales ..	98,547	13,590	..	628	..	..	..	..
Victoria ..	78,036	10,019	..	463	..	..	..	..
Queensland(b) ..	33,272	4,237	..	195	..	..	..	..
South Australia ..	28,615	3,098	..	142	..	..	..	..
Western Australia ..	18,581	2,630	..	119	..	..	..	..
Tasmania ..	6,405	929	..	42	..	..	..	..
Australian Capital Territory ..	492	67	..	3	..	..	..	..
Total ..	260,948	34,570	..	1,592	..	..	..	..

(a) Location of register of policies.

(b) Includes Papua and New Guinea.

New policies issued in Australia during each of the years 1939 and 1949 to 1953 were as shown in the following table :—

**LIFE ASSURANCE : NEW POLICIES ISSUED IN AUSTRALIA.**

Year.	Assurance and Endowment Policies.				Annuity Policies.			
	Number of Policies.	Sum Assured. (£'000.)	Premiums.		Number of Policies.	Annuities per Annum. (£'000.)	Premiums.	
			Single. (£'000.)	Annual. (£'000.)			Single. (£'000.)	Annual. (£'000.)

**ORDINARY DEPARTMENT.**

1939 .. ..	142,157	48,263	(a)	(a)	420	87	(a)	(a)
1949 .. ..	253,793	140,395	347	5,030	2,533	507	468	136
1950 .. ..	265,846	167,271	364	5,891	2,879	878	560	209
1951 .. ..	287,647	221,132	460	7,854	2,658	1,300	649	380
1952 .. ..	268,797	233,186	355	8,240	2,602	1,741	600	418
1953 .. ..	300,295	252,080	518	8,765	1,724	968	552	224

**INDUSTRIAL DEPARTMENT.**

1939 .. ..	385,498	18,542	(a)	(a)	..	..	..	..
1949 .. ..	300,988	29,690	7	1,367	..	..	..	..
1950 .. ..	289,275	29,632	7	1,367	..	..	..	..
1951 .. ..	266,577	30,661	..	1,413	..	..	..	..
1952 .. ..	270,391	34,367	..	1,579	..	..	..	..
1953 .. ..	260,948	34,570	..	1,592	..	..	..	..

(a) Not available.

5. Policies Matured or Otherwise Discontinued in Australia.—The volume of business discontinued from various causes in each year is always large. In the following table details are given of ordinary and industrial life assurance policies matured or otherwise discontinued in each State and the Australian Capital Territory during the year 1953.

**LIFE ASSURANCE : POLICIES MATURED OR OTHERWISE DISCONTINUED IN AUSTRALIA, 1953.**

State or Territory.(a)	Assurance and Endowment			Annuity Policies.		
	Number of Policies.	Sum Assured. (£'000.)	Annual Premiums. (£'000.)	Number of Policies.	Annuities per Annum. (£'000.)	Annual Premiums. (£'000.)

**ORDINARY DEPARTMENT.**

New South Wales .. ..	54,697	36,045	1,345	367	74	27
Victoria .. ..	38,858	25,362	948	455	484	102
Queensland(b) .. ..	22,598	13,188	435	32	3	..
South Australia .. ..	10,054	5,802	230	24	5	1
Western Australia .. ..	7,963	4,388	175	16	3	..
Tasmania .. ..	4,854	3,078	108	28	3	2
Australian Capital Territory	—287	—10,015	—28	71	7	3
Total .. ..	138,737	77,848	3,213	993	579	135

**INDUSTRIAL DEPARTMENT.**

New South Wales .. ..	101,135	7,871	422	..	..	..
Victoria .. ..	80,431	5,953	324	1	..	..
Queensland(b) .. ..	28,288	2,183	119	..	..	..
South Australia .. ..	22,566	1,552	86	..	..	..
Western Australia .. ..	14,802	1,204	63	..	..	..
Tasmania .. ..	5,488	524	27	..	..	..
Australian Capital Territory	106	12	1	..	..	..
Total .. ..	252,906	19,299	1,042	1	..	..

(a) Location of register of policies.

(b) Includes Papua and New Guinea.

NOTE.—Minus sign (—) indicates excess of transfers to registers or other adjustment to number and value of policies.



Policies matured or otherwise discontinued in Australia during each of the years 1939 and 1949 to 1953 were as shown in the following table :—

**LIFE ASSURANCE : POLICIES MATURED OR OTHERWISE DISCONTINUED IN AUSTRALIA.**

Year.	Assurance and Endowment Policies.			Annuity Policies.		
	Number of Policies.	Sum Assured. (£'000.).	Annual Prem-iums. (£'000.).	Number of Policies.	Annuities per Annum. (£'000.).	Annual Prem-iums. (£'000.).

**ORDINARY DEPARTMENT.**

1939	..	..	..	80,912	24,786	(a)	275	17	(a)
1949	..	..	..	100,492	44,071	1,687	1,039	216	90
1950	..	..	..	113,054	50,917	1,920	4,269	274	71
1951	..	..	..	110,969	56,307	2,067	947	360	124
1952	..	..	..	121,228	66,694	2,473	821	500	179
1953	..	..	..	138,737	77,848	3,213	993	579	135

**INDUSTRIAL DEPARTMENT.**

1939	..	..	..	262,096	12,132	(a)	..	..	..
1949	..	..	..	219,041	14,690	819	I	..	..
1950	..	..	..	221,218	15,323	851	I	..	..
1951	..	..	..	216,935	15,388	861	..	..	..
1952	..	..	..	240,381	17,638	967	..	..	..
1953	..	..	..	252,906	19,299	1,042	I	..	..

(a) Not available.

The number of policies and sums assured, excluding annuities, discontinued during the years 1939 and 1949 to 1953 and the cause for discontinuance are given in the following table :—

**LIFE ASSURANCE : POLICIES(a) MATURED OR OTHERWISE DISCONTINUED IN AUSTRALIA—CAUSE OF DISCONTINUANCE.**

Year.	Death or Maturity.	Surrender.	Forfeiture.	Other.	Total.
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**ORDINARY DEPARTMENT : NUMBER OF POLICIES.**

1939	..	..	..	22,529	18,409	39,382	—	128	80,192
1949	..	..	..	32,867	35,889	34,013	—	2,277	100,492
1950	..	..	..	34,655	42,710	35,045	—	644	113,054
1951	..	..	..	36,150	43,347	33,259	—	1,787	110,969
1952	..	..	..	39,150	48,879	33,734	—	535	121,228
1953	..	..	..	40,836	53,064	37,027	—	7,810	138,737

(a) Excludes annuities.

NOTE.—Minus sign (—) indicates excess of transfers to registers or other adjustment to number and value of policies.

LIFE ASSURANCE: POLICIES(*a*) MATURED OR OTHERWISE DISCONTINUED  
IN AUSTRALIA—CAUSE OF DISCONTINUANCE—*continued.*

Year.	Death or Maturity.	Surrender.	Forfeiture.	Other.	Total.
ORDINARY DEPARTMENT: SUM ASSURED. (£'000.).					
1939 .. .. .	5,612	5,863	13,414	— 103	24,786
1949 .. .. .	9,340	17,956	14,909	1,866	44,071
1950 .. .. .	10,132	22,270	16,939	1,576	50,917
1951 .. .. .	10,816	24,303	18,108	3,080	56,307
1952 .. .. .	12,044	28,824	21,458	4,368	66,694
1953 .. .. .	13,107	34,026	25,792	4,923	77,848

INDUSTRIAL DEPARTMENT: NUMBER OF POLICIES.					
1939 .. .. .	73,585	33,766	154,328	417	262,096
1949 .. .. .	113,833	37,268	67,800	140	219,041
1950 .. .. .	115,594	38,699	66,542	383	221,218
1951 .. .. .	122,209	33,109	60,877	740	216,935
1952 .. .. .	136,117	43,769	60,402	93	240,381
1953 .. .. .	146,134	51,044	55,289	439	252,906

INDUSTRIAL DEPARTMENT: SUM ASSURED. (£'000.).					
1939 .. .. .	2,759	1,372	7,976	25	12,132
1949 .. .. .	4,962	2,231	7,466	31	14,690
1950 .. .. .	4,880	2,446	7,950	47	15,323
1951 .. .. .	5,056	2,462	7,819	51	15,388
1952 .. .. .	5,728	3,914	7,983	13	17,638
1953 .. .. .	6,285	5,383	7,569	62	19,299

(*a*) Excludes annuities.

NOTE.—Minus sign (—) indicates excess of transfers to registers or other adjustment to number and value of policies.

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 table for each State and the Australian Capital Territory for the year 1953:—

ORDINARY LIFE ASSURANCE: AUSTRALIAN REVENUE FROM PREMIUMS, 1953.  
(£'000.)

State or Territory.( <i>a</i> )	Assurance and Endowment Premiums.		Consideration for Annuities.		Total.
	Single Premiums.	Other Premiums.	Single Premiums.	Other Premiums.	
New South Wales .. .. .	95	18,777	103	349	19,324
Victoria .. .. .	102	15,691	384	886	17,063
Queensland( <i>b</i> ) .. .. .	72	7,530	8	18	7,628
South Australia .. .. .	34	4,899	16	16	4,965
Western Australia .. .. .	13	3,429	8	12	3,462
Tasmania .. .. .	5	1,649	7	22	1,683
Australian Capital Territory	151	667	4	196	1,018
Total .. .. .	472	52,642	530	1,499	55,143

(*a*) Location of register of policies.

(*b*) Includes Territories of Papua and New Guinea.

The next table shows, for each of the years 1939 and 1949 to 1953, the aggregate Australian income from premiums in respect of ordinary business of all offices doing business in Australia :—

**ORDINARY LIFE ASSURANCE : AUSTRALIAN REVENUE FROM PREMIUMS.**  
(£'000.)

Year.	Assurance and Endowment Premiums.	Consideration for Annuities.	Total.
1939 .. .. .	13,954	184	14,138
1949 .. .. .	31,904	1,158	33,062
1950 .. .. .	35,840	1,365	37,205
1951 .. .. .	41,265	1,679	42,944
1952 .. .. .	47,091	1,870	48,961
1953 .. .. .	53,114	2,029	55,143

(b) *Industrial Business.* Premiums received on policies in 1953 amounted to :— New South Wales, £5,161,000; Victoria, £4,457,000; Queensland, £1,657,000; South Australia, £1,346,000; Western Australia, £900,000; Tasmania, £346,000; Australian Capital Territory, £21,000; Australia, £13,888,000. The Australian receipts from premiums for the years 1939 and 1949 to 1953 were as follows :—1939, £6,490,000; 1949, £11,676,000; 1950, £12,207,000; 1951, £12,874,000; 1952, £13,379,000; 1953, £13,888,000.

(ii) *Claims, etc., paid.* Details of the claims, etc., paid on policies in each State and the Australian Capital Territory during the year 1953 are shown in the following table :—

**LIFE ASSURANCE : PAYMENTS TO POLICY-HOLDERS IN AUSTRALIA, 1953.**  
(£'000.)

State or Territory.(a)	Claims.		Sur- renders.	Annuities.	Cash Bonuses.	Total.
	Death or Disability.	Maturity.				
ORDINARY DEPARTMENT.						
New South Wales .. ..	3,438	2,552	1,475	151	50	7,666
Victoria .. ..	2,871	2,613	1,348	142	41	7,015
Queensland(b) .. ..	1,198	1,014	498	23	16	2,749
South Australia .. ..	790	705	253	28	10	1,786
Western Australia .. ..	624	369	203	19	7	1,222
Tasmania .. ..	281	209	117	17	2	626
Australian Capital Territory	38	37	88	11	..	174
Total .. ..	9,240	7,499	3,982	391	126	21,238
INDUSTRIAL DEPARTMENT.						
New South Wales .. ..	338	2,302	392	..	..	3,032
Victoria .. ..	279	2,066	282	..	..	2,627
Queensland(b) .. ..	108	678	108	..	..	894
South Australia .. ..	82	502	73	..	..	657
Western Australia .. ..	47	340	51	..	..	438
Tasmania .. ..	18	112	20	..	..	150
Australian Capital Territory	..	7	1	..	..	8
Total .. ..	872	6,007	927	..	..	7,806

(a) Location of register of policies.

(b) Includes Papua and New Guinea.

In the following table details are given of claims, etc., paid on policies in Australia for each of the years 1939 and 1949 to 1953 :—

**LIFE ASSURANCE : PAYMENTS TO POLICY-HOLDERS IN AUSTRALIA.**  
(£'000.)

Year.	Claims.	Surrenders.	Annuities.	Cash Bonuses.	Total.
ORDINARY DEPARTMENT.					
1939 .. .. .	7,935	1,843	220	260	10,258
1949 .. .. .	12,273	1,951	298	98	14,620
1950 .. .. .	13,320	2,382	322	102	16,126
1951 .. .. .	14,029	2,641	346	87	17,103
1952 .. .. .	15,576	3,287	379	107	19,349
1953 .. .. .	16,739	3,982	391	126	21,238
INDUSTRIAL DEPARTMENT.					
1939 .. .. .	3,132	499	..	..	3,631
1949 .. .. .	5,572	546	..	..	6,118
1950 .. .. .	5,410	606	..	..	6,016
1951 .. .. .	5,585	566	..	..	6,151
1952 .. .. .	6,284	772	..	..	7,056
1953 .. .. .	6,879	927	..	..	7,806

7. Total Revenue and Expenditure.—(i) *Total Revenue.* The following table shows particulars of the total life assurance revenue derived by life assurance offices from sources within and beyond Australia during each of the years 1939 and 1949 to 1953 :—

**ORDINARY AND INDUSTRIAL LIFE ASSURANCE : TOTAL REVENUE.**  
(£'000.)

Year.	Assurance and Endowment Premiums.	Con-sideration for Annuities Granted.	Interest, Dividends and Rents.	All other Revenue.	Total Revenue.
ORDINARY BUSINESS.					
1939 .. .. .	21,568	303	9,901	17	31,789
1949 .. .. .	45,770	1,366	15,267	736	63,139
1950 .. .. .	50,867	1,572	16,613	2,327	71,379
1951 .. .. .	57,869	2,461	18,244	307	78,881
1952 .. .. .	64,980	2,372	20,175	106	87,633
1953 .. .. .	72,389	2,614	22,508	2,545	100,056
INDUSTRIAL BUSINESS.					
1939 .. .. .	7,863	..	2,127	61	10,051
1949 .. .. .	13,576	..	3,301	366	17,243
1950 .. .. .	14,145	..	3,548	389	18,082
1951 .. .. .	14,915	..	3,831	85	18,831
1952 .. .. .	15,437	..	4,120	26	19,583
1953 .. .. .	15,975	..	4,415	603	20,993

(ii) *Total Expenditure.* The next table supplies details of the total expenditure, both within and beyond Australia, of life assurance offices during each of the years 1939 and 1949 to 1953 :—

## ORDINARY AND INDUSTRIAL LIFE ASSURANCE : TOTAL EXPENDITURE.

( £'000.)

Year.	Claims and Annuities paid.	Surrenders.	Cash Bonuses paid to Policy-holders.	Com-mission.	Share-holders' Dividends.	All other Expendi-ture.(a)	Total Expendi-ture.
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## ORDINARY BUSINESS.

1939	..	12,320	2,668	380	1,483	125	3,867	20,843
1949	..	19,735	2,845	143	3,613	105	6,390	32,831
1950	..	20,876	3,481	152	4,027	105	6,187	34,828
1951	..	21,786	3,813	134	5,042	128	7,770	38,673
1952	..	24,034	4,691	161	5,479	120	10,355	44,840
1953	..	25,905	5,636	178	5,964	122	11,793	49,598

## INDUSTRIAL BUSINESS.

1939	..	3,763	576	..	1,619	72	1,278	7,308
1949	..	6,778	638	..	2,082	37	2,159	11,694
1950	..	6,622	710	..	2,116	31	2,416	11,895
1951	..	6,743	667	..	2,250	35	2,646	12,341
1952	..	7,594	878	..	2,405	75	3,030	13,982
1953	..	8,348	1,053	..	2,421	130	3,978	15,930

(a) Includes other expenses of management, licence fees and taxes, &c.

8. *Liabilities and Assets.*—(i) *General.* The liabilities of the Australian offices consist mainly of their assurance 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 and assets 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 assurance 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 Prudential Assurance Co. Ltd. (incorporated in England). For various reasons several offices do not attempt the dissection of liabilities and assets between the industrial and ordinary branches, and, therefore, the figures in the following tables relate to the ordinary and industrial branches combined. Details of the total liabilities of life assurance offices for the year 1953 are given in the following table.

**ORDINARY AND INDUSTRIAL LIFE ASSURANCE : TOTAL LIABILITIES, 1953.**  
(£'000.)

Item.	Life Assurance Business.	Other Classes of Business.	Total Liabilities.
<b>Shareholders' Capital—</b>			
Authorized .. .. .	..	4,648	4,648
Less Unissued .. .. .	..	1,907	1,907
Subscribed Capital .. .. .	..	2,741	2,741
<b>Paid-up—</b>			
In Money .. .. .	..	2,319	2,319
Otherwise than in Money .. .. .	..	99	99
Total .. .. .	..	2,418	2,418
<b>Life Assurance Statutory Funds—</b>			
Ordinary Department .. .. .	579,106	..	579,106
Industrial Department .. .. .	113,925	..	113,925
Total .. .. .	693,031	..	693,031
<b>Funds in respect of Other Classes of Business</b> .. .. .	..	764	764
General Reserves .. .. .	16,194	1,587	17,781
Profit and Loss Account Balance .. .. .	..	134	134
Total, Shareholders' Capital, Assurance Funds and Reserves .. .. .	709,225	4,903	714,128
<b>Other Liabilities—</b>			
Deposits .. .. .	1,041	1,090	2,131
Staff Provident and Superannuation Funds .. .. .	173	332	505
Claims admitted or intimated but not paid .. .. .	8,086	90	8,176
Annuities due but not paid .. .. .	6	..	6
Premiums Paid in Advance and in Suspense .. .. .	1,000	13	1,013
Sundry Creditors .. .. .	2,523	145	2,668
Bank Overdraft .. .. .	2,443	221	2,664
Reserves and Provisions for Taxation .. .. .	2,296	138	2,434
All other Liabilities .. .. .	619	15	634
Total Liabilities .. .. .	727,412	6,947	734,359

The following table furnishes details of the total assets of life assurance offices for the year 1953 :—

**ORDINARY AND INDUSTRIAL LIFE ASSURANCE : TOTAL ASSETS, 1953.**  
(£'000.)

Item.	Life Assurance Business.	Other Classes of Business.	Total.	Amount of Total Assets held in Australia.
<b>Freehold and leasehold property, office premises, furniture, etc. .. .. .</b>	<b>25,001</b>	<b>334</b>	<b>25,335</b>	<b>17,473</b>
<b>Loans—</b>				
On Mortgage .. .. .	196,765	95	196,860	149,507
On Policies of the Company including Advances of Premiums .. .. .	29,463	..	29,463	21,745
Other Loans .. .. .	21,677	445	22,122	22,008
Total Loans .. .. .	247,905	540	248,445	193,260
<b>Investments—</b>				
<b>Government Securities—</b>				
Australia .. .. .	212,102	3,514	215,616	208,208
Other .. .. .	49,837	79	49,916	344
<b>Securities of Local and Semi-Governmental Bodies .. .. .</b>	<b>119,001</b>	<b>184</b>	<b>119,185</b>	<b>92,702</b>
Other Investments .. .. .	59,387	1,580	60,967	51,885
Total Investments .. .. .	440,327	5,357	445,684	353,139
<b>Cash on Deposit, Current Account and in hand .. .. .</b>	<b>3,775</b>	<b>65</b>	<b>3,840</b>	<b>2,801</b>
<b>Other Assets .. .. .</b>	<b>10,404</b>	<b>651</b>	<b>11,055</b>	<b>8,251</b>
Total Assets .. .. .	727,412	6,947	734,359	574,924

(iii) *Assets held in Australia.* Details of assets held in Australia for the years 1930 and 1949 to 1953 are set out in the following table :—

**ORDINARY AND INDUSTRIAL LIFE ASSURANCE(a) : ASSETS HELD IN AUSTRALIA.**

(£'000.)

Particulars.	1939. (b)	1949.	1950.	1951.	1952.	1953.
Landed and house property ..	12,823	13,436	13,582	13,941	15,776	16,840
Government and municipal securities .. ..	115,712	278,354	273,331	267,158	271,892	301,254
Other investments .. ..	6,700	25,611	36,114	45,613	48,218	51,885
Loans on mortgages .. ..	61,720	60,941	82,793	113,312	136,006	149,507
Loans on companies' policies .. ..	22,445	16,699	17,071	18,067	20,580	21,745
Other loans .. ..	(c)	5,484	10,941	16,463	19,998	22,008
All other assets .. ..	8,116	11,377	11,465	11,562	12,128	11,685
<b>Total Australian Assets</b>	<b>227,516</b>	<b>411,902</b>	<b>445,297</b>	<b>486,116</b>	<b>524,598</b>	<b>574,924</b>

(a) Life assurance and other classes of business.  
other investments.

(b) Australian assets.

(c) Included with

9. *Loans.*—In the following table details are given of new loans granted by life assurance companies during each of the years ended 31st December, 1950 to 1954. The information has been compiled from monthly returns furnished by each company. New loans granted 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 ASSURANCE COMPANIES : NEW LOANS GRANTED.**

(£'000.)

Particulars.	1950.	1951.	1952.	1953.	1954.
<b>CLASS OF SECURITY.</b>					
Mortgage of Real Estate ..	35,677	41,132	30,140	26,863	33,216
Companies' Policies .. ..	2,583	2,930	4,329	3,477	3,725
Other .. ..	4,211	7,298	4,937	3,967	4,113
<b>Total .. ..</b>	<b>42,471</b>	<b>51,360</b>	<b>39,406</b>	<b>34,307</b>	<b>41,054</b>
<b>STATE OR TERRITORY.(a)</b>					
New South Wales .. ..	21,176	26,596	21,748	18,637	17,699
Victoria .. ..	16,651	16,813	10,687	9,638	12,196
Queensland .. ..	1,916	3,325	2,065	1,841	4,158
South Australia .. ..	1,419	1,641	2,349	1,754	2,765
Western Australia .. ..	894	2,075	1,649	1,694	3,005
Tasmania .. ..	391	873	858	731	1,176
Aust. Cap. Territory .. ..	24	37	50	12	55
<b>Total .. ..</b>	<b>42,471</b>	<b>51,360</b>	<b>39,406</b>	<b>34,307</b>	<b>41,054</b>

(a) State or Territory of location of mortgage, registration of policy, or residence of borrower.

### § 3. Fire, Marine and General Insurance.

1. *Australasian Companies.*—The following table which has been extracted from the *Australasian Insurance and Banking Record*, shows, for the years 1938–39 and 1949–50 to 1953–54 particulars of the revenue and expenditure of a group of insurance companies having their head offices either in Australia, New Zealand or Fiji :—

#### FIRE, MARINE AND GENERAL INSURANCE COMPANIES : SUMMARY OF REVENUE AND EXPENDITURE.

Particulars.	1938–39.	1949–50.	1950–51.	1951–52.	1952–53.	1953–54.
No. of companies .. ..	40	44	45	46	48	54
	£'000.	£'000.	£'000.	£'000.	£'000.	£'000.
Premiums, less reinsurances ..	9,708	24,008	31,796	40,451	45,679	52,684
Losses .. ..	5,417	12,585	17,131	22,777	25,826	32,596
Expenses, commission and taxes .. ..	2,994	7,880	9,799	12,397	14,306	15,058
Transfer to Reserve for Un-earned Premiums ..	(a)	1,526	3,151	3,441	2,764	2,996
Underwriting Profit ..	1,297	2,017	1,715	1,836	2,783	4,245
Interest, rent, etc. ....	1,011	1,360	1,545	1,828	2,094	2,835
Dividends and bonuses paid ..	709	1,755	1,912	1,904	1,629	1,612

(a) Not available.

2. *Aggregate Australian Business.*—(i) *General.* While the foregoing statements relate only to those companies whose head offices are located in Australia, New Zealand or Fiji, the following particulars, which are somewhat restricted in the range of information, are in respect of all companies operating in Australia. The statistics in this paragraph conform substantially 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 tables contain selected items of statistics and the information shown is not suitable for the construction of a “profit and loss” statement or “revenue” account.

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 1953–54 (1952–53) revenue from premiums amounted to £97,984,000 (£89,346,000) and from the net interest on investments, etc., to £3,345,000 (£2,593,000), totalling £101,329,000 (£91,939,000). Expenditure on losses amounted to £52,599,000 (£45,800,000), contributions to fire brigades £2,635,000 (£2,290,000), commission and agents' charges £9,963,000 (£9,279,000), expenses of management £16,742,000 (£15,537,000) and taxation £3,992,000 (£3,817,000), a total of £85,931,000 (£76,723,000).

(ii) *States.* The following table shows, for each State, the aggregate premium income less reinsurances and returns, and claims or losses less amounts recoverable, for all classes of insurance other than life for the years 1938–39 and 1949–50 to 1953–54.



FIRE, MARINE AND GENERAL INSURANCE : PREMIUMS AND LOSSES—STATES.  
(£'000.)

State.	1938-39.	1949-50.	1950-51.	1951-52.	1952-53.	1953-54.
GROSS PREMIUMS, LESS REINSURANCES AND RETURNS.						
New South Wales (a) ..	6,943	18,797	23,214	31,107	35,130	38,381
Victoria .. ..	4,505	14,579	18,024	24,441	28,215	30,775
Queensland .. ..	2,327	5,422	6,755	9,015	10,733	12,016
South Australia ..	1,245	3,637	4,630	6,167	7,275	8,041
Western Australia ..	1,373	3,141	3,911	5,000	5,779	6,224
Tasmania .. ..	457	1,156	1,415	1,878	2,214	2,547
Total .. ..	16,850	46,732	57,949	77,608	89,340	97,984
GROSS CLAIMS OR LOSSES, LESS AMOUNTS RECOVERABLE.						
New South Wales (a) ..	3,842	9,109	11,156	16,661	17,848	20,981
Victoria .. ..	2,194	6,465	9,042	12,205	15,208	16,709
Queensland .. ..	1,071	2,401	2,658	4,979	5,650	5,981
South Australia ..	487	1,357	1,851	2,858	3,021	4,835
Western Australia ..	731	1,365	1,912	2,981	3,120	3,009
Tasmania .. ..	204	471	786	724	953	1,084
Total .. ..	8,529	21,168	27,405	40,408	45,800	52,599

(a) From 1947-48 excludes Workers' Compensation Insurance in coal-mining industry in New South Wales.

(iii) *Classes of Insurance.* The following statement shows premiums and losses in respect of the principal classes of risks, for the years 1938-39 and 1949-50 to 1953-54 :—

FIRE, MARINE AND GENERAL INSURANCE : PREMIUMS AND LOSSES—  
PRINCIPAL CLASSES OF RISK, AUSTRALIA.  
(£'000.)

Class of Risk.	1938-39.	1949-50.	1950-51.	1951-52.	1952-53.	1953-54.
GROSS PREMIUMS, LESS REINSURANCES AND RETURNS.						
Fire .. ..	5,597	12,343	14,763	18,535	21,366	22,170
Workers' Compensation (a) ..	4,361	11,556	13,378	17,159	19,310	20,279
Motor Vehicle—						
Compulsory Third Party ..	3,848	2,383	3,040	4,750	7,106	8,496
Other .. ..						
Marine .. ..	1,018	4,296	5,303	7,433	5,940	6,056
Personal Accident .. ..	554	1,188	1,541	1,899	2,184	2,479
All other .. ..	1,472	6,730	8,004	9,784	11,506	12,699
Total .. ..	16,850	46,732	57,949	77,608	89,346	97,984
GROSS CLAIMS OR LOSSES, LESS AMOUNTS RECOVERABLE.						
Fire .. ..	2,223	2,430	4,197	6,669	6,731	5,842
Workers' Compensation (a) ..	2,972	6,292	6,784	8,678	10,934	14,542
Motor Vehicle—						
Compulsory Third Party ..	2,324	2,695	3,372	5,331	7,042	9,456
Other .. ..						
Marine .. ..	243	1,784	2,244	3,352	3,420	2,263
Personal Accident .. ..	264	412	514	634	741	912
All other .. ..	503	2,585	2,427	3,719	3,496	5,634
Total .. ..	8,529	21,168	27,405	40,408	45,800	52,599

(a) From 1947-48 excludes Workers' Compensation Insurance in coal-mining industry in New South Wales.

The volume of business measured by the amount of premium income shows that fire insurance represented about 23.9 per cent. of the total business during 1952-53 and 22.6 per cent. during 1953-54, workers' compensation 21.6 per cent. during 1952-53 and 20.7 per cent. during 1953-54, motor vehicles (including compulsory third party insurance) 32.5 per cent. in 1952-53 and 35.0 per cent. in 1953-54 and marine insurance constituted 6.6 per cent. in 1952-53 and 6.2 per cent. in 1953-54.

## E. FRIENDLY SOCIETIES.

1. *General.*—The total membership of friendly societies in Australia is approximately 530,000 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, even when due allowance is made for young and unmarried members, be more than doubled to arrive at an estimate of the number of persons who receive some direct benefit from these societies. 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., and revenue and expenditure and funds of registered societies for the year 1952-53. More detailed information is available in *Finance Bulletin* No. 45.

## FRIENDLY SOCIETIES : 1952-53.

Particulars.	New South Wales. (a)	Victoria. (b)	Queensland. (c)	South Australia. (e)	Western Australia.	Tasmania. (d)	Total.
	No.	No.	No.	No.	No.	No.	No.
Registered Societies .. ..	(e) 36	150	24	15	13	20	..
Branches .. ..	2,200	1,397	527	(f) 730	300	159	5,313
Benefit members at end of year ..	179,581	179,845	58,275	63,922	23,915	18,834	524,372
Average benefit members during year ..	185,211	178,536	60,150	65,742	25,097	18,617	533,553
Members who received sick pay ..	(g)	36,599	10,161	13,809	4,358	2,642	(g)
Total weeks sick pay granted ..	(g)	462,388	129,483	180,202	59,506	36,425	(g)
Average weeks per member sick ..	(g)	12.63	12.74	13.05	13.65	13.79	(g)
Deaths of benefit members ..	(g)	2,522	1,004	1,068	303	313	(g)
Proportion of deaths per 1,000 members (average) ..	(g)	14.13	16.69	16.24	12.07	16.63	(g)
<b>Revenue—(e)</b>	£'000.	£'000.	£'000.	£'000.	£'000.	£'000.	£'000.
Entrance fees, levies and members' contributions .. ..	1,178	1,084	318	344	200	92	3,216
Interest, dividends and rents ..	274	330	109	168	41	26	1,233
All other revenue .. ..	83	83		23	60	36	
<b>Total .. ..</b>	<b>1,535</b>	<b>1,497</b>	<b>427</b>	<b>535</b>	<b>301</b>	<b>154</b>	<b>4,449</b>
<b>Expenditure—(e)</b>							
Sick pay .. ..	229	269	76	90	28	20	712
Medical attendance and medicine ..	548	513	130	184	122	42	1,539
Sums payable at death .. ..	122	64	46	54	17	22	325
Administration .. ..	321	278	88	98	45	33	863
All other expenditure .. ..	117	206	..	41	15	30	409
<b>Total .. ..</b>	<b>1,337</b>	<b>1,330</b>	<b>340</b>	<b>467</b>	<b>227</b>	<b>147</b>	<b>3,848</b>
<b>Total Funds (e) .. ..</b>	<b>7,333</b>	<b>8,981</b>	<b>2,825</b>	<b>4,081</b>	<b>1,165</b>	<b>668</b>	<b>25,053</b>

(a) Includes Australian Capital Territory. (b) Excludes Dispensaries, juvenile societies and members contributions to medical benefits only. (c) Excludes juvenile branches. (d) Year 1952. (e) Excludes 22 miscellaneous societies. (f) Lodges which contain male and female members counted as two branches. (g) Not available.

## F. PROBATES AND LETTERS OF ADMINISTRATION.

The following particulars give some idea 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. 1953-54. (a)	Victoria. 1953.	Queensland. 1952-53.	South Australia. 1953.	Western Australia. 1953.	Tasmania. 1953. (b)
Probates—							
Estates ..	No.	17,723	9,680	1,778	2,827	2,089	1,102
Gross Value ..	£	(c)	(d)	16,610,743	15,378,171	8,792,674	5,887,284
Net Value ..	£	72,674,998	(d)	14,347,361	8,390,830	5,540,985	
Letters of Administration—							
Estates ..	No.	(c)	2,200	289	899	291	239
Gross Value ..	£	(c)	(d)	906,500	1,601,861	608,317	513,243
Net Value ..	£	(c)	(d)	(c)	1,420,944	539,195	473,939
Total—							
Estates ..	No.	17,723	11,880	2,067	3,726	2,380	1,341
Gross Value ..	£	(c)	62,345,679	17,517,243	16,980,032	9,401,021	6,400,527
Net Value ..	£	72,674,998	58,654,839	(c)	15,768,305	8,930,025	6,014,924

(a) Total estates of deceased persons assessed for death duty. (b) Estates dealt with by Taxation Department.  
(c) Not available. (d) Not available separately.

## G. STATE LOTTERIES AND BETTING.

## § 1. State Lotteries.

State Governments operate lotteries in New South Wales, Queensland and Western Australia. Tattersalls Lotteries and Tasmanian Lotteries are operated under Government licences in Victoria and Tasmania respectively.

New South Wales State Lotteries are conducted in accordance with the New South Wales State Lotteries Act, 1930 and the first drawing took place on 20th August, 1931. At present, each ordinary lottery consists of 100,000 tickets at 5s. 6d. each, with prizes totalling £17,550 and each special lottery of 100,000 tickets at 10s. each, with prize money totalling £31,700. In addition there is a mammoth lottery consisting of 100,000 tickets of £1 each with prize money totalling £64,200. Net profits of the lottery are paid to the Consolidated Revenue Fund from which grants are made to hospitals.

Tattersalls Lotteries, which were previously conducted in Tasmania, were transferred to Victoria in 1954 and the first drawing in Melbourne took place on 8th July, 1954. The Tattersalls Consultations Act, 1953 provides that prizes in each consultation shall not be less than sixty per cent. of total subscriptions to that consultation, and that a duty equal to thirty-one per cent. of subscriptions shall be paid into the Consolidated Revenue Fund from which an equivalent amount will be paid out into the Hospitals and Charities Fund and the Mental Hospitals Fund in proportions as determined by the Treasurer. At present, tickets are priced at 5s. each (200,000) with prizes totalling £30,000; 10s. each (100,000 and 200,000) with prizes totalling £30,000 and £60,000 respectively and £1 each (100,000) with prizes totalling £60,000. In addition there is a special Melbourne Cup consultation at £1 each (200,000) with prize money of £120,000.

In Queensland, the Golden Casket Art Union commenced in 1916 with the specific object of augmenting the funds of the Queensland War Council. Subsequently, Anzac Cottages and Nurses Quarters Funds benefited until 1920, when net profits were paid to the Department of Health and Home Affairs (Hospitals, Motherhood and Child Welfare Trust Fund) and used for the maintenance of hospitals, grants to institutions, and for motherhood and child welfare purposes. A stamp duty is imposed on tickets sold. The proceeds of this are paid to Consolidated Revenue Fund. At present, ordinary tickets are priced at 5s. 6d. each (100,000), special tickets at 10s. (100,000) and £1 (100,000) each with prizes totalling £17,550, £32,000 and £64,300 respectively. A special Melbourne Cup lottery with tickets priced at 15s. (100,000) and prizes totalling £48,100 was introduced in 1955.

In Western Australia, lotteries are conducted by the Lotteries Commission under the Lotteries Control Act of 1932. Profits are paid by the Commission to hospitals and other charities. Each lottery comprises 100,000 tickets at 2s. 6d. each, with prizes totalling £6,630.

In Tasmania, lotteries are subject to the provisions of the Racing and Gaming Act 1950-1952. With the transfer of Tattersalls from Hobart to Melbourne, Tasmanian Lotteries commenced operations under Government licence and the first drawing took place on 30th June, 1954. The stamp duty on tickets sold, and the duty on prize money

are paid into Consolidated Revenue. Tickets are priced at present at 5s. (250,000) and £1 (250,000) with prizes totalling £38,047 and £152,188 respectively. In 1955 a lottery with tickets at £5 each (50,000) and prize money totalling £152,188 was introduced.

Details of the income, expenditure and net profit of the three State Lotteries for the years 1938-39 and 1949-50 to 1953-54 are given in the following table:—

**STATE LOTTERIES: INCOME, EXPENDITURE AND NET PROFIT.**  
(£.)

Year ended 30th June—	Income.			Expenditure.			Net Profit.	
	Tickets.	Other Income.	Total.	Prizes Allotted.	Taxes.	Adminis- tration and other.		Total.
NEW SOUTH WALES STATE LOTTERY.								
1939 .. ..	2,388,750	18	2,388,768	1,500,059	..	55,674	1,555,733	833,035
1950 .. ..	6,990,000	336	6,990,336	4,456,505	..	151,882	4,608,387	2,381,949
1951 .. ..	7,867,500	233	7,867,733	5,015,255	..	194,819	5,210,074	2,657,659
1952 .. ..	8,830,000	142	8,830,142	5,627,205	..	266,307	5,893,512	2,936,630
1953 .. ..	10,330,000	204	10,330,204	6,580,500	..	317,128	6,897,628	3,432,576
1954 .. ..	10,587,500	213	10,587,713	6,712,990	..	373,958	7,116,948	3,470,765
QUEENSLAND GOLDEN CASKET ART UNION.								
1939 .. ..	1,902,500	2,626	1,905,126	1,217,800	95,125	146,907	1,459,832	445,294
1950 .. ..	3,972,500	1,794	3,974,294	2,537,450	198,625	236,092	2,972,167	1,002,127
1951 .. ..	4,265,000	2,484	4,267,484	2,724,300	213,250	253,132	3,190,682	1,076,802
1952 .. ..	4,882,500	1,865	4,884,365	3,118,650	244,125	294,483	3,657,258	1,227,107
1953 .. ..	5,650,000	2,410	5,652,410	3,609,000	282,500	343,918	4,235,418	1,416,992
1954 .. ..	5,760,000	2,399	5,762,399	3,679,200	288,000	352,211	4,319,411	1,442,988
WESTERN AUSTRALIAN STATE LOTTERY.								
1939 .. ..	238,680	..	238,680	127,389	..	33,432	160,821	77,859
1950 .. ..	787,470	..	787,470	417,600	..	108,876	526,566	260,904
1951 .. ..	924,965	..	924,965	490,620	..	127,731	618,351	306,614
1952 .. ..	949,975	..	949,975	511,800	..	128,592	640,692	309,283
1953 .. ..	974,950	..	974,950	530,010	..	134,673	664,683	310,267
1954 .. ..	1,099,979	..	1,099,979	596,310	..	147,100	743,410	356,569

## § 2. Totalizator Investments.

Estimates of totalizator investments and investments with licensed bookmakers for the years 1938-39 and 1949-50 to 1953-54 are given in the following table:—

**TOTALIZATOR INVESTMENTS AND INVESTMENTS WITH LICENSED BOOKMAKERS.**  
(£'000.)

Year ended 30th June—	N.S.W.	Vic.	Q'land.	S. Aust.	W. Aust.	Tas.	Total.
<b>TOTALIZATOR INVESTMENTS.(a)</b>							
1939 .. ..	1,731	2,732	722	630	762	339	6,916
1950 .. ..	9,702	9,457	1,945	1,746	2,382	950	26,182
1951 .. ..	11,550	10,756	2,249	1,966	2,718	936	30,175
1952 .. ..	16,344	11,334	2,857	2,204	3,226	951	36,916
1953 .. ..	14,190	10,314	2,888	2,337	3,019	839	33,587
1954 .. ..	14,202	10,172	2,925	2,497	3,002	993	33,791
<b>INVESTMENTS WITH LICENSED BOOKMAKERS.(b)</b>							
1939 .. ..	21,379	(c)	(c)	7,640	(c)	(d) 1,093	(c)
1950 .. ..	74,664	50,000	(c)	21,272	(c)	(e) 6,389	(c)
1951 .. ..	82,073	51,000	(c)	22,857	(c)	7,223	(c)
1952 .. ..	115,485	52,000	(c)	25,080	(c)	8,889	(c)
1953 .. ..	110,080	50,000	(c)	24,642	(c)	10,764	(c)
1954 .. ..	114,402	55,000	(c)	27,197	(c)	11,662	(c)

(a) Estimated from taxes on totalizators. (b) Estimated from taxes on betting with licensed bookmakers. (c) Not available. (d) Year ended 31st December. (e) Year ended 31st July.

## H. GOVERNMENT, SEMI-GOVERNMENTAL AND PARLIAMENTARY PENSION AND SUPERANNUATION SCHEMES.

### § 1. Government and Semi-Governmental Pension and Superannuation Schemes.

The Commonwealth and all State Governments have established pension or superannuation schemes for their employees. These schemes are operated through funds to which both the Government and the employees make contributions. Employees of semi-governmental authorities are in some cases covered by the Commonwealth or State Government scheme and in other cases by a separate scheme of the authority.

In the following table aggregate details are given for the year 1953-54, of the receipts, expenditure, accumulated funds and number of contributors and pensioners of the Commonwealth and State Government and main semi-governmental schemes. The funds included are :—

- (a) *Commonwealth*.—The Superannuation Fund and Defence Forces Retirement Benefits Fund.
- (b) *New South Wales*.—State Superannuation Fund, Government Railways Superannuation Fund and Police Superannuation and Reward Fund.
- (c) *Victoria*.—The State Superannuation Fund, Police Superannuation Fund, Police Pensions Fund, Melbourne Harbor Trust Superannuation Account, Geelong Harbor Trust Superannuation Fund, Melbourne and Metropolitan Board of Works Superannuation Fund, State Electricity Commission Provident Fund, Gas and Fuel Corporation Superannuation Fund, Metropolitan Fire Brigades Board Superannuation Fund, Country Fire Authority Superannuation Fund and Port Phillip Pilots' Sick and Superannuation Fund.
- (d) *Queensland*.—Public Service Superannuation Fund and Police Superannuation Fund.
- (e) *South Australia*.—South Australian Superannuation Fund, Police Pensions Fund and Public Service Superannuation Fund.
- (f) *Western Australia*.—The Superannuation Fund.
- (g) *Tasmania*.—Public Service Superannuation Fund (Old and New Funds), Police Provident Fund and State Teachers' Superannuation Fund.

### GOVERNMENT AND SEMI-GOVERNMENTAL PENSION AND SUPERANNUATION SCHEMES, 1953-54.

Particulars.	C'with.	N.S.W.	Vic.	Q'land.	S. Aust.	W. Aust.	Tas.	Total.
<b>Receipts—</b>								
Contributions—	£'000.	£'000.	£'000.	£'000.	£'000.	£'000.	£'000.	£'000.
Employees ..	5,379	3,242	2,140	248	625	249	334	12,217
Government ..	2,819	6,324	2,003	385	649	503	211	13,704
Interest ..	1,341	1,566	974	232	306	116	82	4,605
Other ..	45	68	16	4	4	3	4	143
<b>Total ..</b>	<b>9,585</b>	<b>11,200</b>	<b>6,033</b>	<b>890</b>	<b>1,579</b>	<b>868</b>	<b>631</b>	<b>30,759</b>
<b>Expenditure—</b>								
Pension Payments ..	3,510	5,305	2,962	202	810	549	252	13,705
Gratuities or Rewards ..	111	87	61	1	..	..	11	271
Refund of Contributions ..	630	384	83	77	65	30	45	1,314
Other ..	..	53	2	..	20	..	..	86
<b>Total ..</b>	<b>4,251</b>	<b>5,829</b>	<b>3,108</b>	<b>377</b>	<b>915</b>	<b>579</b>	<b>310</b>	<b>15,376</b>
<b>Funds at end of Year ..</b>	<b>5,334</b>	<b>5,376</b>	<b>2,877</b>	<b>5,077</b>	<b>8,000</b>	<b>3,141</b>	<b>2,300</b>	<b>19,922</b>
<b>Contributors at end of Year—</b>								
Males ..	No. 119,237	No. 87,414	No. 40,961	No. 10,214	No. 11,652	No. 6,880	No. 5,497	No. 308,218
Females ..	No. 13,087	No. 5,329	No. 3,421	No. 1,309	No. 582	No. 1,731	No. 1,731	No. 22,210
<b>Total ..</b>	<b>132,324</b>	<b>92,743</b>	<b>44,382</b>	<b>11,523</b>	<b>12,234</b>	<b>8,611</b>	<b>7,228</b>	<b>330,428</b>
<b>Pensioners at end of Year—</b>								
Males ..	7,765	25,493	7,833	1,026	2,686	2,331	78	35,918
Female ex-employees ..	790	..	1,072	253	421	154	13	..
Widows ..	5,228	..	5,602	252	2,213	1,107	44	..
Children ..	1,175	..	587	32	227	168	12	..
<b>Total ..</b>	<b>14,978</b>	<b>25,493</b>	<b>15,094</b>	<b>1,563</b>	<b>5,547</b>	<b>3,760</b>	<b>149</b>	<b>65,918</b>

For details of the individual funds summarized above see *Finance Bulletin* No. 45 issued by this Bureau.

## § 2. Parliamentary Pension and Superannuation Schemes.

Pension and superannuation schemes have been established for members of the Commonwealth and all State Parliaments except the Tasmanian. Full details of these schemes are given in pages 91 to 99 of Official Year Book No. 38. All the schemes are operated through funds to which the members of Parliament and the Commonwealth or States contribute. Details of the receipts, expenditure, funds and number of contributors and pensioners for the year 1953-54 are given in the following table :—

### PARLIAMENTARY PENSION AND SUPERANNUATION SCHEMES, 1953-54.

Particulars.	C'wlth.	N.S.W.	Vic.	Q'land.	S. Aust.	W. Aust.	Total.
	£	£	£	£	£	£	£
<b>Receipts—</b>							
<b>Contributions—</b>							
Members .. ..	30,057	12,131	10,284	7,354	3,816	4,302	67,944
Government .. ..	19,690	4,950	6,738	107,354	6,566	4,160	149,458
Interest .. ..	4,234	1,709	..	2,232	1,782	766	10,723
Other .. ..	..	..	..	..	..	..	..
<b>Total .. ..</b>	<b>53,981</b>	<b>18,790</b>	<b>17,022</b>	<b>116,940</b>	<b>12,164</b>	<b>9,228</b>	<b>228,125</b>
<b>Expenditure—</b>							
Pension Payments (a) ..	29,662	9,625	17,022	3,092	2,729	3,025	65,155
Refund of Contributions ..	583	675	..	..	..	334	1,592
Other .. ..	..	..	..	..	63	..	63
<b>Total .. ..</b>	<b>30,245</b>	<b>10,300</b>	<b>17,022</b>	<b>3,092</b>	<b>2,792</b>	<b>3,359</b>	<b>66,810</b>
<b>Funds at end of Year ..</b>	<b>134,750</b>	<b>52,703</b>	<b>..</b>	<b>170,871</b>	<b>53,273</b>	<b>23,850</b>	<b>435,447</b>
<b>Contributors at end of Year ..</b>	<b>No. 183</b>	<b>No. 99</b>	<b>No. 99</b>	<b>No. 71</b>	<b>No. 59</b>	<b>No. 80</b>	<b>No. 591</b>
<b>Pensioners at end of Year—</b>							
Ex-members .. ..	23	16	(b)	10	4	8	(b)
Widows .. ..	13	10	(b)	..	5	11	(b)
<b>Total .. ..</b>	<b>36</b>	<b>26</b>	<b>(b)</b>	<b>10</b>	<b>9</b>	<b>19</b>	<b>(b)</b>

(a) Including lump sum payments.

(b) Not available.

## CHAPTER XX.

### 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' Debts 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 the Public Debts of the Commonwealth and the States. In view of this it has been found convenient to deal with the Commonwealth and State Public Debt in a separate division.

The subject of income taxes is also dealt with in a separate division.

#### A. COMMONWEALTH FINANCE.

##### § 1. General.

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* pages 18–22 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 to the Commonwealth from the States of certain specified departments, and Section 51, in outlining the powers of the Commonwealth Parliament, implies the transfer or creation of other departments. Section 87 deals with the financial relations between the Commonwealth and the States. These matters have been treated in previous issues of the Official Year Book and on pages 783–786 of this issue a summary is given of the present provisions for Commonwealth financial assistance to the States.

The majority of the tables relating to Commonwealth Finance have been compiled from the annual Budget Papers as presented to Parliament by the Treasurer of the Commonwealth.

2. **Accounts of Commonwealth Government.**—The Commonwealth Government, like the State Governments, bases its accounts upon three funds, the Consolidated Revenue Fund, the Trust Fund and the Loan Fund.

##### § 2. Commonwealth Consolidated Revenue Fund.

###### Division I.—Nature of Fund.

1. **Provisions of the Constitution.**—The provisions made for the establishment of a Commonwealth Consolidated Revenue Fund, and the means to be adopted for operating on the fund, are contained in Sections 81 to 83 of the Constitution (*see* page 18 of this Year Book).

2. **Annual Results of Transactions.**—In the early 1920's receipts and expenditure of the Consolidated Revenue Fund each ranged between £60 million and £70 million. Excess receipts in these years amounted to one or two million pounds a year, and were utilized for a variety of purposes, e.g., for debt redemption, naval construction, main

roads, science and industry investigations, prospecting for oil and precious metals, civil aviation, etc. In the later 'twenties and early 'thirties, when receipts and expenditure were each about £70 million or £80 million a year, there were annual deficiencies, which by the end of 1930-31 had accumulated to more than £17 million.

In subsequent years (receipts and expenditure each rising from about £70 million in 1931-32 to £95 million in 1938-39) there were excess receipts of up to £3.5 million a year. Approximately £1.5 million of these excess receipts were used to reduce the accumulated deficiency, and the balance for non-recurring grants to the States, post office works and the provision of defence equipment. The balance of the accumulated deficiency (£15.7 million) was funded in 1937-38.

For most of the 1939-45 War years and thereafter, the Consolidated Revenue Fund has been balanced, as all available revenue after charging expenditure on ordinary services has been used for defence, war and repatriation purposes.

During the years 1951-52 to 1953-54 the Fund was balanced after special payments of £98.5 million, £13.4 million and £56.3 million to the National Debt Sinking Fund, War Pensions Trust Account and Debt Redemption Reserve Trust Account respectively. The amounts so transferred were subsequently invested wholly or partly in special loans for State works requirements.

Receipts and expenditure increased from £95 million in 1938-39 to £377 million in 1944-45. By 1949-50 they had risen to £581 million, and then increased sharply to £842 million in 1950-51, £1,017 million in 1951-52 and £1,040 million in 1952-53. Receipts and expenditure for 1953-54 were £1,023 million.

### Division II.—Revenue.

1. General.—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 1938-39 and 1949-50 to 1953-54. Taxation constitutes the main source of Commonwealth revenue e.g. 84.0 per cent. in 1953-54.

#### COMMONWEALTH CONSOLIDATED REVENUE FUND: SOURCES OF REVENUE. (£'000.)

Source.	1938-39.	1949-50.	1950-51.	1951-52.	1952-53.	1953-54.
Taxation .. .. .	74,111	518,959	777,187	934,011	895,464	900,450
Per head of population ..	£10 13 9	£64 9 5	£93 10 2	£109 7 6	£102 7 5	£101 3 4
Business Undertakings ..	17,892	42,087	48,792	64,955	70,933	75,126
Per head of population ..	£2 11 9	£5 4 7	£5 17 5	£7 12 2	£8 2 2	£8 8 10
Territories(a) .. .. .	356	926	1,150	1,558	1,779	2,195
Per head of population ..	£0 1 0	£0 2 3	£0 2 9	£0 3 8	£0 4 1	£0 4 11
Other Revenue—						
Interest, etc. .. .. .	1,144	1,889	2,756	3,795	5,475	8,797
Coinage .. .. .	128	466	499	895	310	750
Defence .. .. .	151	541	702	499	2,188	2,809
Atomic Energy Commission ..	..	..	..	..	1,174	2,791
Civil Aviation .. .. .	6	2,870	3,504	3,247	3,501	4,313
Health .. .. .	18	25	31	51	43	80
Patents, Trade Marks, etc. ..	68	124	128	143	183	187
Bankruptcy .. .. .	31	22	23	27	31	49
Wartime Trading Profits—Wool ..	..	..	..	..	42,361	..
Commerce and Agriculture ..	..	11	22	34	121	106
Shipping and Transport ..	158	264	282	260	255	391
Net Profit on Australian Note Issue .. .. .	767	4,183	3,394	3,381	4,861	5,707
Surplus Balances of Trust Accounts .. .. .	..	6,700	1,034	179	761	4,190
Australian Shipping Board Transfer of Surplus Funds ..	..	..	..	..	..	4,000
Joint Coal Board—Repayment of Advances .. .. .	..	..	..	..	500	3,342
Other .. .. .	235	1,585	2,288	3,793	10,187	7,507
Total .. .. .	2,706	18,680	14,663	16,304	71,891	45,019
Per head of population ..	£0 7 9	£2 6 5	£1 15 4	£1 18 2	£8 4 4	£5 1 2
Grand Total .. .. .	95,065	580,652	841,792	1,016,828	1,040,067	1,022,790
Per head of population ..	£13 14 3	£72 2 8	£101 5 8	£119 1 6	£118 18 0	£114 18 3

(a) Excludes Railways.



A graphical representation of the revenue and expenditure of the Commonwealth Consolidated Revenue Fund appears on page 793.

2. **Taxation.**—(i) *Total Collections.* (a) *Amount.* Collections under each heading for the years 1938-39 and 1949-50 to 1953-54 are shown below :—

## COMMONWEALTH TAXATION : TOTAL NET COLLECTIONS.

(£'000.)

Heading.	1938-39.	1949-50.	1950-51.	1951-52.	1952-53.	1953-54.
Customs .. .. .	31,160	77,726	91,921	113,936	70,720	94,757
Excise .. .. .	16,472	66,157	73,083	99,981	113,104	125,460
Sales Tax .. .. .	9,308	42,425	57,173	95,459	89,067	95,689
Land Tax .. .. .	1,489	4,210	3,591	6,199	1,250	221
Pay-roll Tax .. .. .	..	22,728	28,721	37,170	40,171	40,334
Income Taxes(a) .. .. .	11,883	279,654	341,957	545,179	556,966	528,120
Wool Deduction .. .. .	..	..	109,531	5,963	— 2,223	— 239
Estate Duty .. .. .	1,916	6,054	6,401	7,778	8,393	9,825
Gift Duty .. .. .	..	745	1,044	1,202	1,162	1,386
Entertainments Tax .. .. .	..	4,698	5,148	6,161	6,705	1,977
Special Industry Taxes(b) .. .. .	1,883	14,562	58,617	14,983	10,152	2,570
<b>Total Taxation .. .. .</b>	<b>74,111</b>	<b>518,959</b>	<b>777,187</b>	<b>934,011</b>	<b>895,464</b>	<b>900,450</b>

(a) Includes Social Services Contribution, War-time (Company) Tax, Super Tax and Undistributed Profits Tax. (b) Used for purposes of industries concerned. The taxes are as follows :—Flour Tax, Wool Levy, Wool Contributory Charge, Wheat Export Charge, Miscellaneous Export Charges, Stevedoring Industry Charge and Gold Tax.

NOTE.—Minus sign (—) indicates an excess of refunds.

(b) *Proportion of each Class on Total Collections.* The following table shows the proportion of the total collections represented by returns from each class of taxation for the years 1938-39 and 1949-50 to 1953-54 :—

## COMMONWEALTH TAXATION : PROPORTION OF EACH CLASS ON TOTAL NET COLLECTIONS.

(Per Cent.)

Heading.	1938-39.	1949-50.	1950-51.	1951-52.	1952-53.	1953-54.
Customs .. .. .	42.1	15.0	11.8	12.2	7.9	10.5
Excise .. .. .	22.3	12.7	9.4	10.7	12.6	13.9
Sales Tax .. .. .	12.6	8.2	7.4	10.2	10.0	10.6
Land Tax .. .. .	2.0	0.8	0.5	0.7	0.2	..
Pay-roll Tax .. .. .	..	4.4	3.7	4.0	4.5	4.5
Income Taxes(a) .. .. .	16.0	53.9	44.0	58.4	62.2	58.7
Wool Deduction .. .. .	..	..	14.1	0.6	— 0.3	..
Estate Duty .. .. .	2.6	1.2	0.8	0.8	0.9	1.1
Gift Duty .. .. .	..	0.1	0.1	0.1	0.1	0.2
Entertainments Tax .. .. .	..	0.9	0.7	0.7	0.8	0.2
Special Industry Taxes(b) .. .. .	2.4	2.8	7.5	1.6	1.1	0.3
<b>Total Taxation .. .. .</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 note (a) to previous table.

(b) See note (b) to previous table.

(ii) *Customs Revenue.* Particulars of net customs receipts for the years 1938-39 and 1949-50 to 1953-54 are shown in the following table :—

**COMMONWEALTH CUSTOMS REVENUE : CLASSIFICATION OF NET RECEIPTS.**  
(£'000.)

Classes.	1938-39.	1949-50.	1950-51.	1951-52.	1952-53	1953-54.
Ales, spirits and beverages ..	1,165	1,462	1,890	2,751	1,999	2,344
Tobacco and manufactures ..	3,256	17,657	20,830	24,996	19,199	18,890
Agricultural products and groceries ..	1,373	1,517	1,697	1,806	1,217	1,682
Textiles and attire ..	2,801	7,066	9,894	12,842	3,242	10,560
Metals and machinery ..	2,386	8,439	8,574	14,342	6,843	9,775
Oils, paints, etc. ..	9,927	19,274	23,720	25,915	25,601	27,222
Earthenware, etc. ..	510	1,274	1,467	2,188	666	1,613
Drugs and chemicals ..	310	397	758	941	313	655
Wood, wicker and cane ..	739	966	488	695	307	1,035
Jewellery and fancy goods ..	481	1,900	2,530	2,908	1,138	2,596
Leather and rubber ..	477	1,124	1,535	2,044	744	1,275
Paper and stationery ..	454	428	545	934	324	874
Vehicles ..	2,062	8,735	7,804	8,902	2,178	5,736
Miscellaneous articles ..	1,056	1,347	1,749	2,497	330	1,821
Primage ..	3,914	5,711	8,206	9,296	6,181	8,004
Other receipts ..	250	429	234	879	444	666
<b>Total .. ..</b>	<b>31,161</b>	<b>77,726</b>	<b>91,921</b>	<b>113,936</b>	<b>70,720</b>	<b>94,757</b>

(iii) *Excise Revenue.* Net excise receipts for the years 1938-39 and 1949-50 to 1953-54 were as follows :—

**COMMONWEALTH EXCISE REVENUE : CLASSIFICATION OF NET RECEIPTS.**  
(£'000.)

Particulars.	1938-39.	1949-50.	1950-51.	1951-52.	1952-53.	1953-54.
Beer .. ..	7,289	33,402	37,243	56,941	65,826	71,060
Spirits .. ..	1,604	6,926	8,129	8,890	6,680	6,355
Tobacco .. ..	3,868	10,229	10,759	13,845	16,036	16,211
Cigars and cigarettes ..	2,419	10,192	10,662	13,848	17,890	23,081
Cigarette papers ..	531	1,002	1,166	1,085	1,019	1,072
Petrol .. ..	582	2,678	3,065	3,419	3,823	5,549
Matches .. ..	11	1,201	1,213	1,058	955	1,083
Playing cards .. ..	..	61	63	55	40	53
Coal .. ..	..	207	375	499	552	570
Miscellaneous .. ..	86	259	408	341	283	417
<b>Total .. ..</b>	<b>16,472</b>	<b>66,157</b>	<b>73,083</b>	<b>99,981</b>	<b>113,104</b>	<b>125,460</b>

(iv) *Other Taxation.* (a) *General.* Taxes other than customs and excise are, in general, assessed and collected by the Commissioner of Taxation. The organization comprises an office in each State assessing the returns of taxpayers whose interests are restricted to that State only, and a Central Office assessing taxpayers whose interests are in more than one State.

(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 for use in primary production. The most recent exemptions were those granted from 19th August, 1954.

A general rate of Sales Tax is levied on all goods other than those specified in the schedules of the Sales Tax (Exemptions and Classifications) Act 1935-1954. These

schedules set out details of goods exempt from sales tax and those subject to special rates. The general and special rates which operated from 15th November, 1946, were:—

Period.	General Rate.	Special Rates.
15th November, 1946 to 7th September, 1949 ..	10 per cent. ..	25 per cent.
8th September, 1949 to 12th October, 1950 ..	8½ per cent. ..	25 per cent.
13th October, 1950 to 26th September, 1951 ..	8½ per cent. ..	10, 25 and 33½ per cent.
27th September, 1951 to 6th August, 1952 ..	12½ per cent. ..	20, 25, 33½, 50 and 66⅔ per cent.
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. ..	16⅔ per cent.
From 19th August, 1954 ..	12½ per cent. ..	10 and 16⅔ per cent.

For particulars of rates applicable since the inception of Sales Tax in August, 1930 see Official Year Book No. 37, page 617.

Sales Tax Collections for the years 1938-39 and 1949-50 to 1953-54 were as follows:— 1938-39, £9,308,000; 1949-50, £42,425,000; 1950-51, £57,173,000; 1951-52, £95,459,000; 1952-53, £89,067,000; 1953-54, £95,689,000.

Particulars of the net amount of sales tax payable, and the sales of taxable and exempt goods in each State for 1953-54, are given in the following table. The figures are in respect of sales during the period 1st July to 30th June.

#### SALES TAX AND AMOUNT OF SALES, 1953-54.

(£'000.)

Particulars.	N.S.W. (a)	Vic.	Q'land.	S. Aust.	W. Aust.	Tas.	N. Terr.	Total.
Net Sales on which Sales Tax was payable at—								
1½ per cent. ..	189,117	139,786	62,913	49,783	32,853	9,041	243	483,736
16½ per cent. ..	70,533	51,920	21,598	19,971	9,780	2,320	14	176,136
20 per cent. ..	9,183	7,809	3,018	2,626	1,284	339	6	24,265
33½ per cent. ..	1,425	804	353	210	172	42	1	3,007
50 per cent. ..	354	303	66	43	34	2		802
Total ..	270,612	200,622	87,948	72,633	44,123	11,744	264	687,946
Sales of Exempt Goods by Registered Persons ..	576,868	411,094	196,093	140,323	100,663	39,843	1,439	1,466,323
Total Sales of Taxable and Exempt Goods ..	847,480	611,716	284,041	212,956	144,786	51,587	1,703	2,154,269
Sales Tax Payable ..	37,884	28,108	12,218	10,168	6,068	1,500	34	96,079

(a) Includes Australian Capital Territory.

Sales of taxable and exempt goods and sales tax payable for Australia as a whole for the years 1938-39 and 1949-50 to 1953-54 are shown in the following table:—

#### 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.
1938-39 .. ..	196,491	280,656	477,147	9,363
1949-50 .. ..	455,251	866,575	1,321,826	40,789
1950-51 .. ..	552,919	1,138,887	1,691,806	54,471
1951-52 .. ..	623,390	1,321,696	1,945,086	91,332
1952-53 .. ..	555,390	1,342,279	1,897,669	86,085
1953-54 .. ..	687,946	1,466,323	2,154,269	96,079

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 1935-1954. The figures shown in the foregoing tables do not represent the total sales of all commodities, as vendors trading in exempt goods only 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. For rates of tax payable from 1942-43 to 1951-52, see Official Year Book No. 40, 1954, page 669. Receipts for the years 1938-39 and 1949-50 to 1953-54 were as follows:—1938-39, £1,489,000; 1949-50, £4,210,000; 1950-51, £3,591,000; 1951-52, £6,199,000; 1952-53, £1,250,000; 1953-54, £221,000.

(d) *Pay-roll Tax.* The Pay-roll Tax Assessment Act 1941-1942 and the Pay-roll Tax Act 1941 imposed a pay-roll tax of 2½ per cent. on all wages and salaries in excess of £20 per 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. The exemption was increased to £80 per week (£4,160 per annum) from 1st October, 1953 and to £120 per week (£6,240 per annum) from 1st September, 1954.

Receipts from pay-roll tax for the years 1949-50 to 1953-54 were, 1949-50, £22,728,000; 1950-51, £28,721,000; 1951-52, £37,170,000; 1952-53, £40,171,000; 1953-54, £40,384,000.

(e) *Income Taxes.* Details of taxes on income are given in Division E of this Chapter.

(f) *Wool Sales Deduction.* The Wool Sales Deduction Act 1950 and the Wool Sales Deduction (Administration) Act 1950 came into operation on 2nd December, 1950 and required that a deduction be made from the sale value of wool sold or exported, the amount deducted being set off against the Income Tax and Social Services Contribution assessed in respect of the income of the year 1950-51. These Acts were repealed by the Wool Sales Deduction Legislation Repeal Act 1951 which came into operation on 17th November, 1951, and provided for the refund to producers, etc., of amounts paid on the value of wool sold or otherwise disposed of, after 30th June, 1951. The amount of deduction collected was—1950-51, £109,531,000; 1951-52, £5,963,000. In 1952-53 and 1953-54 refunds amounted to £2,223,000 and £239,000 respectively.

(g) *Estate Duty.* The Commonwealth Estate Duty was first levied in 1914. Particulars of exemptions and the rates imposed prior to October, 1953 are given in earlier issues of the Year Book (see No. 40, page 670).

Estate duty, under the Estate Duty Assessment Act 1914-1953, operative from 28th October, 1953 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 or grand-children of the deceased, the sum of £5,000 decreasing by £1 for every £3 by which the value exceeds £5,000 and ceasing to apply at £20,000; (b) where no part of the estate passes to the widow, children or grand-children, the sum of £2,500 decreasing by £1 for every £3 by which the value exceeds £2,500 and ceasing to apply at £10,000; and (c) where part only of the estate passes to the widow, children or grand-children, the statutory exemption is to be calculated proportionately under (a) and (b).

This Act also provides, from 27th June, 1950, for a special deduction of £5,000 from estates of persons who served in Korea or Malaya.

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.; over £500,000, 27.9 per cent.

Total collections for the years 1938-39 and 1949-50 to 1953-54 were as follows:—1938-39, £1,915,000; 1949-50, £6,054,000; 1950-51, £6,401,000; 1951-52, £7,778,000; 1952-53, £8,393,000; 1953-54, £9,825,000.

Particulars of the number and value of estates and duty assessed, for each of the assessment years 1938-39 and 1949-50 to 1953-54, are given in the following table:—

## ESTATE DUTY ASSESSMENTS.

Particulars.	1938-39.	1949-50.	1950-51.	1951-52.	1952-53.	1953-54.
Number of Estates ..	9,081	13,982	15,680	16,209	19,003	19,621
Gross Value Assessed £'000	65,699	117,534	134,074	144,073	175,672	187,905
Deductions .. £'000	12,630	19,219	22,714	22,083	27,795	31,010
Statutory Exemption £'000	..	16,271	18,175	18,672	22,566	22,976
Dutiable Value .. £'000	53,069	82,044	93,185	103,318	125,311	133,919
Duty Payable .. £	2,002,283	5,992,700	6,933,608	7,797,967	9,248,925	10,088,841
Average dutiable value £	5,482	5,868	5,943	6,313	6,373	6,825
Average duty per estate £	207	429	442	479	470	514

(h) *Gift Duty.* The Gift Duty Assessment Act 1941-1947 and the Gift Duty Act 1941-1947 impose a gift duty on all gifts made after the 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 will not exceed one-half of the amount by which the value of the gift exceeds £2,000.

Total receipts from gift duty for the years 1949-50 to 1953-54 were as follows:—1949-50, £745,000; 1950-51, £1,044,000; 1951-52, £1,202,000; 1952-53, £1,162,000; 1953-54, £1,386,000.

(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 Official Year Book (see No. 40, pages 672 and 673).

Entertainments tax receipts during the five years 1949-50 to 1953-54 were as follows:—1949-50, £4,698,000; 1950-51, £5,148,000; 1951-52, £6,161,000; 1952-53, £6,708,000; 1953-54, £1,977,000.

(j) *Flour Tax.* Particulars of the rates of flour tax which operated from 4th December, 1933 to 21st December, 1947 are given in Official Year Book No. 37, pages 618 and 619. Because of the rise in wheat prices the rate was declared to be nil as from 22nd December, 1947.

(k) *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 Official Year Book. This levy was suspended from 1st July, 1946 until 30th June, 1952 while the Wool Contributory Charge was imposed.

However, with the repeal of the Wool Contributory Charge, a levy on wool produced in Australia was re-introduced from 1st July, 1952. The Wool Tax Acts (Nos. 1 and 2) of 1952 provide for the payment of a levy of four shillings per bale until 30th June, 1953, after which date the rate of tax may be varied within prescribed limits. There was no variation to 30th June, 1954. The purpose of the tax is to provide funds for publicity and research previously provided by the Wool Contributory Charge. Collections during 1952-53 and 1953-54 were £675,000 and £772,000 respectively.

(l) *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 are given in earlier issues of the Official Year Book (see No. 40, page 675).

The various Wool (Contributory Charge) Acts were repealed by the Wool Tax Assessment Act of 1952 and the charge superseded by the wool levy. Collections during the years 1949-50 to 1952-53 were as follows:—1949-50, £1,439,000; 1950-51, £44,844,000; 1951-52, £2,230,000, and 1952-53, £28,000.

(m) *Wheat Export Charge and Wheat Tax.* A summary of the provisions of the Wheat Export Charge Acts 1946, 1948 and 1952 is contained in previous issues of the Official Year Book (see No. 40, p. 676 and No. 41, p. 604).

The Wheat Export Charge Act 1954 repealed previous Acts and provided for an export charge on wheat and wheat products for the seasons 1953-54 to 1957-58 inclusive. The charge levied is based on the difference between the cost of production and the export price with a maximum levy of 1s. 6d. per bushel. Under the Wheat Industry Stabilization Act 1954, to which the Wheat Export Charge Act is complementary, the Commonwealth Government guarantees a return to wheat-growers of the ascertained cost of production in respect of up to 100 million bushels of wheat exported from Australia during each of the five seasons. 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 shall be made from the Consolidated Revenue Fund.

Collections of wheat export charge amounted to £12,633,000 in 1949-50; £13,353,000 in 1950-51; £12,202,000 in 1951-52 and £8,139,000 in 1952-53.

(n) *Miscellaneous Export Charges.* These consist of charges levied on exports of apples and pears (Apple and Pear Export Charges Act 1938-1947), canned fruits (Canned Fruits Export Charges Act 1926-1952), dairy produce (Dairy Produce Export Charges Act 1924-1937), dried fruits (Dried Fruits Export Charges Act 1924-1929), eggs (Egg Export Charges Act 1947) and on grapes used in the manufacture of wine (Wine Grapes Charges Act 1929-1954). The collections are paid into 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:—1949-50, £89,000; 1950-51, £76,000; 1951-52, £72,000; 1952-53, £166,000 and 1953-54, £168,000.

(o) *Stevedoring Industry Charge.* The Stevedoring Industry Charge Act 1947 and the Stevedoring Industry Charge Assessment Act 1947 imposed a charge of 4½d. per 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. per man-hour; 11th December, 1951 an increase to 4d. per man-hour; 28th October, 1952 an increase to 11d. per man-hour and from 4th May, 1954 a reduction to 6d. per man-hour.

Collections during the years 1949-50 to 1953-54 were as follows:—1949-50, £499,000; 1950-51, £420,000; 1951-52, £551,000; 1952-53, £1,144,000 and 1953-54, £1,630,000.

(p) *Gold Tax.* Particulars of the Gold Tax which operated from 15th September, 1939 to 20th September, 1947 are given in Official Year Book No. 39, page 767.

3. *Business Undertakings.*—(i) *Postmaster-General's Department.* Particulars of net receipts for each of the financial years 1938-39 and 1949-50 to 1953-54 are contained in the following table :—

**POSTMASTER-GENERAL'S DEPARTMENT : NET RECEIPTS.**

(£'000.)

Particulars.	1938-39.	1949-50.	1950-51.	1951-52.	1952-53.	1953-54.
Private boxes and bags ..	74	96	144	164	166	175
Commission on money orders and postal notes ..	289	441	472	327	850	887
Telegraphs ..	1,372	3,756	4,442	5,066	4,547	4,710
Telephones ..	8,040	19,168	22,667	31,059	35,177	37,113
Postage ..	6,636	13,942	16,020	20,687	21,821	22,893
Radio ..	516	(a)	(a)	(a)	(a)	(a)
Miscellaneous ..	439	946	1,032	1,568	1,824	2,020
<b>Total .. ..</b>	<b>17,366</b>	<b>38,349</b>	<b>44,777</b>	<b>59,371</b>	<b>64,398</b>	<b>67,798</b>

(a) Included under Broadcasting Services.

Further particulars of the Postmaster-General's Department's receipts to 1953-54 are given in Chapter VII.—Transport and Communication (Division I. Posts, Telegraphs, Telephones and Wireless).

(ii) *Broadcasting Services.* Following the amendment of the Australian Broadcasting Act 1942-1946 by Act No. 64 of 1948, the Broadcasting Control Board was set up on 15th March, 1949. (See also Chapter VII.—Transport and Communication).

Details of net receipts for the years 1949-50 to 1953-54 are shown in the following table :—

**BROADCASTING SERVICES : NET RECEIPTS.**

(£'000.)

Particulars.	1949-50.	1950-51.	1951-52.	1952-53.	1953-54.
Listeners' Licence Fees ..	1,899	1,943	2,776	3,770	3,827
Broadcasting Station Licence Fees ..	17	18	20	23	25
Miscellaneous .. ..	18	10	9	13	15
<b>Total .. ..</b>	<b>1,934</b>	<b>1,971</b>	<b>2,805</b>	<b>3,806</b>	<b>3,867</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 1938-39 and 1949-50 to 1953-54 :—

**COMMONWEALTH RAILWAY REVENUE.**

(£'000.)

Railway.	1938-39.	1949-50.	1950-51.	1951-52.	1952-53.	1953-54.
Trans-Australian ..	331	981	1,175	1,479	1,372	1,825
Central Australia ..	138	776	816	1,241	1,290	1,553
North Australia ..	50	35	38	49	42	68
Aust. Cap. Territory ..	7	12	15	10	25	15
<b>Total .. ..</b>	<b>526</b>	<b>1,804</b>	<b>2,044</b>	<b>2,779</b>	<b>2,726</b>	<b>3,461</b>

Further particulars to 1953-54 are given in Chapter VII.—Transport and Communication (Division B. Government Railways).

4. Other Sources of Revenue.—Revenue derived by the Consolidated Revenue Fund from the Territories of the Commonwealth during 1953-54 amounted to £2,195,000 (Australian Capital Territory, £1,548,000; Northern Territory, £647,000). Of other sources of revenue, amounting in 1953-54 to £45,019,000, the following are noteworthy:—Interest, £8,797,000; Civil Aviation, £4,313,000; Net Profit on Australian Note Issue, £5,707,000; Australian Shipping Board—Transfer of Surplus Funds £4,000,000; Joint Coal Board—Repayment of Advances £3,342,000 and Surplus Balances of Trust Accounts, £4,190,000.

### Division III.—Expenditure.

1. Details of Expenditure from Consolidated Revenue.—The following table shows details of the expenditure from the Consolidated Revenue Fund during the years 1938-39 and 1949-50 to 1953-54.

#### COMMONWEALTH CONSOLIDATED REVENUE FUND : EXPENDITURE. (£'000.)

Department, etc.	1938-39.	1949-50.	1950-51.	1951-52.	1952-53.	1953-54.
Defence Services(a) .. ..	7,579	42,171	73,455	125,008	173,699	162,148
War (1914-18 and 1939-45) and Repatriation Services .. ..	19,257	93,816	129,622	105,891	117,832	120,262
Subsidies and Bounties .. ..	236	20,683	40,537	31,341	25,332	21,320
Cost of Departments .. ..	9,229	50,723	60,222	70,519	73,584	71,094
National Welfare Fund .. ..	(b) 16,428	123,288	132,680	171,709	165,511	176,565
National Debt Sinking Fund Special Payment (Surplus) .. ..	..	..	..	98,500	..	..
Business Undertakings—						
Postmaster-General .. ..	14,878	44,512	54,802	64,291	69,917	72,244
Broadcasting Services .. ..	(c) 2,872	3,591	3,591	4,135	4,556	4,684
Railways .. ..	1,351	2,792	3,381	4,025	3,944	4,137
Territories .. ..	1,100	7,294	8,260	9,746	9,815	11,133
Capital Works and Services—						
Defence and War Services .. ..	1,349	12,500	75,138	45,126	42,317	28,513
Repatriation .. ..	141	14,848	(d) 342	27,861	28,167	27,073
Postmaster-General .. ..	3,851	19,792	34,897	28,819	28,427	25,986
Broadcasting Services .. ..	(e) 157	157	212	251	262	281
Railways .. ..	142	482	1,461	2,637	4,741	3,382
Territories .. ..	739	3,161	5,085	5,153	4,821	4,511
Other .. ..	493	25,757	31,458	45,886	37,219	32,847
Payments to or for States .. ..	15,649	101,232	128,032	160,947	182,891	194,248
Other Expenditure(e) .. ..	2,015	14,572	58,617	14,983	53,687	6,091
<b>Grand Total .. ..</b>	<b>94,437</b>	<b>580,652</b>	<b>841,792</b>	<b>1,016,828</b>	<b>(f) 1,026,667</b>	<b>(g) 966,519</b>
<b>Per Head of Population .. ..</b>	<b>£ s. d.</b> <b>13 12 5</b>	<b>£ s. d.</b> <b>72 2 8</b>	<b>£ s. d.</b> <b>101 5 8</b>	<b>£ s. d.</b> <b>119 1 6</b>	<b>£ s. d.</b> <b>117 7 5</b>	<b>£ s. d.</b> <b>108 11 10</b>

(a) Excludes debt charges and Defence Division of the Department of the Treasury. (b) Invalid and Age Pensions and Maternity Allowances. (c) Provided in part from Postmaster-General's Department. Votes and balance from Broadcasting Trust Account. (d) In addition, £24,911,000 was provided from Loan Fund. (e) Includes assistance to primary producers. (f) Excludes surplus £13,400,000 transferred to War Pensions Trust Account. (g) Excludes surplus £56,271,000 transferred to Debt Redemption Reserve Trust Account.



Further details of the expenditure in each section are given in paragraphs 2 to 11 following.

A graphical representation of the revenue and expenditure of the Commonwealth Consolidated Revenue Fund appears on page 793. In this diagram Public Debt Charges (interest and debt redemption, etc.) are shown as a separate item, whereas in the table above these charges are included in the section to which they relate.

Details of Commonwealth expenditure on public debt charges for 1938-39 and 1949-50 to 1953-54 are shown in the following table:—

**PUBLIC DEBT CHARGES(a) : COMMONWEALTH EXPENDITURE.**  
(£'000.)

Item.	1938-39.	1949-50.	1950-51.	1951-52.	1952-53.	1953-54.
<b>War (1914-18 and 1939-45)</b>						
Debt(b)						
Interest and Exchange ..	7,616	45,127	44,614	43,902	43,354	43,696
Debt Redemption ..	2,049	13,197	13,835	15,002	21,256	19,981
Other(c) ..	224	379	312	215	279	249
<b>Total ..</b>	<b>9,889</b>	<b>58,703</b>	<b>58,761</b>	<b>59,119</b>	<b>64,889</b>	<b>63,926</b>
<b>Business Undertakings—</b>						
<b>Postmaster-General's Department—</b>						
Interest and Exchange ..	1,758	1,281	1,454	1,437	1,349	1,207
Debt Redemption ..	1,129	2,048	2,150	2,257	2,371	2,313
Other (c) ..	..	..	..	..	..	13
<b>Total ..</b>	<b>2,887</b>	<b>3,329</b>	<b>3,604</b>	<b>3,694</b>	<b>3,720</b>	<b>3,533</b>
<b>Railways—</b>						
Interest and Exchange ..	455	375	420	415	413	406
Debt Redemption ..	75	128	134	141	148	155
Other(c) ..	11	7	1	..	1	..
<b>Total ..</b>	<b>541</b>	<b>510</b>	<b>555</b>	<b>556</b>	<b>562</b>	<b>561</b>
<b>Territories—</b>						
Interest and Exchange ..	318	241	230	219	218	238
Debt Redemption ..	58	99	105	110	115	121
Other(c) ..	4	..	3	..	..	..
<b>Total ..</b>	<b>380</b>	<b>340</b>	<b>338</b>	<b>329</b>	<b>333</b>	<b>359</b>
<b>Works and Other Purposes—</b>						
Interest and Exchange ..	3,226	2,812	2,794	3,259	4,140	5,308
Debt Redemption ..	613	640	864	791	718	705
Other(c) ..	37	75	59	46	66	133
<b>Total ..</b>	<b>3,876</b>	<b>3,527</b>	<b>3,717</b>	<b>4,096</b>	<b>4,933</b>	<b>6,149</b>
<b>Total—</b>						
Interest and Exchange ..	13,373	49,836	49,512	49,232	49,483	50,857
Debt Redemption ..	3,924	16,112	17,088	18,301	24,608	23,278
Other(c) ..	276	461	375	261	346	395
<b>Grand Total ..</b>	<b>17,573</b>	<b>66,409</b>	<b>66,975</b>	<b>67,794</b>	<b>74,437</b>	<b>74,530</b>

(a) Excludes payments to or for States under the Financial Agreement. See pages 783-86.

(b) Includes repatriation debt. (c) Redemption, conversion and loan management, etc., expenses.

2. **Defence Services.**—Details of the expenditure on Defence Services by the Departments of Defence, Navy, Army, Air, Supply and Defence Production are shown in the following table. The expenditure shown under Department of Supply includes the former Departments of Shipping and Fuel, Supply and Development, Supply and Shipping, and Munitions. This table covers expenditure by the service and associated departments only, and includes the cost of maintaining forces in Korea and at other overseas posts.

The figures represent the combined expenditures from revenue, trust and loan fund for the years 1938-39 and 1949-50 to 1953-54.

**DEFENCE SERVICES(a) : COMMONWEALTH EXPENDITURE FROM REVENUE, TRUST AND LOAN FUNDS.**

(£'000.)

Item.	1938-39.	1949-50.	1950-51.	1951-52.	1952-53.	1953-54.
Department of Defence .. ..	61	257	364	493	619	651
Department of the Navy—						
Naval Forces—Pay, maintenance, etc. ..	2,592	12,268	19,337	30,390	36,411	34,049
Naval construction and additions to the fleet ..	1,643	1,384	2,244	3,302	5,436	5,996
Buildings, works, etc. ..	433	1,121	1,659	2,812	2,510	1,665
Administrative and miscellaneous expenditure(b) ..	35	2,085	1,443	1,308	3,031	2,783
Total .. ..	4,703	16,858	24,683	37,812	47,388	45,093
Department of the Army—						
Military Forces—Pay, maintenance, etc. ..	2,941	12,975	16,977	28,615	58,441	44,908
Arms, armament, ammunition ..	1,129	1,894	5,387	17,926	26,174	15,201
Buildings, works, etc. ..	418	758	4,349	8,769	6,039	3,313
Administrative and miscellaneous expenditure(b) ..	126	—271	—180	1,036	1,296	1,407
Total .. ..	4,614	15,356	26,533	56,346	91,950	64,829
Department of Air—						
Air Force—Pay, maintenance, etc. ..	1,304	8,433	12,042	20,042	23,815	21,561
Aircraft, equipment and stores ..	1,049	2,912	13,210	23,502	25,881	22,886
Buildings, works, etc. ..	489	692	1,592	3,883	4,521	3,312
Administrative and miscellaneous expenditure(b) ..	17	—155	952	1,073	1,219	1,175
Total .. ..	2,859	11,882	27,796	48,500	55,436	48,934
Department of Supply—						
Defence research and development ..	..	5,575	6,264	6,434	6,786	7,444
Strategic stores and equipment reserve ..	..	..	57,048	10,049	..	..
Buildings, works, etc. ..	463	324	264	270	372	200
Administrative and miscellaneous expenditure(b) ..	1,212	4,419	5,629	3,090	4,279	4,203
Total .. ..	1,675	10,318	69,205	19,843	11,437	11,847
Department of Defence Production(c)	..	..	..	7,140	9,186	7,307
Defence Equipment and Supplies (d)	..	..	..	..	..	12,000
Total Defence Services—						
Consolidated Revenue Fund ..	8,927	54,671	148,593	170,134	216,016	190,661
Trust Funds .. ..	(e) 3,072	..	..	..	..	..
Loan Fund .. ..	1,913	..	—12	..	..	..
Grand Total .. ..	13,912	54,671	148,581	170,134	216,016	190,661

(a) Excludes expenditure on debt charges and on Defence Division of the Department of the Treasury.  
 (b) As a dissection is not available expenditure on War and Repatriation Services (see page 775) has been deducted from this item instead of from departmental expenditure above. (c) Included with Department of Supply prior to 1951-52. (d) Paid to credit of Defence Equipment and Supplies Trust Account. (e) Expenditure from excess receipts of previous years appropriated for Defence Equipment Trust Account.

NOTE.—Minus sign (—) indicates excess of transfers or repayments over expenditure.

3. War and Repatriation Services.—Expenditure from Consolidated Revenue and Loan Fund for War and Repatriation Services and Post-war Charges in relation to both the 1914-18 and 1939-45 Wars is shown in the following table for the years 1938-39 and 1949-50 to 1953-54. Expenditure on subsidies, which in the year 1949-50 were paid from the War and Repatriation Votes, has been excluded from this table and is

dealt with separately in paragraph 4. Expenditure on the maintenance of forces in Korea and at other oversea posts and the cost of arms and equipment is included in Defence Services (*see* paragraph 2).

# WAR AND REPATRIATION SERVICES AND POST-WAR CHARGES: COMMONWEALTH EXPENDITURE FROM CONSOLIDATED REVENUE AND LOAN FUNDS.

(£'000.)

Item.	1938-39.	1949-50.	1950-51.	1951-52.	1952-53.	1953-54.
Public Debt Charges—						
Interest and Exchange .. ..	7,616	45,127	44,614	43,902	43,354	43,605
Debt Redemption .. ..	2,049	13,197	13,835	15,002	21,256	19,981
Other .. ..	224	379	312	215	279	249
Total Public Debt Charges(a) ..	9,889	58,703	58,761	59,119	64,889	63,835
War Gratuities .. ..		9,994	30,797	42	15	
War and Service Pensions .. ..	8,228	22,023	27,532	33,566	36,577	39,425
Commonwealth Reconstruction Training Scheme .. ..		7,086	4,141	1,807	974	502
War Service Land Settlement .. ..		4,074	4,388	5,641	6,567	5,506
Re-establishment loans for agricultural purposes .. ..		1,065	296	188	140	115
Repatriation Department—						
Repatriation benefits .. ..	631	6,662	7,834	9,758	10,822	11,500
Other benefits .. ..	119	262	263	298	388	443
Administration and general expenses ..	315	2,473	3,061	3,196	3,464	3,597
Expenditure recovered(b) .. ..	-71	-1,951	-1,777	-1,615	-1,534	-1,281
Total Repatriation Department ..	994	7,446	9,381	11,637	13,141	14,259
War Service Homes—Salaries and general expenses .. ..	98	266	492	631	622	685
Defence Departments—Proportion of expenditure(c) .. ..		3,988	2,455			
Other Departments—Miscellaneous expenditure .. ..	48	1,155	438	1,243	1,386	922
International Payments(d) .. ..		11,794	81	102	48	40
Other Administrations—Recoverable expenditure(e) .. ..		-1,942	-1,849	1,071	-842	-921
Miscellaneous Credits .. ..		-2,371	-1,749	-2,853	(f)	(f)
Credits from the Disposals Commission ..		-3,982	-1,681	-1,183	(f)	(f)
Capital Works and Services—						
Repatriation Department .. ..	36	297	342	271	203	227
War Service Homes Act 1918-1949 ..	105	14,551	24,911	27,590	27,964	26,846
Total Capital Works and Services ..	141	14,848	25,253	27,861	28,167	27,073
Total, War and Repatriation Services and Post-war Charges—						
Consolidated Revenue Fund .. ..	19,398	108,664	129,963	133,752	145,999	147,335
Loan Fund .. ..		25,483	28,773	5,120	5,684	4,199
GRAND TOTAL .. ..	19,398	134,147	158,736	138,872	151,683	151,534

(a) Excludes Interest and Redemption on War (1914-18) Debt due to the United Kingdom Government, payment of which was suspended in 1931. (b) From Service Departments and Australian Soldiers' Repatriation Trust Account. (c) Represents expenditure on War and Repatriation Services by Defence Departments (*see* page 774) for which dissection is not available. (d) Excludes International Monetary Fund Charges. (e) Munitions, stores, etc., supplied to the Government of United Kingdom and other administrations. (f) Includes repayments and waiver of war-time indebtedness of other administrations. (f) Receipts credited to Defence revenue.

NOTE.—Minus sign (—) indicates excess of credits or repayments over expenditure.

4. Subsidies and Bounties.—The following table shows details, for the years 1938-39 and 1949-50 to 1953-54, of Commonwealth expenditure from revenue on subsidies, bounties and assistance to primary producers. Expenditure on special relief such as drought, frost, flood and bush fire, etc. (*see* table, p. 778, for more important items), is not included, 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). Further information relating to these schemes and other assistance to, page 783 primary producers is given in Chapter XXI—Agricultural Production.

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 Official Year Book No. 38.

**SUBSIDIES AND BOUNTIES : COMMONWEALTH EXPENDITURE.**  
(£'000.)

Item.	1938-39.	1949-50.	1950-51.	1951-52.	1952-53	1953-54
<b>Subsidies—</b>						
Price Stabilization—						
Tea .. .. .	..	6,986	7,129	5,577	4,683	4,180
Imports (other than Tea) .. .. .	..	572	..	..	..	..
Coal .. .. .	..	..	1,704	1,519	1,114	200
Wheat Shipped to Tasmania—Freight Subsidy .. .. .	..	..	140	143	210	192
Total .. .. .	..	7,558	8,973	7,239	6,007	4,572
<b>Assistance to Primary Production—</b>						
Dairy Industry .. .. .	..	8,008	14,998	15,743	15,719	15,400
Superphosphate .. .. .	..	3,657	263	..	..	..
Nitrogenous Fertilizers .. .. .	..	781	599	1,521	289	175
Wheat Industry .. .. .	..	622	683	..	..	..
Other .. .. .	..	2	36	9	519	..
Total .. .. .	..	13,072	16,579	19,373	16,527	15,575
Total Subsidies .. .. .	..	20,628	25,552	26,612	22,534	20,147
<b>Bounties—</b>						
Tractor .. .. .	..	54	90	103	38	145
Wool Products .. .. .	..	..	14,875	2,254	1	..
Wheat—for Stock Feed .. .. .	..	..	..	2,368	2,759	1,010
Other .. .. .	(b) 236	1	20	4	..	18
Total Bounties .. .. .	236	55	14,985	4,729	2,798	1,173
Grand Total .. .. .	236	20,683	40,537	31,341	25,332	21,320

(a) Dairy products.

(b) Includes Raw Cotton Bounty, £115,000 and Sulphur Bounty, £88,000.

5. **Total Cost of Departments.**—Expenditure under this heading covers expenditure by departments, other than the defence and repatriation departments and business undertakings, on administrative services and other activities. Expenditure on defence, (other than interest and debt redemption in respect of the defence departments which is included in the expenditure of the Department of the Treasury), war and repatriation services, subsidies and bounties, social services paid from the National Welfare Fund, business undertakings, Commonwealth territories and capital works and services is excluded.

Information on the functions of departments and the acts administered by the Ministers of departments was published in Official Year Book No. 37, pages 76-86, and particulars of subsequent changes in departmental structure are given in later issues.

In the following table details are given of that expenditure on the branches of each department which might be termed running expenses. Miscellaneous expenditure and debt charges, etc., are not included in this table but in the one following.

**COMMONWEALTH CONSOLIDATED REVENUE FUND : COST OF DEPARTMENTS—**  
**SALARIES, WAGES AND GENERAL EXPENDITURE.**  
(£'000.)

Department.	1938-39	1949-50.	1950-51.	1951-52	1952-53	1953-54
<b>Governor-General</b> .. .. .	28	37	44	64	81	88
<b>Parliament—</b>						
Cost of Parliament .. .. .	279	647	833	1,062	1,193	1,184
Electoral Office .. .. .	105	288	344	341	441	434
Total .. .. .	384	935	1,177	1,403	1,634	1,618
<b>Prime Minister—</b>						
Department .. .. .	62	119	155	210	246	256
Audit Office .. .. .	38	210	272	289	(a)	(a)
Public Service Board .. .. .	51	289	381	405	429	440
National Library .. .. .	4	52	73	96	107	121
High Commissioner's Office—United Kingdom .. .. .	81	485	548	621	621	612
Commonwealth Grants Commission .. .. .	5	10	12	14	15	15
Office of Education .. .. .	..	226	276	200	148	149
Security Services .. .. .	..	115	208	276	331	332
Total .. .. .	241	1,506	1,925	2,111	1,897	1,925
<b>External Affairs—</b>						
Department .. .. .	20	284	380	442	427	429
Oversea representation .. .. .	..	811	965	1,160	1,301	1,280
Total .. .. .	20	1,095	1,345	1,602	1,728	1,709

For footnotes see next page.

COMMONWEALTH CONSOLIDATED REVENUE FUND: COST OF DEPARTMENTS—SALARIES, WAGES AND GENERAL EXPENDITURE—*continued.*

(£'000.)

Department.	1938-39.	1949-50.	1950-51	1951-52	1952-53	1953-54
<b>Treasury—</b>						
Department .. .. .	50	236	329	367	468	526
Taxation Branch and Boards of Review ..	616	4,119	5,323	6,117	6,668	6,678
Bureau of Census and Statistics ..	61	274	374	461	530	594
Commonwealth Superannuation Board ..	9	28	52	73	78	80
<b>Total .. .. .</b>	<b>745</b>	<b>4,667</b>	<b>6,078</b>	<b>7,018</b>	<b>7,744</b>	<b>7,878</b>
<b>Attorney-General—</b>						
Department .. .. .	20	79	123	149	187	199
Crown Solicitor .. .. .	28	140	170	205	227	237
High Court .. .. .	34	58	69	78	87	85
Bankruptcy Administration .. .. .	44	59	79	90	97	113
Court of Conciliation and Arbitration ..	24	134	130	168	175	174
Patents, Trade Marks and Designs ..	71	152	197	319	334	381
Other Branches .. .. .	37	131	231	241	233	244
<b>Total .. .. .</b>	<b>258</b>	<b>753</b>	<b>1,017</b>	<b>1,250</b>	<b>1,340</b>	<b>1,433</b>
<b>Interior—</b>						
Department .. .. .	296	803	965	1,083	1,212	1,204
Meteorological Branch .. .. .	80	292	390	440	438	515
Observatory .. .. .	7	45	55	60	67	72
Forestry Branch .. .. .	10	60	79	86	88	90
<b>Total .. .. .</b>	<b>393</b>	<b>1,200</b>	<b>1,400</b>	<b>1,669</b>	<b>1,805</b>	<b>1,881</b>
<b>Works .. .. .</b>	<b>(b)</b>	<b>1,058</b>	<b>1,504</b>	<b>1,481</b>	<b>1,384</b>	<b>1,939</b>
Civil Aviation .. .. .	90	2,115	3,166	3,571	3,788	2,511
Trade and Customs .. .. .	721	1,860	2,474	2,953	3,244	3,390
<b>Health—</b>						
Department .. .. .	135	200	207	353	405	445
Quarantine .. .. .		80	143	161	108	222
Health Services .. .. .		174	287	343	479	459
<b>Total .. .. .</b>	<b>135</b>	<b>463</b>	<b>727</b>	<b>857</b>	<b>1,082</b>	<b>1,126</b>
<b>Commerce and Agriculture—</b>						
Department .. .. .	58	240	206	333	388	407
Inspection of goods for export ..	175	446	516	582	680	740
Commercial Intelligence Services Abroad ..	47	201	241	299	334	364
Division of Agricultural Economics and Division of Agricultural Production ..		78	110	122	123	140
<b>Total .. .. .</b>	<b>280</b>	<b>965</b>	<b>1,172</b>	<b>1,336</b>	<b>1,534</b>	<b>1,651</b>
<b>Social Services—Department .. .. .</b>	<b>139</b>	<b>1,249</b>	<b>1,686</b>	<b>1,974</b>	<b>2,300</b>	<b>2,395</b>
<b>Shipping and Transport—</b>						
Department .. .. .		766	223	161	144	135
Marine Branch .. .. .	208	435	553	748	702	813
Ship Construction .. .. .		71	80	85	91	91
<b>Total .. .. .</b>	<b>208</b>	<b>1,272</b>	<b>856</b>	<b>994</b>	<b>1,027</b>	<b>1,039</b>
<b>Territories—Department .. .. .</b>	<b>(c)</b>	<b>88</b>	<b>127</b>	<b>158</b>	<b>103</b>	<b>166</b>
<b>Immigration—Department .. .. .</b>	<b>(b)</b>	<b>820</b>	<b>888</b>	<b>1,230</b>	<b>1,260</b>	<b>1,193</b>
<b>Labour and National Service—Department ..</b>	<b>..</b>	<b>1,525</b>	<b>1,845</b>	<b>1,773</b>	<b>1,795</b>	<b>1,732</b>
<b>National Development—</b>						
Department .. .. .		290	437	452	458	385
Bureau of Mineral Resources .. .. .		118	282	480	688	434
<b>Total .. .. .</b>	<b>..</b>	<b>417</b>	<b>719</b>	<b>932</b>	<b>1,146</b>	<b>819</b>
<b>Commonwealth Scientific and Industrial Research Organization—Department ..</b>	<b>195</b>	<b>1,930</b>	<b>2,477</b>	<b>2,895</b>	<b>3,260</b>	<b>3,537</b>
<b>Atomic Energy Commission .. .. .</b>	<b>..</b>	<b>..</b>	<b>..</b>	<b>6</b>	<b>..</b>	<b>253</b>
<b>Total All Departments .. .. .</b>	<b>3,837</b>	<b>23,955</b>	<b>30,816</b>	<b>35,271</b>	<b>38,247</b>	<b>38,283</b>

(a) Allocated to Departments.  
with Prime Minister's Department.

(b) Included with Department of the Interior.

(c) Included

The following table gives details of miscellaneous expenditure included in the total cost of departments. It covers such items as interest and debt redemption in respect of departments (including defence departments) which is included under expenditure by the Department of the Treasury, repairs and maintenance of buildings, and special expenditure for which the Commonwealth is committed, such as contributions to international organizations, payment of Commonwealth scholarships, etc. The costs of social services, which are paid from the National Welfare Fund, are not included in this table (see p. 780 for this information).

**COMMONWEALTH CONSOLIDATED REVENUE FUND : COST OF DEPARTMENTS—  
MISCELLANEOUS EXPENDITURE.(a)  
(£'000.)**

Department.	1938-39.	1949-50.	1950-51.	1951-52.	1952-53.	1953-54.
Governor-General .. .. .	1	3	4	10	7	6
Parliament—						
Cost of elections .. .. .	3	177	210	231	244	240
Other .. .. .	17	29	46	45	35	45
Total .. .. .	20	206	256	276	279	285
Prime Minister—						
Commonwealth Scholarship Scheme and financial assistance to University students .. .. .	..	199	425	742	864	917
Australian National University .. .. .	..	216	280	450	600	650
Bush fire and flood relief, etc. .. .. .	19	101	312	43	75	108
Other .. .. .	259	216	536	377	615	931
Total .. .. .	278	732	1,553	1,612	2,154	2,606
External Affairs—						
United Nations and Allied Organizations. . (b) 46	699	701	715	597	632	
Australian National Antarctic Research Expeditions .. .. .	..	84	119	145	152	224
International development and relief .. .. .	..	..	1,511	4,859	4,271	3,574
Contributions to other international agencies, etc. .. .. .	4	94	102	94	105	112
Total .. .. .	50	877	2,433	5,813	5,125	4,542
Treasury—						
Interest (including exchange) .. .. .	3,229	2,812	2,794	3,259	4,149	5,308
Debt Redemption(c) .. .. .	614	640	864	791	718	708
Other .. .. .	87	3,405	607	660	1,313	1,094
Total .. .. .	3,930	6,857	4,265	4,710	6,180	7,110
Attorney-General .. .. .	23	66	78	98	97	117
Interior—						
Other departments in Canberra—Transport services, fuel, light and power; oversea publicity, etc. .. .. .	..	209	262	231	302	317
Other .. .. .	123	213	267	298	366	430
Total .. .. .	123	422	529	529	668	747
Works .. .. .	(d)	129	148	138	131	158
Civil Aviation—						
Maintenance and development of civil aviation .. .. .	162	1,441	1,767	2,526	2,671	3,683
Domestic and international air services—						
Mails, subsidies, etc. .. .. .	56	2,444	3,041	3,274	3,968	3,572
Meteorological maintenance services and other .. .. .	8	488	503	616	684	621
Total .. .. .	226	4,373	5,311	6,416	7,323	8,076
Trade and Customs .. .. .	82	258	174	218	251	310
Health—						
Subsidy, cattle tick control .. .. .	69	253	53	53	53	53
Miscellaneous expenditure on health .. .. .	93	241	265	295	369	377
Other .. .. .	17	53	65	77	73	97
Total .. .. .	179	547	383	425	495	527
Commerce and Agriculture—						
Dairy industry—Efficiency grant .. .. .	..	101	205	293	244	238
Wool use publicity, promotion and research .. .. .	74	341	348	341	371	386
Other .. .. .	186	117	148	199	356	545
Total .. .. .	260	559	701	833	971	1,169

For footnotes see next page.

## COMMONWEALTH CONSOLIDATED REVENUE FUND: COST OF DEPARTMENTS—MISCELLANEOUS EXPENDITURE(a)—continued.

(£'000.)

Department.	1938-39.	1949-50.	1950-51.	1951-52.	1952-53.	1953-54.
Social Services—						
Compassionate allowances, etc. . . . .	186	54	76	87	104	116
Other . . . . .						
Total . . . . .	186	108	140	160	183	208
Shipping and Transport—						
Shipping subsidies, etc. . . . .		626	86	185	186	148
Storage services . . . . .		977	285	(e)	(e)	(e)
Other . . . . .	7	67	51	92	55	62
Total . . . . .	7	1,670	422	277	241	210
Territories . . . . .	(f)	3	2	2	2	6
Immigration—						
Assisted migration . . . . .	(d)	6,647	8,110	8,892	6,400	3,645
Other migration activities . . . . .	(d)	2,257	3,708	3,365	3,096	1,960
Other . . . . .	(d)	77	264	283	277	209
Total . . . . .	(d)	8,981	12,082	12,540	9,773	5,814
Labour and National Service . . . . .		251	148	108	102	96
National Development—						
Joint Coal Board . . . . .		724	636	716	1,031	621
Other . . . . .		25	52	259	194	73
Total . . . . .		749	688	975	1,225	694
Commonwealth Scientific and Industrial Research Organization—						
Miscellaneous grants to scientific bodies . . . . .	28	65	69	83	102	98
Other . . . . .		12	20	25	28	32
Total . . . . .	28	77	89	108	130	130
Total, All Departments . . . . .	5,393	26,868	29,406	35,248	35,337	32,811

(a) Includes rent, repairs and maintenance, pension and superannuation contributions. Interest and debt redemption in respect of the various departments is included under the Department of the Treasury. (b) League of Nations. (c) Unallocated debt charges, in respect of all departments including defence departments. (d) Included with Department of the Interior. (e) Provided under Defence Services. (f) Included with Prime Minister's Department.

6. 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 contributions 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 a small amount of 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 1949-50 to 1953-54. A dissection of expenditure into the various types of benefits is given in Chapter XV.—Welfare Services (*see* pages 545 and 546).

**NATIONAL WELFARE FUND: RECEIPTS, EXPENDITURE AND BALANCES.**  
(£'000.)

Year.	Income.			Expenditure.	Balance in Fund at end of Year.
	Contribution from Consolidated Revenue.	Interest on Investments.	Total.		
1949-50 .. ..	123,288	751	124,039	92,804	131,115
1950-51 .. ..	132,680	985	133,665	114,983	149,797
1951-52 .. ..	171,709	1,129	172,838	137,608	185,027
1952-53 .. ..	165,511	1,809	167,320	165,511	186,836
1953-54 .. ..	176,565	2,094	178,659	176,565	188,930

7. **National Debt Sinking Fund.**—During 1951-52 surplus revenue of £98,500,000 was paid to the National Debt Sinking Fund for investment in a special loan raised to finance State works expenditure.

8. **Business Undertakings.**—(i) *Postmaster-General's Department.* From the beginning of 1949-50, Broadcasting Services were separated from the Postmaster-General's Department. Prior to 1949-50 part of the expenditure on these services was included with the Postmaster-General's Department. Details of the expenditure of this Department for the years 1938-39 and 1949-50 to 1953-54 are given in the following table :—

**POSTMASTER-GENERAL'S DEPARTMENT: EXPENDITURE.**  
(£'000.)

Item.	1938-39.	1949-50.	1950-51.	1951-52.	1952-53.	1953-54.
Salaries, stores and materials, mail, engineering services, etc.	11,485	39,919	49,670	58,686	64,157	66,619
Superannuation, Pensions, etc.	392	665	795	1,061	1,056	1,214
Rents, repairs, etc. . . .	114	599	733	850	984	876
Interest and Exchange ..	1,758	1,281	1,454	1,437	1,349	1,220
Debt Redemption ..	1,129	2,048	2,150	2,257	2,371	2,313
<b>Total Working, etc., expenses .. ..</b>	<b>14,878</b>	<b>44,512</b>	<b>54,802</b>	<b>64,291</b>	<b>69,917</b>	<b>72,244</b>
<b>Capital Works and Services ..</b>	<b>3,851</b>	<b>19,792</b>	<b>34,897</b>	<b>28,819</b>	<b>28,427</b>	<b>25,986</b>
<b>Grand Total .. ..</b>	<b>18,729</b>	<b>64,304</b>	<b>89,699</b>	<b>93,110</b>	<b>98,344</b>	<b>98,230</b>

Further details of expenditure for 1953-54 on account of the Postmaster-General's Department appear in Chapter VII.—Transport and Communication (Division I, Poste, Telegraphs, Telephones and Wireless).

(ii) *Broadcasting Services.* Since 1949-50 all expenditure on broadcasting services has been brought together in one section. Previously these services had been financed partly by the Postmaster-General's Department and partly from the Wireless Broadcasting Trust Account. Details of expenditure for the years 1949-50 to 1953-54 are shown in the following table.



**COMMONWEALTH BROADCASTING SERVICES : EXPENDITURE.**  
(£'000.)

Item.	1949-50.	1950-51.	1951-52.	1952-53.	1953-54.
Australian Broadcasting Control Board	37	59	61	56	77
Australian Broadcasting Commission— Salaries, general and programme expenses .. .. .	1,539	2,010	2,254	2,497	2,590
Technical and other Services—Post- master-General .. .. .	1,290	1,509	1,807	1,988	2,006
Repairs, maintenance, etc. .. .. .	6	13	13	15	11
Total Working, etc., expenses .. .. .	2,872	3,591	4,135	4,556	4,684
Capital Works and Services .. .. .	157	212	251	202	281
Grand Total .. .. .	3,029	3,803	4,386	4,758	4,965

(iii) *Railways.* The Commonwealth Railways, previously administered by the Department of the Interior, were transferred in March, 1950 to the newly-formed Department of Fuel, Shipping and Transport which became the Department of Shipping and Transport in May, 1951. The expenditure on railways for the years 1938-39 and 1949-50 to 1953-54 is shown below.

**COMMONWEALTH RAILWAYS : EXPENDITURE.**  
(£'000.)

Item.	1938-39.	1949-50.	1950-51.	1951-52.	1952-53.	1953-54.
Working expenses—						
Trans-Australian .. .. .	494	1,165	1,457	1,540	1,285	1,352
North Australia .. .. .	55	74	69	91	115	139
Central Australia .. .. .	214	728	867	1,178	1,297	1,359
Aust. Capital Territory .. .. .	7	19	26	37	46	43
Interest and Exchange .. .. .	455	375	420	415	413	406
Debt Redemption .. .. .	75	128	135	141	148	155
Superannuation .. .. .	14	28	34	43	44	50
Freight concessions—North Australia and Central Australia Railways .. .. .	..	196	297	513	531	588
Miscellaneous (a) .. .. .	37	79	76	67	65	45
Total Working, etc., ex- penses .. .. .	1,351	2,792	3,381	4,025	3,944	4,137
Capital Works and Services .. .. .	142	482	1,461	2,637	4,746	3,382
Grand Total .. .. .	1,493	3,274	4,842	6,662	8,690	7,519

(a) Includes loans redemption and conversion expenses, 1949-50, £7,000; 1952-53, £1,000.

Additional details of the financial operations of the Commonwealth Railways to 1953-54 are given in Chapter VII.—Transport and Communication (Division B, Government Railways).

9. *Territories.*—The following table shows the expenditure on account of Commonwealth Territories for the years 1938-39 and 1949-50 to 1953-54. The Australian Capital Territory is administered by the Department of the Interior, and the Department of Territories controls the external territories and the Northern Territory. The expenditure has been grouped in one table for convenience. Information in greater detail will be found in the *Finance Bulletin* issued by this Bureau.

**COMMONWEALTH TERRITORIES : EXPENDITURE.**  
(£'000.)

Territory.	1938-39.	1949-50.	1950-51.	1951-52.	1952-53	1953-54.
<b>Administrative and Maintenance of Services—</b>						
Australian Capital(a) ..	637	1,519	1,924	2,157	2,462	2,652
Northern (a) ..	403	1,422	1,814	2,041	2,425	2,602
Papua ..	49	4,348	4,518	5,532	4,888	5,821
New Guinea ..	6					
Norfolk Island ..	5	5	4	16	40	58
<b>Total ..</b>	<b>1,100</b>	<b>7,294</b>	<b>8,260</b>	<b>9,746</b>	<b>9,815</b>	<b>11,133</b>
<b>Capital Works and Services—</b>						
Australian Capital(a) ..	244	2,426	3,713	3,851	3,246	2,642
Northern(a) ..	495	707	1,361	1,281	1,206	1,452
Papua and New Guinea ..	..	28	11	21	369	417
<b>Total ..</b>	<b>739</b>	<b>3,161</b>	<b>5,085</b>	<b>5,153</b>	<b>4,821</b>	<b>4,511</b>

(a) Excludes Railways, see para. 8 (iii).

10. **Capital Works and Services.**—In the following table details are given of Commonwealth expenditure on capital works and services during each of the years 1938-39 and 1949-50 to 1953-54 and of the aggregate to 30th June, 1954. The table covers all expenditure on capital works and services made from the Consolidated Revenue Fund, the Loan Fund and Trust Funds.

**COMMONWEALTH EXPENDITURE ON CAPITAL WORKS AND SERVICES FROM REVENUE, TRUST AND LOAN FUNDS.**  
(£'000.)

Particulars.	1938-39.	1949-50.	1950-51.	1951-52.	1952-53.	1953-54.	1901-2 to 1953- 54 Total.(a)
<b>Defence and War—</b>							
Navy ..	2,076	4,318	4,357	6,415	9,847	9,248	82,440
Army ..	1,547	1,154	7,133	18,410	20,960	11,172	127,016
Air Force ..	1,538	2,266	1,592	3,883	4,521	3,312	64,684
Munitions and other ..	1,173	4,762	6,62,024	6,16,418	6,989	4,781	192,631
<b>Repatriation Services—</b>							
War Service Homes ..	105	14,551	24,911	27,590	27,964	26,846	159,924
Other ..	..	297	342	271	203	227	3,102
Postmaster-General's Department ..	3,849	19,785	34,897	28,818	28,427	25,986	260,120
Broadcasting Services ..	..	157	212	251	202	281	1,102
<b>Railways—</b>							
Commonwealth ..	142	481	1,460	2,634	4,742	3,381	27,842
Other ..	..	..	..	..	..	..	2,445
<b>Territories—</b>							
Australian Capital Territory ..	488	2,418	3,697	3,851	3,237	2,630	31,920
Northern Territory ..	244	708	1,361	1,281	1,206	1,452	10,207
Papua-New Guinea ..	..	28	11	20	369	417	1,185
Norfolk Island ..	..	..	..	..	..	..	2
<b>Other—</b>							
Ships, yards and docks ..	—300	2,000	1,462	2,413	1,786	3,494	41,111
Civil Aviation ..	419	3,805	4,845	6,424	6,096	4,933	41,002
Snowy Mountains Scheme ..	..	2,497	6,077	10,393	13,600	13,170	45,737
Immigration ..	..	7,304	7,168	7,243	2,279	558	28,998
Coal Industry Act 1946 ..	..	4,232	3,000	4,100	26	..	13,008
Health ..	35	477	679	1,224	1,709	1,788	6,871
Subscriptions to Capital(e) ..	..	527	377	..	1,049	1,000	8,248
Advances(d) ..	..	333	477	2,389	4,180	2,451	14,977
All other works, buildings, etc. ..	243	4,582	7,373	11,700	5,493	5,453	56,595
<b>Total ..</b>	<b>11,559</b>	<b>76,682</b>	<b>173,475</b>	<b>155,728</b>	<b>145,885</b>	<b>122,580</b>	<b>1,221,077</b>
<b>Source of Funds—</b>							
Consolidated Revenue Fund ..	6,715	76,697	148,593	155,733	145,899	122,593	(e)
Loan Fund ..	1,598	—15	24,882	—5	—14	—13	(e)
Trust Funds(f) ..	3,246	..	..	..	..	..	(e)
<b>Total ..</b>	<b>11,559</b>	<b>76,682</b>	<b>173,475</b>	<b>155,728</b>	<b>145,885</b>	<b>122,580</b>	<b>1,221,077</b>

(a) Includes properties transferred from the States. (b) Includes Strategic Stores and Equipment Reserve, 1950-51, £57,048,000; 1951-52, £10,049,000. (c) Excludes Amalgamated Wireless (Aust.) Ltd. and Commonwealth New Guinea Timbers Ltd. included under Postmaster-General's Department and Territories respectively. (d) Excludes Overseas Telecommunications Commission included under Postmaster-General's Department. (e) Not available. (f) From excess receipts of previous years and National Defence Contributions Trust Account.

NOTE.—Minus sign (—) indicates excess of credits or repayments over expenditure.

11. 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 Official Year Book (*see* No. 37, pages 633 to 638). In the following paragraphs reference is made to the arrangements at present in operation.

(ii) *Amounts Paid.* (a) *Year 1953-54.* 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, 1953-54.(a)  
(£'000.)

Particulars.	N.S.W.	Vic.	Q'land.	S.A.	W.A.	Tas.	Total.
Interest on States' Debts ..	2,918	2,127	1,066	704	473	67	7,585
Sinking Fund on States' Debts (b) ..	1,273	759	438	438	356	199	3,463
Special Grants ..	..	..	..	6,100	7,800	1,500	15,400
Tax Reimbursement Grants ..	47,733	29,352	19,257	10,384	9,623	4,066	120,415
Special Financial Assistance ..	8,819	5,622	3,438	1,853	1,718	765	21,915
Commonwealth Aid Roads (c) ..	1,641	2,863	3,160	1,810	3,160	823	16,457
(Supplementary) Trust Account (d) ..	..	..	..	..	..	..	5,000
Price Control Reimbursement ..	..	—1	7	25	6	47	84
Western Australian Waterworks Grant ..	..	..	..	..	333	..	333
Coal Mining Industry—Long Service Leave ..	461	..	78	..	31	9	579
Imported Houses—Grants ..	121	241	..	209	44	..	615
Encouragement of Meat Production ..	..	..	280	..	133	..	413
Grants to Universities ..	536	334	180	167	115	57	1,280
Total ..	66,202	41,207	27,034	21,690	23,792	7,733	193,048

(a) Excludes relief to primary producers and other payments for medical research, etc. (b) Paid to National Debt Sinking Fund. (c) Paid to Trust Fund: excludes £600,000 for road safety practices and Commonwealth strategic roads. (d) Not allocable by States.

(b) 1938-39 and 1949-50 to 1953-54. 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.	1938-39.	1949-50.	1950-51.	1951-52.	1952-53.	1953-54.
Financial Agreement—						
Interest on States' Debts ..	7,585	7,585	7,585	7,585	7,585	7,585
Sinking Fund on States' Debts (b) ..	1,478	2,005	2,241	2,557	3,011	3,463
Special Grants ..	2,020	11,054	12,175	10,522	15,934	15,400
Tax Reimbursement—						
Grants ..	..	62,271	70,107	86,268	108,623	120,415
Additional Grants ..	..	..	5,000	..	..	..
Special Financial Assistance ..	..	..	15,000	33,577	27,146	21,915
Coal Strike Emergency Grant ..	..	8,000	..	..	..	..
Grants for Road Construction, etc. (c) ..	4,266	8,767	13,543	14,647	15,107	16,457
Commonwealth Aid Roads (Supplementary) Trust Account ..	..	..	..	..	..	5,000
Price Control Reimbursement ..	..	706	704	937	1,056	84
Local Public Works—Interest and Sinking Fund ..	100	..	..	..	..	..
Youth Employment ..	200	..	..	..	..	..
Western Australian Waterworks ..	..	37	218	289	224	333
Coal Mining Industry—Long Service Leave ..	..	207	374	490	552	579
Imported Houses—Grants ..	..	..	170	1,788	1,530	615
Encouragement of Meat Production ..	..	..	315	205	398	413
Grants to Universities ..	..	..	..	1,473	1,125	1,389
Total ..	15,649	100,632	127,432	160,347	182,291	193,648

(a) Excludes relief to primary producers and other payments for medical research, etc. (b) Paid to National Debt Sinking Fund. (c) Excludes expenditure on strategic roads and road safety practices, 1949-50 to 1953-54, £600,000.

Particulars of special Commonwealth grants for the relief of primary producers are not included in the foregoing tables. For details *see* Chapter XXI—Agricultural Production. *See also* para. 4., Subsidies and Bounties, and para. 12., Other Expenditure of this Division.

(iii) *Financial Agreement.* Details of the Financial Agreement between the Commonwealth and the States are given in Official Year Book No. 37, pages 685 to 690. Under this Agreement the Commonwealth undertook to contribute £7,584,912 per annum towards interest payable on the State Debts for a period of 58 years from 1st July, 1927. This amount is to be distributed amongst 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 Debts. Details of these payments are given in part D of this Chapter (§ 2, page 805).

(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 Official Year Book (see No. 40, page 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 1938–39 and 1950–51 to 1954–55 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 1954–55 include an estimate of the indispensable need of the claimant State for 1954–55 and an adjustment to the estimated grant for 1952–53.

**COMMONWEALTH GRANTS COMMISSION : GRANTS RECOMMENDED.**  
(£'000.)

Particulars.	1938–39.	1950–51.	1951–52.	1952–53.	1953–54.	1954–55.
<b>South Australia—</b>						
Estimated grant ..	1,040	4,570	4,250	6,600	6,300	3,350
Adjustment (a) ..	..	762	308	—257	—200	—1,100
Net grant recommended ..	1,040	5,332	4,558	6,343	6,100	2,250
<b>Western Australia—</b>						
Estimated grant ..	570	4,750	5,000	8,200	7,350	7,100
Adjustment (a) ..	..	1,089	88	—159	450	350
Net grant recommended ..	570	5,839	5,088	8,041	7,800	7,450
<b>Tasmania—</b>						
Estimated grant ..	410	1,100	750	1,550	1,650	3,200
Adjustment (a) ..	..	—96	126	..	—150	—600
Net grant recommended ..	410	1,004	876	1,550	1,500	2,600
<b>Grand Total ..</b>	<b>2,020</b>	<b>12,175</b>	<b>10,522</b>	<b>15,934</b>	<b>15,400</b>	<b>12,300</b>

(a) Adjustment to estimated grant paid two years previously.

(v) *Tax Reimbursement Grants.* 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 Official Year Book (see No. 37, pages 635 to 637). 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.

This Act provided for reimbursement grants of certain specified amounts to be paid to the States during 1946-47 and 1947-48. For 1948-49 and subsequent years the grants were assessed on the aggregate paid in 1947-48 (£45,000,000) increased in accordance with a formula based on increases in population and average wages. Details of the formula and of the treatment of arrears of State income taxes are given in earlier issues of the Official Year Book (*see* No. 40, page 696).

In 1950-51 an amount of £5,000,000 was paid to the States under the States Grants (Additional Tax Reimbursement Act) 1950. As this was considered as a non-recurring grant the formula outlined above was not amended.

(vi) *Additional Financial Assistance, 1948-49 to 1953-54.*—(a) *Coal Strike Emergency Grant.* During 1949-50 State business undertakings suffered considerable losses as a result of the coal strike. Towards meeting these losses the Commonwealth made grants totalling £8,000,000 to the States. The amounts paid to each State were:—New South Wales, £3,261,000; Victoria, £1,830,000; Queensland, £1,309,000; South Australia, £687,000; Western Australia, £661,000; and Tasmania, £252,000.

(b) *Special Financial Assistance Grants.* During the years 1950-51 to 1953-54 there were heavy additions to the financial needs of the States and special assistance grants amounting to £15,000,000, £33,577,000, £27,146,000 and £21,915,000 respectively were made. For details of amounts paid to each State during 1953-54 *see* page 783 and for payments during 1950-51, 1951-52 and 1952-53 *see* Official Year Book No. 39, page 791, No. 40, page 698 and No. 41, page 619.

(vii) *Grants for Road Construction.* (a) *Main Roads Development Act 1923-25, Federal Aid Roads Act 1926, 1931 and 1936, Federal Aid Roads and Works Act 1937, Commonwealth Aid Roads and Works Act 1947-1949 and Commonwealth Aid Roads Act 1950.* Details of these Acts are given in earlier issues of the Official Year Book (*see* No. 38, pp. 787-8 and No. 41, p. 62) and in the *Finance Bulletins* published by this Bureau.

(b) *The Commonwealth Aid Roads Act 1954* repealed the Commonwealth Aid Roads Act 1950 and provided for payment to the States, for a period of five years from 1st July, 1954, an amount equivalent to 7d. per gallon on all petrol except aviation spirit which is entered for home consumption and which is subject to Customs and Excise duties as specified in Customs Tariff Item 229c and Excise Tariff Item 11(A) 2 and (B) 2. Out of this amount, the following grants are to be made to the States, for construction and maintenance of roads and the purchase of roadmaking plant:—

(a) Sixty per cent. of the amount, less £900,000, per annum for expenditure on roads, and

(b) Forty per cent. of the amount for expenditure on roads in rural areas other than highways, trunk or main roads.

The States may spend from the Commonwealth road grants up to £1,000,000 per annum on works connected with transport by road or water. Five per cent. of the grants is payable to Tasmania and the remainder is to be divided among the other five states three-fifths according to population and two-fifths according to area. In addition the Commonwealth may spend each year £800,000 on strategic roads and £100,000 on the promotion of road safety practices.

(viii) *Other Payments.* (a) *Price Control Reimbursement.* These grants were made from 1948-49 to 1953-54 to reimburse the States for expenditure incurred in administering prices, rents and land sales controls. An amount of £84,000 was paid by the Commonwealth to the States during the year ended 30th June, 1954 to cover certain arrears.

(b) *Western Australian Waterworks.* The Western Australia (Water Supply) Act 1948 provides for grants to Western Australia not exceeding an aggregate of £2,150,000 for the development of the agricultural areas, great southern towns and Goldfields Water Supply scheme. The amount provided by the Commonwealth is not to exceed half the total expenditure on the scheme.

(c) *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 of 6d. per ton on coal produced from 1st November, 1949. The rate of duty was raised to 7½d. per ton from 26th August, 1951 and to 8d. per ton from 30th May, 1952. 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.

(d) *Imported Houses.* A subsidy is paid to the States for houses imported by a State or a housing authority of a State after 12th October, 1949. The amount of the subsidy is the amount by which the cost of imported houses exceeds the cost of building comparable houses from local materials. The subsidy is limited to £300 per house and in aggregate to 30,000 houses or £9,000,000.

(e) *Encouragement of Meat Production.* To develop meat production in Queensland and Western Australia grants are made to these States for the provision of improved 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 £75,000 in Queensland and £31,500 in Western Australia. These limits were extended as from 20th April, 1954 to £150,000 in Queensland and £50,000 in Western Australia.

(f) *Grants to Universities.* The States Grants (Universities) Act 1951, provides for grants to be made to the States for the purpose of financial assistance to Universities during the three years 1950–51 to 1952–53. This Act was superseded by the States Grants (Universities) Act 1953 which came into operation on 1st January, 1953, and which increased the assistance payable during 1952–53 and 1953–54.

**12. Other Expenditure.**—Expenditure under this item represents 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. Advance payments in respect of sales of uranium paid to the Atomic Energy Commission are also included.

Information relating to the taxes levied is given in Division II.—Revenue, of this section (see pages 768, 769, and 770). Details of expenditure from the trust funds are given in § 3., Commonwealth Trust Funds. Details of the price stabilization and other assistance schemes for primary industries may be found in Chapter XXI.—Agricultural Production. Details of expenditure from the Consolidated Revenue Fund during the last five years are given in the following table.

**OTHER EXPENDITURE: RECEIPTS AND EXPENDITURE FROM  
COMMONWEALTH CONSOLIDATED REVENUE FUND.  
(£'000.)**

Receipts from —	Expenditure on—	1949–50.	1950–51.	1951–52.	1952–53.	1953–54.
<b>Taxes—</b>						
Export Charges ..	Export Control Boards (a) ..	..	..	..	166	168
Gold Tax ..	Gold Mining Industry ..	— 10	..	..	..	..
Stevedoring Industry ..	Stevedoring Industry ..					
Charge ..	Board ..	499	420	551	1,144	1,630
Wheat Export Charge	Wheat Industry Price Stabilization (b) ..	12,634	13,353	12,202	8,139	..
Wool Contributory Charge	Wool Use Promotion and Disposals Plan ..	1,439	1,654	486	} 28	..
Wool Tax ..	Wool Reserve Prices Fund ..	..	43,190	1,744		
Total ..	Wool Use Promotion ..	..	..	..	675	772
		14,562	58,617	14,983	10,152	2,570
<b>Other—</b>						
Advance Payments—	Atomic Energy Commission ..	..	..	..	1,174	2,791
Sales of Uranium ..	Wool Industry—Distribution of War-time Trading Profits ..	..	..	..	42,361	..
Wool Disposals Profit..	Australian Wool Bureau ..	..	..	..	..	730
Wool Stores—Moneys paid by Wool Realization Commission	..	..	..	..	43,535	3,521
Total ..	..	..	..	..	..	..
Grand Total ..	..	14,562	58,617	14,983	53,687	6,091

(a) Paid to Apple and Pear Export Fund, Canned Fruits Export Fund, Dairy Produce Export Fund, Dried Fruits Export Fund, Egg Export Fund and Wine Export Fund. Prior to 1952–53 these charges were treated as refunds of Revenue and not shown separately. (b) Paid to Wheat Prices Stabilization Fund.

### § 3. Commonwealth Trust Funds.

1. Receipts, Expenditure and Balances, 1953-54.—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, 1954.

#### COMMONWEALTH TRUST FUNDS: RECEIPTS, EXPENDITURE AND BALANCES, 1953-54.

(£'000.)

Fund.	Balance at 30th June, 1953.	Year ended 30th June, 1954.		Balance at 30th June, 1954.
		Receipts.	Expenditure.	
Australian New Guinea Production ..	1,441	(a) 47	..	1,488
Coal Mining Industry Long Service Leave .. .. .	1,014	603	785	832
Coinage .. .. .	3,891	2,531	2,531	3,891
Commonwealth Aid Roads .. .. .	1,604	17,057	17,267	1,394
Commonwealth Aid Roads (Supplementary) .. .. .	..	5,000	..	5,000
Debt Redemption Reserve .. .. .	..	56,271	..	56,271
Defence Equipment and Supplies .. .. .	..	12,000	..	12,000
Defence Forces Retirement Benefits .. .. .	5,098	1,879	858	6,119
Enemy Subjects .. .. .	1,023	234	77	1,180
Insurance Deposits .. .. .	3,956	691	166	4,481
International Development and Relief .. .. .	586	3,025	2,542	1,069
Korean Operations Pool .. .. .	10,000	19,172	18,267	10,905
Lend-Lease Settlement .. .. .	1,598	42	80	1,560
Liquid Fuel Equalization .. .. .	930	..	..	930
National Debt Sinking Fund .. .. .	167,782	68,828	46,443	190,167
National Welfare .. .. .	186,836	178,659	176,565	188,930
Parliamentary Retiring Allowances .. .. .	111	54	30	135
Public Trustee and Custodian .. .. .	2,318	1,206	3	3,521
Strategic Stores and Equipment Reserve .. .. .	48,871	..	2	48,869
Superannuation .. .. .	29,738	7,810	3,510	34,038
Temple Society .. .. .	627	13	4	636
War Gratuity .. .. .	4,351	(b) -4,000	87	264
War Service Homes .. .. .	..	28	28	..
War Service Homes—Insurance .. .. .	560	117	102	575
Wheat Industry Stabilization .. .. .	298	..	5	293
Wheat Prices Stabilization .. .. .	20,577	343	20,920	..
Wool Contributory Charge .. .. .	2,826	8	2,826	8
Wool Disposals Profit .. .. .	26,566	600	14,843	12,323
Wool Industry .. .. .	7,381	212	460	7,133
Wool Research .. .. .	688	441	569	560
Other .. .. .	35,000	391,404	374,676	52,718
Total .. .. .	566,571	764,365	683,646	647,290

(a) Surplus balance, £190,000 transferred to Consolidated Revenue Fund has been deducted.  
 (b) Surplus balance transferred to Consolidated Revenue Fund.

2. Summary, 1938-39 and 1949-50 to 1953-54.—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.	1938-39.	1949-50.	1950-51.	1951-52.	1952-53.	1953-54.
Balance brought forward .. .. .	25,609	245,194	278,647	363,051	489,729	566,571
Receipts .. .. .	84,167	410,174	622,435	725,282	709,973	764,365
Expenditure .. .. .	85,550	376,721	538,031	598,604	633,131	683,646
Balance carried forward .. .. .	24,226	278,647	363,051	489,729	566,571	647,290

### § 4. Commonwealth Loan Fund.

Brief historical notes relating to the Commonwealth Loan Fund are given in earlier issues of the Official Year Book (*see* No. 37, page 640). In the following table details are given of the net expenditure from the Commonwealth Loan Fund for the years 1938-39 and 1949-50 to 1953-54 and of the aggregate expenditure to 30th June, 1954. The figures shown represent "net" loan expenditure, i.e., after adjustments have been made for refunds of amounts expended in earlier years.

#### COMMONWEALTH NET EXPENDITURE FROM LOAN FUND. (£'000.)

Particulars.	1938-39.	1949-50.	1950-51.	1951-52.	1952-53.	1953-54.	Total to 30th June 1954.
<b>War Loans—</b>							
Defence and War (1914-18, 1939-45) Services .. ..	..	25,483	a 28,773	a 5,120	a 5,684	a 4,199	2,001,679
<b>Other Loans—</b>							
Capital Works and Services—							
Defence(b) .. ..	1,912	..	— 12	..	..	..	8,682
Repatriation Services(b)—							
War Service Homes(b) .. ..	..	..	..	..	..	..	7,329
Other .. ..	..	..	..	..	..	..	47
Postmaster-General's Department .. ..	— 1	— 8	— 1	— 1	— 1	..	40,424
Broadcasting Services .. ..	..	..	..	..	..	..	104
Railways .. ..	..	— 1	— 1	— 3	— 4	— 1	13,750
Territories(c) .. ..	— 7	— 7	— 16	— 1	— 9	— 12	8,724
Other—							
Ships, Yards and Docks .. ..	— 305	..	..	..	..	..	7,694
Civil Aviation .. ..	..	..	..	..	..	..	213
Immigration .. ..	..	..	..	..	..	..	1,681
All other works, buildings, etc. .. ..	— 1	..	..	..	..	..	4,223
<b>Other Purposes—</b>							
Assistance to States—							
Farmers' Debt Adjustment .. ..	2,000	..	..	..	..	..	7,967
Housing .. ..	..	17,215	21,640	26,547	30,000	37,200	178,209
Other .. ..	— 4	..	..	..	..	..	5,976
Wheat Bounty .. ..	..	..	..	..	..	..	3,430
<b>Total Capital Works and Services and Other Purposes</b> .. ..	<b>3,594</b>	<b>17,199</b>	<b>21,610</b>	<b>26,542</b>	<b>29,986</b>	<b>37,187</b>	<b>288,453</b>
<b>International Bank Dollar Loan(d)</b> .. ..	..	..	4,044	23,831	17,935	21,468	67,278
<b>Swiss Loan (e)</b> .. ..	..	..	..	..	..	5,792	5,792
<b>GRAND TOTAL</b> .. ..	<b>3,594</b>	<b>42,682</b>	<b>54,427</b>	<b>55,493</b>	<b>53,605</b>	<b>63,646</b>	<b>2,363,202</b>

(a) Comprises expenditure under War Service Homes Acts—1950-51, £24,911,000 and financial assistance to the States in connexion with War Service Land Settlement—1950-51, £3,862,000; 1951-52, £5,120,000; 1952-53, £5,684,000; 1953-54, £4,199,000. (b) Excludes amounts charged to War Loan Fund. (c) Includes administration and other public buildings, Australian Capital Territory.

(d) Payment to National Debt Sinking Fund. *See* pages 818 and 819. (e) Payment to Swiss Loan Trust Account. *See* page 818.

NOTE.—Minus sign (—) indicates excess of repayments to Loan Fund.

Information relating to the Public Debt of the Commonwealth is given in part D, Commonwealth and State Public Debt, of this chapter.

## B. 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 relegated to



municipal 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, therefore, is needed in making comparisons, and the particulars contained in this Chapter should be read with those contained in Chapter XVIII.—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 in 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 mainly concerned 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 the State is paid into its Consolidated Revenue Fund, from which payments are made under the authority of an annual Appropriation Act passed by the Legislature, or by a permanent appropriation under a special act.

Figures in § 2 following relating to New South Wales represent the transactions of the Consolidated Revenue Fund and the business undertakings included in the annual budget papers. These latter are as follows:—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 obviate duplications caused by inter-fund payments and to maintain uniformity from year to year in the presentation of statistics. 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 Official 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 Official Year Book from year to year (*see also* pages 805–807).

## § 2. State Consolidated Revenue Funds.

### Division I.—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) Payments by Commonwealth Government under the Financial Agreement, Special Grants and Tax Reimbursement Acts, etc.; (e) Interest on advances; and (f) Miscellaneous sources, comprising fines, fees, etc.

Of these sources, that yielding the largest revenue for the States as a whole is the group of business undertakings, the principal contributors being the government railways and tramways. Next in magnitude are Commonwealth payments under the Tax Reimbursement Acts, followed in order by taxation receipts, Commonwealth special financial assistance and special grants, and lands receipts. Since the introduction in 1942–43 of the uniform tax scheme, Commonwealth payments under the Income and Entertainments Tax Reimbursement Acts and, from 1946–47, under the Tax Reimbursement Act, have replaced revenue previously received from income and entertainment taxes.

2. **Revenue Received.**—The following table shows particulars of the total amounts and the amounts per head of consolidated revenue received by the several States during the years 1938–39 and 1949–50 to 1953–54.

## STATE CONSOLIDATED REVENUE.

Year.	N.S.W.(a)	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas.	Total.
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TOTAL REVENUE.  
(£'000.)

1938–39 ..	51,099	26,985	19,330	12,304	10,950	3,615	124,283
1949–50 ..	106,504	55,557	37,119	26,360	26,018	7,077	258,635
1950–51 ..	128,298	63,546	44,723	31,072	28,974	7,819	304,432
1951–52 ..	167,095	81,661	55,753	37,588	33,955	10,469	386,521
1952–53 ..	180,908	96,995	63,171	44,251	38,725	12,061	436,111
1953–54 ..	186,642	106,748	69,696	48,376	43,596	13,285	468,343

PER HEAD OF POPULATION.  
£ s. d.

1938–39 ..	18 13 7	14 8 3	19 3 6	20 13 6	23 9 0	15 4 2	17 19 5
1949–50 ..	33 11 6	25 12 0	31 18 3	38 7 7	47 13 5	25 10 3	32 5 4
1950–51 ..	39 3 9	28 8 2	37 9 10	43 14 0	50 14 3	27 3 9	36 15 11
1951–52 ..	49 15 10	35 9 7	45 13 2	51 10 9	57 8 9	35 1 3	45 9 8
1952–53 ..	52 17 11	41 1 2	50 11 8	59 0 10	63 4 0	39 0 10	50 2 3
1953–54 ..	54 16 0	44 1 2	53 11 6	61 10 10	69 2 7	42 18 8	52 17 9

(a) See § 1 para. 2, page 789.

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 1953–54 are as follows:—

## STATE CONSOLIDATED REVENUE : SOURCES, 1953–54.

Source of Revenue.	N.S.W.(a)	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas.	Total.
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TOTAL REVENUE.  
(£'000.)

Taxation (b) ..	19,104	17,206	8,299	6,540	3,346	3,472	57,967
Business Under- takings ..	88,616	41,163	28,952	16,753	15,271	4	190,759
Lands ..	3,644	2,683	3,967	310	964	335	11,903
Interest (n.e.i.) ..	968	3,054	1,462	2,734	1,126	1,851	11,195
Commonwealth Pay- ments— Tax Reimburse- ments ..	47,733	29,352	19,257	10,384	9,623	4,066	120,415
Other (c) ..	11,437	7,749	4,541	8,681	9,997	2,532	44,937
Miscellaneous ..	15,140	5,541	3,218	2,974	3,269	1,025	31,167
Total ..	186,642	106,748	69,696	48,376	43,596	13,285	468,343

PER HEAD OF POPULATION.  
(£ s. d.)

Taxation (b) ..	5 12 3	7 2 0	6 7 7	8 6 5	5 6 1	11 4 4	6 10 11
Business Under- takings ..	26 0 4	16 19 9	22 5 1	21 6 3	24 4 3	0 0 3	21 10 10
Lands ..	1 1 4	1 2 2	3 1 0	0 7 10	1 10 7	1 1 8	1 6 11
Interest (n.e.i.) ..	0 5 8	1 5 3	1 2 6	3 9 7	1 15 9	5 19 8	1 5 3
Commonwealth Pay- ments— Tax Reimburse- ments ..	14 0 4	12 2 3	14 16 0	13 4 2	15 5 2	13 2 10	13 11 11
Other (c) ..	3 7 2	3 4 0	3 9 10	11 0 11	15 17 1	8 3 8	5 1 0
Miscellaneous ..	4 8 11	2 5 0	2 9 6	3 15 8	5 3 8	3 6 3	3 10 5
Total ..	54 16 0	44 1 2	53 11 6	61 10 10	69 2 7	42 18 8	52 17 9

(a) See § 1 para. 2, page 789. (b) In all States certain taxation collections are not paid into Consolidated Revenue Fund. For total collections see next page. (c) Includes payments under Financial Agreement, Special Grants, Prices Control Reimbursement Grants and Special Financial Assistance.

(ii) *Revenue from Taxation. (a) General.* The following table shows, for the year 1953-54, particulars of all State taxation collections 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 represent a comprehensive statement of all taxation collections by the Government in each State. In this and the succeeding statements of taxation, 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 Tax" instead of under "Stamp Duties" and "Licences" respectively. Commonwealth payments under the State Grants (Tax Reimbursement) Act are not included.

## STATE REVENUE FROM TAXATION: TOTAL NET COLLECTIONS(a) 1953-54.

(£'000.)

Tax.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas.	Total.
<b>Motor Taxes—</b>							
Registration Fees and Taxes .. ..	7,997	4,081	3,766	2,128	1,123	557	19,652
Drivers', etc., Licences ..	714	358	(b) 128	239	101	35	1,575
Other .. ..	1,934	1,444	912	101	114	145	4,650
<b>Total Motor ..</b>	<b>10,645</b>	<b>5,883</b>	<b>4,806</b>	<b>2,468</b>	<b>1,338</b>	<b>737</b>	<b>25,877</b>
<b>Probate and Succession</b>							
Duties .. ..	8,014	5,387	2,353	1,593	877	476	18,700
Other Stamp Duties .. ..	5,645	3,685	2,548	1,040	1,197	428	14,543
Land .. ..	2	2,016	1,080	568	297	175	4,138
Income (Arrears) .. ..	33	27	21	4	7	..	92
Liquor .. ..	2,429	1,963	472	55	268	159	5,346
Lotteries .. ..	..	..	288	..	..	1,516	1,804
Racing .. ..	2,890	2,451	297	1,087	421	174	7,320
Entertainments .. ..	..	656	..	..	165	83	906
Licences (n.e.l.) .. ..	91	232	..	54	26	8	..
Other .. ..	..	..	952	42	86	..	1,491
<b>GRAND TOTAL ..</b>	<b>29,749</b>	<b>22,300</b>	<b>12,817</b>	<b>6,911</b>	<b>4,682</b>	<b>3,758</b>	<b>80,217</b>

(a) From all sources of taxation irrespective of whether paid to Consolidated Revenue or to other funds. (b) As from October, 1952 no charge has been made for drivers' licences. Instead a driving fee is charged upon renewal of registration.

Of the total taxation collections detailed above the following were paid into special funds:—

## STATE REVENUE FROM TAXATION: PAYMENTS INTO SPECIAL FUNDS, 1953-54.

(£'000.)

Tax.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas.	Total.
<b>Motor ..</b>	<b>10,645</b>	<b>4,827</b>	<b>3,766</b>	<b>..</b>	<b>1,250</b>	<b>286</b>	<b>20,774</b>
<b>Other Stamp Duties ..</b>	<b>..</b>	<b>155</b>	<b>..</b>	<b>..</b>	<b>..</b>	<b>..</b>	<b>155</b>
<b>Liquor ..</b>	<b>..</b>	<b>112</b>	<b>73</b>	<b>..</b>	<b>..</b>	<b>..</b>	<b>185</b>
<b>Racing ..</b>	<b>..</b>	<b>..</b>	<b>..</b>	<b>371</b>	<b>..</b>	<b>..</b>	<b>371</b>
<b>Other ..</b>	<b>..</b>	<b>..</b>	<b>679</b>	<b>..</b>	<b>86</b>	<b>..</b>	<b>765</b>
<b>Total ..</b>	<b>10,645</b>	<b>5,094</b>	<b>4,518</b>	<b>371</b>	<b>1,336</b>	<b>286</b>	<b>22,250</b>

The table hereunder shows, for the year 1953-54, the proportions of collections under individual classes of tax to the total taxation revenue :—

**STATE REVENUE FROM TAXATION: PROPORTIONS OF INDIVIDUAL TAXES TO TOTAL, 1953-54.**

(Per Cent.)

Tax.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas.	Total.
Motor .. .. .	35.78	26.38	37.50	35.71	28.57	19.61	32.26
Probate and Succession Duties .. .. .	26.94	24.16	18.35	23.05	18.73	12.67	23.31
Other Stamp Duties .. .. .	18.97	16.53	19.87	15.05	25.57	11.40	18.13
Land .. .. .	0.02	9.04	8.42	8.22	6.34	4.05	5.16
Income (Arrears) .. .. .	0.11	0.12	0.17	0.05	0.15	..	0.11
Liquor .. .. .	8.16	8.80	3.69	0.80	5.74	4.23	6.66
Lotteries .. .. .	..	..	2.25	..	..	40.35	2.25
Racing .. .. .	9.71	10.99	2.32	15.73	8.98	4.62	9.12
Entertainments .. .. .	..	2.94	..	..	3.53	2.27	1.14
Licences (n.e.l.) .. .. .	0.31	1.04	..	0.78	0.55	0.20	..
Other .. .. .	..	..	7.43	0.61	1.84	..	1.86
<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>

(b) 1938-39 and 1949-50 to 1953-54. Prior to federation, customs and excise duties constituted the principal source of revenue from taxation. Thereafter, until the introduction of the uniform income tax scheme in 1942-43, the most productive State taxes were the various income taxes which, in 1941-42, included unemployment relief, State development and hospital taxes. Since 1941-42 the States have been reimbursed by the Commonwealth for the revenue lost by the discontinuance of these taxes. Details of the reimbursement grants are given on pp. 784 and 790. Information relating to the State income taxes which were levied prior to 1942-43 may be found in earlier issues of the Year Book.

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 1938-39 and 1949-50 to 1953-54, are shown in the following table :—

**STATE REVENUE FROM TAXATION: TOTAL NET COLLECTIONS.(a)**

Year.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas.	Total.
<b>TOTAL NET COLLECTIONS.</b> (£'000.)							
1938-39(b)	20,263	12,023	8,657	4,199	3,597	1,779	50,518
1949-50 ..	16,584	10,814	6,172	3,475	2,518	2,323	41,886
1950-51 ..	20,850	13,226	7,755	4,347	2,977	2,644	51,799
1951-52 ..	24,840	16,943	9,672	5,151	3,455	2,949	63,010
1952-53 ..	27,678	19,157	11,603	5,341	3,912	3,296	70,987
1953-54 ..	29,749	22,300	12,817	6,911	4,682	3,758	80,217

**PER HEAD OF POPULATION.**

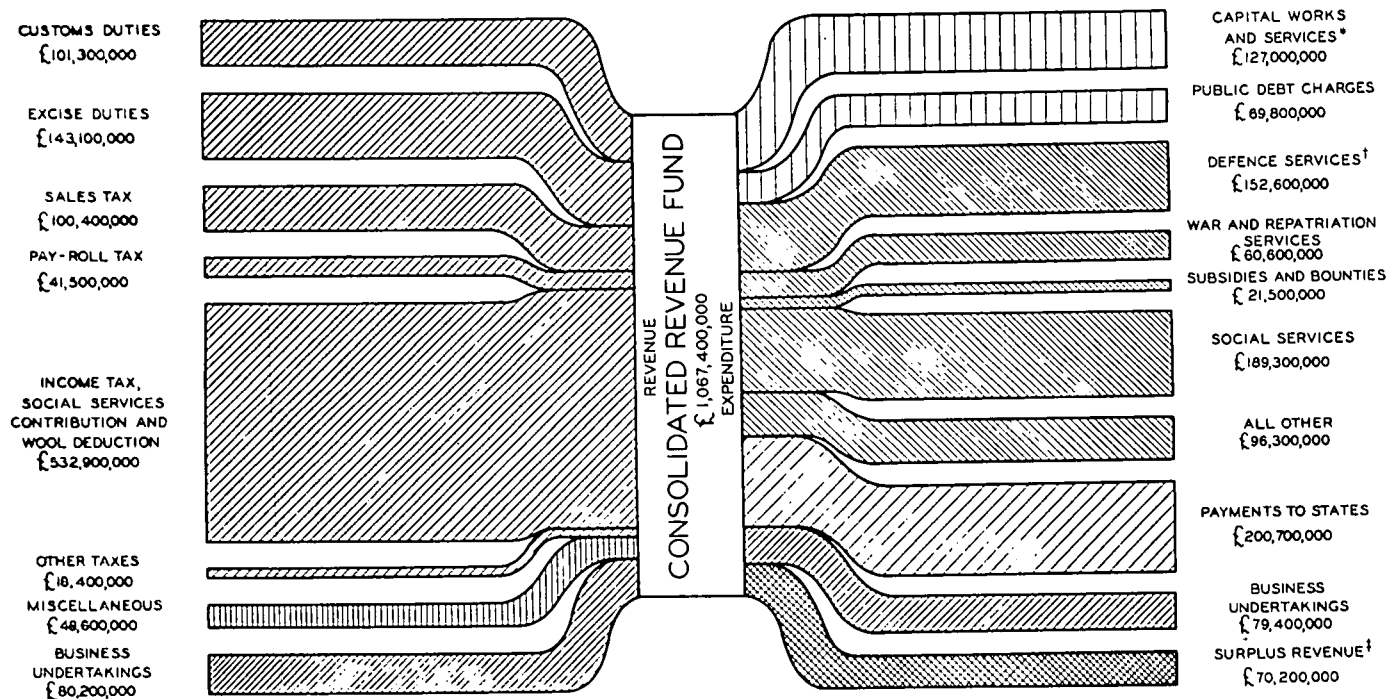
(£ s. d.)

1938-39(b)	7 8 2	6 8 5	8 11 6	7 1 1	7 14 1	7 9 8	7 6 1
1949-50 ..	5 4 7	4 19 8	5 6 2	5 1 2	4 12 3	8 7 6	5 4 6
1950-51 ..	6 7 4	5 18 3	6 10 1	6 2 3	5 4 2	9 3 10	6 5 2
1951-52 ..	7 8 0	7 7 3	7 18 5	7 1 3	5 16 10	9 17 6	7 8 3
1952-53 ..	8 1 10	8 2 2	9 5 10	7 2 6	6 7 8	10 13 5	8 3 1
1953-54 ..	8 14 8	9 4 4	9 17 2	8 15 8	7 8 6	12 2 10	9 1 2

(a) Excluding Commonwealth Tax Reimbursements.

(b) Includes Income Taxes.

# COMMONWEALTH CONSOLIDATED REVENUE FUND, YEAR ENDED 30<sup>TH</sup> JUNE, 1955

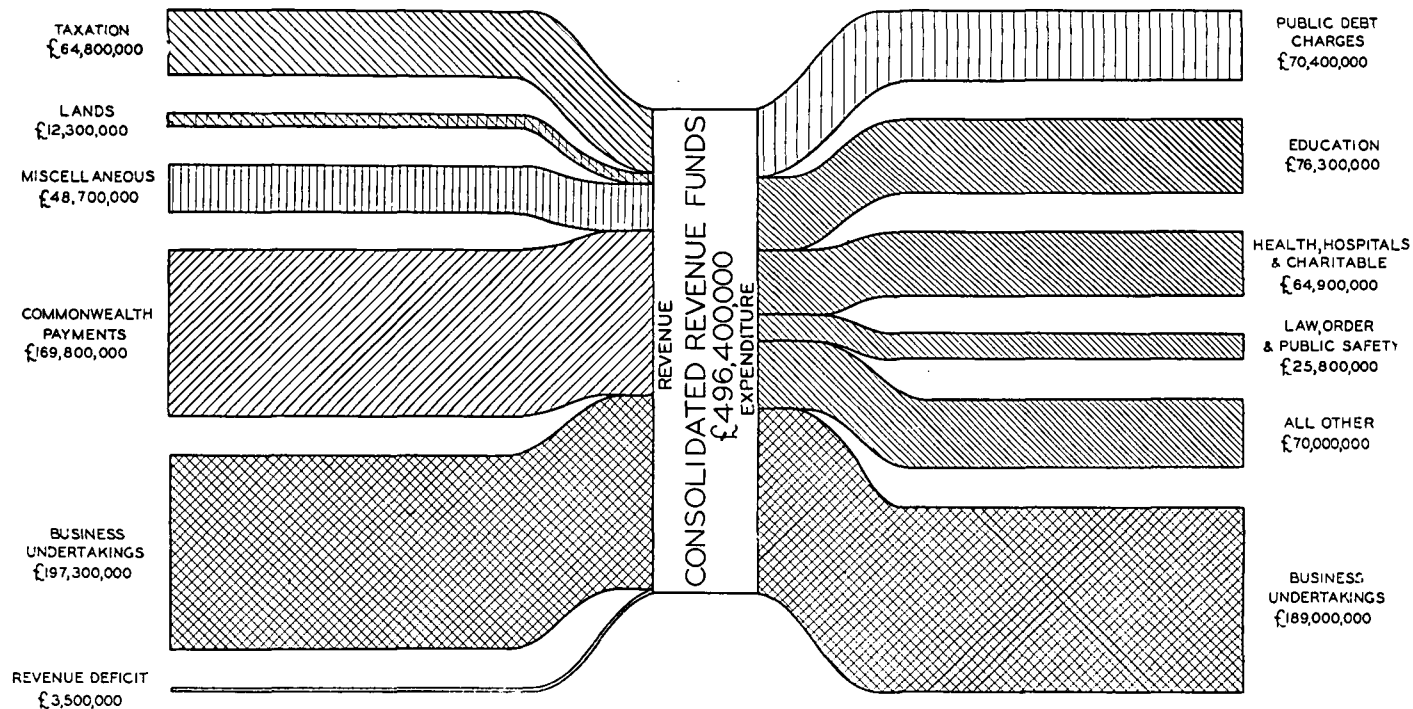


\* INCLUDES DEFENCE WORKS AND SERVICES £33,000,000

† INCLUDES WAR DEBT CHARGES £38,900,000

‡ PAID TO DEBT REDEMPTION RESERVE TRUST ACCOUNT

# STATE CONSOLIDATED REVENUE FUNDS, YEAR ENDED 30<sup>TH</sup> JUNE, 1955



The following table shows, for the years 1938-39 and 1949-50 to 1953-54, 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.(a)**  
(£'000.)

Tax.	1938-39.	1949-50.	1950-51.	1951-52.	1952-53.	1953-54.
Motor	6,961	12,038	15,579	20,523	23,321	25,877
Probate and Succession Duties	5,000	10,600	13,004	15,394	17,756	18,700
Other Stamp Duties	3,466	9,431	11,961	12,228	12,297	14,543
Land	1,408	1,201	1,362	2,511	3,416	4,158
Income Taxes	29,796	(b) 267	(b) 291	(b) 155	(b) 132	(b) 92
Liquor	1,045	2,432	2,726	3,681	4,429	5,346
Lotteries	532	1,353	1,502	1,642	1,756	1,804
Racing	1,251	3,739	4,428	5,850	6,623	7,320
Entertainments	633	..	..	..	..	906
Licences and all other	426	825	946	1,026	1,257	1,491
Total	50,518	41,886	51,799	63,010	70,987	80,217

(a) From all sources of taxation irrespective of whether paid to Consolidated Revenue or to other funds. Excludes Commonwealth Tax Reimbursements. (b) Arrears of State income taxes.

Details of taxation collections paid into special funds and included in the above table are shown below :—

**STATE REVENUE FROM TAXATION : PAYMENTS INTO SPECIAL FUNDS.**  
(£'000.)

Tax.	1938-39.	1949-50.	1950-51.	1951-52.	1952-53.	1953-54.
Unemployment Relief	1,119	..	..	..	..	..
Hospital	264	..	..	..	..	..
Motor	5,858	10,037	13,309	16,934	19,316	20,774
Other Stamp Duties	..	106	125	137	122	155
Liquor	92	136	137	149	173	185
Racing	83	371	450	448	349	371
Other	173	176	294	357	638	765
Total	7,589	10,826	14,315	18,025	20,598	22,250

(iii) *Business Undertakings.* (a) 1953-54. A very large proportion of State gross revenues is made up of receipts from business undertakings under the control of the Governments. The principal 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 1953-54 the revenue from these sources was £190,759,000 or 40.7 per cent. of the revenue from all sources. Details of revenue are as follows :—

**STATE REVENUE FROM BUSINESS UNDERTAKINGS, 1953-54.**  
(£'000.)

Source.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas.(a)	Total.
Railways (b)	74,569	(c) 35,841	28,952	12,806	11,377	..	163,545
Tramways and Omnibuses	11,575	..	..	..	1,027	..	12,602
Harbours, Rivers, Lights	2,472	(d) 470	..	1,375	465	..	4,782
Water Supply, Sewerage, Irrigation and Drainage	..	2,671	..	2,352	2,112	..	6,535
Electricity Supply	..	1,683	..	..	..	4	1,687
Other	..	1,098	..	220	290	..	1,608
Total	88,616	41,163	28,952	16,753	15,271	4	190,759

(a) Tasmanian transport services are under the separate control of the Transport Commission. (b) The following contributions to Railways revenue from Consolidated Revenue Fund are excluded—New South Wales, £1,000,000; Victoria, £1,035,000; South Australia, £4,000,000. (c) Includes electric tramways operated by the Railways Department. (d) Includes Harbour Trust Fund contribution, £344,000.

(b) 1938-39 and 1949-50 to 1953-54. 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.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas.	Total.
TOTAL REVENUE.							
(£'000.)							
1938-39 ..	24,676	11,649	7,642	4,957	5,633	(a) 511	55,068
1949-50 ..	50,879	23,834	15,460	9,133	8,822	4	108,132
1950-51 ..	61,675	22,646	18,876	10,120	9,782	4	123,103
1951-52 ..	82,454	29,180	22,391	12,938	12,430	4	159,397
1952-53 ..	86,223	36,845	24,868	15,366	11,475	4	174,781
1953-54 ..	88,616	41,163	28,952	16,753	15,271	4	190,759

### PER HEAD OF POPULATION.

(£ s. d.)							
1938-39 ..	9 0 5	6 2 6	7 11 7	8 6 6	12 1 4	(a) 2 3 0	7 19 3
1949-50 ..	16 0 10	10 19 8	13 5 10	13 6 0	16 3 4	0 0 4	13 9 10
1950-51 ..	18 16 9	10 2 6	15 16 5	14 4 8	17 2 5	0 0 4	14 17 7
1951-52 ..	24 11 5	12 13 7	18 6 9	17 14 9	21 0 6	0 0 3	18 15 2
1952-53 ..	25 4 3	15 11 11	19 18 3	20 10 0	18 14 7	0 0 3	20 1 8
1953-54 ..	26 0 4	16 18 9	22 5 1	21 6 4	24 4 8	0 0 3	21 11 10

(a) Includes Tasmanian transport services which were subsequently placed under the control of the Transport Commission.

In the table below, particulars of total State revenue from Business Undertakings for the various types of undertakings are shown for the years 1938-39 and 1949-50 to 1953-54 :—

### STATE REVENUE FROM BUSINESS UNDERTAKINGS.

(£'000.)

Source.	1938-39.	1949-50.	1950-51.	1951-52.	1952-53.	1953-54.
Railways, Tramways and Omnibuses ..	48,154	98,289	112,396	146,720	161,479	176,147
Harbour Services ..	2,357	3,627	3,939	4,569	4,058	4,782
Water Supply, Sewerage, Irrigation and Drainage ..	2,543	4,338	4,745	5,568	6,142	6,535
Other ..	2,014	1,878	2,023	2,540	3,102	3,295
Total ..	55,068	108,132	123,103	159,397	174,781	190,759

(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 1953-54.



STATE LAND REVENUE, 1953-54.  
(£'000.)

Source.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas.	Total.
Sales ..	90	117	..	47	76	12	820
Conditional Purchases	311	..	..	3	173		
Rentals(a) ..	2,002	231	2,340	260	167	20	5,020
Forestry ..	1,183	2,244	1,524	..	548	303	5,802
Other ..	58	91	103	..	..	..	252
Total ..	3,644	2,683	3,967	310	964	335	11,003

(a) Includes mining royalties, rents, etc.

The total land revenue for all States for the years 1938-39 and 1949-50 to 1953-54 respectively was:—£4,144,000, £7,004,000, £7,917,000, £11,792,000, £12,659,000, and £11,903,000.

(v) *Commonwealth Payments.* Commonwealth payments to the States represent a considerable proportion of the States' Revenue. In 1953-54 the total amount (excluding sundry minor items) paid to the Consolidated Revenue Funds of the States was £165,351,000 (35.3 per cent.). This was made up of the contribution towards interest on States' debts under the Financial Agreement, £7,585,000, special grants to the States of South Australia, Western Australia and Tasmania, £15,400,000, prices control reimbursement £37,000, special financial assistance, £21,915,000 and tax reimbursement grants, £120,415,000.

In addition to these, the States receive a number of other payments which are paid to trust funds. The main items in this class are the contribution towards the sinking fund on States' debts (£3,463,000 in 1953-54) paid to the National Debt Sinking Fund and grants for Commonwealth Aid Roads (£23,457,000 in 1953-54) paid to State trust funds.

More detailed information concerning Commonwealth payments to the States is given in § 2 of part A of this Chapter (page 783).

(vi) *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. In 1953-54 interest, mainly from loans to local governing bodies, on public account balances and for soldier land settlement amounted to £11,195,000, whilst "Miscellaneous" revenue, which includes fines of the courts and fees for services, amounted to £31,028,000,

## Division II.—Expenditure.

1. *General.*—The principal heads of State expenditure from Consolidated Revenue Funds are:—

(a) Interest, exchange and debt redemption charges in connexion with public debt; (b) Working expenses of railways, tramways and other business and industrial undertakings; (c) Education; (d) Health and charitable expenditure; (e) Justice; (f) Police; (g) Penal establishments; and (h) all other expenditure, under which heading is included public works, lands and surveys, agriculture and forestry, legislative and general administration, pensions and miscellaneous.

In earlier years the working expenses of railways and tramways were the most important item of State Governmental expenditure, but, for a period prior to 1941-42, public debt charges were the heaviest item. Since then, however, railways and tramways expenditure has again taken the major place. In the year 1953-54 the working expenses of the railways, tramways and omnibuses were 36.6 per cent. of the total expenditure from the State Consolidated Revenue Funds; next in importance were education, 14.4 per cent.; charitable, public health and hospitals, 11.5 per cent.; public debt charges, 13.2 per cent.; and law, order and public safety, 5.2 per cent.

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 1938-39 and 1949-50 to 1953-54 are shown in the following table :—

**STATE EXPENDITURE : CONSOLIDATED REVENUE FUNDS.**

Year.	N.S.W.(a)	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas.	Total.
<b>TOTAL EXPENDITURE.</b> (£'000.)							
1938-39 ..	53,558	27,773	19,316	12,701	11,170	3,641	128,159
1949-50 ..	107,681	55,816	37,090	26,550	25,994	7,344	260,475
1950-51 ..	128,265	63,889	44,625	30,842	28,814	8,066	304,501
1951-52 ..	166,997	84,067	55,708	37,499	34,547	10,871	389,689
1952-53 ..	180,811	97,360	62,980	44,226	39,233	11,763	436,373
1953-54 ..	186,514	106,037	69,353	46,566	43,699	13,270	465,439
<b>PER HEAD OF POPULATION.</b> (£ s. d.)							
1938-39 ..	19 11 7	14 16 8	19 3 3	21 6 10	23 18 5	15 6 5	18 10 8
1949-50 ..	33 18 11	25 14 5	31 17 9	38 13 1	47 12 7	26 9 6	32 9 11
1950-51 ..	39 3 6	28 11 3	37 8 2	43 7 7	50 8 8	28 0 11	36 16 1
1951-52 ..	49 15 2	36 10 6	45 12 5	51 8 3	58 8 10	36 8 3	45 17 2
1952-53 ..	52 17 4	41 4 3	50 8 8	59 0 2	64 0 7	38 1 6	50 2 10
1953-54 ..	54 15 3	43 15 3	53 6 6	59 4 8	69 5 10	42 17 8	52 11 2

(a) See § 1, para. 2, page 789.

3. **Details of Expenditure.**—(i) 1953-54. The following table shows the total expenditure and expenditure per head for each of the principal items :—

**STATE EXPENDITURE : DETAILS, 1953-54.**

Particulars.	N.S.W.(a)	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas.(b)	Total.
<b>TOTAL EXPENDITURE.</b> (£'000.)							
Public Debt (interest, exchange, debt redemption, etc.) ..	19,817	14,327	8,965	8,237	6,488	3,391	61,225
Railways ..	64,182	34,607	28,303	14,160	14,357	..	155,609
Tramways and Omnibuses ..	13,446	..	..	..	1,154	..	14,600
Harbours and Rivers, etc. ..	1,705	422	83	1,291	415	..	3,916
Water Supply, Sewerage, Irrigation and Drainage ..	..	2,590	..	1,969	1,879	..	6,438
Other Business and Industrial Undertakings ..	..	1,169	328	199	913	913	3,522
Education ..	27,805	17,391	8,082	5,589	5,544	2,810	67,221
Health and Charitable ..	21,767	15,625	9,232	4,710	4,750	2,348	58,432
Justice ..	2,227	1,297	719	297	348	183	5,071
Police ..	5,864	4,073	2,733	1,231	1,243	544	15,688
Penal establishments ..	1,482	541	202	252	170	100	2,747
Public safety ..	325	94	265	52	93	38	867
Adjustment of surplus of previous years(c) ..	..	..	..	..	450	-150	300
All other expenditure ..	27,894	13,901	10,441	8,579	5,895	3,093	69,803
<b>Total ..</b>	<b>186,514</b>	<b>106,037</b>	<b>69,353</b>	<b>46,566</b>	<b>43,699</b>	<b>13,270</b>	<b>465,439</b>

(a) See § 1, para. 2, page 789.

(b) Tasmanian transport services are under the separate control

of the Transport Commission. (c) Balance of Special Grant, 1951-52. The Special Grant for 1953-54 was brought into the Western Australian Consolidated Revenue Fund as £7,350,000, although the Commonwealth payment was £7,800,000. The Special Grant for 1953-54 taken into Tasmanian Consolidated Revenue Fund was £1,650,000, although the Commonwealth payment was £1,500,000. The difference was offset in the Tasmanian accounts against the adjusted surplus for 1951-52.

## STATE EXPENDITURE: DETAILS, 1953-54—continued.

Particulars.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas.	Total.
PER HEAD OF POPULATION. (£ s. d.)							
Public Debt (interest, exchange, debt redemption, etc.)	5 16 4	5 18 3	6 17 10	10 9 7	10 5 9	10 19 2	6 18 7
Railways ..	18 16 11	14 5 8	21 15 1	18 0 3	22 15 4	..	17 11 6
Tramways and Omnibuses ..	3 18 11	..	..	..	1 16 7	..	1 13 0
Harbours and Rivers, etc.	0 10 0	0 3 6	0 1 4	1 12 10	0 13 2	..	0 8 10
Water Supply, Sewerage, Irrigation and Drainage ..	..	1 1 4	..	2 10 1	2 19 7	..	0 14 6
Other Business and Industrial Undertakings ..	..	0 9 8	0 5 2	0 5 1	1 9 0	2 19 0	0 7 11
Education ..	8 3 3	7 3 6	6 4 3	7 2 3	8 15 10	9 1 8	7 11 10
Health and Charitable ..	6 7 10	6 8 11	7 1 11	5 19 10	7 10 7	7 11 9	6 11 11
Justice ..	0 13 1	0 10 9	0 11 2	0 7 6	0 11 0	0 11 10	0 11 6
Police ..	1 14 5	1 13 8	2 2 0	1 11 3	1 19 5	1 15 2	1 15 3
Penal establishments	0 8 8	0 4 6	0 3 2	0 6 5	0 5 5	0 6 5	0 6 2
Public safety ..	0 1 11	0 0 9	0 4 1	0 1 4	0 3 0	0 2 5	0 1 10
Adjustment of surplus of previous years ..	..	..	..	..	0 14 3	-0 9 8	0 0 8
All other expenditure	8 3 11	5 14 9	8 0 6	10 18 3	9 6 11	9 19 11	7 17 8
Total ..	54 15 3	43 15 3	53 6 6	59 4 8	69 5 10	42 17 8	52 11 2

(ii) 1938-39 and 1949-50 to 1953-54. Expenditure by the several States for these years on principal items is shown in the following table:—

STATE EXPENDITURE.  
(£'000.)

Particulars.	1938-39.	1949-50.	1950-51.	1951-52.	1952-53.	1953-54.
Public Debt (interest, exchange, debt redemption, etc.) ..	40,158	43,999	46,231	50,545	54,449	61,225
Railways, Tramways and Omnibuses (working expenses) ..	38,138	99,230	115,366	151,710	165,863	170,209
Harbours and Rivers, etc. ..	680	1,789	2,155	3,067	3,155	3,916
Water Supply, Sewerage, Irrigation and Drainage ..	1,076	3,363	4,137	5,233	6,151	6,438
Other Business and Industrial Undertakings ..	1,035	2,340	2,319	2,809	3,405	3,522
Education ..	12,639	32,786	39,973	51,025	61,758	67,221
Health and Charitable ..	15,307	27,739	34,817	48,396	54,641	58,432
Justice ..	1,323	2,851	3,376	4,240	4,731	5,071
Police ..	3,733	8,257	9,831	12,575	14,837	15,688
Penal establishments ..	646	1,490	1,731	2,338	2,537	2,747
Public safety ..	297	657	711	962	930	867
Reduction of previous deficits or adjustment of surpluses ..	..	1,012	1,196	126	-159	300
All other expenditure ..	13,127	34,962	42,658	56,663	64,075	69,803
Total ..	128,159	260,475	304,501	389,689	436,373	465,439

**Division III.—Surplus Revenue.**

The following table shows for each of the years 1938-39 and 1949-50 to 1953-54 the total amount and amount per head of the surplus or deficit of each State :—

**STATE SURPLUS REVENUE.**

Year.	N.S.W.(a)	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas.	Total.
TOTAL AMOUNT. (£'000.)							
1938-39 ..	-2,459	- 787	14	-397	-221	- 26	-3,876
1949-50 ..	-1,177	- 259	29	-190	24	-267	-1,840
1950-51 ..	33	- 343	98	230	160	-247	- 69
1951-52 ..	98	-2,406	45	89	-592	-402	-3,168
1952-53 ..	97	- 365	191	25	-508	298	- 262
1953-54 ..	128	711	343	1,810	-103	15	2,904

**PER HEAD OF POPULATION.  
(£ s. d.)**

1938-39 ..	-0 18 0	-0 8 5	0 0 3	-0 13 4	-0 9 5	-0 2 3	-0 11 3
1949-50 ..	-0 7 5	-0 2 5	0 0 6	-0 5 6	0 0 10	-0 19 3	-0 4 7
1950-51 ..	0 0 3	-0 3 1	0 1 8	0 6 5	0 5 7	-0 17 2	-0 0 2
1951-52 ..	0 0 8	-1 0 11	0 0 9	0 2 6	-1 0 1	-1 7 0	-0 7 6
1952-53 ..	0 0 7	-0 3 1	0 3 0	0 0 8	-0 16 7	0 19 4	-0 0 7
1953-54 ..	0 0 9	0 5 11	0 5 3	2 6 1	0 3 0	0 1 0	0 6 7

(a) See § 1, para. 2, page 789.

NOTE.—Minus sign (—) indicates deficit.

**§ 3. State Trust Funds.**

In addition to the moneys received as revenue and paid to the credit of the Consolidated Revenue Funds, considerable sums are held by the State Governments in trust for various purposes. The balances of trust funds held at 30th June of the years 1939 and 1950 to 1954 were as follows :—

**STATE TRUST FUND BALANCES.  
(£'000.)**

At 30th June—	N.S.W.(a)	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas.	Total.
1939 .. ..	15,684	8,189	3,062	1,448	3,744	530	32,657
1950 .. ..	32,922	16,468	30,382	3,162	10,929	390	94,253
1951 .. ..	43,169	18,725	33,907	6,184	12,090	360	114,435
1952 .. ..	39,419	20,084	35,097	1,896	10,537	625	107,658
1953 .. ..	53,240	22,456	38,652	2,573	11,646	1,320	129,887
1954 .. ..	63,284	29,023	47,518	4,131	12,957	1,671	158,584

(a) Special Deposits Account and Special Accounts.

**§ 4. State Loan Funds.**

1. **General.**—As far back as 1842 revenue collections were supplemented by borrowed moneys, the earliest loan being raised by New South Wales for the purpose of assisting immigration, at rates of interest varying from 2½d. to 5½d. per £100 per diem, or

approximately from  $4\frac{1}{2}$  per cent. to 8 per cent. per annum. Australian public borrowing, however, is mainly due to the fact that the State Governments, in addition to ordinary administrative duties, undertake functions which in other countries are usually entrusted to local authorities or left to private enterprise. Foremost amongst these are the construction and control of the railway systems. 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 loan expenditure and public debt thus differ very materially from those of most European countries, and from those of the Commonwealth, where such expenditure was very largely incurred for defence or war purposes. As shown above, the State debts consist chiefly of moneys raised and expended with the object of assisting the development of the resources of the country, and are 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 *Finance Bulletin* No. 45, 1953-54. Such moneys are credited to the Loan Fund in the year of repayment irrespective of when the advance was made. See also following page.

2. Gross Loan Expenditure.—(i) 1953-54. Particulars of gross loan expenditure on works, services, etc., are shown in the following table:—

## STATE GROSS LOAN EXPENDITURE ON WORKS, SERVICES, ETC., 1953-54.

(£'000.)

Head of Expenditure.	N.S.W.	Vic.(a)	Q'land.	S. Aust.	W. Aust.	Tas.	Total.
Public Works and Services—							
Railways .. .. .	13,000	8,839	5,572	1,508	6,588	491	35,998
Tramways and Omnibuses .. .. .	815			600	32		1,447
Roads .. .. .	400	1,538	172				
Bridges .. .. .							
Harbours and Rivers .. .. .	1,510	247		743	1,412	795	6,817
Lights and Lighthouses .. .. .							
Water Supply .. .. .	3,610	8,475	2,679	4,571	1,475	350	22,333
Sewerage .. .. .		96		716	361		
Electricity Supply .. .. .	16,500	6,000		5,000	703	8,291	36,194
Public Buildings .. .. .	11,361	10,988	2,174	1,707	1,580	1,578	29,388
Loans and Grants to Local Bodies .. .. .							
Unemployment Relief Works .. .. .	284	132	6,250				6,666
Housing(b) .. .. .	1,070	41	560	3,847	1,123	2,798	9,430
Other Public Works, etc. .. .. .	506	313		137	356	395	1,707
Primary Production—							
Soldier Settlement .. .. .	4,268	4,923	268	2		93	9,554
Land for Settlement .. .. .			91	29	53	16	189
Advances to Settlers .. .. .				334		183	517
Water Conservation .. .. .				248	104		
Irrigation and Drainage .. .. .	5,094		1,121	583	60		7,215
Rabbit-proof Fencing .. .. .		2	1	(c)			3
Agriculture .. .. .	331	250	576		31		1,188
Agricultural Bank .. .. .							
Forestry .. .. .	178	900	1,063	1,075	78		3,523
Mines and Mineral Resources .. .. .	409	1	103	3,817	215		4,548
Other .. .. .	695	75		8			769
Other Purposes .. .. .		(d) 2,842		522	1,653		5,153
Total Public Works, Services, etc. .. .. .	60,021	45,665	10,630	25,452	15,924	15,356	187,948
Per Head of Population .. .. .	£17 12 6	£18 16 11	£15 17 3	£32 7 7	£25 1 10	£49 12 6	£20 13 2

(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 with Advances to Settlers.

(d) Includes Gas and Fuel Corporation advances and share capital, £1,995,000, and Rural Finance Corporation, for advances to rural industries, £700,000.

(ii) 1938-39 and 1949-50 to 1953-54. 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.	Victoria. (a)	Q'land.	S. Aust.	W. Aust.	Tas.	Total.
GROSS LOAN EXPENDITURE. (£'000.)							
1938-39 .. ..	8,789	3,218	3,393	2,529	1,783	1,687	21,399
1949-50 .. ..	27,219	20,325	9,035	12,122	8,351	5,783	82,835
1950-51 .. ..	41,168	35,309	17,698	20,601	11,404	15,200	141,380
1951-52 .. ..	65,354	55,084	23,662	31,198	18,758	16,882	210,938
1952-53 .. ..	54,551	41,575	21,854	25,393	19,012	19,830	182,215
1953-54 .. ..	60,021	45,665	20,630	25,452	15,824	15,356	182,948

### PER HEAD OF POPULATION.

(£ s. d.)

1938-39 ..	3	4	3	1	14	5	3	7	4	4	5	0	3	16	4	7	2	0	3	1	11
1949-50 ..	8	11	7	9	7	4	7	15	4	17	13	0	15	6	0	20	17	0	10	6	8
1950-51 ..	12	11	6	15	15	9	14	16	9	28	19	6	19	19	2	52	17	1	17	1	9
1951-52 ..	19	9	6	23	18	8	19	7	7	42	15	6	31	14	7	56	10	11	24	16	6
1952-53 ..	15	19	0	17	12	0	17	10	0	33	17	7	31	0	7	64	3	9	20	18	9
1953-54 ..	17	12	6	18	16	11	15	17	3	32	7	7	25	1	10	49	12	6	20	13	2

(a) See footnote (a) to previous table.

The above tables do not include particulars of expenditure on loan discounts and flotations, 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 1951-52 to 1953-54 are shown in paragraph 3 following.

3. Total Loan Expenditure, 1951-52 to 1953-54.—The following table shows particulars, in summary form, of the total loan expenditure in each State during each of these years.

### STATE LOAN EXPENDITURE : SUMMARY.

(£'000.)

Particulars.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas.	Total.
1951-52.							
Works and Services—							
Gross Expenditure ..	65,354	55,084	23,662	31,198	18,758	16,882	210,938
Net Expenditure ..	63,433	51,573	22,070	27,795	17,758	15,008	197,637
Repayments ..	1,921	3,511	1,592	3,403	1,000	1,874	13,301
Other than Works, etc.(a)—							
Gross Expenditure ..	188	2,183	150	7	20	142	2,690
Net Expenditure ..	188	2,183	150	7	13	141	2,682
Repayments ..	..	..	..	..	(b) 7	1	8
Total Loan Expenditure—							
Gross ..	65,542	57,267	23,812	31,205	18,778	17,024	213,628
Net ..	63,621	53,756	22,220	27,802	17,771	15,149	200,319
Repayments ..	1,921	3,511	1,592	3,403	1,007	1,875	13,309

For footnotes see next page.

**STATE LOAN EXPENDITURE: SUMMARY—continued.**  
(£'000.)

Particulars.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas.	Total.
<b>1952-53.</b>							
Works and Services—							
Gross Expenditure ..	54,551	41,575	21,854	25,393	19,012	19,830	152,215
Net Expenditure ..	51,547	37,763	19,382	21,981	17,626	12,822	161,101
Repayments ..	3,004	3,812	2,472	3,412	1,406	7,008	21,114
Other than Works, etc.(a)—							
Gross Expenditure ..	596	2,510	150	9	42	247	3,554
Net Expenditure ..	596	2,510	150	9	36	247	3,548
Repayments ..	..	..	..	..	(b) 6	..	6
Total Loan Expenditure—							
Gross ..	55,147	44,085	22,004	25,402	19,054	20,077	185,769
Net ..	52,145	40,273	19,532	21,990	17,642	13,069	164,649
Repayments ..	3,004	3,81	2,472	3,41	1,412	7,008	21,120
<b>1953-54.</b>							
Works and Services—							
Gross Expenditure ..	60,021	45,665	20,630	25,452	15,824	15,356	182,948
Net Expenditure ..	56,727	42,510	18,451	22,061	14,194	13,437	167,380
Repayments ..	3,294	3,155	2,179	3,391	1,630	1,919	15,568
Other than Works, etc.(a)—							
Gross Expenditure ..	367	139	..	61	111	552	1,230
Net Expenditure ..	367	139	..	61	101	335	1,003
Repayments ..	..	..	..	..	(b) 10	217	227
Total Loan Expenditure—							
Gross ..	60,388	45,804	20,630	25,513	15,935	15,908	184,178
Net ..	57,094	42,649	18,451	22,122	14,295	13,772	168,383
Repayments ..	3,294	3,155	2,179	3,391	1,640	2,136	15,795

(a) Includes exchange, discounts and flotation expenses, revenue and general cash deficits.  
(b) From Consolidated Revenue Fund.

Information relating to the State Public Debt is given in part D. Commonwealth and State Public Debt (pages 807 and 809).

### C. COMMONWEALTH AND STATE FINANCE.

1. Revenue and Expenditure.—(i) *Consolidated Revenue Funds.* The following tables show the aggregate revenue and expenditure of the Consolidated Revenue Funds of the Commonwealth and States for each of the years 1938-39 and 1949-50 to 1953-54. In these tables 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 sections of this Chapter. The items excluded from the total figures are:—payments made by the Commonwealth to the States on account of tax reimbursements, interest under the Financial Agreement, special grants, special financial assistance, coal strike emergency grants, price control reimbursements and estimated payments of pay-roll tax by the States to the Commonwealth.

#### COMMONWEALTH AND STATES: REVENUE AND EXPENDITURE.

Year ended 30th June—		Revenue.			Expenditure.		
		Commonwealth.	States.	Total.	Commonwealth.	States.	Total.
		£'000.	£'000.	£m.	£'000.	£'000.	£m.
1939	..	95,064	124,283	209.6	94,437	128,159	212.8
1950	..	580,652	258,635	746.6	580,652	260,475	748.4
1951	..	841,792	304,432	1,032.0	841,792	304,501	1,032.0
1952	..	1,016,828	386,521	1,260.1	1,016,828	389,689	1,263.3
1953	..	1,040,067	436,111	1,310.7	1,026,667	436,373	1,297.6
1954	..	1,022,790	468,343	1,320.3	966,519	465,439	1,261.1

(ii) *Loan Expenditure.* The aggregate gross loan expenditures of the Commonwealth and States on works and services for the years 1938-39 and 1949-50 to 1953-54 are shown in the following table:—

**COMMONWEALTH AND STATE GROSS LOAN EXPENDITURE : WORKS AND SERVICES.(a)**  
(£'000.)

Gross Loan Expenditure.	1938-39.	1949-50.	1950-51.	1951-52.	1952-53.	1953-54.
Commonwealth(b) ..	3,913	42,698	50,413	31,667	35,684	41,399
State .. .. .	21,399	82,835	141,380	210,938	182,215	182,948
<b>Total .. .. .</b>	<b>25,312</b>	<b>125,533</b>	<b>191,793</b>	<b>242,605</b>	<b>217,899</b>	<b>224,347</b>

(a) Excludes expenditure on loan flotations, funding deficits, etc. (b) Includes expenditure on Defence, War (1939-45) and Repatriation Services. Excludes payments to National Debt Sinking Fund from proceeds of loan from International Bank of Reconstruction and Development (*see* page 819).

2. *Taxation.*—The following table shows the combined Commonwealth and State taxation, and the amount per head of population, for the years 1938-39 and 1949-50 to 1953-54. Taxation collections by the State Governments which are not paid into the Consolidated Revenue Funds have been included.

**COMMONWEALTH AND STATE TAXATION : TOTAL NET COLLECTIONS.(a)**

Particulars.	1938-39.	1949-50.	1950-51.	1951-52.	1952-53	1953-54
<b>NET COLLECTIONS.</b> (£'000.)						
Customs and Excise Duties ..	47,632	143,883	165,004	213,917	183,824	220,217
Sales Tax .. .. .	9,308	42,425	57,173	95,459	89,067	95,669
Land Tax .. .. .	2,897	5,411	4,953	8,710	4,666	4,350
Pay-roll Tax .. .. .	..	22,728	28,721	37,170	40,171	40,384
Income Taxes(b) .. .. .	41,679	279,921	451,779	551,297	554,869	528,273
Probate and Succession Duties	6,916	16,654	19,405	23,172	26,149	28,525
Stamp Duties n.e.i. .. ..	3,466	9,431	11,961	12,228	12,297	14,543
Motor Taxes .. .. .	6,961	12,038	15,579	20,523	23,321	25,877
Liquor Taxes .. .. .	1,045	2,432	2,726	3,681	4,429	5,346
Racing .. .. .	1,251	3,739	4,428	5,850	6,623	7,320
Entertainments Tax .. ..	633	4,698	5,148	6,161	6,708	2,883
Licences n.e.i. and other Taxes	2,841	17,485	62,109	18,853	14,327	7,251
<b>Total .. .. .</b>	<b>124,629</b>	<b>560,845</b>	<b>828,986</b>	<b>997,021</b>	<b>966,451</b>	<b>980,667</b>

**PER HEAD OF POPULATION.**  
(£ s. d.)

	1938-39.	1949-50.	1950-51.	1951-52.	1952-53.	1953-54.
Customs and Excise Duties ..	6 17 5	17 17 5	19 17 0	25 1 0	21 0 4	24 14 10
Sales Tax .. .. .	1 6 10	5 5 5	6 17 7	11 3 7	10 3 8	10 15 0
Land Tax .. .. .	0 8 4	0 13 5	0 11 11	1 0 4	0 10 5	0 9 10
Pay-roll Tax .. .. .	..	2 16 6	3 9 1	4 7 1	4 11 10	4 10 9
Income Taxes(b) .. .. .	6 0 3	34 15 6	54 7 2	64 11 2	63 8 8	59 7 0
Probate and Succession Duties	0 19 11	2 1 5	2 6 8	2 14 3	2 19 10	3 4 1
Stamp Duties n.e.i. .. ..	0 10 0	1 3 5	1 8 10	1 8 8	1 8 1	1 12 8
Motor Taxes .. .. .	1 0 1	1 9 11	1 17 6	2 8 1	2 13 4	2 18 5
Liquor Taxes .. .. .	0 3 0	0 6 1	0 6 7	0 8 7	0 10 1	0 12 1
Racing .. .. .	..	0 9 3	0 10 8	0 13 9	0 15 2	0 16 5
Entertainments Tax .. ..	0 5 6	0 11 8	0 12 5	0 14 5	0 15 4	0 6 6
Licences n.e.i. and other Taxes	0 8 1	2 3 6	7 9 5	2 4 2	1 12 9	0 16 0
<b>Total .. .. .</b>	<b>17 19 5</b>	<b>69 13 6</b>	<b>99 14 10</b>	<b>116 15 1</b>	<b>110 9 9</b>	<b>110 3 7</b>

(a) For separate details of Commonwealth and State taxation collections, *see* pages 765 and 791.  
(b) Includes Wool Deduction, 1950-51, £109,531,000 (£13 3s. 7d. per head); 1951-52, £5,963,000 (14s. od. per head); 1952-53, —£2,223,000 (—5s. 1d. per head); 1953-54, —£239,000 (—6d. per head).



**D. COMMONWEALTH AND STATE PUBLIC DEBT.****§ 1. General.**

Under the Financial Agreement between the Commonwealth and the States in 1927 the Commonwealth and State Public Debts were amalgamated and the Commonwealth Government accepted responsibility for the State Public Debts. The Commonwealth is reimbursed by the States for interest, exchange, etc., paid on their behalf and the debt is redeemed from the National Debt Sinking Fund to which both the Commonwealth and the States make contributions. Under the agreement the Commonwealth arranges for all borrowings on behalf of the Commonwealth and the States, and Commonwealth securities are issued for all money borrowed.

In the statistical tables relating to Public Debt the units of currency for debt outstanding and interest payable, with the exception referred to below, are :—Debt in Australia—£ Australian ; Debt in London—£ Sterling ; Debt in New York—£ (converted from dollars at the rate of \$4.8665 to £1); Debt in Switzerland—£ (converted from Swiss francs at the rate of 1,000 Swiss francs = £102 18. 10d.).

The totals shown represent the total "face" or "book" value of the debt without adjustment on account of the differences in currency mentioned above.

In § 3, para. 5 only, details of the debt for the Commonwealth and each State are given in Australian currency.

**§ 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 Official Year Book (*see* No. 37, pages 685 to 690). 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 public 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 Premier of each State, 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 Public Debts of the Commonwealth and of the States.

If the Loan Council unanimously decides, however, a State may borrow outside Australia in the name of the State, 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—

- (i) 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 ;
- (ii) borrow from the public by means of counter sales of securities ; and
- (iii) 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 Public Debts.**—The Commonwealth took over on 1st July, 1929—

- (a) the balance then unpaid of the gross public debt of each State existing on 30th June, 1927 ; and
- (b) all other debts 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 debts 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 debt redemption on so much of the debts 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 debts. The balance of the interest payable on the State debts is paid to the Commonwealth by the States.

7. *Sinking Fund.*—(i) *State Public Debt existing at 30th June, 1927.* A sinking fund at the rate of 7s. 6d. per annum for each £100 of the net public debts 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 cent. on the net public debts of the States existing at 30th June, 1927 and each State contributes annually 5s. per cent. on the net public debt of such State 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 cent. 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 para. (iv) below) raised after 30th June, 1927 by a State 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.* 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 accruing after 30th June, 1927 and before 1st July, 1935, special contributions are payable. Details of these contributions are given in Official Year Book No. 37, pages 688 and 689.

(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 debts 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.

(vii) *Oversea Debt.* Sinking fund contributions in respect of oversea debt shall be calculated at the mint par of exchange prevailing on 1st July, 1927.

8. **Borrowing by Semi-Governmental Authorities.**—It was realized at the inception of the Loan Council that, in the interests of co-ordinated borrowing, the Council should be advised of 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. Commonwealth and State Public Debt Outstanding.

1. **Public Debt, Annual Interest Payable and Average Rate of Interest at 30th June, 1954.**—In the following table details are given of the Commonwealth and State Public Debt, annual interest payable and average rate of interest at 30th June, 1954.

#### COMMONWEALTH AND STATE PUBLIC DEBT AND ANNUAL INTEREST PAYABLE AT 30th JUNE, 1954.

Particulars.	Maturing in—				Total.
	Australia.	London.	New York.	Switzerland.	
DEBT.					
Commonwealth Debt—	£A.'000.	£ Stg.'000.	£'000.(a)	£'000.(a)	£'000.(a)
War (1914-18) Debt (b)—					
Stock and Bonds .. .. .	138,318	7,534	..	..	145,852
Other Debt(c) .. .. .	112	..	..	..	112
Total War (1914-18) Debt .. .. .	138,430	7,534	..	..	145,964
War (1939-45) Debt—					
Stock and Bonds .. .. .	1,034,239	5,775	..	..	1,040,014
Treasury Bills, Internal .. .. .	194,390	..	..	..	194,390
Treasury Bills, Public .. .. .	190,000	..	..	..	190,000
Other Debt(d) .. .. .	40,363	..	..	..	40,363
Total War (1939-45) Debt .. .. .	1,458,992	5,775	..	..	1,464,767
Works and Other Purposes—					
Stock and Bonds .. .. .	198,777	49,008	10,944	6,126	264,855
Treasury Bills and Debentures .. .. .	..	470	..	..	470
Treasury Bills, Internal .. .. .	10,810	..	..	..	10,810
International Bank Dollar Loan .. .. .	..	..	30,989	..	30,989
Total Works and Other Purposes .. .. .	209,587	49,478	41,933	6,126	307,124
Total Commonwealth Debt .. .. .	1,807,009	62,787	41,933	6,126	1,917,855
State Debt—					
Stock and Bonds .. .. .	1,341,287	258,078	21,537	..	1,620,902
Debentures .. .. .	37,732	1,491	..	..	39,223
Treasury Bills and Debentures—Short-term .. .. .	..	21,377	..	..	21,377
Balance of Debts of States taken over by Commonwealth and still represented by State Securities .. .. .	..	7,446	..	..	7,446
Total State Debt .. .. .	1,379,019	288,392	21,537	..	1,688,948
Grand Total Commonwealth and State Debt .. .. .	3,186,028	351,179	63,470	6,126	3,606,803

(a) See §1, page 805. (b) Excludes War (1914-18) Debt due to United Kingdom Government (£79,724,220). Repayment of this debt and interest thereon (£3,919,774) was suspended in 1931.  
 (c) War and Peace Savings Certificates and Stamps and War Gratuity Bonds. (d) Advance Loan Subscriptions, National Savings Bonds, War Savings and Savings Certificates, War Savings and National Savings Stamps.

**COMMONWEALTH AND STATE PUBLIC DEBT AND ANNUAL INTEREST  
PAYABLE AT 30TH JUNE, 1954—continued.**

Particulars.	Maturing in— <sup>c</sup>				Total.
	Austral...	London.	New York.	Switzer- land.	

**DEBT PER HEAD OF POPULATION**

	£ s. d. (Aust.)	£ s. d. (Stg.)	£ s. d. (a)	£ s. d. (a)	£ s. d. (a)
Commonwealth Debt—					
War (1914–18) Debt (b) .. ..	15 8 1	0 16 9	..	..	16 4 10
War (1939–45) Debt .. ..	162 6 11	0 12 10	..	..	162 19 9
Works and Other Purposes .. ..	23 6 5	5 10 1	4 13 4	0 13 8	34 3 6
<b>Total Commonwealth Debt .. ..</b>	<b>201 1 5</b>	<b>6 19 8</b>	<b>4 13 4</b>	<b>0 13 8</b>	<b>213 8 1</b>
<b>Total State Debt .. ..</b>	<b>154 5 0</b>	<b>32 5 2</b>	<b>2 8 2</b>	<b>..</b>	<b>188 18 4</b>
<b>Grand Total Commonwealth and State Debt .. ..</b>	<b>350 10 5</b>	<b>39 1 6</b>	<b>7 1 3</b>	<b>0 13 8</b>	<b>401 6 10</b>

**ANNUAL INTEREST PAYABLE.**

	£A.'000.	£ Stg.'000.	£'000.(a)	£'000.(a)	£'000.(b)
Commonwealth Debt—					
War (1914–18) Debt (b) .. ..	4,623	228	..	..	4,851
War (1939–45) Debt .. ..	38,527	231	..	..	38,758
Works and Other Purposes .. ..	6,770	1,648	1,827	245	10,490
<b>Total Commonwealth Debt .. ..</b>	<b>49,920</b>	<b>2,107</b>	<b>1,827</b>	<b>245</b>	<b>54,099</b>
<b>Total State Debt .. ..</b>	<b>45,004</b>	<b>9,246</b>	<b>772</b>	<b>..</b>	<b>55,022</b>
<b>Grand Total Commonwealth and State Debt .. ..</b>	<b>94,924</b>	<b>11,353</b>	<b>2,599</b>	<b>245</b>	<b>109,121</b>

**ANNUAL INTEREST PAYABLE PER HEAD OF POPULATION.**

	£ s. d. (Aust.)	£ s. d. (Stg.)	£ s. d. (a)	£ s. d. (a)	£ s. d. (a)
Commonwealth Debt—					
War (1914–18) Debt (b) .. ..	0 10 3	0 0 7	..	..	0 10 10
War (1939–45) Debt .. ..	4 5 9	0 0 6	..	..	4 6 3
Works and Other Purposes .. ..	0 15 1	0 3 7	0 4 1	0 0 7	1 3 4
<b>Total Commonwealth Debt .. ..</b>	<b>5 11 1</b>	<b>0 4 8</b>	<b>0 4 1</b>	<b>0 0 7</b>	<b>6 0 5</b>
<b>Total State Debt .. ..</b>	<b>5 0 8</b>	<b>1 0 8</b>	<b>0 1 9</b>	<b>..</b>	<b>6 3 1</b>
<b>Grand Total Commonwealth and State Debt .. ..</b>	<b>10 11 3</b>	<b>1 5 3</b>	<b>0 5 10</b>	<b>0 0 7</b>	<b>12 2 10</b>

**AVERAGE RATE OF INTEREST PAYABLE (PER £100 PER ANNUM).**

	£ s. d. (Aust.)	£ s. d. (Stg.)	£ s. d. (a)	£ s. d. (a)	£ s. d. (a)
Commonwealth Debt—					
War (1914–18) Debt (b) .. ..	3 6 10	3 0 5	..	..	3 6 6
War (1939–45) Debt .. ..	2 12 10	4 0 0	..	..	2 12 11
Works and Other Purposes .. ..	3 4 7	3 6 7	4 7 2	4 0 0	3 8 4
<b>Total Commonwealth Debt .. ..</b>	<b>2 15 3</b>	<b>3 7 2</b>	<b>4 7 2</b>	<b>4 0 0</b>	<b>2 16 5</b>
<b>Total State Debt .. ..</b>	<b>3 5 3</b>	<b>3 4 2</b>	<b>3 11 9</b>	<b>..</b>	<b>3 5 2</b>
<b>Grand Total Commonwealth and State Debt .. ..</b>	<b>2 19 7</b>	<b>3 4 8</b>	<b>4 1 11</b>	<b>4 0 0</b>	<b>3 0 6</b>

(a) See §1, page 805. (b) Excludes War (1914–18) Debt due to United Kingdom Government (£79,724,220). Repayment of this debt and interest thereon (£3,919,774) was suspended in 1931.

2. Public Debt and Annual Interest Payable, 1939 and 1950 to 1954.—In the following table details are given of the Public Debt and annual interest payable, including the average rate of interest, at 30th June, 1939 and 1950 to 1954. A dissection of debt for these years into debt payable in Australia, London and New York may be found in the *Finance Bulletins* issued by this Bureau.

COMMONWEALTH AND STATE PUBLIC DEBT AND ANNUAL INTEREST PAYABLE  
AT 30th JUNE.

Particulars.	1939.	1950.	1951.	1952.	1953.	1954.
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DEBT.  
(£'000.) (a)

Commonwealth Debt—						
War (1914–18) Debt ..	186,214	165,063	157,360	156,095	152,333	145,964
War (1939–45) Debt ..	..	1,497,251	1,505,176	1,484,915	1,472,777	1,404,767
Works and Other Purposes ..	131,313	168,313	189,613	227,309	263,10*	307,124
Total Commonwealth Debt	317,527	1,830,627	1,852,149	1,868,319	1,888,215	1,917,855
State Debt ..	897,772	1,078,809	1,208,338	1,395,676	1,543,64*	1,688,94*
Grand Total, Commonwealth and State Debt	1,215,299	2,909,436	3,060,487	3,264,495	3,431,86*	3,606,8*

ANNUAL INTEREST PAYABLE.  
(£'000.) (a)

Commonwealth Debt—						
War (1914–18) Debt ..	7,376	6,001	5,043	5,022	4,884	4,851
War (1939–45) Debt ..	..	40,004	38,284	37,509	38,853	38,758
Works and Other Purposes ..	5,150	5,391	6,017	7,159	8,507	10,490
Total Commonwealth Debt	12,526	51,396	49,344	49,690	52,244	54,099
State Debt ..	33,644	34,181	37,100	41,631	48,140	55,022
Grand Total Commonwealth and State Debt	46,170	85,577	86,444	91,321	100,384	109,121

AVERAGE RATE OF INTEREST PAYABLE (PER £100 PER ANNUM).  
(£ s. d.) (a)

Commonwealth Debt—						
War (1914–18) Debt ..	3 19 3	3 12 9	3 4 5	3 4 5	3 4 2	3 6 0
War (1939–45) Debt ..	..	2 13 6	2 10 11	2 10 7	2 12 6	2 12 11
Works and Other Purposes ..	3 18 5	3 4 1	3 3 6	3 2 11	3 4 8	3 6 1
Total Commonwealth Debt	3 18 11	2 16 2	2 13 4	2 13 3	2 15 4	2 16 5
State Debt ..	3 14 11	3 3 4	3 1 5	2 19 8	3 2 4	3 5 2
Grand Total Commonwealth and State Debt	3 16 0	2 18 10	2 16 6	2 16 0	2 18 6	3 0 6

(a) See §1, page 805.

3. State Public Debt and Annual Interest Payable at 30th June, 1954.—In paragraphs 1 and 2, totals only of the States' Public Debt are given. In the following table the total debt of each State and the amounts outstanding per head of population at 30th June, 1954, the annual interest payable and the average rate of interest payable are shown according to the place of flotation.

## STATE PUBLIC DEBT AND ANNUAL INTEREST PAYABLE AT 30th JUNE, 1954.

State.	Maturing in Australia.	Maturing Oversea.			Grand Total.
		London.	New York.	Total Overseas.	
DEBT.					
	£A'000.	£Stg.'000.	£'000. (a)	£'000. (a)	£'000. (a)
New South Wales ..	481,611	122,281	10,603	132,884	614,495
Victoria ..	328,456	44,908	3,600	48,508	376,964
Queensland ..	172,165	43,878	4,353	48,231	220,396
South Australia ..	177,720	34,502	1,397	35,899	213,619
Western Australia ..	128,604	35,819	1,360	37,179	165,783
Tasmania ..	90,463	7,004	224	7,228	97,691
Total ..	1,379,019	288,392	21,537	309,929	1,688,948

## DEBT PER HEAD OF POPULATION.

	£ s. d. (Aust.)	£ s. d. (Stg.)	£ s. d. (a)	£ s. d. (a)	£ s. d. (a)
New South Wales ..	140 13 5	35 14 4	3 1 11	38 16 3	179 9 8
Victoria ..	133 18 9	18 6 3	1 9 4	19 15 7	153 14 4
Queensland ..	130 11 9	33 5 8	3 6 0	36 11 8	167 3 5
South Australia ..	222 18 10	43 5 7	1 15 1	45 0 8	267 19 6
Western Australia ..	201 0 8	55 19 10	2 2 6	58 2 4	259 3 0
Tasmania ..	292 19 4	22 13 8	0 14 6	23 8 2	316 7 6
Total ..	154 5 0	32 5 2	2 8 2	34 13 4	188 18 4

## ANNUAL INTEREST PAYABLE.

	£A.'000.	£Stg.'000.	£'000. (a)	£'000. (a)	£'000. (a)
New South Wales ..	15,493	3,921	357	4,278	19,771
Victoria ..	10,874	1,453	138	1,591	12,465
Queensland ..	5,621	1,456	156	1,612	7,233
South Australia ..	5,814	1,084	54	1,138	6,952
Western Australia ..	4,172	1,100	60	1,160	5,332
Tasmania ..	3,030	232	7	239	3,269
Total ..	45,004	9,246	772	10,018	55,022

## AVERAGE RATE OF INTEREST PAYABLE (PER £100 PER ANNUM).

	£ s. d. (Aust.)	£ s. d. (Stg.)	£ s. d. (a)	£ s. d. (a)	£ s. d. (a)
New South Wales ..	3 4 4	3 4 2	3 7 4	3 4 5	3 4 4
Victoria ..	3 6 3	3 4 8	3 17 1	3 5 7	3 6 2
Queensland ..	3 5 4	3 6 5	3 11 4	3 6 10	3 5 8
South Australia ..	3 5 5	3 2 11	3 17 2	3 3 5	3 5 1
Western Australia ..	3 4 11	3 1 5	4 7 11	3 2 5	3 4 4
Tasmania ..	3 7 0	3 6 2	3 7 6	3 6 2	3 6 11
Total ..	3 5 3	3 4 2	3 11 9	3 4 8	3 5 2

(a) See §1, page 8.5.

4. State Public Debt, 1939 and 1950 to 1954.—In the following table the debt of each State and the amounts outstanding per head of population at 30th June, 1939 and 1950 to 1954 are shown.

## STATE PUBLIC DEBT.

30th June—	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas.	Total.
DEBT. (£'000.)(a)							
1939 .. ..	359,844	179,698	127,503	108,887	95,473	26,367	897,772
1950 .. ..	425,289	217,413	150,662	133,174	109,550	42,721	1,078,809
1951 .. ..	462,241	250,933	166,157	148,388	123,186	57,433	1,208,338
1952 .. ..	522,491	302,499	187,310	173,436	138,288	71,652	1,395,676
1953 .. ..	568,923	339,520	204,255	193,750	153,072	84,128	1,541,648
1954 .. ..	614,495	376,961	220,396	213,619	165,733	97,691	1,688,948
DEBT PER HEAD OF POPULATION. (£ s. d.)(a)							
1939 .. ..	130 18 7	95 13 3	125 4 11	182 10 6	203 2 4	111 1 2	129 3 11
1950 .. ..	131 17 3	98 13 11	127 5 5	190 3 7	196 7 1	152 18 3	132 7 7
1951 .. ..	139 6 11	110 11 7	137 3 7	206 1 8	211 17 0	197 9 6	144 0 5
1952 .. ..	154 4 0	129 10 6	151 5 0	234 10 3	229 19 11	237 3 5	162 3 9
1953 .. ..	165 5 4	142 7 11	161 7 10	255 17 7	245 0 4	270 9 2	175 15 2
1954 .. ..	179 9 8	153 14 4	167 3 5	267 19 6	259 3 0	316 7 6	188 18 4

(a) See §1, page 8c5.

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 public borrowing on their own behalf, while in other States these services are controlled by the central Government. Comparison of the debts of the States is therefore difficult, but on page 814 figures showing the aggregate debts of the States, including these local and semi-governmental authorities, are shown for the years 1938-39 and 1949-50 to 1953-54.

5. *Public Debt and Interest Payable in Australian Currency.*—In the foregoing tables relating to Commonwealth and State public debt the debt outstanding in London is expressed in sterling, debt outstanding in New York is expressed in pounds converted from dollars at the rate of \$4.8665 to £1 and debt outstanding in Switzerland is expressed in pounds converted from Swiss francs at the rate of 1,000 Swiss francs = £102 18. 10d. This method of showing the debt gives no indication to the amount that the Australian Governments would have to find to repay the debt. In the following tables the public debt and the interest payable are shown in terms of Australian currency throughout. Debt in London, New York and Switzerland has been converted to Australian currency at the selling rate of exchange on 30th June, 1954.

COMMONWEALTH AND STATE PUBLIC DEBT AND INTEREST PAYABLE  
AT 30th JUNE, 1954 : AUSTRALIAN CURRENCY.  
(£A.'000.)

Particulars.	Maturing in—				Total.
	Australia.	London (a)	New York (b)	Switzer- land. (c)	
DEBT.					
Commonwealth Debt—					
War (1914-18) Debt .. ..	138,430	9,455	..	..	147,885
War (1939-45) Debt .. ..	1,458,992	7,247	..	..	1,466,239
Works and Other Purposes .. ..	209,587	62,095	90,993	6,187	368,862
Total Commonwealth Deb	1,807,009	78,707	90,993	5,187	1,982,986
State Debt—					
New South Wales .. ..	481,611	153,463	23,007	..	658,081
Victoria .. ..	328,456	56,359	7,812	..	392,627
Queensland .. ..	172,165	55,067	9,447	..	236,679
South Australia .. ..	177,720	43,299	3,032	..	224,051
Western Australia .. ..	128,604	44,954	2,950	..	176,508
Tasmania .. ..	90,463	8,700	484	..	99,737
Total State Debt	1,279,019	361,932	46,732	..	1,787,683
Commonwealth and State Debt—					
Short-term Debt .. ..	395,200	29,239	..	..	424,489
Other Debt .. ..	2,790,828	411,440	137,725	6,187	3,346,180
Grand Total Commonwealth and State Debt .. ..	3,186,028	440,729	137,725	6,187	3,770,609

(a) Converted at rate of £ sgd. 100 = £A. 125 10s.

(b) Converted at rate of \$2.2395 = £A. 1.

(c) Converted at rate of 9.698 francs = £A. 1.

**COMMONWEALTH AND STATE PUBLIC DEBT AND INTEREST PAYABLE**  
**AT 30th JUNE, 1954: AUSTRALIAN CURRENCY—continued.**  
 (£A.'000.)

Particulars.	Maturing in—				Total.
	Australia.	London. (a)	New York. (b)	Switzer- land. (c)	
ANNUAL INTEREST PAYABLE.					
Commonwealth Debt—					
War (1914–18) Debt .. ..	4,623	286	..	..	4,909
War (1939–45) Debt .. ..	38,527	290	..	..	38,817
Works and Other Purposes .. ..	6,770	2,068	3,964	247	13,049
Total Commonwealth Debt .. ..	49 920	2,644	3,964	247	56,775
State Debt—					
New South Wales .. ..	15,493	4,921	775	..	21,189
Victoria .. ..	10,874	1,823	301	..	12,998
Queensland .. ..	5,621	1,828	337	..	7,786
South Australia .. ..	5,814	1,361	117	..	7,292
Western Australia .. ..	4,172	1,380	130	..	5,682
Tasmania .. ..	3,030	291	16	..	3,337
Total State Debt .. ..	45,004	11,604	1,676	..	58,284
Grand Total Commonwealth and State Debt .. ..	94,924	14,248	5,640	247	115,059

(a) Converted at rate of £ stg. 100 = £A. 125 10s.

(b) Converted at rate of \$2.2395 = £A. 1.

(c) Converted at rate of 9.698 francs = £A. 1.

6. Public Debt at each Rate of Interest.—The following table shows particulars of the amounts of debt for Commonwealth and State purposes at 30th June, 1954, at each rate of interest :—

**COMMONWEALTH AND STATE PUBLIC DEBT AT 30TH JUNE, 1954 : AMOUNTS**  
**AT EACH RATE OF INTEREST.**

Rate of Interest.	Maturing in—							Total.	
	Australia.		London.		New York.		Switzer- land.		
	Com- mon- wealth.	State.	Com- mon- wealth. (a)	State.	Com- mon- wealth.	State.	Com- mon- wealth.	Com- mon- wealth.	State.
Per cent.	£A.'000.	£A.'000.	£stg'000.	£stg'000.	£'000.(b)	£'000.(b)	£'000.(b)	£'000.(b)	£'000.(b)
5.0 .. ..	..	..	..	1	5,415	2,728	..	5,415	2,729
4.75 .. ..	..	..	..	..	10,440	..	..	10,440	..
4.5 .. ..	82,074	263,258	..	11,790	..	..	..	82,074	275,048
4.25 .. ..	..	..	..	..	20,549	..	..	20,549	..
4.0 .. ..	..	573	5,775	21,937	..	..	6,126	11,001	22,510
3.875 .. ..	31,469	56,836	..	..	..	..	..	31,469	56,836
3.75 .. ..	10,162	72,817	6,951	..	..	..	..	26,113	72,817
3.625 .. ..	..	107	..	..	..	..	..	..	107
3.5 .. ..	..	1,752	5,935	49,660	1,123	7,244	..	7,058	58,656
3.4875 .. ..	..	4	..	..	..	..	..	..	4
3.375 .. ..	130	..	..	..	3,280	5,250	..	3,410	5,250
3.25 .. ..	869,067	159,769	33,866	57,074	1,126	6,315	..	904,059	223,158
3.2391 .. ..	20,008	..	..	..	..	..	..	20,008	..
3.125 .. ..	269,585	480,682	..	..	..	..	..	269,585	480,682
3.1 .. ..	..	3,901	..	..	..	..	..	..	3,901
3.0 .. ..	54,343	140,140	9,790	90,670	..	..	..	64,133	230,810
2.8347 .. ..	10,302	..	..	..	..	..	..	10,302	..
2.75 .. ..	..	..	470	37,326	..	..	..	470	37,326
2.7125 .. ..	..	418	..	..	..	..	..	..	418
2.5 .. ..	..	1	..	19,932	..	..	..	..	19,933
2.325 .. ..	..	1,730	..	..	..	..	..	..	1,730
2.0 .. ..	55,180	155,653	..	..	..	..	..	55,180	155,653
1.5 .. ..	..	3,646	..	..	..	..	..	..	3,646
1.0 .. ..	395,200	37,732	..	..	..	..	..	395,200	37,732
Miscellaneous (c) .. ..	489	..	..	2	..	..	..	489	..
Total Debt .. ..	1,807,009	1,379,019	62,787	288,392	41,933	21,537	6,126	1,917,855	1,688,948

(a) Excludes War (1914–18) Debt due to United Kingdom Government, £70,724,000 (rate of interest 4.91667 per cent.). (b) See §1, page 805. (c) Consists of overdue debt, War (1914–18) and (1939–45) Savings Stamps and National Savings Stamps, etc.



7. Dates of Maturity.—(i) *Commonwealth.* In the following table the Commonwealth Public Debt at 30th June, 1954 is classified according to the earliest and the latest years of maturity.

**COMMONWEALTH PUBLIC DEBT AT 30th JUNE, 1954(a) : CLASSIFIED ACCORDING TO EARLIEST AND LATEST YEARS OF MATURITY.**

	Earliest Year.					Latest Year.				
Year of Maturity	Maturing in—				Total.	Maturing in—				Total.
	Aus- tralia.	Lon- don.	New York.	Switzer- land.		Aus- tralia.	Lon- don.	New York.	Switzer- land.	
	£A.'000.	£Stg. '000.	£'000.(b)	£'000.(b)		£'000.(b)	£A.'000.	£Stg. '000.	£'000.(b)	
Before 30th June										
1954 ..	780,443	6,951	5,415	..	792,809	..	..	..	..	..
1954-55(c) ..	450,379	470	1,126	..	451,975	484,949	470	..	..	485,419
1955-56 ..	164,689	16,166	..	..	180,855	41,494	..	5,415	..	46,909
1956-57 ..	90,356	..	4,403	..	94,759	52,121	6,951	1,126	..	60,198
1957-58 ..	10,483	..	..	..	10,483	43,517	..	..	..	43,517
1958-59 ..	..	..	..	..	..	238,954	..	..	..	238,954
1959-60 ..	..	..	..	..	..	242,107	..	..	..	242,107
1960-61 ..	73,821	5,775	..	..	79,596	234,398	16,166	..	..	250,564
1961-62 ..	73,904	5,935	..	..	79,839	165,271	..	3,280	..	168,551
1962-63 ..	79,567	..	..	..	79,567	65,259	..	..	..	65,259
1963-64 ..	..	..	..	..	..	73,821	5,775	..	..	79,596
1964-65 ..	..	292	..	..	292	67,444	..	..	..	67,444
1965-66 ..	..	17,408	..	6,126	23,534	14,307	..	..	..	14,307
1966-67 and later ..	52,356	9,790	..	..	62,146	52,356	33,425	1,123	6,126	93,030
Miscellaneous (d)	31,011	..	630,980	..	62,000	31,011	..	630,980	..	62,000
Total ..	1,807,009	62,787	41,933	6,126	1,917,855	1,807,009	62,787	41,933	6,126	1,917,855

(a) See note (a) to previous table.

(b) See §1, page 805.

(c) Includes Short-term Debt.

(d) Consists of advance loan subscriptions, overdue debt, debt repayable in half-yearly instalments War Savings and Savings Certificates, War Savings Stamps, National Savings Stamps and Peace Savings Certificates.

(e) International Bank Dollar Loans to be repaid in half-yearly instalments from 1st September, 1955 to 1st September, 1975 and from 1st June, 1957 to 1st September, 1972.

(ii) *States.* Particulars of State Public Debt at 30th June, 1954 have been classified in the following table according to the earliest and the latest years of maturity.

**STATE PUBLIC DEBT AT 30th JUNE, 1954 : CLASSIFIED ACCORDING TO EARLIEST AND LATEST YEARS OF MATURITY.**

Year of Maturity.	Earliest Year.				Total.	Latest Year.				Total.
	Maturing in—			Maturing in—						
	Aus- tralia.	London.	New York.	Aus- tralia.		London.	New York.			
	£A.'000.	£Stg. '000.	£'000.(a)	£'000.(a)	£A.'000.	£ Stg. '000.	£'000.(a)	£'000 (a)		
Before 30th June, 1954	200,556	25,854	2,728	229,138	..	..	..	..		
1954-55 .. .. .	157,100	(b)42,959	6,315	206,374	197,958	(a)26,073	..	224,031		
1955-56 .. .. .	83,985	15,644	..	99,629	95,791	..	2,728	98,519		
1956-57 .. .. .	85,855	..	12,494	98,349	40,831	..	6,315	47,146		
1957-58 .. .. .	38,979	..	..	38,970	37,121	20,091	..	57,212		
1958-59 .. .. .	1,665	13,935	..	15,603	34,914	20,809	..	55,723		
1959-60 .. .. .	2,732	..	..	2,732	75,317	..	..	75,317		
1960-61 .. .. .	108,398	11,790	..	120,188	64,724	18,438	..	83,162		
1961-62 .. .. .	197,106	23,806	..	220,912	48,506	..	5,250	53,756		
1962-63 .. .. .	267,503	12,871	..	280,374	159,983	11,790	..	171,773		
1963-64 .. .. .	4,077	10,000	..	14,076	108,195	..	..	108,195		
1964-65 .. .. .	1,564	12,806	..	14,360	178,661	12,870	..	191,531		
1965-66 .. .. .	1,084	65,321	..	66,405	108,605	10,000	..	118,605		
1966-67 .. .. .	63,100	..	..	63,100	63,100	23,806	7,244	94,150		
1967-68 .. .. .	86,519	15,949	..	102,468	86,519	25,646	..	112,165		
1968-69 .. .. .	2,455	..	..	2,455	2,455	..	..	2,455		
1969-70 .. .. .	3,242	18,441	..	21,683	3,242	41,516	..	44,758		
1970-71 .. .. .	2,360	..	..	2,360	2,360	11,141	..	13,501		
1971-72 .. .. .	2,177	12,175	..	14,352	2,177	15,949	..	18,126		
1972-73 .. .. .	2,711	..	..	2,711	2,711	..	..	2,711		
1973-74 .. .. .	3,336	..	..	3,336	3,336	12,175	..	15,511		
1974-75 .. .. .	4,378	..	..	4,378	4,378	31,337	..	35,715		
1975-76 .. .. .	7,338	4,351	..	11,689	7,338	..	..	7,338		
1976-77 and later	28,151	..	..	28,151	28,151	4,351	..	32,502		
Miscellaneous (c)	22,637	2,400	..	25,037	22,637	2,400	..	25,037		
Total .. .. .	1,370,019	288,301	21,537	1,679,857	1,370,019	288,302	21,537	1,688,048		

(a) See §1, page 805.

(b) Includes short-term debt, £22,868,000.

(c) Consists of overdue, indefinite and interminable debt, debt due at Treasurer's option and half-yearly drawings.

8. *Short-term Debt.*—(i) *Amount.* Particulars of the short-term debt (Treasury Bills and Debentures) of the Commonwealth and States in London and in Australia at 30th June, 1939 and at intervals from 30th June, 1950 to 30th June, 1954 are shown in the following table. This debt is included in the public debt as shown elsewhere.

## COMMONWEALTH AND STATE SHORT-TERM DEBT.(a)

Date.	Maturing in Australia. (£A.'000.)			Maturing in London. (£Stg.'000.)		
	Commonwealth.	States.	Total.	Commonwealth.	States.	Total.
30th June, 1939 ..	..	50,228	50,228	4,220	23,155	27,375
" " 1950 ..	108,280	..	108,280	1,470	22,868	24,338
" " 1951 ..	108,280	2,400	110,680	1,220	22,868	24,088
" " 1952 ..	153,280	..	153,280	970	22,868	23,838
30th June, 1953 ..	225,000	..	225,000	720	22,868	23,588
30th September, 1953	205,000	1,000	206,000	720	22,868	23,588
31st December, 1953	245,000	1,000	246,000	470	22,868	23,338
31st March, 1954 ..	205,000	1,000	206,000	470	22,868	23,338
30th June, 1954 ..	190,000	..	190,000	470	22,868	23,338

(a) Excludes Overdrafts and Internal Treasury Bills.

(ii) *Interest Rates.* (a) *London.* The rates of interest payable on Treasury Bills and Debentures in London during the following periods were: 1938–39—minimum rate, 2 per cent., maximum rate,  $2\frac{1}{4}$  per cent.; 1949–50 to 1950–51—minimum rate, 2 per cent., maximum rate,  $2\frac{1}{4}$  per cent. On 8th November, 1951 the rates were increased to—minimum rate,  $2\frac{1}{2}$  per cent., maximum rate,  $2\frac{3}{4}$  per cent.

(b) *Australia.* The Treasury Bill rates in Australia were as follows:— $1\frac{3}{4}$  per cent. from 1st January, 1935;  $1\frac{1}{2}$  per cent. from 1st May, 1940;  $1\frac{1}{4}$  per cent. from 1st May, 1943; 1 per cent. from 1st March, 1945;  $\frac{3}{4}$  per cent. from 1st May, 1949; 1 per cent. from 1st August, 1952.

9. *State and Municipal and Semi-Governmental Authority Public Debt.*—For the reasons indicated on page 811 direct comparisons of the debts of the several States should be made with caution. The table following shows, for 1938–39 and 1949–50 to 1952–53, particulars of the debts of the States and the debts due to the public by municipal and semi-governmental authorities in each State.

## STATE AND MUNICIPAL AND SEMI-GOVERNMENTAL AUTHORITY PUBLIC DEBT.

State.	State.	Municipal. (a)	Semi-Governmental. (a)	Total.	
DEBT. (£'000.) (b).					
1952-53.					
New South Wales .. .. .	568,923	48,350	139,362	756,635	
Victoria .. .. .	339,520	20,340	193,269	553,129	
Queensland .. .. .	204,255	47,529	22,362	274,146	
South Australia .. .. .	193,750	1,243	17,540	212,533	
Western Australia .. .. .	153,072	3,433	3,345	159,850	
Tasmania .. .. .	84,128	6,145	6,002	96,275	
Total {	1952-53 .. .. .	1,543,648	127,040	381,880	2,052,568
	1951-52 .. .. .	1,395,676	112,176	316,191	1,824,043
	1950-51 .. .. .	1,208,338	98,201	257,887	1,564,426
	1949-50 .. .. .	1,078,809	84,445	206,622	1,369,876
	1938-39 .. .. .	897,772	78,126	120,512	1,096,410

(a) Due to the public and excludes amounts due to Central Government. Includes bank overdrafts.  
(b) See §1, page 805.

STATE AND MUNICIPAL AND SEMI-GOVERNMENTAL AUTHORITY  
PUBLIC DEBT—continued.

State.	State.	Municipal. (a)	Semi-Gov- ernmental. (a)	Total.	
DEBT PER HEAD OF POPULATION. (£.) (b). 1952-53.					
New South Wales .. .. .	165.2	14.0	40.5	219.7	
Victoria .. .. .	142.4	8.5	81.1	232.0	
Queensland .. .. .	161.4	37.6	17.6	216.6	
South Australia .. .. .	255.9	1.6	23.2	280.7	
Western Australia .. .. .	246.0	5.5	5.4	256.9	
Tasmania .. .. .	270.5	19.8	19.2	309.5	
Total {	1952-53 ..	175.8	14.4	43.5	233.7
	1951-52 ..	162.2	13.0	36.7	211.9
	1950-51 ..	144.0	11.7	30.8	186.5
	1949-50 ..	132.4	10.4	25.3	168.1
	1938-39 ..	129.2	11.2	17.4	157.8

(a) Due to the public and excludes amounts due to Central Government. Includes bank overdrafts.  
(b) See §1, page 805.

## § 4. Commonwealth Loan Raisings.

1. New Loans Raised, 1951-52 to 1953-54.—Under the Financial Agreement between the Commonwealth and the States, the Commonwealth is responsible for raising all loan moneys required by both the Commonwealth and the State Governments. Details of loan transactions given in this section relate, therefore, to all loans raised for the Commonwealth and the States. The following table shows details of new loans raised in Australia by the Commonwealth during the three years 1951-52 to 1953-54. No new loans were raised in London during this period, and the only new loans raised in New York were those from the International Bank for Reconstruction and Development. Details of these loans are given in para. 3, below.

## COMMONWEALTH NEW LOANS(a) RAISED IN AUSTRALIA.

Month of Raising.	Amount Invited.	Amount Sub- scribed.	Rate of In- terest per annum.	Year of Maturity.	Price of Issue per £100.	Allocation of Proceeds.		
						Commonwealth.		States.
						War (1939- 45) etc.	Other Pur- poses.	
	£'000.	£'000.	%		£	£'000.	£'000.	£'000.
1951-52—								
August (Thirteenth Security Loan) .. .. .	40,000	{ 8,911	2	1954	100	..	3,840	28,660
November (Fourteenth Security Loan) .. .. .	13,233	{ 2,794	2	1954		..	1,470	12,076
March (Fifteenth Security Loan) .. .. .	30,533	{ 10,752	3½	1962-65	100	..	1,787	15,862
June(b) .. .. .	160,000	{ 5,277	2	1955		..	1,787	15,862
		{ 12,282	3½	1962-65	100	..	1,787	15,862
		{ 160,000	2	1955		7,135	16,367	136,498
1952-53—								
November (Sixteenth Security Loan) .. .. .	20,000	20,269	4½	1961	100	..	2,459	17,810
March (Seventeenth Security Loan) .. .. .	29,789	{ 13,981	3	1955	99 100	..	3,595	28,331
		{ 18,037	4½	1962		..	3,595	28,331
June(b) .. .. .	123,000	{ 35,000	3	1955	99 100	..	15,327	107,673
		{ 88,000	4½	1962		..	15,327	107,673
1953-54—								
September (Eighteenth Security Loan) .. .. .	50,000	{ 11,312	3	1955	100	..	6,849	59,160
March (Nineteenth Security Loan) .. .. .	35,000	{ 55,000	4½	1966		..	6,849	59,160
		{ 8,603	3	1957	95½	..	70	52,000
June (b) .. .. .	80,000	{ 43,467	4½	1967		..	70	52,000
		{ 16,000	3	1957	98½	..	5,407	30,475
		{ 64,000	4½	1967		..	5,407	30,475

(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 below).  
(b) Special Issue. For details see following paragraph.

The loans of £160,000,000, £123,000,000 and £80,000,000 issued in June, 1952, 1953 and 1954 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 £225,287,000 in 1951-52, £190,182,000 in 1952-53 and £200,000,000 in 1953-54. Subscriptions to these special loans came from the following sources :—

	1951-52.	1952-53	1953-54.
	£	£	£
National Debt Commission—			
Investment of surplus received from Commonwealth Revenue .. ..	98,500,000	..	..
Investment of Australian currency proceeds of International Bank Loan .. ..	27,000,000	18,500,000	18,000,000
Swiss Loan Trust Account .. ..	..	..	5,750,000
Commonwealth Trust Moneys—Investment	34,500,000	104,500,000	56,250,000
Total ..	160,000,000	123,000,000	80,000,000

Finance for the approved Loan Council programmes in 1952-53 and 1953-54 was provided from the following sources—

	1951-52.	1952-53.	1953-54.
	£	£	£
Public Loans, domestic raisings, etc. ..	72,422,000	67,357,000	125,647,000
Special Commonwealth Loan .. ..	152,865,000	122,825,000	74,353,000
Total ..	225,287,000	190,182,000	200,000,000

In addition to the new loans raised shown in the foregoing table, and the redemption and conversion loans shown in the following table, there were other miscellaneous debt operations during 1953-54, namely :—Savings Certificates and War Saving Certificates (Five and Seven Years' Series), decrease of £5,192,000 ; War Savings and Savings Stamps, decrease of £1,000 ; National Savings Bonds and Stamps, decrease of £13,000 ; "Over the Counter Sales" (small amounts borrowed by virtue of certain statutory rights) £1,312,000. Advance loan subscriptions in hand increased from £4,280,000 at the end of 1952-53 to £9,894,000 at the end of 1953-54.

2. Conversion and Redemption Loans, 1951-52 to 1953-54.—(i) *Australia*. Particulars of conversion loans raised in Australia during the three years 1951-52 to 1953-54 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 per £100.	Year of Maturity.	
	£A.'000.	%	£A.'000.	%	£		£A.'000.
1951-52—							
November ..	26,767	3½	{ 5,077 21,690	{ 2 3½	{ 100 100	{ 1954 1962-65	{ - 89
March ..	44,467	2	{ 33,744 10,723	{ 2 3½	{ 100 100	{ 1955 1962-65	{ 189
1952-53—							
March ..	47,211	2	{ 30,196 17,015	{ 3 4½	{ 99½ 100	{ 1955 1962	{ 727
1953-54—							
September ..	32,926	2	{ 12,235 16,739	{ 3 4½	{ 100 100	{ 1955 1966	{ 541
March ..	15,188	2	{ 6,563 7,625	{ 3 4½	{ 98½ 100	{ 1957 1967	{ 256

NOTE.—Minus sign (—) indicates a reduction in the annual liability for interest and exchange.

(ii) *London.* The following table shows particulars of loans raised in Australia and London during the years 1952-53 and 1953-54 for the purpose of redeeming and converting London loans. There were no loans raised for this purpose in 1951-52.

**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. (a)	
	Amount.	Rate of Interest per annum.	Amount raised in—		Rate of Interest per annum.	Price of Issue per £100.		Year of Maturity.
			Australia.	London.				
			£ Stg. '000.	%				
1952-53— July ..	11,790	3½	..	11,790	4½	98	1960-62	148
1953-54— November ..	10,796	3½	..	10,796	4	99½	1966-68	68

(a) No account has been taken of cost of issuing the conversion loans at a discount. Exchange calculated at £A. 125.375 = £ stg. 100.

(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 up to the end of 1954.

3. *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 and Canada, the Commonwealth Government, in August, 1950, arranged a loan of \$100,000,000 from the International Bank for Reconstruction and Development. The loan is for a term of 25 years with interest at 4½ per cent. per annum on the amount of the loan withdrawn and outstanding from time to time. In addition there is a commitment charge of ¾ per cent. per annum on the amount of the loan not withdrawn from time to time. Repayment of the loan is to be made in half-yearly instalments commencing on 1st September, 1955. The last instalment is payable on 1st September, 1975. At the 31st December, 1953, the whole of the loan had been drawn.

In July, 1952, a further loan of \$50,000,000 was arranged. This loan is for a term of 20 years with interest at 4½ per cent. per annum on the amount of the loan withdrawn and outstanding from time to time. There is also a commitment charge of ¾ per cent. per annum similar to that of the previous loan. Repayment of the loan is to be made in half-yearly instalments from 1st June, 1957 to 1st December, 1972. Up to 30th June, 1954, \$44,706,057 had been drawn on the loan.

In March, 1954 a third loan of \$54,000,000 was arranged. The loan is for a term of 15 years with interest and commitment charges similar to those for the previous loan for \$50,000,000. Repayment of the loan will be made in half-yearly instalments from 1st March, 1957 to 1st March, 1969. Up to 30th June, 1954, \$6,418,978 had been drawn on the loan.

In March, 1955, a fourth loan of \$54,500,000 was arranged. This loan is for a term of 15 years with interest at 4½ per cent. per annum. There is also a commitment charge of ¾ per cent. per annum similar to that of previous loans. Repayment is to be made in half-yearly instalments from 15th March, 1958 to 15th March, 1970.

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. Subject to a special import licence being obtained, the goods are imported and distributed through normal channels and payment made through the Australian banking system. Periodically, schedules of dollar payments for goods imported against loan licences are submitted to the International Bank for Reconstruction and Development. These

schedules form the basis for periodical drawings by the Commonwealth against the loan. The amounts drawn are paid to the Commonwealth Bank to replace the dollar funds used in making the purchases. In return, the Commonwealth Government receives Australian currency from the Commonwealth Bank. This is paid to the Commonwealth National Debt Sinking Fund, out of which the loans will subsequently be redeemed.

4. **Swiss Loan.**—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 and February, 1955, of two 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 Credit Suisse and the Union Bank of Switzerland. Certain Swiss taxes connected with the issue and servicing of the loan 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 Australian Government to repay the loan in whole 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 Swiss loan was for a period of 15 years with an option to redeem after 10 years. The rate of interest was  $3\frac{1}{2}$  per cent. and the issue price £99 10s. Bonds and interest are payable only in Swiss francs.

The loans were both fully subscribed and Swiss franc proceeds, after deducting borrowing expenses, were sold by the Commonwealth Government to the Commonwealth Bank in return for an equivalent amount of Australian currency. A trust account, named the Swiss Loan Trust Account, was opened and the proceeds from the two loans were transferred to this account and were used in assisting the Loan Council borrowing programmes for the 1953-54 and 1954-55 financial years. The Swiss Loan Trust Account will also be used as a sinking fund for the loans, and, when the time comes for repayment, the trust account investments can be realized. The provisions of the National Debt Sinking Fund Act do not apply to the loans.

5. **Summary of Loan Transactions, 1949-50 to 1953-54.**—The following table contains a summary of loan transactions on behalf of the Commonwealth and State Governments during the five years 1949-50 to 1953-54.

#### COMMONWEALTH LOAN TRANSACTIONS : SUMMARY.

Year ended 30th June.	New Loans.				Net Increase in Short-term Debt in Australia.		Loans Raised for Con- version or Redemption of Existing Debt Maturing in—		
	New Loans (a) Raised in—			Miscel- laneous Debt in Aus- tralia.(b)			Aus- tralia.	London.	
								Raised in—	
	Aus- tralia.	New York.	Switzer- land.					Aus- tralia.(b)	Public.
£A.'000	\$'000.	Francs '000.	£A.'000.	£A.'000.	£A.'000.	£A.'000.	£A.'000.	£ Stg. '000.	
1950 .. ..	105,844	..	..	13,978	— 15,000	19,000	93,213	7,000	..
1951 .. ..	127,567	(c) 9,059	..	— 16,443	2,400	87,000	153,928	11,781	..
1952 .. ..	223,695	(c) 53,310	..	7,402	42,600	— 37,000	71,234	..	..
1953 .. ..	175,287	(c) 10,223	..	24,510	71,721	— 75,610	47,211	..	11,790
1954 .. ..	198,390	(c) 48,114	60,000	13,273	— 35,000	29,000	43,171	..	10,796

(a) Includes loans raised for redemption of Treasury Bills. No new loans were raised in London during this period.

(b) "Over the Counter Sales". Instalment Stock, National Savings Bonds, War Savings and Savings Certificates and net increase in debt on account of War Savings and Savings Stamps, National Savings Stamps and advance loan subscriptions. (c) Amounts drawn of \$100,000,000, \$50,000,000, \$51,000,000 and \$54,500,000 loans from International Bank for Reconstruction and Development.

NOTE.—Minus sign (—) denotes a decrease in debt.

## § 5. National Debt Sinking Fund.

1. *Commonwealth Public Debt.*—Particulars relating to the creation of sinking funds are included in issues of the Official 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 1938–39 and 1949–50 to 1953–54 were as follows:—

## NATIONAL DEBT SINKING FUND: COMMONWEALTH ACCOUNT.

(£'000.)

Items.	1938–39.	1949–50.	1950–51.	1951–52.	1952–53.	1953–54.
<b>Receipts—</b>						
From Consolidated Revenue	3,918	16,146	17,225	(a) 116,928	18,471	18,154
Loans and Advances Repaid	17	580	4,381	2,094	2,508	2,276
War Service Homes Money Repaid	629	2,156	3,147	4,046	4,050	5,326
Half Net Profit Commonwealth Bank	321	1,116	1,140	1,336	1,764	2,127
Reparation Monies	..	500	..	..	..	..
Interest on Investments	32	104	70	76	(b) 2,144	(c) 3,371
Loan (International Bank for Reconstruction and Development) Act	..	..	4,044	23,831	17,935	21,467
Other Contributions	14	12	12	12	10	6
<b>Total Receipts</b>	<b>4,931</b>	<b>20,614</b>	<b>30,019</b>	<b>148,323</b>	<b>46,882</b>	<b>52,727</b>
<b>Expenditure—</b>						
Securities Repurchased and Redeemed in—						
Australia	4,230	26,916	28,762	25,382	16,011	16,993
London	608	610	1,688	411	436	722
New York	214	118	449	448	455	8,996
<b>Total Expenditure</b>	<b>5,052</b>	<b>27,644</b>	<b>30,899</b>	<b>26,241</b>	<b>16,902</b>	<b>26,713</b>
Balance at 30th June	1,131	10,877	9,997	132,079	162,059	188,073
<b>Face Value of Securities Repurchased and Redeemed in—</b>						
Australia	4,199	26,872	28,828	26,882	16,860	18,561
London	498	496	1,409	335	363	593
New York	167	68	210	211	212	4,152
<b>Total Face Value</b>	<b>4,864</b>	<b>27,436</b>	<b>30,447</b>	<b>27,428</b>	<b>17,435</b>	<b>23,306</b>

(a) Includes £28,500,000 Consolidated Revenue Fund surplus. (b) Includes £1,562,000 interest received under National Debt Sinking Fund (Special Payment) Act 1951. (c) Includes £1,970,000 interest received under National Debt Sinking Fund (Special Payment) Act 1951.

2. *State Public Debt.*—(i) *States, 1953–54.* A sinking fund for the redemption of the debt of the States was established under the Financial Agreement. Details of contributions to be made to this fund are given on page 806. Particulars of the transactions of the National Debt Sinking Fund (States' Account) for each State during the year 1953–54 are shown below.

## NATIONAL DEBT SINKING FUND: STATE ACCOUNT, 1953–54.

(£'000.)

Items.	N.S.W.	Vic.	Q'land.	S. Aust.	W. Aust.	Tas.	Total.
<b>Receipts—</b>							
Contributions under Financial Agreement—							
Commonwealth	1,273	759	438	438	356	199	3,463
States	4,523	2,891	1,637	1,509	1,203	534	12,357
Interest from States on cancelled Securities	24	6	6	5	1	3	45
Special Contributions by States	140	37	..	19	1	6	203
Interest on Investments, etc.	18	4	4	3	3	1	33
<b>Total Receipts</b>	<b>5,978</b>	<b>3,697</b>	<b>2,085</b>	<b>2,934</b>	<b>1,564</b>	<b>743</b>	<b>16,101</b>
<b>Expenditure—</b>							
Securities Repurchased and Redeemed in—							
Australia	6,769	2,224	1,656	1,572	507	848	13,576
London	498	133	276	248	169	38	1,362
New York	177	1,785	720	700	1,407	3	4,792
<b>Total Expenditure</b>	<b>7,444</b>	<b>4,142</b>	<b>2,652</b>	<b>2,520</b>	<b>2,083</b>	<b>889</b>	<b>19,730</b>
Balance at 30th June, 1954	557	593	266	234	411	33	2,094
<b>Face Value of Securities Repurchased and Redeemed in—</b>							
Australia	7,310	2,336	1,756	1,650	506	887	14,445
London	408	115	239	209	151	32	1,154
New York	84	824	333	323	649	1	2,214
<b>Total Face Value</b>	<b>7,802</b>	<b>3,275</b>	<b>2,328</b>	<b>2,182</b>	<b>1,306</b>	<b>920</b>	<b>17,813</b>

(ii) *All States, 1938-39 and 1949-50 to 1953-54.* The following table is a summary of the transactions of the National Debt Sinking Fund (State Account) for the years 1938-39 and 1949-50 to 1953-54 :—

**NATIONAL DEBT SINKING FUND : STATE ACCOUNT.**

( £'000.)

Items.	1938-39.	1949-50.	1950-51.	1951-52	1952-53.	1953-54.
<b>Receipts—</b>						
Contributions under Financial Agreement—						
Commonwealth ..	1,478	2,006	2,241	2,357	3,011	3,463
States ..	4,327	8,747	9,418	10,325	11,362	12,357
Interest from States on cancelled Securities ..	15	27	25	41	49	45
Commonwealth Contributions under Federal Aid Roads and Works Act ..	69	..	..	..	..	..
Special Contributions by States ..	61	142	147	151	155	203
Interest on Investments, etc.	56	6	8	4	25	33
<b>Total Receipts ..</b>	<b>6,006</b>	<b>10,928</b>	<b>11,839</b>	<b>13,078</b>	<b>14,602</b>	<b>16,101</b>
<b>Expenditure—</b>						
Securities Repurchased and Redeemed in—						
Australia ..	4,008	6,509	8,877	9,280	10,602	13,576
London ..	1,722	1,449	5,307	474	973	1,362
New York ..	347	393	462	430	483	4,792
<b>Total Expenditure ..</b>	<b>6,077</b>	<b>8,351</b>	<b>14,646</b>	<b>10,184</b>	<b>12,058</b>	<b>19,730</b>
<b>Balance at 30th June ..</b>	<b>1,885</b>	<b>3,092</b>	<b>285</b>	<b>3,179</b>	<b>5,723</b>	<b>2,094</b>
<b>Face Value of Securities Repurchased and Redeemed in—</b>						
Australia ..	3,996	6,480	8,859	9,661	11,644	14,445
London ..	1,561	1,182	4,345	420	838	1,154
New York ..	285	223	229	220	241	2,214
<b>Total Face Value ..</b>	<b>5,842</b>	<b>7,885</b>	<b>13,433</b>	<b>10,301</b>	<b>12,723</b>	<b>17,813</b>

**E. TAXES ON INCOME.**

**NOTE.**—The following section contains details of taxes on individuals and companies for the 1955-56 financial year.

1. **General.**—A description of the development of income taxes in Australia appeared in Official Year Book No. 35, p. 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 1936-1955 and the Income Tax and Social Services Contribution Act 1955. 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 1955-56 is levied on the income of individuals in 1955-56 and on the income of companies in 1954-55.

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 1947-1955 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, (v) pay and allowances earned by a member of the Defence Forces while serving in Korea after 26th June, 1950 and Malaya after 28th June, 1950 and (vi) 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.

Assessable income is divided into two main groups—personal exertion and property. Personal exertion income includes all wage, salary, business and professional incomes, while property income includes all rents, dividends and interest. No distinction between personal exertion and property income is made for companies. The further tax on property income imposed on individuals in cases where the total taxable income exceeded £400 and the amount of property income exceeded £100 was discontinued from the 1953-54 financial year.

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, £120 and Zone B, £20.

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 paragraph 4 following.

4. **Concessional Deductions.**—Concessional allowances for dependants, medical expenses, life assurance and superannuation contributions, etc., are made by way of a deduction from income. The maximum deduction allowed for each dependant, parent or a housekeeper employed by the taxpayer for the financial year 1955-56 is shown in the following table.

#### CONCESSIONAL DEDUCTIONS FOR DEPENDANTS, ETC.

(£.)

Dependant, etc. (Resident).	Maximum Deduction. (a)
Spouse .. .. .	130
Daughter-housekeeper (b) .. .. .	130
Housekeeper (b) having care of taxpayer's children under 16 years of age .. .. .	130
Parent .. .. .	130
One child under 16 years of age .. .. .	78
Other children under 16 years of age .. .. .	52
Invalid relative(c) .. .. .	78
Child 16 to 21 years receiving full-time education (d) .. .. .	78

(a) These deductions are allowed only if the dependant or parent 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) Child, step-child, brother or sister over 16 years of age. The amount of the deduction is reduced by any invalid pension received. (d) The amount of the deduction is reduced by the value of any assistance provided by the Commonwealth or a State.

When the dependant or person maintained derives separate income, the amount of the concessional deduction allowable is reduced as follows :—

In the case of a spouse or daughter-housekeeper, by £2 for every £1 by which the separate net income exceeds £65 ; for each parent maintained, by £1 for each £1 of separate income ; and for each dependent child or invalid relative, by £2 for every £1 by which the separate net income exceeds £52.

For the 1955-56 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, up to £150 for each person, are allowed as a concessional deduction. Medical expenses include payments made to a legally qualified medical practitioner, nurse or chemist, or a hospital, in respect of an illness or operation, payments for dental services not exceeding £30 for any one person, payment for therapeutic treatment and eye tests, expenditure on medical or surgical appliances, artificial limbs or eyes, hearing aids and spectacles, and the remuneration of an attendant of a person who is blind or confined to bed or invalid chair.

Other concessional deductions allowed to resident taxpayers include (i) payments of life, etc., insurance premiums and contributions to superannuation, medical, hospital and similar funds and friendly societies, not exceeding an aggregate of £200, (ii) funeral expenses of a dependant not exceeding £30 and (iii) expenditure incurred for the full-time education of dependants who are less than 21 years of age (maximum £75 per dependant).

In addition to concessional deductions, all taxpayers (residents and non-residents) 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.

5. **Effective Exemptions from Tax.**—For the financial years 1950-51 to 1955-56 resident taxpayers without dependants were exempt from Income Tax and Social Services Contribution if their income did not exceed £104. The effect of the deductions for dependants was to exempt taxpayers up to the incomes shown hereunder.

#### RESIDENT TAXPAYERS : EFFECTIVE EXEMPTIONS FROM TAX.

( £. )

Taxpayer with—						Income Tax and Social Services Contribution— Financial Years 1950-51 to 1952-53.	Income Tax and Social Services Contribution— Financial Years 1953-54 to 1955-56.
No dependants	..	..	..	..	..	104	104
Wife	..	..	..	..	..	208	234
„ and one child	..	..	..	..	..	286	312
„ „ two children	..	..	..	..	..	338	364
„ „ three children	..	..	..	..	..	390	416
„ „ four children	..	..	..	..	..	442	468

For the 1955-56 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 £390. A married couple both of whom qualify by age for the concession, are exempt from tax if their combined net incomes do not exceed £780.

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 1955-56.

**INCOME TAX AND SOCIAL SERVICES CONTRIBUTION—INDIVIDUALS: RATES OF INCOME TAX AND SOCIAL SERVICES CONTRIBUTION—1953-54 TO 1955-56.**

Total Taxable Income.		1953-54.		1954-55 and 1955-56.	
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

For primary producers, the rate of Income Tax and Social Services Contribution for the current year is determined by the average of the taxable income 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 ordinary rates. 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 receive a rebate of 2s. in the £1.

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.**—This Act provided for relief from double taxation of incomes flowing between Australia and the United States of America. It also provided similar relief in respect of the United Kingdom, which had been covered by the Income Tax Assessment Act since 1947.

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 1950-51 to 1955-56 :—

### COMMONWEALTH TAXES ON INCOME.

(£.)

Income.	Income Tax and Social Services Contribution.				
	1950-51 Financial Year.	1951-52 Financial Year.	1952-53 Financial Year.	1953-54 Financial Year.	1954-55 and 1955-56 Financial Years.
<b>INCOME FROM PERSONAL EXERTION.—TAXPAYER WITH NO DEPENDANTS.</b>					
150 .. .. .	1.65	1.80	1.65	1.25	1.05
200 .. .. .	3.95	4.35	3.95	3.10	2.50
250 .. .. .	7.30	8.05	7.30	5.85	4.80
300 .. .. .	11.65	12.80	11.65	9.35	7.90
350 .. .. .	17.10	18.80	17.10	13.95	12.10
400 .. .. .	22.50	24.75	22.50	18.55	16.25
500 .. .. .	35.85	39.45	35.85	30.20	27.10
600 .. .. .	51.65	56.80	51.65	43.95	39.60
800 .. .. .	90.00	99.00	90.00	77.30	69.60
1,000 .. .. .	135.00	148.50	135.00	117.30	106.25
1,500 .. .. .	281.65	309.80	281.65	246.85	225.85
2,000 .. .. .	468.35	515.20	468.35	412.30	376.25
3,000 .. .. .	928.35	1,021.20	928.35	823.10	753.75
5,000 .. .. .	2,088.35	2,297.20	2,088.35	1,857.30	1,701.25

### INCOME FROM PERSONAL EXERTION.—TAXPAYER WITH DEPENDENT WIFE.

150 .. .. .	..	..	..	..	..
200 .. .. .	..	..	..	..	..
250 .. .. .	1.55	1.70	1.55	0.75	0.65
300 .. .. .	3.75	4.10	3.75	2.00	1.60
350 .. .. .	7.00	7.70	7.00	4.20	3.60
400 .. .. .	11.30	12.45	11.30	7.25	6.05
500 .. .. .	22.05	24.25	22.05	15.80	13.75
600 .. .. .	35.30	38.85	35.30	26.70	23.85
800 .. .. .	69.25	76.15	69.25	55.05	49.50
1,000 .. .. .	110.80	121.90	110.80	90.70	81.85
1,500 .. .. .	247.15	271.85	247.15	209.30	191.35
2,000 .. .. .	426.75	469.40	426.75	366.25	334.55
3,000 .. .. .	876.35	964.00	876.35	765.15	700.10
5,000 .. .. .	2,022.45	2,224.70	2,022.45	1,783.60	1,634.10

COMMONWEALTH TAXES ON INCOME—*continued.*  
(£.)

Income.	Income Tax and Social Services Contribution.				
	1950-51 Financial Year.	1951-52 Financial Year.	1952-53 Financial Year.	1953-54 Financial Year.	1954-55 and 1955-56 Financial Years.
<b>INCOME FROM PERSONAL EXERTION.—TAXPAYER WITH DEPENDENT WIFE AND ONE CHILD.</b>					
150 .. .. .	..	..	..	..	..
200 .. .. .	..	..	..	..	..
250 .. .. .	..	..	..	..	..
300 .. .. .	0.85	0.95	0.85	..	..
350 .. .. .	2.50	2.75	2.50	1.10	0.95
400 .. .. .	5.15	5.65	5.15	2.80	2.25
500 .. .. .	13.60	14.95	13.60	8.80	7.40
600 .. .. .	24.90	27.40	24.90	17.80	15.60
800 .. .. .	54.95	60.45	54.95	42.85	38.60
1,000 .. .. .	93.90	103.30	93.90	75.90	68.30
1,500 .. .. .	223.75	246.10	223.75	188.50	172.20
2,000 .. .. .	395.55	435.10	395.55	338.85	309.70
3,000 .. .. .	837.35	921.10	837.35	730.60	668.20
5,000 .. .. .	1,973.05	2,170.35	1,973.05	1,739.40	1,593.80

**INCOME FROM PERSONAL EXERTION.—TAXPAYER WITH DEPENDENT WIFE AND TWO CHILDREN.**

150 .. .. .	..	..	..	..	..
200 .. .. .	..	..	..	..	..
250 .. .. .	..	..	..	..	..
300 .. .. .	..	..	..	..	..
350 .. .. .	0.80	0.90	0.80	..	..
400 .. .. .	2.40	2.65	2.40	1.10	0.90
500 .. .. .	8.70	9.55	8.70	5.30	4.35
600 .. .. .	18.80	20.70	18.80	13.05	11.25
800 .. .. .	46.30	50.90	46.30	35.70	32.10
1,000 .. .. .	83.20	91.50	83.20	66.80	60.10
1,500 .. .. .	208.15	228.90	208.15	174.60	159.40
2,000 .. .. .	375.85	413.45	375.85	321.95	294.35
3,000 .. .. .	812.45	893.70	812.45	708.95	648.25
5,000 .. .. .	1,940.15	2,134.15	1,940.15	1,709.95	1,566.90

**INCOME FROM PROPERTY.—TAXPAYER WITH NO DEPENDANTS.**

150 .. .. .	1.65	1.80	1.65	1.25	1.05
200 .. .. .	3.95	4.35	3.95	3.10	2.50
250 .. .. .	7.30	8.05	7.30	5.85	4.80
300 .. .. .	11.65	12.80	11.65	9.35	7.90
350 .. .. .	17.10	18.80	17.10	13.95	12.10
400 .. .. .	22.50	24.75	22.50	18.55	16.25
500 .. .. .	40.85	44.95	40.85	30.20	27.10
600 .. .. .	61.65	67.80	61.65	43.95	39.60
800 .. .. .	110.00	121.00	110.00	77.30	69.60
1,000 .. .. .	165.00	181.50	165.00	117.30	106.25
1,500 .. .. .	345.00	379.50	345.00	246.85	225.85
2,000 .. .. .	565.00	621.50	565.00	412.30	376.25
3,000 .. .. .	1,091.70	1,200.85	1,091.70	823.10	753.75
5,000 .. .. .	2,351.70	2,586.85	2,351.70	1,857.30	1,701.25

9. *Pay-as-you-earn.*—Individual taxpayers pay tax on a pay-as-you-earn basis. A similar scheme does not operate for companies.

(a) *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 and 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.

(b) *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 is made at the same time as collection and assessment for the previous year is 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 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.

Employees with income of £100 or more from sources other than salaries and wages are 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 £104 are required to lodge returns by the 31st July each year (31st August for business incomes). Income Tax and Social Services Contribution payable is assessed, and assessment notices showing the amount payable are issued during the year following the year of income (in most cases from September to June following the lodgment of the return). 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 collected 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 by 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 1953-54 to 1955-56, 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 Official Year Book No. 39, p. 846 and No. 40, p. 743.

# **RATES OF TAX : COMPANIES, 1953-54 TO 1955-56 FINANCIAL YEARS.**

(Pence per £.)

Type of Company.	Rate of Tax—		
	On Taxable Income.		Undistributed Amount—Additional Tax.
	Up to £5,000.	On Remainder of Taxable Income.	
Private .. .. .	48	72	120
Co-operative and Non-profit(a) .. .. .	60	84	..
Life Assurance—			
Mutual .. .. .	48	72	..
Other—			
(1) Mutual Income .. .. .	48	72	..
(2) Other Income(b) .. .. .	(c) 72	84	..
Other .. .. .	(c) 72	84	..
Interest paid to a Non-resident(d) .. .. .	84	84	..

(a) Non-profit companies with taxable incomes not exceeding £104 are exempted from tax and if the taxable income does not exceed £208 the tax may not exceed one-half of the amount by which the taxable income exceeds £104. (b) The rate of 72d. is levied on the amount by which the £5,000 exceeds the mutual income. (c) For non-resident companies dividends included in this part of taxable income are taxed at 60d. per £1. (A resident company is allowed a rebate of tax in respect of dividends received.) (d) If the non-resident is not a company, tax is paid only on income in excess of £104.

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—

- Primary income tax and social services contribution payable;
- Retention allowance (i.e., the proportion of the reduced distributable income which a company may retain without incurring liability for undistributed income tax); and
- Certain dividends paid by the company.

For the financial years 1953-54 to 1955-56 the retention allowance is the following proportion of the reduced distributable income :—

On first £1,000 or part, 50 per cent.

On next £1,000 or part, 40 per cent.

On next £1,000 or part, 35 per cent.

On next £1,000 or part, 30 per cent.

On balance, 25 per cent., and

Ten per cent. of distributable income from property, except dividends from other private companies.

For the financial years 1953-54 to 1955-56, 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 imposed 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 1938-39 and 1949-50 to 1953-54 :—

## INCOME TAX COLLECTIONS.

(£'000.)

Year.	Total.		
	Common-wealth.	State.	Total.
1938-39 .. .. .	11,883	29,796	41,679
1949-50 .. .. .	279,654	267	279,921
1950-51 .. .. .	341,957	291	342,248
1951-52 .. .. .	545,179	155	545,334
1952-53 .. .. .	556,960	132	557,092
1953-54 .. .. .	528,420	92	528,512

(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.	1939-40.	1949-50.	1950-51.	1951-52.(a)	1952-53.	1953-54.
Individuals—						
Income Tax .. ..	7,423	692,614	80,712	} 332,956	340,175	351,147
Social Services Contribution ..	..	692,672	92,588			
Companies—						
Income Tax .. ..	8,041	63,467	74,770	156,163	151,246	119,348
Super Tax .. ..	..	5,943	7,040	..	..	..
Undistributed Income Taxes(c)						
Private Companies ..	688	7,098	8,253	11,219	5,824	4,266
Non-Private Companies ..	..	4,308	4,847	..	..	..
Total .. .. .	16,152	266,102	268,210	500,338	497,245	474,761

(a) Income Tax and Social Services Contribution were consolidated in 1951-52. assessments issued to 30th June, 1953.

(c) Approximate.

(b) Includes



(iii) *Commonwealth Income Tax and Social Services Contribution, 1953-54 Assessment Year.* The following table shows, for the 1953-54 assessment year, particulars for individual taxpayers, income, and tax assessed, according to grade of actual income and State, etc., of assessment.

**COMMONWEALTH INCOME TAX AND SOCIAL SERVICES CONTRIBUTION: 1953-54 ASSESSMENT(a)—NUMBER OF TAXPAYERS, TAXABLE INCOME AND NET INCOME TAX AND SOCIAL SERVICES CONTRIBUTION ASSESSED—INDIVIDUALS.**

(Incomes derived in year 1952-53.)

Grade of Actual Income(b) and State or Territory of Assessment.		Number of Taxpayers.			Actual Income.	Taxable Income.				Net Income Tax and Social Services Contribution As- sessed.
						Personal Exertion.		Pro- perty.	Total.	
		Males.	Fe- males.	Total.	Total.	Salary and Wages.	Total.	Total.		
£	£	No.	No.	No.	£'000.	£'000.	£'000.	£'000.	£'000.	
105- 200 ..	64,516	107,026	171,542	26,629	21,165	23,590	2,045	25,635	333	
201- 300 ..	100,549	135,636	236,185	59,536	45,582	51,566	3,840	55,406	1,545	
301- 400 ..	123,166	144,432	267,595	93,910	70,545	80,672	4,793	85,465	3,790	
401- 500 ..	138,983	170,528	309,511	140,126	105,559	120,113	4,863	124,976	7,403	
501- 600 ..	173,049	165,450	338,499	185,833	138,419	157,461	4,896	162,357	11,574	
601- 700 ..	310,334	75,976	386,310	252,814	181,375	203,524	4,761	208,285	16,830	
701- 800 ..	476,546	36,162	512,708	384,575	278,155	301,525	4,876	306,401	27,291	
801- 900 ..	369,478	17,671	387,149	327,948	229,018	252,755	4,647	257,402	25,140	
901- 1,000 ..	237,985	10,614	248,599	235,311	157,152	179,634	4,259	183,893	19,636	
1,001- 1,250 ..	276,770	13,889	290,659	320,242	190,760	241,931	8,771	250,702	30,365	
1,251- 1,500 ..	99,074	7,287	106,361	144,498	65,806	109,398	6,993	116,391	16,915	
1,501- 2,000 ..	78,282	8,283	86,565	148,087	43,052	113,755	10,401	124,156	22,042	
2,001- 3,000 ..	58,446	7,419	65,865	159,143	24,559	125,601	13,871	139,472	32,713	
3,001- 4,000 ..	24,609	3,113	27,722	95,314	10,327	76,790	9,176	85,966	25,628	
4,001- 5,000 ..	12,437	1,440	13,877	61,738	6,247	49,829	6,570	56,399	19,983	
5,001-10,000 ..	15,393	2,134	17,527	115,555	10,209	92,292	14,730	107,022	49,956	
10,001-15,000 ..	2,225	399	2,624	31,250	2,222	24,086	4,980	29,066	17,022	
15,001 and over ..	1,311	254	1,565	37,103	1,784	26,190	6,737	32,927	21,889	
Total Residents ..		2,563,153	907,713	3,470,866	2,819,612	1,581,936	2,230,712	121,209	2,351,921	350,053
Central Office ..	7,861	4,785	12,646	37,310	4,833	23,020	10,694	33,714	15,168	
New South Wales ..	955,206	351,355	1,306,561	1,064,893	628,420	845,982	41,364	887,346	128,890	
Victoria ..	721,304	281,643	1,002,947	790,846	461,341	626,383	36,745	663,128	92,400	
Queensland ..	359,883	108,841	468,724	363,585	186,902	285,852	10,702	296,554	43,208	
South Australia ..	238,707	76,737	315,444	271,120	138,159	217,563	11,586	229,149	35,583	
Western Australia ..	180,457	54,206	234,663	193,201	101,671	154,028	6,705	160,733	24,582	
Tasmania ..	84,646	25,609	110,255	81,428	48,881	64,029	2,928	66,957	8,113	
Northern Territory ..	4,271	963	5,234	4,549	3,043	3,566	49	3,615	445	
Aust. Cap. Terr. ..	10,818	3,484	14,302	12,680	8,686	10,289	376	10,665	1,666	
Total Residents ..		2,563,153	907,713	3,470,866	2,819,612	1,581,936	2,230,712	121,209	2,351,921	350,053
Total Non-residents		2,012	2,044	4,056	4,215	154	838	3,072	3,910	1,092
Grand Total ..		2,565,165	909,757	3,474,922	2,823,827	1,582,090	2,231,550	124,281	2,355,831	351,147

(a) Assessment in respect of 1952-53 income issued to 30th September, 1954. Assessments issued after that date have been excluded. (b) Actual income is the total income (less any expenses of earning the income) and includes any exempt income and any concessional deductions or expenses of a capital nature which are allowed as a deduction for the purpose of assessing taxable income.

(iv) *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 excluded.

COMMONWEALTH INCOME TAXES ON RESIDENT INDIVIDUALS IN GRADES  
OF ACTUAL INCOME.

Grade of Actual Income.(b)	1939-40.		1950-51.(a)		1951-52.(a)		1952-53.(a)		1953-54.(a)	
	No. of Tax-payers.	Tax.	No. of Tax-payers.	Tax.	No. of Tax-payers.	Tax.	No. of Tax-payers.	Tax.	No. of Tax-payers.	Tax.
£        £		£'000.		£'000.		£'000.		£'000.		£'000.
105- 200	..	..	345,054	1,081	266,134	517	200,711	434	171,542	333
201- 300	(c) 47,732	27	455,284	3,655	351,062	2,282	270,729	1,985	236,185	1,545
301- 400	104,210	126	459,219	6,419	412,396	5,778	307,080	4,866	267,598	3,790
401- 500	68,168	182	613,437	12,176	440,555	9,176	363,271	9,569	309,511	7,403
501- 600	38,939	197	475,486	13,298	553,803	15,008	371,461	13,356	338,499	11,574
601- 700	} d 29,912	294	248,498	9,770	427,288	15,406	486,388	22,031	386,310	16,830
701- 800			130,579	6,935	262,954	12,398	434,711	24,955	512,708	27,291
801- 900	} e 23,070	460	72,272	5,012	145,231	8,721	306,206	21,846	387,149	25,140
901- 1,000			45,399	3,960	83,028	6,340	196,872	17,093	248,599	19,636
1,001- 1,250	10,922	372	62,573	7,511	101,209	10,921	214,482	25,203	290,659	30,365
1,251- 1,500	6,281	306	33,790	5,982	48,123	7,823	80,306	14,657	106,361	16,915
1,501- 2,000	7,987	691	38,430	10,390	49,840	12,618	72,535	21,019	86,565	22,042
2,001- 3,000	4,549	686	34,940	17,176	47,681	22,152	56,460	31,511	65,865	32,713
3,001- 4,000	2,045	615	14,277	12,393	24,374	19,662	23,868	24,598	27,722	25,628
4,001- 5,000	984	484	6,981	9,134	14,102	17,761	12,018	19,168	13,877	19,983
5,001-10,000	1,298	1,321	9,494	22,991	23,366	66,729	15,086	47,391	17,527	49,956
10,001-15,000	205	504	1,752	9,461	4,917	33,056	2,354	17,027	2,624	17,022
15,001-30,000	(f) 92	393	954	10,060	3,124	38,841	1,091	14,357	1,302	15,094
30,001-50,000	(g) 39	316	155	3,385	612	15,235	164	4,196	200	4,383
50,001 and over	8	141	39	1,773	216	11,263	68	3,686	63	2,412
Total ..	346,441	7,115	3,048,613	172,592	3,260,015	331,707	3,415,861	338,930	3,470,866	350,555

(a) Includes Social Services Contribution. (b) See note (b) to previous table. (c) Grade £251-£300.  
 (d) Grade £601-£750. (e) Grade £751-£1,000. (f) Grade £15,001-£25,000. (g) Grade £25,001-£50,000.

## CHAPTER XXI.

### AGRICULTURAL PRODUCTION.

NOTE.—Values of Australian oversea trade shown throughout this chapter are expressed as £A. f.o.b. Port of Shipment, except where otherwise indicated.

#### § 1. Introductory.

In general, statistics in this chapter relating to agricultural production are derived from "census" returns supplied by farmers (an average of 245,800 during the past ten years) who utilize one acre or more of land for agricultural or pastoral purposes. The returns are collected by the Statisticians of each State and by the Commonwealth Statistician in respect of the Australian Capital Territory. Particulars for the Northern Territory have not been available in recent years. 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 to apply to years ending on 30th June.

#### § 2. Progress of Agriculture.

1. *Early Records.*—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.

A brief reference to the 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 Official Year Book. (*See* No. 22, p. 670.)

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 gold discoveries of 1851 and subsequent years had at first a very disturbing effect on agricultural progress, the area of crops declining from 491,000 acres in 1850 to 458,000 acres in 1854. 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.

2. *Progress of Cultivation.*—The following table shows the area of crops in each of the States and Territories of Australia at decennial intervals since 1860 and during each of the eleven seasons ended 1953–54, and on page 859 there is a graph showing the area of crops in Australia from 1860 onward.

**AREA OF CROPS.**  
(’000 Acres.)

Season.	N.S.W.	Victoria.	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
1943-44	4,797	3,463	1,757	2,761	2,782	335	(a)	7	15,902
1944-45	5,045	4,310	1,707	3,179	2,790	343	(a)	8	17,472
1945-46	6,087	5,327	1,822	3,824	2,945	412	(a)	9	20,426
1946-47	6,512	5,103	1,617	3,885	3,590	361	(a)	9	21,077
1947-48	7,168	5,023	1,849	3,852	4,026	342	(a)	11	22,271
1948-49	5,711	4,645	1,953	3,757	4,215	345	(a)	10	20,636
1949-50	5,670	4,480	2,057	3,617	4,399	368	(a)	10	20,601
1950-51	4,761	4,351	2,077	3,676	4,650	290	(a)	6	19,811
1951-52	4,704	4,271	2,022	3,666	4,693	291	(a)	6	19,683
1952-53	4,837	4,286	2,422	3,581	4,816	303	(a)	6	20,251
1953-54	5,425	4,480	2,361	3,778	4,633	330	(a)	6	21,013

(a) Not available.

The progress of agriculture was practically uninterrupted from 1860 to 1915-16, when, as the result of a special effort to raise wheat during the 1914-18 War, 18.5 million acres were cultivated in Australia. Four years later the area of crops declined to 13.3 million acres owing to the accumulation of wheat stocks consequent upon the difficulty of securing freight space during the war years. After the termination of hostilities the area again began to expand and rose steadily to the record area of 25.2 million acres in 1930-31. Thereafter the slump in wheat prices seriously depressed the agricultural industry and the area of crops receded to just under 20 million acres in 1935-36.

By 1938-39 the industry had recovered 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 1943-44 production gradually increased again until, in 1947-48, 22.3 million acres were sown to crops. This upward trend has been reversed since 1948-49 largely as a result of the transfer of many primary producers from agricultural to pastoral production following on high prices for wool. Of recent years the area has fluctuated around a level of 20 million acres, 1952-53 being 20.4 million acres and 1953-54 0.7 million acres higher at 21.1 million acres. As the area under wheat in Australia constitutes a large proportion of the total area cropped (56 per cent. during the ten years ended 1953-54) fluctuations in the latter follow broadly the same pattern as changes in wheat areas.

3. **Area under Sown Pastures.**—In all the States there are considerable areas of grasses mainly sown on land from which scrub has been cleared or on land which it is desired to rest from cultivation. These areas, which are not included in “area of crops”, have expanded from about 5.3 million acres in 1929-30 to about 23.0 million acres in 1953-54.

4. **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 for 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:—(i) the promotion of the welfare and development of agricultural industries generally; (ii) exchange of information on agricultural production and marketing; (iii) the improvement of the quality of agricultural products and the maintenance of high grade standards; (iv) to ensure, as far as possible, balance between production and available markets; and (v) organized marketing, etc.

In addition a permanent Standing Committee on Agriculture was formed to advise the Council; secure co-operation and co-ordination in agricultural research; 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.

### § 3. Distribution, Production and Value of Crops.

1. Area of Crops in States and Territories.—The following table shows the areas in the several States and the Australian Capital Territory of each of the crops for the season 1953-54.

#### AREA OF CROPS, 1953-54.

(Acres.)

Crop.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas.	A.C.T.	Aust.(a)
<b>Cereals for Grain—</b>								
Barley—								
2 Row ..	21,487	344,346	48,039	1,026,543	32,812	8,942	..	1,482,169
6 Row ..	10,273	30,209	8,037	93,207	176,479	494	..	320,693
Maize ..	53,556	5,613	114,735	..	21	64	..	178,989
Oats ..	506,758	583,075	13,480	280,244	733,122	20,118	255	2,137,052
Panicum, Millet and Setaria ..	..	521	39,332	..	..	..	..	39,903
Rice ..	38,850	..	50	..	..	..	..	38,909
Rye ..	1,305	27,754	388	52,520	7,835	711	..	90,513
Sorghum ..	7,053	..	181,819	..	..	..	..	188,872
Wheat ..	3,356,888	2,389,304	579,969	1,528,377	2,885,114	9,600	1,566	10,750,908
Hay ..	450,243	807,223	70,451	262,006	219,171	123,249	3,023	1,935,366
Green Fodder ..	761,552	(b) 56,210	663,097	(c) 365,301	507,756	60,127	1,218	2,415,261
Other Stock Fodder	7,686	10,056	15,394	28,726	4,372	31,293	..	97,527
<b>Grass Seed—</b>								
Lucerne ..	6,148	(d)	626	15,079	6	53	..	(e) 21,912
Clover ..	4,975	1,695	..	11,958	14,518	626	..	33,782
Other ..	1,670	7,230	5,936	2,014	760	1,386	..	18,936
<b>Industrial Crops—</b>								
Broom Millet ..	2,220	139	160	..	3	..	..	2,531
Canary Seed ..	50	..	4,104	..	..	..	..	4,154
Cotton ..	..	..	8,965	..	..	..	..	8,965
<b>Flax—</b>								
For Fibre ..	..	9,550	..	3,040	3,105	..	..	15,695
For Linseed ..	1,400	1,226	3,647	70	..	..	..	6,343
Hops ..	..	344	..	..	(f)	1,350	..	(e) 1,694
Peanuts ..	1,525	..	36,617	..	(f)	..	..	(e) 38,142
<b>Sugar-cane—</b>								
For crushing ..	7,787	..	332,703	..	..	..	..	340,490
Other (excluding fodder) ..	7,337	..	133,775	..	..	..	..	141,112
Sunflower Seed ..	80	216	4,311	..	..	..	..	4,607
Tobacco ..	501	2,246	4,065	..	1,434	..	..	8,246
Other ..	90	250	350	..	..	412	..	1,102
<b>Vegetables for Human consumption—</b>								
Onions ..	270	3,641	2,477	471	375	18	7	7,279
Potatoes ..	16,513	52,745	9,382	7,023	8,068	34,524	112	128,367
Other Vegetables ..	43,656	30,243	31,653	7,565	6,774	11,013	63	130,967
<b>Vineyards—</b>								
Bearing ..	16,021	42,793	2,608	57,858	7,978	..	..	127,258
Not Bearing ..	2,107	2,984	276	4,263	1,224	..	..	10,854
<b>Orchards and other Fruit Gardens—</b>								
Bearing ..	72,848	52,519	26,205	23,131	18,808	23,539	81	217,131
Not Bearing ..	17,913	13,661	13,774	6,627	2,734	1,279	14	56,002
<b>Nurseries and Cut Flowers ..</b>	975	2,872	197	118	191	161	10	4,524
<b>All Other Crops ..</b>	586	993	4,130	112	155	741	18	6,645
<b>Total Area ..</b>	<b>5,425,341</b>	<b>4,479,568</b>	<b>2,360,822</b>	<b>3,778,257</b>	<b>4,632,815</b>	<b>329,790</b>	<b>6,367</b>	<b>21,012,960</b>

(a) Excludes Northern Territory, details for which are not available. (b) Excludes 38,351 acres of pasture land sown to lucerne and 219,194 acres sown to oats for grazing. (c) Excludes 256,003 acres of pasture land sown to lucerne for grazing. (d) Not available. Included in "All Other Crops". (e) Incomplete. See footnotes to individual States. (f) Not available for publication. Included in "All Other Crops".

2. Relative Areas of Crops in States and Territories.—The proportion of each of the crops cultivated to the extent of over 100,000 acres in the various States and Territories to the total area of crops for the season 1953-54 is shown in the next table. In four of

the States, namely, New South Wales, Victoria, South Australia and Western Australia, wheat-growing for grain is by far the most extensive crop. In Queensland the most extensive crops are wheat, green fodder and sugar-cane, and in Tasmania, green fodder, hay and potatoes.

As pointed out previously, wheat is the main crop in Australia, the area thereof, for grain only, representing more than 50 per cent. of the total area of crops in 1953-54.

### RELATIVE AREAS OF CROPS, 1953-54.

(Per cent.)

Crop.	N.S.W.	Vic.	Q'land.	S. Aust.	W. Aust.	Tas.	A.C.T.	Aust.(a)
Wheat (Grain) ..	61.9	53.4	24.6	40.4	62.3	2.1	24.6	50.9
Green Fodder(b) ..	14.0	1.3	28.1	9.7	11.0	40.8	19.1	12.0
Oats (Grain) ..	9.3	13.0	0.6	7.4	15.8	4.4	4.0	10.1
Hay ..	8.4	18.0	3.0	6.9	4.7	27.1	47.5	9.2
Barley (Grain) ..	0.7	8.3	2.4	29.7	4.5	2.1	..	8.5
Sugar-cane, Crushed	0.3	..	19.8	..	..	..	..	2.3
Orchards and Fruit	..	..	..	..	..	..	..	..
Gardens ..	1.7	1.5	1.7	0.8	0.5	5.5	1.5	1.3
Sorghum ..	..	..	7.7	..	..	..	..	0.9
Maize (Grain) ..	1.1	0.2	4.9	..	..	..	..	0.8
Vineyards ..	0.3	1.0	..	1.6	0.2	..	..	0.6
Potatoes ..	0.3	1.2	0.4	0.2	0.2	7.6	1.8	0.6
All other ..	2.0	2.1	6.8	3.3	0.8	10.4	1.5	2.8
Total ..	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0

(a) Excludes Northern Territory, details for which are not available. (b) Includes green forage except in Victoria and in South Australia where pasture land sown to lucerne is excluded.

3. Area of Principal Crops in Australia.—The area of the principal crops during each of the five seasons ended 1953-54, compared with the average for the decennium ended 1938-39 is shown hereunder:—

### AREA OF PRINCIPAL CROPS : AUSTRALIA.

('000 Acres.)

Crop.	Average, ten years ended 1938-39.	1949-50.	1950-51.	1951-52.	1952-53.	1953-54.
Cereals for Grain—						
Barley, 2 Row ..	428	927	963	965	1,123	1,482
Maize ..	295	194	169	170	174	179
Oats ..	1,393	1,748	1,757	2,365	2,764	2,137
Rice ..	22	38	37	36	35	39
Wheat ..	14,345	12,240	11,663	10,384	10,209	10,751
Hay ..	2,994	1,605	1,377	1,549	1,761	1,935
Green Fodder ..	1,272	2,178	2,118	2,403	2,196	2,415
Vegetables for Human Consumption—						
Onions ..	8	8	8	9	6	7
Potatoes ..	130	134	127	118	135	128
Other vegetables for human consumption ..	(a) 83	155	156	162	152	131
Industrial Crops—						
Cotton ..	43	3	3	4	6	9
Hops ..	1	2	2	2	2	2
Sugar-cane ..	332	398	397	403	434	482
Tobacco ..	12	5	6	8	8	8
Vineyards ..	118	135	137	136	137	138
Orchards ..	276	280	275	271	271	273
All other Crops ..	206	551	616	698	336	897
Total ..	21,958	20,601	19,811	19,683	20,251	21,013

(a) Incomplete. Market gardens and pulse only.

4. Weights and Measures.—Details of the weights and measures used in recording production of Agricultural commodities appear in the introduction to *Primary Industries Bulletin* No. 48—Part I.—*Rural Industries*.

5. Production of Crops in States and Territories.—The following table shows production of crops in the various States and the Australian Capital Territory for the season 1953-54 :—

## PRODUCTION OF CROPS, 1953-54.

Crop.	Unit of Quantity.	N.S.W.	Vic.	Q'land.	S. Aust.	W.A.	Tas.	A.C.T.	Aust.(a)
<b>Cereals for Grain—</b>									
Barley—									
2 Row .. ..	'ooo bus.	455	7,360	985	26,433	406	281	..	35,923
6 Row .. ..	" "	225	572	151	2,059	2,327	15	..	5,350
Maize .. ..	" "	1,737	293	3,042	..	..	..	..	5,070
Oats .. ..	" "	8,533	9,832	199	4,321	9,590	461	5	32,961
Panicum, Millet and Setaria .. ..	" "	..	10	556	..	..	..	..	566
Rice .. ..	" "	4,069	..	..	..	..	..	..	4,069
Rye .. ..	" "	14	201	4	325	47	16	..	607
Sorghum .. ..	" "	129	..	4,040	..	..	..	..	4,169
Wheat .. ..	" "	63,681	53,698	10,180	30,400	39,700	263	29	197,960
Hay .. ..	" tons	639	1,360	140	369	294	242	5	3,049
<b>Grass Seed—</b>									
Lucerne .. ..	cwt.	5,184	..	819	9,976	3	53	..	16,035
Clover .. ..	" "	7,816	820	..	18,004	30,986	624	..	58,250
Other .. ..	" "	4,021	9,826	14,543	2,591	1,984	3,589	..	33,554
<b>Industrial Crops—</b>									
Broom Millet—									
Fibre .. ..	" "	12,980	698	775	..	30	..	..	14,483
Grain .. ..	bus.	9,954	225	..	..	..	..	..	10,179
Canary Seed .. ..	" "	804	..	29,427	..	..	..	..	30,231
Cotton, Unginned .. ..	'ooo lb.	..	..	5,132	..	..	..	..	5,132
<b>Flax—</b>									
Straw .. ..	ton	..	12,984	..	4,647	4,470	..	..	22,101
Linseed .. ..	" "	256	202	359	..	5	..	..	822
Hops (Dry Weight) .. ..	cwt.	..	5,517	..	(b)	19,149	..	(c)	24,666
Peanuts .. ..	" "	14,369	..	357,315	..	(b)	..	..	371,694
Sugar-cane for Crushing .. ..	'ooo tons	263	..	8,751	..	..	..	..	9,014
Sunflower Seed .. ..	cwt.	534	1,040	18,518	..	..	..	..	20,092
Tobacco, Dried Leaf .. ..	'ooo lb.	588	2,154	4,015	..	912	..	..	7,669
<b>Vegetables for human consumption—</b>									
Onions .. ..	ton	1,325	22,783	11,957	4,975	4,626	87	14	45,767
Potatoes .. ..	" "	58,046	213,714	32,628	45,044	53,708	144,300	514	547,954
<b>Vineyards—</b>									
Grapes—									
For Drying .. ..	" "	35,408	222,821	..	79,722	10,200	..	..	348,151
Table .. ..	" "	4,268	5,834	2,352	841	2,187	..	..	15,482
Wine .. ..	" "	27,138	11,755	209	121,994	3,899	..	..	164,995

(a) Excludes Northern Territory, details for which are not available.

(b) Not available for publication.

(c) Incomplete.

6. Production of Principal Crops in Australia.—The following table shows the production of the principal crops for the five years ended 1953-54, and the average for the decennium ended 1938-39 :—

## PRODUCTION OF PRINCIPAL CROPS : AUSTRALIA.

Crop.	Unit of Quantity.	Average, ten years ended 1938-39.	1949-50.	1950-51.	1951-52.	1952-53.	1953-54.
<b>Cereals for Grain—</b>							
Barley, 2 Row .. ..	'ooo bus.	7,480	17,569	20,811	19,476	29,633	35,923
Maize .. ..	" "	7,228	5,006	4,729	4,018	4,967	5,070
Oats .. ..	" "	16,437	27,391	25,128	34,506	43,623	32,961
Rice .. ..	" "	2,005	3,783	4,118	3,048	3,904	4,069
Wheat .. ..	" "	169,398	218,221	184,244	159,725	195,208	197,960
Hay .. ..	" tons	3,490	2,430	2,063	2,345	2,765	3,049
<b>Vegetables for human consumption—</b>							
Onions .. ..	" "	43	48	35	53	45	46
Potatoes .. ..	" "	351	471	412	509	431	548
<b>Industrial Crops—</b>							
Cotton, Unginned .. ..	lb.	15,667	719	1,102	1,406	2,184	5,132
Hops, (dry weight) .. ..	cwt.	18,889	(a)22,993	(a)26,147	(a)17,914	(a)32,111	(a)24,666
Sugar-cane for Crushing .. ..	'ooo tons	4,585	6,549	7,052	5,327	6,957	9,014
Tobacco (Dried leaf) .. ..	lb.	5,113	4,138	4,211	7,553	6,485	7,669
<b>Vineyards—</b>							
Grapes .. ..	" tons	381	434	362	475	568	529
Wine made (b) .. ..	" gals.	16,104	32,675	26,036	35,255	30,023	31,606
Dried Vine Fruits .. ..	" tons	70	68	56	72	101	96

(a) Excludes Western Australia.

(b) Net factory and farm production of beverage and distillation wine excluding the liquid gallonage of spirits added in wine fortifying.

7. **Yield per Acre of Principal Crops in Australia.**—The following table shows the yield per acre for Australia of the principal crops for the five years ended 1953-54 and the average for the decennium ended 1938-39.

**YIELD PER ACRE OF PRINCIPAL CROPS : AUSTRALIA.**

Crop.	Unit of Quantity.	Average, ten years ended 1938-39.	1949-50.	1950-51.	1951-52.	1952-53.	1953-54.
Cereals for Grain—							
Barley, 2 Row .. ..	bushel.	17.5	19.0	21.6	20.2	26.4	24.2
Maize .. .. .	"	24.5	31.0	27.9	23.7	28.5	28.4
Oats .. .. .	"	11.8	15.7	14.3	14.6	15.8	15.4
Rice .. .. .	"	93.0	100.8	111.5	85.5	114.8	104.6
Wheat .. .. .	"	11.8	17.8	15.8	15.4	19.1	18.4
Hay .. .. .	ton	1.17	1.51	1.50	1.51	1.57	1.58
Vegetables for human consumption—							
Onions .. .. .	"	5.54	6.34	4.61	6.13	5.90	6.20
Potatoes .. .. .	"	2.71	3.52	3.24	4.31	3.18	4.27
Industrial Crops—							
Cotton, Unginned .. ..	lb.	366	267	373	314	372	572
Hops (dry weight) (a) ..	cwt.	17.88	14.76	16.32	10.79	19.31	15.18
Sugar-cane for Crushing(a)	ton	19.24	24.34	25.94	18.91	24.89	26.47
Tobacco (Dried leaf) ..	lb.	463	903	651	921	819	930
Vineyards—							
Grapes (a) .. .. .	ton	3.45	3.53	2.91	3.78	4.49	4.15

(a) Per acre of productive crops.

8. **Gross Value of Principal Crops in Australia.**—The following table shows the gross value of principal crops at the principal markets in Australia for the five years ended 1953-54 and the average for the decennium ended 1938-39.

**GROSS VALUE OF PRINCIPAL CROPS : AUSTRALIA.**  
(£'000.)

Crop.	Average, ten years ended 1938-39.	1949-50.	1950-51.	1951-52.	1952-53.	1953-54.
Cereals for Grain—						
Barley .. .. .	1,214	10,709	13,339	17,739	27,512	21,011
Maize .. .. .	1,537	2,806	3,048	3,809	4,030	3,868
Oats .. .. .	1,937	8,254	10,293	19,005	15,301	12,345
Rice .. .. .	392	1,653	2,171	2,108	3,338	3,198
Wheat (a) .. .. .	30,125	148,596	124,740	120,734	154,656	138,135
Hay .. .. .	11,413	17,770	17,931	26,193	29,249	33,230
Green Fodder .. .. .	2,775	(b) 3,894	(b) 5,001	(b) 6,934	(b) 6,209	(b) 7,720
Vegetables for human consumption—						
Onions .. .. .	245	1,058	1,086	2,019	1,106	1,662
Potatoes .. .. .	2,314	9,142	10,265	15,982	14,706	12,075
Other vegetables for human consumption .. .. .	(c) 2,203	14,835	20,200	27,123	24,543	22,915
Industrial Crops—						
Cotton, Unginned .. ..	(a) 298	26	54	127	107	316
Hops .. .. .	157	(b) 465	(b) 620	(b) 517	(b) 1,021	(b) 802
Sugar-cane .. .. .	7,895	18,581	19,046	19,635	30,495	39,619
Tobacco (Dried leaf) ..	474	1,146	1,622	2,379	2,578	3,816
Vineyards .. .. .	3,907	8,886	10,125	14,084	15,751	13,488
Orchards .. .. .	(a) 7,953	26,273	30,656	43,838	42,032	46,415
All other Crops .. .. .	2,651	7,795	8,441	10,098	10,465	11,520
Total, Gross Value ..	77,490	281,889	278,638	332,324	383,108	372,135

(a) Includes Government assistance.

(b) Incomplete, excludes Western Australia.

(c) Incomplete. Market gardens and pulse only.

9. **Value of Production and Indexes of Price and Quantum of Production.**—(i) *Gross and Net Values, 1953-54.* Values of agricultural production for each State are shown for 1953-54 in the following table. A more detailed reference to the value of production of agriculture and other industries in Australia as well as a brief explanation of the terms used will be found in Chapter XXIX.—Miscellaneous.



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; consequently, the figures stated are inflated to that extent.

**GROSS, FARM AND NET VALUES OF AGRICULTURAL PRODUCTION, 1953-54.**  
(£'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)
				Seed used and Fodder for Farm Stock.	Value of other Materials used.	
New South Wales .. ..	93,735	17,410	76,325	4,995	(b) 2,938	68,342
Victoria .. ..	89,374	14,587	74,787	5,000	4,163	65,624
Queensland .. ..	73,491	7,640	65,851	5,420	4,960	55,471
South Australia .. ..	57,872	9,312	48,560	3,341	3,519	41,700
Western Australia .. ..	43,267	5,593	37,674	2,572	6,983	28,119
Tasmania .. ..	14,223	3,258	10,965	1,232	(b) 529	9,204
Total .. ..	371,962	57,800	314,162	22,560	23,142	268,460

(a) No deduction has been made for depreciation and maintenance.  
for costs of power, power kerosene, petrol and other oils.

(b) No allowance made

(ii) *Net Values, 1929-30 to 1953-54.* 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 1949-50 to 1953-54 in comparison with the averages for the decennial period ended 1938-39:—

**NET VALUE OF AGRICULTURAL PRODUCTION.**

Year.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas.	Total.
NET VALUE.(a) (£'000.)							
Average, ten years 1929-30 to 1938-39	13,304	10,508	10,189	6,540	4,903	1,824	47,268
1949-50 .. ..	69,078	53,905	30,953	32,790	26,605	5,372	218,703
1950-51 .. ..	44,402	53,465	32,001	36,202	33,126	8,644	208,130
1951-52 .. ..	58,333	64,084	35,622	46,903	31,027	10,716	246,685
1952-53 .. ..	66,623	65,067	53,684	51,244	28,977	10,803	276,398
1953-54 .. ..	68,342	65,624	55,471	41,700	28,119	9,204	268,460

**NET VALUE PER HEAD OF POPULATION. (£ s. d.)**

Average, ten years 1929-30 to 1938-39	5 1 2	5 14 11	10 13 0	11 3 10	11 0 9	7 18 5	7 1 4
1949-50 .. ..	21 19 2	24 15 9	26 7 8	47 4 2	48 16 1	19 11 5	27 6 2
1950-51 .. ..	13 14 9	23 16 9	26 10 2	50 8 7	58 1 7	30 9 9	25 3 8
1951-52 .. ..	17 12 3	27 15 0	28 14 6	63 2 0	52 11 11	36 10 8	29 1 3
1952-53 .. ..	19 15 10	27 8 7	42 3 11	66 17 1	47 8 2	35 14 2	31 16 1
1953-54 .. ..	20 1 4	27 1 8	42 13 1	53 1 1	44 11 8	29 14 11	30 6 4

(a) No deduction has been made for depreciation and maintenance.

(iii) *Quantum and Price Indexes of Agricultural Production.* Quantum and price indexes of agricultural production shown in the following table have been calculated by the fixed-base weighted aggregative method. Further details on weights used, &c., are to be found in Chapter XXIX.—Miscellaneous.

## QUANTUM AND PRICE INDEXES OF AGRICULTURAL PRODUCTION.

(Base : Average 3 years ended June, 1939 = 100.)

Particulars.	1949-50.	1950-51.	1951-52.	1952-53.	1953-54.
<b>Quantum Produced—</b>					
Wheat .. .. .	133	112	97	119	120
Other Crops .. .. .	107	105	107	123	134
Total, All Crops .. .. .	117	108	103	121	129
<b>Total per Head of Population</b>	100	89	83	95	99
<b>Price—</b>					
Wheat .. .. .	341	338	378	397	345
Other Crops .. .. .	218	255	338	337	305
Total, All Crops .. .. .	272	291	355	364	323

## § 4. Wheat.

1. **Royal Commission on the Wheat Industry.**—A Royal Commission was appointed in January, 1934 to inquire into and report upon the economic condition of the industries of growing, handling and marketing wheat, and the manufacturing, distributing and selling of flour and bread. A searching inquiry was made by the Commission and the results of its investigations were submitted in a series of five reports. The first and second reports covered the wheat-growing industry, the third that of baking, the fourth the flour-milling industry, while the fifth, completed in February, 1936, dealt with the history of the Commission's investigations and traversed the principal recommendations submitted.

2. **Wheat Costs of Production Committee.**—A Wheat Costs of Production Committee was appointed by the Commonwealth Government in February, 1947, to inquire into and report upon :—(i) the reasonable costs of production of wheat per bushel in Australia's main wheat-growing districts, and (ii) whether basic items of cost could be established as an index to periodical variations in costs of the production of wheat. The Committee in its report to the Commonwealth Government in March, 1948, found that the cost of growing wheat in the Commonwealth was 6s. per bushel at sidings and advised that basic items of cost could be established as an index to periodical variations in wheat production costs.

3. **Licensing of Areas Sown to Wheat, and Acreages Sown.**—Details of the operations of the Wheat Stabilization Board in licensing wheat growing during the seasons 1941-42 to 1948-49 will be found in Official Year Book No. 38, pp. 940, 941. The Board ceased to function on 31st December, 1948.

4. **Legislation relating to Wheat Industry.**—(i) *Financial Assistance to Wheat Growers.* Reference to financial assistance during 1952-53 and 1953-54 will be found in § 23, Financial Assistance to Primary Producers, hereafter. Information with respect to earlier years will be found in earlier issues of the Official Year Book.

(ii) *Stabilized Marketing.* 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 permanent Wheat Stabilization Plan in 1948, was given in the Appendix to Official Year Book No. 37 (pp. 1295-99).

(iii) *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, 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.

The Board was reconstituted, with similar powers, under the Commonwealth Wheat Stabilization Act 1948 to administer the stabilization plan. The new Board commenced to function on the 18th December, 1948.

(iv) *Wheat Stabilization Plan.* (a) 1947-48 to 1952-53. Details of the Wheat Stabilization Plan which operated during the seasons 1947-48 to 1952-53 inclusive were published in Official Year Book No. 40, pp. 841 and 842, and previous issues. All contributions paid into the Fund established as a part of the plan have now been refunded.

(b) 1953-54 to 1957-58. Agreement was reached in July, 1954 at a conference of Premiers and Ministers for Agriculture on the terms of a new wheat industry stabilization plan. The plan was submitted to polls of wheat growers in the mainland producing States, 94 per cent. of growers voting in favour of the plan.

The necessary legislation was subsequently passed by Commonwealth and State Governments and the plan operated from the 1953-54 season.

The principal features of the plan are as follows :—

- (i) The period of the Wheat Stabilization Plan to be five years, 1953-54 to 1957-58 inclusive.
- (ii) The Australian Wheat Board will be the sole authority for marketing wheat within Australia and wheat and flour for export from Australia.
- (iii) The Commonwealth Government will guarantee a return to growers of the ascertained cost of production in respect of up to 100 million bushels of wheat exported from Australia from each of the crops covered by the plan.
- (iv) The home consumption price will not be less than the guaranteed price. Subject to this understanding, the home consumption price will be fixed at 14s. per bushel, bulk f.o.r. ports, but will vary downwards to conform with the International Wheat Agreement price current at the commencement of each season. If no international agreement is operating the home consumption price will vary downwards with the current export price fixed by the Wheat Board.
- (v) A premium of 3d. per bushel on wheat grown in Western Australia and exported from that State will be paid in recognition of the natural freight advantage applying to that State.
- (vi) The home consumption price will be loaded by an amount necessary to cover the cost of freight on wheat to Tasmania. For 1953-54 and 1954-55 this amount is 1½d. per bushel.
- (vii) A Stabilization Fund will be established by means of an export tax of 1s. 6d. per bushel when wheat export prices exceed the costs of production by this amount or more, and by that portion of 1s. 6d. by which the export prices exceed the costs of production when the excess is less than 1s. 6d. per bushel.
- (viii) The maximum amount of the Stabilization Fund will be £20 million. As the Fund accumulates beyond this figure, repayments will be made to the oldest contributing pool.
- (ix) When average export realizations fall below costs of production, export returns will be raised, in respect of up to 100 million bushels, first by drawing upon the Stabilization Fund and when that Fund is exhausted the Commonwealth Government will make the necessary payments.

5. Marketing of Wheat.—(i) *Wheat Acquired and Disposed of.* (a) *Wheat Acquired.* Particulars of wheat acquired by the Australian Wheat Board from the 1949-50 to 1954-55 harvests are shown in the following table :—

**AUSTRALIAN WHEAT BOARD : WHEAT ACQUIRED, 1949-50 TO 1954-55.**

('000 Bushels.)

Pool.	Harvest.	New South Wales.	Victoria.	Queensland.	South Australia.	Western Australia.	Tasmania.	Australia.
13 .. ..	1949-50	75,450	55,238	11,195	26,377	34,581	88	202,929
14, 14A and 14B ..	1950-51	37,292	49,430	7,712	29,523	46,088	60	170,103
15 .. ..	1951-52	33,853	43,766	6,169	25,773	36,412	48	146,021
16 .. ..	1952-53	51,668	47,460	16,776	32,171	31,703	87	179,805
17 .. ..	1953-54	57,844	52,219	9,102	27,711	36,161	161	183,198
18 and 18A ..	1954-55	32,338	46,377	11,604	28,632	30,619	65	152,635

(b) *Wheat Disposal.* Details relating to the disposal of wheat during the years ended 30th November, 1950 to 1955 are shown in the following table :—

**AUSTRALIAN WHEAT BOARD : DISPOSAL OF WHEAT, 1950 TO 1955.(a)**  
(’000 Bushels.)

Particulars.	1950.	1951.	1952.	1953.	1954.	1955.
Sold for export as wheat ..	80,931	85,227	46,192	59,517	40,547	63,171
Sold for export as flour ..	30,947	42,454	3f.693	41,255	26,871	(b)34,024
Sold for local consumption as flour ..	35,484	37,577	39,049	39,108	35,860	38,012
Sold for other purposes ..	25,499	29,556	26,233	20,605	20,261	18,560

(a) Years ended 30th November.

(b) Includes flour content of manufactured wheat products exported.

(ii) *Finance.* The Wheat Acquisition Regulations empowered the Minister to arrange with the Commonwealth Bank for advances to the Board, the advances being guaranteed by the Commonwealth Government. The Wheat Industry Stabilization Act 1948 included similar provisions for advances to the reconstituted Board established under that Act.

**AUSTRALIAN WHEAT BOARD : FINANCIAL OPERATIONS, POOLS Nos. 13 to 17.**  
(£.)

Particulars.	No. 13 Pool.(a)  (1949-50 Harvest).	Nos. 14, 14A and 14B Pools. (a) (1950-51 Harvest).	No. 15 Pool.(a)  (1951-52 Harvest).	No. 16 Pool.(a)  (1952-53 Harvest).	No. 17 Pool.(b)  (1953-54 Harvest).
Paid to growers .. ..	129,469,276	105,633,151	100,000,768	127,177,779	98,807,867
Rail freight .. ..	6,300,839	6,063,648	7,620,657	11,154,989	12,732,106
Expenses .. ..	4,393,666	4,798,292	5,415,288	5,944,989	7,488,900
<b>Total Payments</b> ..	<b>140,163,775</b>	<b>116,495,101</b>	<b>113,036,713</b>	<b>144,277,757</b>	<b>119,028,873</b>
<b>Value of sales delivered</b> ..	<b>c 140,163,775</b>	<b>d 116,495,101</b>	<b>e 113,036,713</b>	<b>144,277,757</b>	<b>(f)129,395,071</b>

(a) Complete. (b) Incomplete. (c) Includes £15,244,895 paid into Wheat Prices Stabilization Fund under Wheat Export Charges Act 1948, plus interest £394,285. (d) Includes £11,070,976 paid into Wheat Prices Stabilization Fund under Wheat Export Charges Act 1948, plus interest £400,712. (e) Includes £9,166,550 paid into Wheat Prices Stabilization Fund under Wheat Export Charges Act 1948, plus interest £282,291. (f) Includes £9,189,577 paid to Wheat Prices Stabilization Fund under Wheat Export Charge Act, 1954.

NOTE.—Details of earlier pools will be found in previous issues of the Year Book.

(iii) *Advances to Growers.* Details of advances made to wheat growers in respect of the various pools are published in *Statistical Bulletin : The Wheat Industry, Australia*, last issued in April, 1956.

6. *International Wheat Agreement.*—Details of the International Wheat Agreement operative from 1st August, 1949 to 31st August, 1953 were published in Official Year Book No. 40, pp. 844-5, and previous issues.

A table showing guaranteed sales and purchases and actual transactions recorded during 1952-53, the last year of the Agreement, was published in Official Year Book No. 41, p. 752.

A further agreement covering a period of three years from 1st August, 1953 to 31st July, 1956 was signed in Washington in April, 1953. Sweden and the United Kingdom have failed to enter into the new agreement while Jordan, Korea, Vatican City and Yugoslavia have joined the new agreement. Australia's quota was fixed originally at 48 million bushels but this was subsequently adjusted to 45 million bushels.

Particulars of guaranteed sales and purchases and transactions actually recorded during 1953-54 are shown in the table below.

**INTERNATIONAL WHEAT AGREEMENT: GUARANTEED ANNUAL SALES AND PURCHASES AND TRANSACTIONS RECORDED FOR 1953-54.(a)**  
(Million Bushels.)

Exporting Country.	Guaranteed Annual Sales.(b)	Sales Recorded 1953-54.	Importing Country.	Guaranteed Annual Purchases.(c)	Purchases Recorded 1953-54.
United States of America ..	193.7	106.2	Germany .. ..	55.1	37.5
Canada .. ..	150.8	90.9	Japan .. ..	36.7	36.9
Australia .. ..	14.4	27.8	India .. ..	36.7	2.6
France .. ..	0.3	0.3	Netherlands .. ..	24.8	17.2
			Belgium .. ..	23.9	15.2
			Remaining Importing Countries .. ..	212.0	115.6
Total .. ..	389.2	225.2	Total .. ..	389.2	225.2

(a) Wheat and wheat flour as wheat. (b) Quantities which exporting countries must sell if required by importing countries to do so at the maximum price. (c) Quantities which importing countries must buy if required to do so at the relevant minimum price.

7. **Wheat Farms.**—(i) *Number.* Particulars of the number of farms growing 20, acres and upwards of wheat for grain during each of the years 1949-50 to 1953-54, compared with the average for the five years ended 1938-39, are shown in the following table. It should be noted that 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.	Average, 1934-35 to 1938-39.	1949-50.	1950-51.	1951-52.	1952-53.	1953-54.
New South Wales ..	15,657	15,594	14,279	13,147	13,167	14,865
Victoria .. ..	12,393	11,491	11,203	10,076	10,049	10,900
Queensland .. ..	2,403	3,744	3,862	3,005	4,970	3,918
South Australia ..	12,255	9,346	8,416	8,345	8,432	8,473
Western Australia ..	8,859	7,808	7,814	7,766	7,751	7,786
Tasmania .. ..	269	58	79	51	95	149
Australia(a) ..	51,836	48,041	45,653	42,390	44,464	46,091

(a) Excludes Australian Capital Territory.

(ii) *Special Tabulations relating to Wheat Holdings.* With the co-operation of State Statisticians, a series of special tabulations relating to rural holdings was undertaken for all States for the year 1949-50. The tabulations, which covered, *inter alia*, a series of size classifications of wheat farms, have been published in detail in *Primary Industries Bulletin*, 1949-50, No. 44. A similar tabulation was made for the year 1947-48, a summary of the results being published in *Production Bulletin* No. 42, Part II.—*Primary Industries* and Official Year Book No. 38, page 947.

8. **Area, Production and Yield per Acre.**—(i) *Area.* Wheat is the principal crop grown in Australia, and its progress since 1860 has been almost continuous. Prominent features in its 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 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.

As previously mentioned, any variation in the acreage sown to this cereal materially affects the total area of crops. The area, production and yield per acre of wheat for grain in each State are shown below for the years 1949-50 to 1953-54 in comparison with the averages for the decennial periods ended 1938-39 and 1952-53 :—

#### WHEAT FOR GRAIN: AREA, PRODUCTION AND YIELD PER ACRE.

Season.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas.	A.C.T.	Aust.
AREA ('000 ACRES).								
Average, 1929-30 to 1938-39 ..	4,302	3,063	277	3,526	3,158	17	2	14,345
1949-50 ..	4,012	2,838	600	1,896	2,804	6	4	12,240
1950-51 ..	3,329	2,735	559	1,848	3,185	5	2	11,663
1951-52 ..	2,753	2,404	453	1,613	3,094	4	1	10,384
1952-53 ..	2,702	2,232	724	1,544	2,999	7	1	10,209
Average, 1943-44 to 1952-53 ..	3,566	2,717	466	1,918	2,515	6	2	11,190
1953-54 ..	3,357	2,389	580	1,528	2,885	10	2	10,751
PRODUCTION ('000 BUSHEL). (a)								
Average, 1929-30 to 1938-39 ..	55,935	38,416	4,118	34,700	35,812	374	43	169,398
1949-50 ..	81,939	57,434	11,774	28,351	38,500	127	92	218,221
1950-51 ..	43,273	51,236	8,785	30,936	49,900	95	19	184,244
1951-52 ..	30,689	45,995	6,632	27,301	40,000	94	14	150,725
1952-53 ..	56,670	50,335	18,662	33,919	35,458	156	8	195,208
Average, 1943-44 to 1952-53 ..	52,434	40,286	9,182	25,804	31,181	117	45	159,049
1953-54 ..	63,681	53,698	10,180	30,409	39,700	263	29	197,960
YIELD PER ACRE (BUSHEL). (a)								
Average, 1929-30 to 1938-39 ..	13.0	12.5	14.9	9.8	11.3	21.7	20.6	11.8
1949-50 ..	20.4	20.3	19.6	15.0	13.3	23.3	20.6	17.8
1950-51 ..	13.0	18.7	15.7	16.7	15.7	17.8	10.1	15.8
1951-52 ..	14.4	18.7	14.6	16.9	12.0	26.1	14.0	15.4
1952-53 ..	21.0	22.6	25.8	22.0	11.8	23.4	12.7	19.1
Average, 1943-44 to 1952-53 ..	14.7	14.8	19.7	13.5	12.4	20.5	17.9	14.2
1953-54 ..	19.0	22.5	17.6	19.9	13.8	27.2	18.5	18.4

(a) 60 lb. per bushel.

A graph showing the expansion of the area sown to wheat for grain in Australia since 1860 appears on page 859 while a map showing the distribution of areas growing wheat for grain throughout Australia in 1947-48 appeared in Official Year Book No. 39, pp. 977-8. Similar maps showing the distribution of wheat areas in 1924-25 and 1938-39 appeared respectively in Official Year Book No. 22, p. 695, and in No. 34, p. 451.

(ii) *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 and inconsistencies in this respect are reflected in the yearly 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 ships flour made from local wheat which is particularly suitable for biscuits. Normally the production of wheat greatly exceeds Australian requirements, and from half to two-thirds of the crop is exported overseas.

Australia's wheat production in 1953-54 was 198.0 million bushels, representing an average yield of 18.4 bushels per acre. This was 39.0 million bushels more than the average for the ten years ended 1952-53 and 28.6 million bushels more than the average for the ten years ended 1938-39.

(iii) *Yield per Acre.* Short-term variations in yield per acre are due chiefly to the vagaries of the seasons. The best yields per acre 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 (the record); and in 1953-54, 18.4 bushels.

(iv) *Decennial Averages, 1861-70 to 1945-54.* The following table shows the average area, production and yield per acre for decennial periods since 1861.

#### WHEAT FOR GRAIN: AVERAGE AREA AND PRODUCTION, AUSTRALIA.

Period.				Area.	Production.	Yield per Acre.
				'000 Acres.	'000 Bushels.	Bushels.
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	..	..	..	11,201	135,400	12.0
1931-40	..	..	..	14,176	177,758	12.5
1941-50	..	..	..	11,358	145,599	12.8
1945-54	..	..	..	11,478	167,873	14.6

It should be noted, that with improved farming methods, including the proper tillage of the soil, rotation of crops, the growing of suitable varieties and the application of fertilizers, average yields per acre in the five decades since 1901 have shown a continued improvement.

9. *Varieties of Wheat Sown.*—(i) *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 since followed him have proved of immense benefit to the wheat industry of Australia. Their efforts have resulted in better average yields, 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 the principal varieties grown during each season is restricted to about 40.

(ii) *Stats, 1953.* The principal varieties of wheat sown and the percentage of each to the total area sown in the five main producing States during 1953 were as follows:—New South Wales, Bencubbin (38.2), Gabo (15.8), Kendee (7.6); Victoria, Insignia (41.0), Quadrat (26.4), Pinnacle (21.4); Queensland, Gabo (15.4), Charter (14.9), Lawrence (13.8); South Australia, Gabo (22.9), Bencubbin (9.9); Western Australia, Bungulla (25.6), Bencubbin (21.8), Kondut (10.4). A detailed table of wheat varieties sown in these five States appears in *Primary Industries Bulletin* No. 48, *Part I.—Rural Industries.*

10. *F.A.Q. Standard of Wheat.*—The Chambers of Commerce in each of the four main wheat States each year determine the "f.a.q." standard for the State. "F.a.q." means "fair average quality", and the standard is used as the basis for sales of the season's crop. It represents the average quality for the season, and this average varies from year to year, and from State to State. "F.a.q." is an Australian term, and the method 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.

Samples of wheat are obtained by the Chambers of Commerce from the different wheat districts, and are mixed to give a representative sample of the whole crop. From this representative sample the f.a.q. weight is determined by the use of the Schopper 1-litre scale chondrometer.

The f.a.q. weight of a bushel of wheat in each of the four main wheat-producing States for the 1954-55 season's crop was as follows (1953-54 details in parentheses)—New South Wales, 66½ lb. (64 lb.); Victoria, 62½ lb. (64½ lb.); South Australia, 64½ lb. (63½ lb.); and Western Australia, 63½ lb. (64½ lb.).

11. **Price of Wheat.**—(i) *Home Consumption.* The price 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 is shown in the table below for the years indicated.

**AUSTRALIAN WHEAT BOARD'S PRICE FOR WHEAT FOR HOME CONSUMPTION : AUSTRALIA.**

(s. d. per Bushel, Bulk Basis.)

Particulars.	1950.(a)	1951.	1952.	1953.	1954.	1955.
For Flour .. ..	6 8	7 10	10 0	11 11	(b)14 1½	(b)14 1½
For Stock Feed .. ..	6 8	7 10	(c)12 0	(c)13 11	(b)14 1½	(b)14 1½

(a) Excludes 5d. per bushel subsidy paid by the Commonwealth Government, making the total return to growers 7s. 1d. per bushel, bulk basis. (b) Of this, 1½d. is to be used to meet freight charges incurred on wheat shipped to Tasmania. (c) Excludes subsidy of 4s. 1d. in 1952 and 2s. 2d. in 1953 paid by the Commonwealth Government. In Western Australia the price in 1952 was 10s. exclusive of subsidy.

(ii) *Export Wheat Prices—Australian Wheat Board's Basic Selling Price.*—The Wheat Board basic export selling prices averaged 14s. 6d. for the season ended 31st July, 1955, both for wheat sold under the International Wheat Agreement and for "free" wheat sold on the open market. Actual selling prices have been lower than the basic prices in some cases, particularly where other exporting countries enjoy a geographical freight advantage.

The maximum and minimum prices fixed under the 1953-56 International Wheat 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 for No. 1 Manitoba Northern wheat in bulk in store Fort William—Port Arthur." Expressed in terms of Australian currency the maximum price for f.a.q. Australian wheat sold under the Agreement is approximately 18s. 5½d. per bushel while the minimum price is 13s. 10d. per bushel, though it may be higher or lower depending upon the differences in freight rates between Canada—the United Kingdom and Australia—the United Kingdom.

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 Official Year Book No. 41, p. 755, and *Statistical Bulletin: The Wheat Industry, Australia*, No. 88, of April, 1955, and in previous issues of these publications.

12. **Value of the Wheat Crop.**—The estimated gross value of the wheat crop in each State and in Australia during the season 1953-54 and the value per acre are shown below.

**WHEAT FOR GRAIN : VALUE OF CROP(a), 1953-54.**

Particulars.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas.	A.C.T.	Aust.
Aggregate value £'000	44,016	37,009	7,225	21,969	27,712	184	20	138,135
Value per acre ..	£13/2/3	£15/9/9	£12/9/2	£14/7/6	£9/12/1	£18/19/10	£12/17/8	£12/16/11

(a) Gross value of total crop, including wheat used for seed and for stock feed on farms.



13. **Production and Disposal of Wheat in Australia.**—In the following table details are given of the production of wheat and its disposal during each of the years ended 30th November, 1950 to 1954 in comparison with the average for the three years ended November, 1937 to 1939. The particulars respecting local consumption refer to sales actually executed by the Australian Wheat Board, whilst those respecting exports represent actual shipments. (For particulars of production and exports from 1860 see graph, p. 860).

### WHEAT : PRODUCTION AND DISPOSAL, AUSTRALIA.

(Million Bushels.)

Particulars.	Average, Three Years ended 30th Nov. 1939.	Year ended 30th November—				
		1950.	1951.	1952.	1953.	1954.
Opening stocks (including flour as wheat) .. .. .	10.2	19.0	43.8	19.4	16.9	37.7
Production .. .. .	164.7	218.2	184.2	159.7	195.2	198.0
<b>Total Available Supplies ..</b>	<b>174.9</b>	<b>237.2</b>	<b>228.0</b>	<b>179.1</b>	<b>212.1</b>	<b>235.7</b>
<b>Exports—</b>						
Wheat .. .. .	75.0	82.8	85.9	45.6	60.7	38.5
Flour as wheat(a) .. .. .	30.6	36.9	41.7	36.1	41.4	27.9
Breakfast foods and other uses ..	(b)	0.8	2.0	1.2	0.8	0.8
<b>Local Consumption—</b>						
Flour as wheat .. .. .	30.9	35.5	37.6	39.0	39.1	34.4
Stock feed .. .. .	9.3	23.5	27.4	23.9	18.4	17.6
Seed .. .. .	14.6	11.6	10.5	10.3	10.8	10.8
Breakfast foods and other uses ..	(b)	2.2	2.3	2.6	2.2	1.6
Balance retained on farm (excluding seed) .. .. .	(c)	3.7	3.7	3.4	4.6	4.0
Closing stocks (including flour as wheat) .. .. .	14.5	43.8	19.4	16.9	37.7	94.9
<b>Total Disposals .. .. .</b>	<b>174.9</b>	<b>240.8</b>	<b>230.5</b>	<b>179.0</b>	<b>215.7</b>	<b>230.5</b>
<b>Excess (+) or Deficiency (—) of Disposals in respect of Available Supplies (d) .. .. .</b>	<b>..</b>	<b>+3.6</b>	<b>+2.5</b>	<b>—0.1</b>	<b>+3.6</b>	<b>—5.2</b>

(a) Includes wheatmeal from July 1951, and sharps from July, 1954. (b) Included with flour (local consumption). (c) Included with stock feed. (d) Includes allowance for unrecorded movements in stocks, gain or loss in out-turn, etc.

14. **Exports of Wheat and Flour.**—(NOTE : Statistics in this section relate to years ended 30th June.) (i) *Quantities.* The following table shows particulars of the exports of wheat and flour and total of both in terms of wheat for each of the years 1949–50 to 1953–54 compared with the average for the five years ended 1938–39. For the sake of convenience, flour has been expressed at its equivalent in wheat, 1 ton of flour being taken as equal to 46.3 bushels of grain. Wheat and flour have been imported to tide over lean seasons on only two occasions since 1900 : in 1902–3 the wheat harvest was as low as 12,378,000 bushels, and wheat and flour representing 12,468,000 bushels of wheat were imported, whilst an equivalent of 7,279,000 bushels was imported in 1914–15 to supplement the yield of 25 million bushels produced in that season. During the five years ended 1953–54 exports in terms of wheat averaged 102,580,000 bushels, compared with the average of 106,432,000 bushels for the five years ended 1938–39.

## WHEAT AND FLOUR : EXPORTS FROM AUSTRALIA.

Year.	Quantity.				Value. (£'000.)		
	Wheat.	Flour.		Total as Wheat.	Wheat.	Flour.	Total.
		As Flour.	As Wheat. (a)				
'000 bushels.	Tons. (2,000 lb.)	'000 bushels.	'000 bushels.				
Average, 1934-35 to 1938-39 ..	76,473	64,707	29,959	106,432	14,813	(b)5,058	19,871
1949-50..	78,426	775,499	35,906	114,332	62,173	26,482	88,655
1950-51..	86,782	886,533	41,046	127,828	74,151	33,022	107,173
1951-52..	62,921	791,470	36,645	99,566	55,287	33,107	88,394
1952-53..	59,508	871,096	40,331	99,839	51,970	37,471	89,441
1953-54..	36,058	761,917	35,276	71,334	30,957	29,726	60,683

(a) One ton (2,000 lb.) of flour is taken to be equivalent to 46.3 bushels of wheat.

(b) Excludes wheatmeal for baking.

(ii) *Destination.* (a) *Wheat.* The following table shows the exports of wheat to various countries for each of the five years ended 1953-54 and the average for the five years ended 1938-39.

WHEAT : EXPORTS FROM AUSTRALIA.  
( '000 Bushels.)

Country to which Exported.	Average, 1934-35 to 1938-39.	1949-50.	1950-51.	1951-52.	1952-53.	1953-54.
United Kingdom ..	45,195	9,435	20,017	17,932	21,956	11,520
India ..	1,662	35,254	16,742	7,372	10,767	7,038
New Zealand ..	1,537	5,756	4,863	9,649	5,808	7,752
Other British Countries ..	7,863	4,677	5,821	7,321	10,760	5,405
Egypt ..	503	6,511	17,075	3,980	..	..
Germany, Federal Republic of	(a)235	..	2,336	4,734	2,847	1,888
Italy ..	3,152	325	7,965	6,473	2,068	357
Other Foreign Countries ..	16,326	16,468	11,963	5,460	5,302	2,098
Total ..	76,473	78,426	86,782	62,921	59,508	36,058

(a) Pre-war Germany.

(b) *Flour.* The following table shows the exports of flour to various countries for each of the five years ended 1953-54, and the average for the five years ended 1938-39.

FLOUR : EXPORTS FROM AUSTRALIA.  
(Tons of 2,000 lb.)

Country to which Exported.	Average, 1934-35 to 1938-39. (a)	1949-50.	1950-51.	1951-52.	1952-53.	1953-54.
United Kingdom ..	142,912	35,236	112,953	96,432	139,941	65,659
Ceylon ..	16,915	131,348	190,674	187,134	261,845	222,479
India ..	2,732	188,358	54,609	83,142	79,921	19,880
Malaya, Federation of	63,309	78,372	79,930	60,030	65,074	70,829
Singapore ..	(b)	21,399	58,339	52,238	66,691	64,382
Other British Countries ..	109,609	174,706	120,173	88,195	92,122	97,257
Egypt ..	24,284	53,759	121,001	65,143	23,078	19,588
Indonesia, Republic of	..	4,472	62,890	62,322	90,774	133,406
Other Foreign Countries ..	287,312	87,849	85,964	96,834	51,650	68,437
Total ..	647,073	775,490	886,533	791,470	871,096	761,917

(a) Excludes wheatmeal for baking.

(b) Included with Malaya, Federation of.

15. **Stocks of Wheat and Flour.**—Stocks of wheat and flour in terms of wheat held by each State at 30th November in each year 1939 and 1950 to 1954 are shown in the following table. These data are based on stocks held at mills, sidings, ports and depots as recorded by the Australian Wheat Board.

**WHEAT (INCLUDING FLOUR IN TERMS OF WHEAT) : STOCKS AT 30TH  
NOVEMBER.(a)**  
(Bushels.)

30th November—	N.S.W.	Vic.	Q'land.	S. Aust.	W. Aust.	Tas.	Australa.
1939 .. ..	6,674,033	4,702,088	549,219	6,133,986	2,512,576	240,728	20,812,630
1950 .. ..	16,875,191	12,596,836	1,880,457	6,658,635	5,556,227	221,856	43,789,202
1951 .. ..	3,595,558	6,250,683	565,049	5,557,175	3,248,883	162,826	19,380,174
1952 .. ..	5,880,929	4,432,261	5,000	4,253,930	2,107,632	187,226	16,866,978
1953 .. ..	9,887,570	11,540,069	2,236,564	7,576,520	6,307,443	187,731	37,745,797
1954 .. ..	26,457,427	26,936,944	2,486,847	15,413,380	23,499,253	125,200	94,919,051

(a) One ton of flour is treated as equivalent to 46.3 bushels of wheat.

16. **Bulk Handling and Storage of Wheat in Australia.**—(i) *Description and Development of the Bulk Handling System.* A detailed description of the bulk handling system including its advantages and disadvantages compared with other methods of handling appeared on pages 954–8 of Official Year Book No. 39.

New South Wales, Victoria and Western Australia have operated bulk handling systems for a number of years, but until recently no efforts have been made to introduce such a system in the other States.

Late in 1953 it became clear that Australia could not clear its stocks of wheat as quickly as in past years and in April, 1954 the Commonwealth Government arranged to finance the construction of additional storage space in New South Wales, Victoria and South Australia (Western Australia and Queensland were later included in the scheme). The Australian Wheat Board was authorized to control the expenditure of the money provided, amounting to £3½ million.

(ii) *Bulk Handling and Storage in the States.* Particulars of the operation of the bulk handling and storage system and projected extensions in the States concerned are set out below :—

(a) *New South Wales.* At the end of 1954 there were 180 elevators operated by Government Grain Elevators and situated at the more important wheat receiving stations throughout the State as well as terminal elevators at Sydney and Newcastle. The storage capacity of the country elevators is 25,422,000 bushels. In 1953–54, 61 per cent. of the total crop was handled compared with 76 per cent. in 1952–53 and 48 per cent. in 1940–41.

Additional storage capacity is being constructed at several country centres and the sub-terminals at Junee, Temora and Werris Creek are being enlarged to a total capacity of 4.5 million bushels each as part of the plan to meet the general shortage in storage capacity.

Temporary bulkheads have also been erected to meet shortages and in 1951–52 75 of these were used.

Further bulk handling facilities are in course of construction at Newcastle and numerous sidings in Northern and Western New South Wales. When completed these storages—which are being constructed with the State's portion of the Commonwealth loan of £3½m. mentioned above—will add a further 11,900,000 bushels to the total bulk storage available in N.S.W., but when they come into use a number of temporary bulk-heads will be dismantled.

(b) *Victoria.* The Victorian Grain Elevators Board operates 148 elevators with a storage capacity of 17,034,000 bushels and a terminal elevator at Geelong with a capacity of 4,100,000 bushels. Storages for 18 million bushels, adjacent to the permanent terminal, have been constructed at Geelong.

Temporary measures for extending bulk handling facilities have been adopted and sub-terminals were constructed or acquired at Dunolly, Murtoa and Warracknabeal with a capacity of 22,000,000 bushels. Temporary bulkheads have also been used and in 1952-53 and 1953-54 there were 86 in use with a total storage for 6,885,000 bushels.

In 1953-54, 96 per cent. of the total crop was received in elevators, compared with 98 per cent. in 1952-53 and 24 per cent. in 1939-40.

(c) *Queensland.* In 1952-53 a temporary silo was provided at Pinkenba and a number of concrete silos and temporary bulkheads have subsequently been erected at country centres. Plans to extend this programme include the provision of a permanent bulk terminal at Pinkenba.

(d) *South Australia.* In 1951-52 a bulk terminal was erected by the Wheat Board at Ardrossan with a storage capacity of 1,000,000 bushels. Approximately 4,115,000 bushels were handled in 1952-53.

Additional storages are being constructed at Port Adelaide, Kadina, Gladstone and Cummins with a total capacity of 10,650,000 bushels.

(e) *Western Australia.* The system of storage in Western Australia differs from that in the eastern States in that horizontal storages made of timber and galvanized iron are used. These are relatively cheap and may be moved from place to place as required. These storages are operated by the Co-operative Bulk Handling Ltd. which is controlled and managed by wheat growers.

In 1953-54 there were 277 sidings equipped with bulk handling facilities and 36,138,000 bushels, comprising the whole of the marketed wheat crop, were received.

Extension of storage facilities in 1954-55 involved the erection of a storage for 5 million bushels at Midland Junction, which is now completed.

(f) *Tasmania.* Bulk handling of wheat has not been found necessary in this State but it is planned to erect installations at Hobart and Launceston to store wheat imported from the mainland.

17. *World Area and Production of Wheat.*—The details in the following table of the world area and production of wheat by principal countries and by continents have been compiled from official sources so far as they are available, but more particularly from the records published by the Food and Agriculture Organization of the United Nations, and the United States Office of Foreign Agricultural Service. The harvests shown for countries in the Northern Hemisphere are those garnered during the period March to October whilst those for the Southern Hemisphere cover the period November to February following.

#### WHEAT : AREA, PRODUCTION AND YIELD PER ACRE IN VARIOUS COUNTRIES.

Continent and Country.	Area.(a)			Production.			Yield per Acre.		
	Average 1935-39.	1953.	1954.(b)	Average 1935-39.	1953.	1954.(b)	Average 1935-39.	1953.	1954.(b)
	'000 acres.	'000 acres.	'000 acres.	'000 bushels.	'000 bushels.	'000 bushels.	bus.	bus.	bus.
North America—									
Canada ..	25,595	25,513	24,267	312,399	613,962	298,909	12.2	24.1	12.3
United States ..	57,293	67,661	53,712	758,629	1,169,484	969,781	13.2	17.3	18.1
Total(c) ..	84,170	94,860	79,850	1,086,000	1,809,000	1,300,000	12.9	19.1	16.3

See next page for footnotes.

## WHEAT: AREA, PRODUCTION AND YIELD PER ACRE IN VARIOUS COUNTRIES—continued.

Continent and Country.	Area.(a)			Production.			Yield per Acre.		
	Average 1935-39.	1953.	1954.(b)	Average 1935-39.	1953.	1954.(b)	Average 1935-39.	1953.	1954.(b)
	'000 acres.	'000 acres.	'000 acres.	'000 bushels.	'000 bushels.	'000 bushels.	bus.	bus.	bus.
Europe—									
France ..	12,560	10,430	11,100	286,505	330,000	338,220	22.8	31.6	35.0
Italy ..	12,577	12,100	12,100	278,366	332,800	266,800	22.1	27.5	22.0
Spain ..	(d) 11,253	10,606	10,66c	(d) 157,986	125,000	180,000	d 14.0	11.8	16.9
Total(c) ..	74,850	71,400	72,88c	1,600,000	1,725,000	1,720,000	21.4	24.2	23.6
U.S.S.R. ..	104,000	(f)	(f)	1,240,000	(f)	(f)	11.9	(f)	(f)
Africa—Total(c) ..	13,850	16,950	18,530	143,000	195,000	220,000	10.3	11.5	11.9
Asia—									
China ..	(e) 49,000	(f)	(f)	(e) 750,000	(f)	(f)	(e) 15.3	(f)	(f)
India ..	(e) 25,460	24,286	26,310	262,100	275,590	293,920	10.3	11.3	11.2
Pakistan ..	(e) 9,305	9,510	10,650	117,000	105,000	137,500	12.6	11.0	12.9
Turkey ..	8,973	15,840	15,830	133,690	293,950	180,040	15.1	18.6	11.4
Total(c) ..	114,190	133,130	140,750	1,558,000	1,790,000	1,790,000	13.6	13.4	12.7
South America—									
Argentina ..	15,834	12,345	13,500	221,769	227,800	282,560	14.0	18.5	20.9
Total(c) ..	20,490	18,840	20,010	281,000	330,000	390,000	13.7	17.5	19.5
Oceania—									
Australia ..	13,128	10,751	10,499	169,744	197,960	166,610	12.9	18.4	15.9
Total(c) ..	13,349	10,865	10,609	176,873	202,740	171,210	13.2	18.7	16.1
World Total(c)	424,900	465,050	464,630	6,085,000	7,380,000	6,930,000	14.3	15.9	14.9

(a) Figures refer to harvested areas as far as possible. (b) Preliminary. (c) Totals (estimates) include allowances for any missing data for countries shown and for other producing countries not shown. (d) 1935 only. (e) Average of less than five years. (f) Not available. See footnote (c).

18. Exports—Principal Countries.—The following table shows the quantities of wheat exported from the chief exporting countries for the period 1934-38 and the years 1952 and 1953 according to statistics recently published by the Food and Agriculture Organization of the United Nations, and the United States Office of Foreign Agricultural Service.

While Australia's production of wheat averages about 3 per cent. of the world's total, its exports account for a much higher proportion of the total quantities shipped. During the five years 1934-38 Australia's share of world wheat exports was 16 per cent., but in 1953 the proportion fell to 10 per cent., although the actual quantity shipped was only 2 per cent. lower

## WHEAT(a) : EXPORTS, PRINCIPAL COUNTRIES.

Exporting Country.	Average, 1934-38.		1952.		1953.	
	Quantity.	Proportion of World Total.	Quantity.	Proportion of World Total.	Quantity.	Proportion of World Total.
	'000 bushels.	%	'000 bushels.	%	'000 bushels.	%
Canada .. ..	175,294	27.6	395,619	38.9	340,214	34.9
Argentina .. ..	122,740	19.3	2,307	0.2	93,753	9.6
Australia .. ..	102,406	16.1	83,120	8.2	100,430	10.3
United States of America ..	46,274	7.3	418,194	41.0	276,238	28.3
U.S.S.R. (Russia) ..	26,631	4.2	(b)42,254	4.2	(b)27,557	2.8
France .. ..	18,316	2.9	14,565	1.4	18,801	1.9
All other .. ..	143,993	22.6	61,832	6.1	118,681	12.2
Total .. ..	635,654	100.0	1,017,891	100.0	975,674	100.0
World Production (c) (mil. bus.)	6,085		7,420		7,380	
Proportion of Australia's Production to World Production .. ..	%		%		%	
	2.8		2.7		2.7	

(a) Includes flour expressed in terms of wheat.

(b) Unofficial.

(c) Average 1935-39.

19. Imports—Principal Countries.—The principal importers of wheat, together with quantities imported, for the periods indicated, are shown in the following table:—

## WHEAT(a) : IMPORTS, PRINCIPAL COUNTRIES.

Importing Country.	Average, 1934-38.		1952.		1953.	
	Quantity.	Proportion of World Total.	Quantity.	Proportion of World Total.	Quantity.	Proportion of World Total.
	'000 bushels.	%	'000 bushels.	%	'000 bushels.	%
United Kingdom .. ..	208,737	33.8	171,998	17.2	175,073	18.7
Brazil .. ..	36,387	5.9	46,491	4.6	60,924	6.5
Italy .. ..	26,043	4.2	49,787	5.0	43,041	4.6
Germany, Federal Republic of	(b)25,606	(b)4.1	79,332	7.9	68,055	7.3
Netherlands .. ..	22,593	3.7	31,562	3.2	35,821	3.8
Japan .. ..	11,552	1.9	61,515	6.1	63,198	6.8
India and Pakistan .. ..	1,826	0.3	104,637	10.5	107,352	11.5
Egypt .. ..	588	0.1	33,429	3.3	20,583	2.2
All other .. ..	283,950	46.0	422,508	42.2	361,073	38.6
Total .. ..	617,282	100.0	1,001,259	100.0	935,120	100.0

(a) Includes flour expressed in terms of wheat.

(b) Pre-war Germany.

## § 5. Oats.

1. Area, Production and Yield per acre.—Oats are usually next in importance to wheat amongst the grain crops cultivated in Australia, but while wheat grown for grain in 1953-54 accounted for 50.9 per cent., oats grown for grain represented only 10.1 per cent. of the area of all crops. The area, production and yield per acre of oats for the years 1949-50 to 1953-54 and the averages for the ten-year periods ended 1938-39 and 1952-53 are shown in the following table:—

## OATS FOR GRAIN: AREA, PRODUCTION AND YIELD PER ACRE.

Season.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas.	A.C.T.	Australia.
AREA ('000 ACRES).								
Average, 1929-30 to 1938-39 ..	229	478	5	282	369	30	..	1,393
1949-50 ..	375	483	21	261	585	23	..	1,748
1950-51 ..	332	527	17	271	586	24	..	1,757
1951-52 ..	596	676	21	387	657	27	I	2,369
1952-53 ..	730	756	57	369	832	20	..	2,764
Average, 1943-44 to 1952-53 ..	511	575	26	307	527	18	..	1,964
1953-54 ..	507	584	13	280	733	20	..	2,137
PRODUCTION ('000 BUSHELS).(a)								
Average, 1929-30 to 1938-39 ..	3,578	5,750	68	2,233	3,973	831	4	16,437
1949-50 ..	7,016	8,718	338	3,464	7,268	577	10	27,391
1950-51 ..	3,994	9,034	221	3,534	7,914	429	2	25,128
1951-52 ..	9,395	11,151	263	5,405	7,689	594	9	34,506
1952-53 ..	12,326	12,599	1,303	6,666	10,440	286	3	43,623
Average, 1943-44 to 1952-53 ..	7,303	8,322	461	3,668	6,127	410	6	26,297
1953-54 ..	8,533	9,852	199	4,321	9,590	461	5	32,961
YIELD PER ACRE (BUSHELS).(a)								
Average, 1929-30 to 1938-39 ..	15.7	12.0	12.8	7.9	10.8	28.2	22.4	11.8
1949-50 ..	18.7	18.0	16.5	13.4	12.4	25.3	28.8	15.7
1950-51 ..	12.0	17.1	13.0	13.0	13.5	18.3	7.0	14.3
1951-52 ..	15.8	16.5	12.6	14.0	11.7	22.4	15.4	14.6
1952-53 ..	16.9	16.7	23.1	18.0	12.5	14.3	17.2	15.8
Average, 1943-44 to 1952-53 ..	14.3	14.5	18.1	12.0	11.6	22.5	13.4	14.5
1953-54 ..	16.8	16.9	14.8	15.4	13.1	22.9	18.6	15.4

(a) 40 lb. per bushel.

A graph showing the area sown to oats appears on page 859.

The principal oat-growing States are New South Wales, Victoria and Western Australia, which produce on the average more than 80 per cent. of the total quantity grown in Australia. South Australia also produces considerable quantities, but in Queensland and Tasmania the output is small.

During the five seasons ending 1953-54 an average of 8.7 million bushels were exported; 2.2 million bushels were used in factories for oatmeal; and 6.2 million bushels were used for seed purposes; leaving a balance of 15.3 million bushels for stock feed (principally unprocessed).

The largest yield per acre recorded for Australia in the ten years ended 1953-54 was that of the season 1947-48, amounting to 19.3 bushels per acre, this being the highest yield since 1920-21. The smallest yield per acre for the same period was that recorded in the abnormally dry season 1944-45, namely 4.4 bushels which is the lowest ever recorded for Australia.

2. **Price of Oats.**—The average wholesale price in the Melbourne market for oats of good milling quality in 1953-54 was 7s. 6½d. per bushel. This represents an increase of 3.1 per cent. on the price in 1952-53 (7s. 3¾d.) and an increase of 118.1 per cent. on the price in 1938-39 (3s. 5½d.).

3. **Value of Oat Crop.**—The estimated gross value of the oat crop in each State for the 1953-54 season and the value per acre were as follows :—

#### OATS : VALUE OF CROP, 1953-54.

Particulars.	N.S.W.	Vic.	Q'land.	S. Aust.	W. Aust.	Tas.	A.C.T.	Aust.
Aggregate value £'000	3,946	3,609	84	1,572	2,925	207	2	12,345
Value per acre ..	£7/14/9	£6/3/9	£6/4/3	£5/12/2	£3/19/10	£10/6/3	£8/11/7	£5/15/6

4. **Imports and Exports.**—The production of oats in Australia is sufficient to admit of a regular export trade. The quantities and values of oats exported from Australia during the years 1949-50 to 1953-54 compared with the average for the years 1934-35 to 1938-39 are shown hereunder :—

#### OATS : EXPORTS, AUSTRALIA.

Particulars.	Average, 1934-35 to 1938-39.	1949-50.	1950-51.	1951-52.	1952-53.	1953-54.
Quantity '000 bus.	286	6,626	7,947	12,971	11,846	3,275
Value .. £'000	36	2,394	3,529	8,001	4,851	1,219

The quantity of oats imported into Australia is usually not very large, although in 1945-46 imports exceeded exports by 802,000 bushels. Canada was the chief supplier. The previous year when imports exceeded exports was 1927-28 (by 461,000 bushels), when New Zealand was the main supplier. In 1953-54 the principal countries of destination of the exports were the United Kingdom, Federal Republic of Germany, Singapore, Federation of Malaya, India and Ceylon.

5. **Oatmeal, etc.**—The production of oatmeal amounted in 1953-54 to 40,010 tons equivalent to about 2,241,000 bushels of oats, or about 6.8 per cent. of the total production.

6. **World Production.**—The world's production of oats for the year 1954, excluding production in the U.S.S.R., according to preliminary details released by the Food and Agriculture Organization of the United Nations, amounted to 2,745 million bushels, harvested from 91.7 million acres, representing an average yield of 29.9 bushels per acre. This compared with the production in the previous year of 2,673 million bushels from an area of 89.4 million acres also giving an average yield of 29.9 bushels per acre. The world's average production, including that of the U.S.S.R., for the years 1934 to 1938 amounted to 3,588 million bushels from 143 million acres giving an average yield of 25.09 bushels per acre. In comparison with the average return per acre for world production in 1954 that of Australia for the same period (15.4 bushels) appears very small. Yields in excess of 40 bushels per acre are not uncommon and some European countries record averages in excess of 50 bushels per acre.



## § 6. Maize.

1. **States Growing Maize.**—Maize is grown for grain chiefly in Queensland and New South Wales, the area so cropped in these States during the 1953-54 season being 173,291 acres, or 97 per cent. of the total for Australia. In all States except South Australia the crop is grown to a greater or lesser extent for green fodder, particularly in connexion with the dairying industry.

2. **Area, Production and Yield per Acre.**—Although maize for grain is grown extensively in other countries, the area sown to maize for grain in Australia has averaged only 214,636 acres during the ten years ended 1952-53. Compared with the previous year, the area in 1953-54 increased by 4,915 acres but was considerably less than the comparatively large areas of 414,914 and 400,544 acres sown in 1910-11 and 1927-28 respectively.

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 necessitates a parallel development in the specialized industry of growing hybrid strains of seed.

The area, production and yield per acre of maize for grain in each State for the years 1949-50 to 1953-54 and the averages for the ten-year periods ended 1938-39 and 1952-53 are given in the following table. Separate details for hybrid and other varieties are shown for New South Wales, Victoria and Queensland for 1953-54.

MAIZE FOR GRAIN : AREA, PRODUCTION AND YIELD PER ACRE.

Season.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas.	A.C.T.	Aust.
AREA (ACRES).								
Average, 1929-30 to 1938-39 ..	114,881	18,413	161,380	12	15	..	7	294,708
1949-50 ..	72,872	5,136	115,550	..	20	10	3	193,591
1950-51 ..	52,674	4,089	112,467	..	107	2	..	169,339
1951-52 ..	54,216	4,115	111,181	..	8	18	2	169,540
1952-53 ..	60,647	5,175	108,230	..	13	9	..	174,074
Average, 1943-44 to 1952-53 ..	80,501	5,900	128,155	..	69	10	1	214,636
1953-54—								
Hybrid ..	31,951	4,238	33,884	}	21	64	..	178,989
Other ..	26,605	1,375	80,851					
PRODUCTION ('000 BUSHEL).(a)								
Average, 1929-30 to 1938-39 ..	3,072	631	3,525	..	..	..	..	7,228
1949-50 ..	2,408	194	3,393	..	1	..	..	5,996
1950-51 ..	1,512	187	3,029	..	1	..	..	4,729
1951-52 ..	1,410	168	2,439	..	..	1	..	4,018
1952-53 ..	2,113	204	2,650	..	..	..	..	4,967
Average, 1943-44 to 1952-53 ..	2,255	232	3,162	..	1	..	..	5,650
1953-54—								
Hybrid ..	1,100	243	1,024	}	..	2	..	5,079
Other ..	638	55	2,017					
YIELD PER ACRE (BUSHEL).(a)								
Average, 1929-30 to 1938-39 ..	26.7	34.3	21.8	29.8	10.0	..	8.5	24.5
1949-50 ..	33.1	37.8	29.4	..	22.1	20.5	10.0	31.0
1950-51 ..	28.7	45.7	26.9	..	14.3	12.5	..	27.9
1951-52 ..	26.0	40.8	21.9	..	13.9	34.8	3.0	23.7
1952-53 ..	34.8	39.3	24.5	..	22.6	12.0	..	28.5
Average, 1943-44 to 1952-53 ..	28.0	39.3	24.7	..	10.9	15.1	9.6	26.3
1953-54—								
Hybrid ..	34.4	57.3	30.2	}	12.9	29.6	..	28.4
Other ..	24.0	40.1	24.9					

(a) 56 lb. per bushel.

The average yield for Australia for the ten-year period was 26.3 bushels per acre. Among principal producing countries the United States of America during 1954 averaged 37.1 bushels per acre and Italy 34.5 bushels.

3. **Price of Maize.**—The average wholesale price of maize in the Melbourne market in 1953-54 was 17s. 3½d. per bushel compared with 20s. 8½d. in 1952-53. In 1938-39 the comparable price for maize of similar quality was 5s. 2½d.

4. **Value of Crop.**—The estimated gross value of the crop in each State for the 1953-54 season and the value per acre were as follows:—

#### MAIZE FOR GRAIN : VALUE OF CROP, 1953-54.

Particulars.	N.S.W.	Vic.	Q'land.	S. Aust.	W. Aust.	Tas.	Aust.
Aggregate value .. £'000	1,557	270	2,037	..	1	3	3,868
Value per acre ..	£26/11/8	£48/2/41	£17/15/1	..	£28/12/5	£48/18/2	£21/12/2

5. **Exports of Maize and Maize Products.**—Details of exports of maize for the five years ended 1953-54 compared with the average of the five years ended 1938-39 are shown below.

#### MAIZE : EXPORTS, AUSTRALIA.

Particulars.	Average, 1934-35 to 1938-39.	1949-50.	1950-51.	1951-52.	1952-53.	1953-54.
Quantity '000 bus.	57	1,201	1,189	188	782	504
Value .. £'000	9	614	786	149	703	353

In recent years only small quantities of maize have been imported.

Exports of cornflour, which prior to the war were very small, increased considerably during the war years, the principal country of destination being New Zealand. In 1953-54 1,242,463 lb., valued at £72,136, were exported, compared with an annual average of only 37,000 lb. during the five years ended 1938-39. It should be noted that these figures include some quantities of "cornflour" made from wheat. Imports of cornflour into Australia are negligible.

6. **World Production.**—According to preliminary details released by the Food and Agriculture Organization of the United Nations, world production of maize, excluding that of the U.S.S.R., in the year 1954, amounted to 5,389 million bushels, harvested from 216 million acres, giving an average yield per acre of 25.0 bushels. This compared with production in the previous year of 5,693 million bushels from 214 million acres, yielding an average per acre of 26.6 bushels. Production (including that of the U.S.S.R.) over the years 1934 to 1938 averaged 4,525 million bushels from 218 million acres, giving an average yield per acre of 21.0 bushels.

The United States of America is the most important maize-producing country in the world and during the three years ended 1954 the area sown to maize in that country averaged 80.5 million acres or 38 per cent. of the world total. During the same period production averaged 3,145 million bushels or about 57 per cent. of the world total. These figures are not strictly comparable with those for other countries included in the above-mentioned world totals as the area, and an estimate of grain equivalent, of maize used as green fodder are included. In recent years maize grain actually harvested in the United States has amounted to about 90 per cent. of the total crop.

## § 7. Barley.

1. Area, Production and Yield per Acre.—The area sown to barley for grain expanded considerably during the ten years preceding the 1939-45 War—from 383,000 acres in 1930-31 to 836,000 acres in 1939-40. This increase was followed by a decline to 443,000 acres in 1943-44, but the area sown has increased in succeeding years, and in 1953-54 reached the record level of 1,803,000 acres. Victoria was originally the principal barley-growing State, but since 1913-14 its place has been taken by South Australia which accounted for 62 per cent. of the Australian acreage in 1953-54. Victoria was next in importance with 21 per cent., leaving a balance of about 17 per cent. distributed among the other States. The totals given here relate to the areas harvested for grain; small areas are sown for hay, but more considerable quantities are sown for green forage. These, however, are not included in this section. The area, production and yield per acre of barley for grain in the several States for the years 1949-50 to 1953-54 and the averages for the ten-year periods ended 1938-39 and 1952-53 are shown in the following table:—

BARLEY FOR GRAIN: AREA, PRODUCTION AND YIELD PER ACRE.

Season.	N.S.W.	Vic.	Q'land.	S. Aust.	W. Aust.	Tas.	A.C.T.	Aust.
AREA ('000 ACRES).								
Average, 1929-30 to 1938-39 ..	11	107	8	331	31	7	..	495
1949-50 ..	13	236	25	694	68	4	..	1,040
1950-51 ..	8	218	26	765	59	3	..	1,079
1951-52 ..	11	186	28	832	57	4	..	1,118
1952-53 ..	18	235	72	937	107	8	..	1,377
Average, 1943-44 to 1952-53 ..	20	172	25	605	69	6	..	897
1953-54—								
Malting (2-Row)	22	344	48	1,026	33	9	..	1,482
Other (6-Row)	10	31	8	96	176	..	..	321
Total ..	32	375	56	1,122	209	9	..	1,803
PRODUCTION ('000 BUSHEL). (a)								
Average, 1929-30 to 1938-39 ..	173	1,976	132	5,714	371	186	I	8,553
1949-50 ..	265	4,876	578	12,725	968	131	..	19,543
1950-51 ..	129	4,510	489	16,727	925	91	..	22,871
1951-52 ..	167	3,620	450	16,826	695	150	I	21,909
1952-53 ..	341	4,734	2,109	25,902	1,742	217	..	35,045
Average, 1943-44 to 1952-53 ..	285	3,037	584	12,388	885	154	I	17,334
1953-54—								
Malting (2-Row)	455	7,360	988	26,433	406	281	..	35,923
Other (6-Row)	225	572	151	2,059	2,327	15	..	5,349
Total ..	680	7,932	1,139	28,492	2,733	296	..	41,272
YIELD PER ACRE (BUSHEL). (a)								
Average, 1929-30 to 1938-39 ..	16.6	18.4	16.7	17.3	11.9	25.2	18.9	17.8
1949-50 ..	20.6	20.7	23.1	18.3	14.2	30.1	..	18.8
1950-51 ..	15.6	20.8	18.7	21.9	15.6	27.8	..	21.2
1951-52 ..	15.0	19.4	16.0	20.2	12.3	35.3	26.1	19.6
1952-53 ..	19.4	20.2	29.3	27.6	16.3	27.0	..	25.5
Average, 1943-44 to 1952-53 ..	14.5	17.7	23.0	20.5	12.9	27.0	13.8	19.3
1953-54—								
Malting (2-Row)	21.2	21.4	20.6	25.7	12.4	31.4	..	24.2
Other (6-Row)	21.9	18.9	18.7	21.6	13.2	31.0	..	16.7
Total ..	21.4	21.2	20.3	25.4	13.1	31.4	..	22.9

(a) 50 lb. per bushel.

Taking Australia as a whole, about 82 per cent. of the area of barley for grain in 1953-54 was sown with malting or 2-row barley while the remainder consisted of 6-row, or feed, varieties. The proportion, however, varied considerably in the several States.

The consumption of barley during the season 1953-54 was as follows:—malt works, 7,118,000 bushels; flour and other grain mills, 297,000 bushels; distilleries, 63,000 bushels; exports, 28,216,000 bushels; leaving a balance of 5,927,000 bushels for feed, seed and other purposes.

The following table sets out the acreage and production of malting and other barley in Australia during the seasons 1949-50 to 1953-54 and the averages for the ten-year periods ended 1938-39 and 1952-53.

**BARLEY, MALTING AND OTHER : AREA AND PRODUCTION, AUSTRALIA.**

Season.	Area. ( <sup>'</sup> 000 Acres.)			Production. ( <sup>'</sup> 000 Bushels.)			Yield per Acre. (Bushels.)		
	Malting (2-row).	Other (6-row).	Total.	Malting (2 row).	Other (6-row).	Total.	Malting (2-row).	Other (6-row).	Total.
Average, 1929-30 to 1938-39 ..	428	67	495	7,480	1,073	8,553	17.5	16.0	17.3
1949-50 ..	927	113	1,040	17,569	1,974	19,543	18.9	17.5	18.8
1950-51 ..	963	116	1,079	20,811	2,066	22,871	21.6	17.8	21.2
1951-52 ..	965	153	1,118	19,477	2,432	21,909	20.2	15.9	19.6
1952-53 ..	1,123	254	1,377	29,633	5,412	35,045	26.4	21.3	25.5
Average 1943-44 to 1952-53 ..	774	123	897	15,308	2,026	17,334	19.8	16.5	19.3
1953-54 ..	1,482	321	1,803	35,923	5,349	41,272	24.2	16.7	22.9

During the last ten-year period shown the average area of barley of the malting, or 2-row, class was more than six times the corresponding figure for barley of the 6-row, or feed, class. The yield per acre for malting barley was 20 per cent. higher than that for 6-row barley.

2. **Australian Barley Board.**—Following the outbreak of war in 1939, the Australian Barley Board, representative of the industry, was formed, and the Commonwealth Government acceded to its request to acquire the entire 1939-40 barley crop, which was placed under the control of the Board. A pool was established from which proceeds were distributed with appropriate margins for different grades of barley.

The Board was responsible for the marketing and storage of barley, and, like the Australian Wheat Board, appointed licensed receivers to receive grain on its behalf and to act as agents for all local and overseas sales.

Following the decision of the Commonwealth Government not to acquire barley in the smaller producing States after 1941-42, the Governments of Western Australia and Queensland established State Barley Boards to control marketing in these States.

The Commonwealth Government did not acquire barley after the 1947-48 crop, and the Victorian and South Australian Governments formed a joint board under the same name as the former Commonwealth board to market the 1948-49 and subsequent crops of the two States. Details of these acquisitions are shown in the table below.

**AUSTRALIAN BARLEY BOARD : BARLEY ACQUIRED, SOLD, ETC.,**

Pool.			Quantity Acquired.	Quantity. Sold.(a)	Total Advances made per Bushel on 2-row No. 1 Grade less freight.	Total Net Payments to Growers
			<sup>'</sup> 000 bushels.	<sup>'</sup> 000 bushels.	s. d.	£
No. 10 (1948-49 Crop)	..	..	13,986	14,087	(b) 7 11.9	5,377,137
„ 11 (1949-50 „ )	..	..	16,250	16,336	(b) 10 2.2	7,905,902
„ 12 (1950-51 „ )	..	..	19,976	20,152	(b) 11 2.488	10,721,180
„ 13 (1951-52 „ )	..	..	19,340	19,488	15 8.28	14,563,936
„ 14 (1952-53 „ )	..	..	29,087	29,103	16 2.01	21,359,168
„ 15 (1953-54 „ )	..	..	34,430	34,586	10 4.101	15,417,374

(a) Includes surplus in out-turn. (b) Paid to growers in the northern part of South Australia. Growers in the south-east of South Australia and Victoria received an additional 2d. per bushel.

3. **Prices.**—The average wholesale price for 2-row English malting barley in the Melbourne market during 1953-54 was 15s. 7d. compared with 15s. 3d. in 1952-53 and 3s. 5½d. in 1938-39.

4. **Value of Barley Crop.**—The estimated gross value of the barley crop in each State for the 1953-54 season and the value per acre are shown in the following table :—

**BARLEY FOR GRAIN : VALUE OF CROP, 1953-54.**

Particulars.	N.S.W.	Vic.	Q'land.	S. Aust.	W. Aust.	Tas.	Australia.
Aggregate value .. £'000	443	4,164	530	14,402	1,266	206	21,011
Value per acre ..	£13/18/11	£11/2/4	£9/8/11	£12/16/9	£6/1/6	£21/17/5	£11/13/1

5. **Exports.**—Australian exports of barley during the five years ended 1953-54 averaged 16,832,000 bushels, South Australia being the principal exporting State and the United Kingdom, the Netherlands and Japan the principal countries to which barley was shipped. Particulars of Australian exports for the years 1949-50 to 1953-54 together with the average for the five years ended 1938-39 are shown in the following table :—

**BARLEY : EXPORTS, AUSTRALIA.**

Particulars.	Average, 1934-35 to 1938-39.	1949-50.	1950-51.	1951-52.	1952-53.	1953-54.
Quantity '000 bus.	3,279	10,703	12,208	12,062	22,239	26,949
Value .. £'000	483	6,433	9,053	11,154	19,245	14,870

Imports of barley in recent years have been negligible.

In addition to exports of barley grain, there is also an export of Australian pearl and Scotch barley, the total for 1953-54 amounting to 452,746 lb., valued at £16,487, consigned mainly to Ceylon.

6. **Malt.**—(i) *Production.* Details of the quantity of grain used and the production of barley malt are given in the following table:—

**BARLEY MALT : GRAIN USED AND MALT PRODUCED, AUSTRALIA.**

Particulars.	1938-39.	1949-50.	1950-51.	1951-52.	1952-53.	1953-54.
Grain used '000 bus.	3,730	5,294	5,543	6,063	6,505	7,118
Malt produced '000 bus. (a)	3,621	5,438	5,550	6,073	6,620	7,078

(a) 40 lb. per bushel.

(ii) *Imports and Exports.* The production of malt in Australia was sufficient to meet local requirements and to provide a margin for export until 1947-48 but from 1948-49 to 1951-52 imports exceeded exports by an increasing quantity, the net imports reaching 266,000 bushels in 1951-52. In 1952-53, there was a small net export amounting to 4,000 bushels valued at £7,000 and in 1953-54 this increased to 140,124 bushels valued at £177,415.

7. **World Production.**—In comparison with the barley production of other countries, that of Australia is extremely small. The main producers in 1954 were Canada and the United States of America. China is also normally a major producer, but details for 1954 are not yet available. Australian production in that year was only a little more than one per cent. of the world total.

According to preliminary results compiled by the Food and Agriculture Organization of the United Nations, world production of barley in the year 1954, excluding that of the U.S.S.R., amounted to 2,434 million bushels harvested from 108.5 million acres, equivalent to a yield per acre of 22.4 bushels. This compared with the production of 2,430 million bushels in the previous year from 103 million acres, giving a yield per acre of 23.6 bushels. Production, including that of the U.S.S.R., over the years 1934-38 averaged 2,273 million bushels from 114.6 million acres, representing an average yield of 19.8 bushels per acre.

## § 8. Rice.

Rice-growing is 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 small surplus became available for export. The area sown is controlled, being limited by the quantity of water available.

The area sown reached a maximum in 1943-44 when 40,690 acres yielded 4,015,000 bushels. The highest production was recorded in 1950-51 when the yield was 4,117,600 bushels.

The bulk of Australia's exports of rice, which had gone to the United Kingdom in years prior to 1938-39, is shipped now to islands in the South-East Asia area.

Details relating to area, production and trade for the years 1949-50 to 1953-54, compared with the averages for the years 1934-35 to 1938-39, are shown in the following table :—

RICE : AREA, PRODUCTION AND TRADE, AUSTRALIA. (a)

Season.	No. of Holdings Growing Rice (b)	Area.	Production (Paddy Rice).		Average Yield (Paddy) per acre.	Imports.		Exports.	
			Quantity.	Gross Value. (c)		Un-cleaned.	Cleaned.	Un-cleaned.	Cleaned.
		Acres.	'000 Bushels. (c)	£'000.	Bushels. (d)	Centals.	Centals.	Centals.	Centals.
Average, 1934-35 to 1938-39 ..	(e) 313	22,823	2,274	450	99.7	2,124	38,272	9,357	271,851
1949-50 ..	444	37,540	3,783	1,653	100.8	..	6,685	225	597,739
1950-51 ..	462	36,945	4,118	2,171	111.5	1	63	2,065	657,267
1951-52 ..	452	35,664	3,048	2,108	85.5	3	18	4,140	559,395
1952-53 ..	496	34,519	3,964	3,338	114.8	136	2,223	2,126	532,828
1953-54 ..	530	38,000	4,060	3,107	104.6	(f)	(f)	18,758	775,489

(a) Rice-growing in Australia has been practically confined to New South Wales with very small acreages only being sown in Queensland in recent seasons. (b) 20 acres or more in area.

(c) Excludes the value of straw. (d) 42 lb. per bushel. (e) 1938-39 figure, previous years not collected. (f) Not available.

## § 9. Sorghum for Grain.

The growing of sorghum for grain on an extensive scale is a recent development in Australia. No details of the area and production of this cereal are available prior to 1939-40, but the output was of little importance. The climatic conditions of Queensland and northern New South Wales are particularly suited for the growing of sorghum and the development so far has been restricted to these areas, but more particularly to Queensland which accounts for the greater portion of the area sown. The grain produced is fed to livestock and is becoming an important source of supply for supplementing other coarse grains for the feeding of livestock. 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). Particulars of the area and production of sorghum grown for grain are given in the following table.

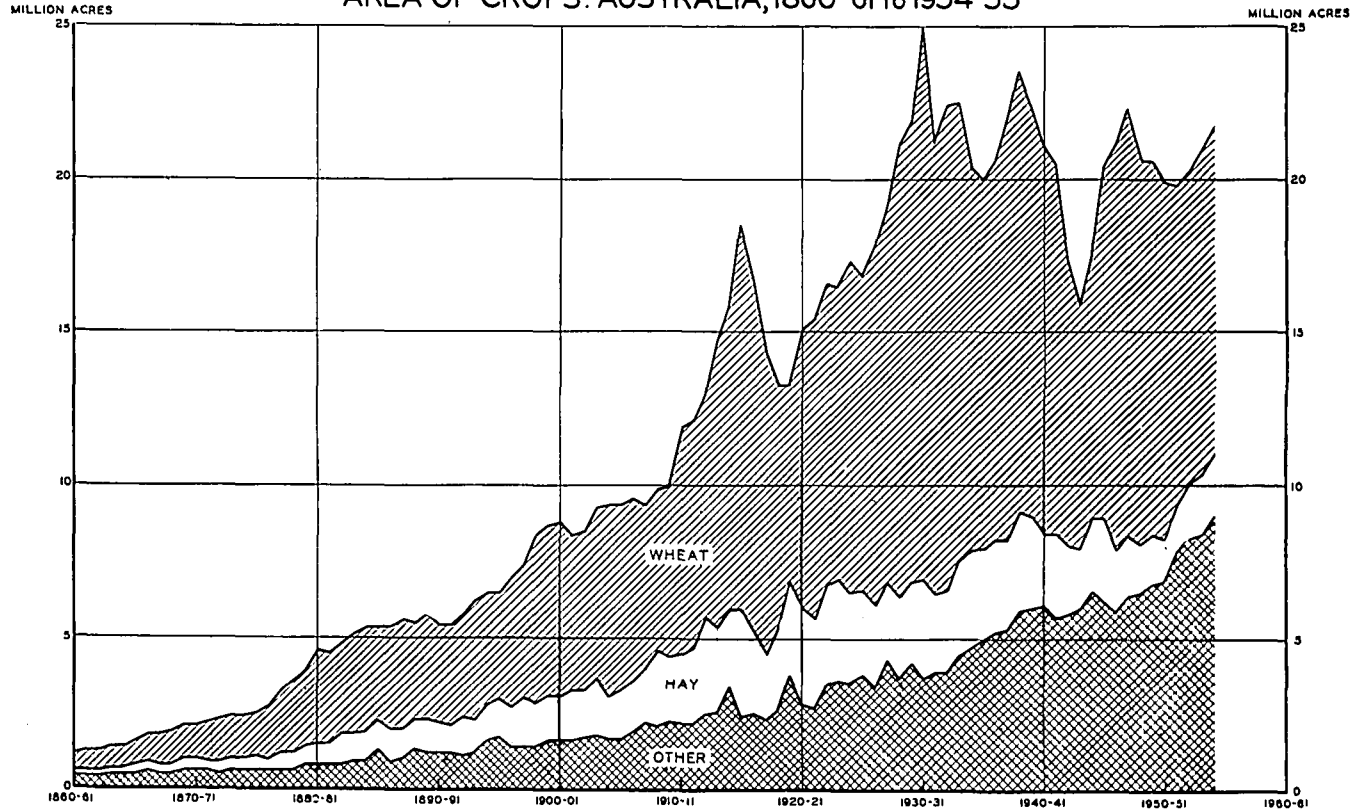
GRAIN SORGHUM : AREA, PRODUCTION AND YIELD PER ACRE, AUSTRALIA.

Season.	Area.			Production.(a)			Yield per Acre.(a)		
	N.S.W.	Q'land.	Total. (b)	N.S.W.	Q'land.	Total. (b)	N.S.W.	Q'land.	Total. (b)
	Acres.	Acres.	Acres.	Bushels.	Bushels.	Bushels.	Bushels.	Bushels.	Bushels.
1939-40 ..	(c) 4,397	(d) 4,397	(c) 8,794	67,809	57,936	(d) 57,936	(c) 13.2	(d) 13.2	(d) 13.2
1949-50 ..	3,575	99,362	102,937	67,809	2,157,717	2,225,526	19.0	21.7	21.6
1950-51 ..	4,466	166,311	170,778	73,773	3,683,286	3,757,064	16.5	22.2	22.0
1951-52 ..	7,101	169,558	176,660	41,487	2,651,799	2,693,280	5.8	15.6	15.3
1952-53 ..	4,982	190,619	195,601	88,905	3,239,133	3,328,038	17.9	17.0	17.0
1953-54 ..	7,053	181,810	188,872	120,063	4,039,779	4,168,842	18.3	22.2	22.1

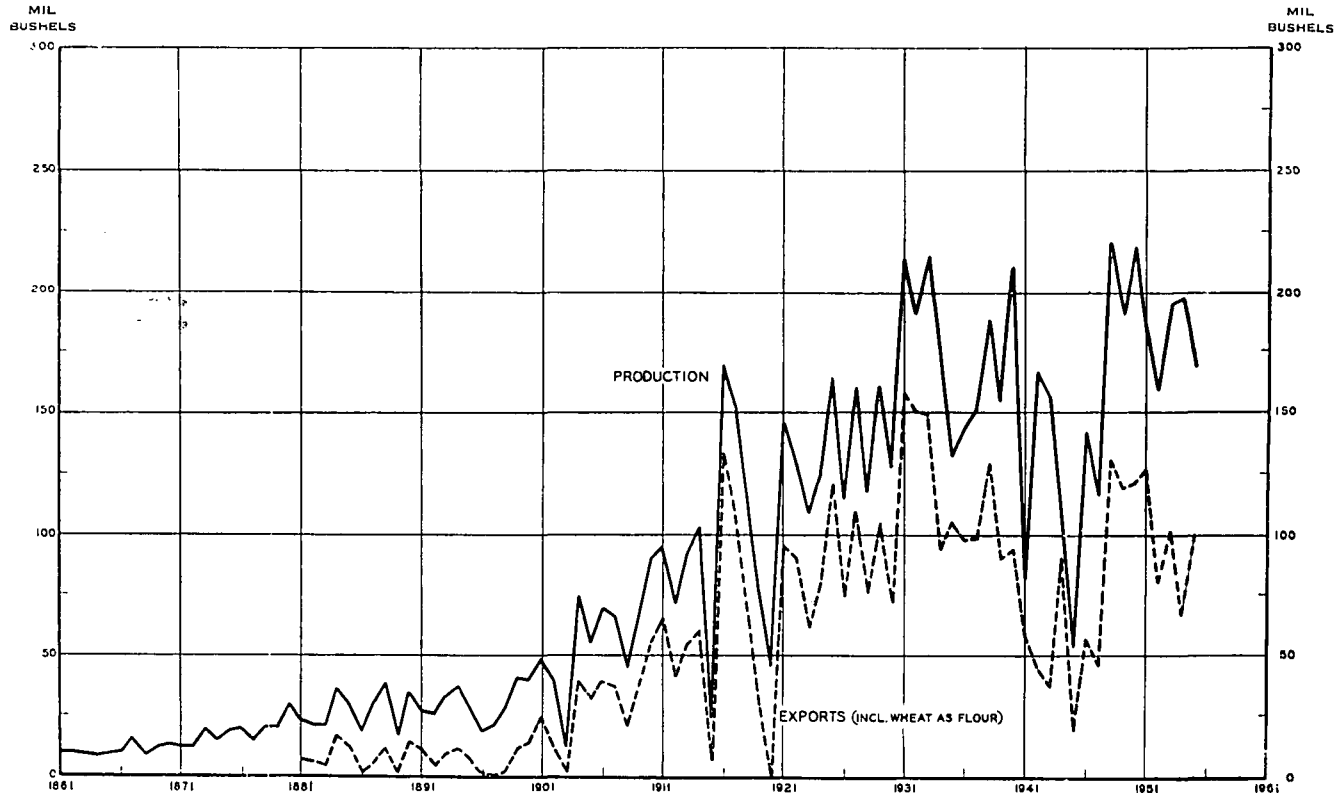
(a) 60 lb. per bushel. (b) Includes small areas sown and quantities produced in other States.

(c) Not available. (d) Queensland only.

# AREA OF CROPS: AUSTRALIA, 1860-61 to 1954-55



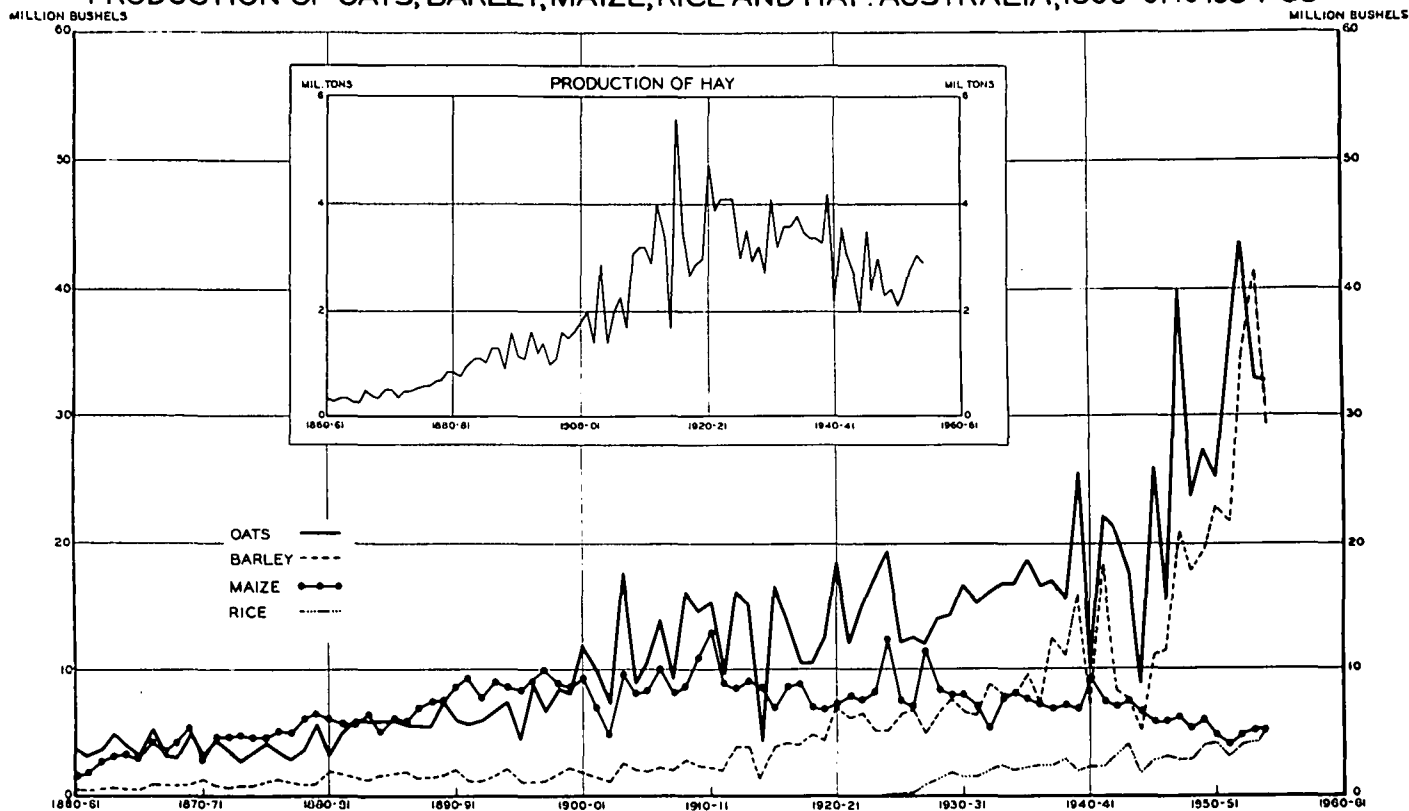
# WHEAT PRODUCTION AND EXPORTS: AUSTRALIA, 1860-61 to 1954-55



NOTE.—The export figures for the years 1915-16 to 1920-21 do not represent the surplus available for export in each of these years because of the dislocation of shipping due to the 1914-1918 War. For these years the quantity consumed in Australia has been averaged and the balance taken as exports.



# PRODUCTION OF OATS, BARLEY, MAIZE, RICE AND HAY : AUSTRALIA, 1860-61 to 1954-55





## § 10. Potatoes.

1. 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. Tasmania comes next in order of acreage sown, although the production exceeded that of Victoria in some of the war years. New South Wales occupies third place in acreage and production. The area for these three States accounted for 79 per cent. of the total for Australia in 1953-54.

The area sown, production and yield per acre of potatoes in each State during the years 1949-50 to 1953-54 and the averages for the ten-year periods ended 1938-39 and 1952-53 are shown hereunder:—

## POTATOES : AREA, PRODUCTION AND YIELD PER ACRE.

Season.	N.S.W.	Vic.	Q'land.	S. Aust.	W.Aust.	Tas.	A.C.T.	Aus.t.
AREA (ACRES).								
Average, 1929-30 to								
1938-39 .. ..	19,199	54,658	11,039	5,042	4,953	34,684	30	129,605
1949-50 .. ..	23,369	50,651	11,624	7,245	6,895	34,110	108	134,002
1950-51 .. ..	18,374	52,482	10,783	6,969	6,780	31,581	142	127,111
1951-52 .. ..	19,034	42,108	11,465	6,971	6,885	31,514	168	118,145
1952-53 .. ..	18,119	52,851	11,641	9,231	8,079	35,347	127	135,395
Average, 1943-44 to								
1952-53 .. ..	22,794	57,635	12,589	7,904	7,779	44,632	132	153,465
1953-54 .. ..	16,513	52,745	9,382	7,023	8,068	34,524	112	128,367

## PRODUCTION (TONS).

Average, 1929-30 to								
1938-39 .. ..	44,122	150,238	18,100	20,202	23,410	94,500	63	350,635
1949-50 .. ..	69,395	167,881	30,681	40,984	39,459	122,000	637	471,037
1950-51 .. ..	43,102	139,397	24,725	35,955	43,887	124,000	660	411,720
1951-52 .. ..	52,020	178,399	33,001	43,898	49,930	150,500	1,017	508,765
1952-53 .. ..	51,132	133,148	35,051	43,880	52,759	114,500	663	431,133
Average, 1943-44 to								
1952-53 .. ..	61,176	194,693	30,083	39,641	43,162	175,534	733	545,022
1953-54 .. ..	58,046	213,714	32,628	45,044	53,708	144,300	514	547,954

## YIELD PER ACRE (TONS).

Average, 1929-30 to								
1938-39 .. ..	2.30	2.75	1.64	2.50	4.73	2.72	2.09	2.71
1949-50 .. ..	2.97	3.31	2.64	5.66	5.72	3.58	5.00	3.52
1950-51 .. ..	2.35	2.66	2.29	5.16	6.47	3.93	4.65	3.24
1951-52 .. ..	2.73	4.24	2.88	6.30	7.25	4.78	6.05	4.31
1952-53 .. ..	2.82	2.52	3.01	4.75	6.53	3.24	5.22	3.18
Average, 1943-44 to								
1952-53 .. ..	2.68	3.38	4.39	5.62	5.55	3.93	5.55	3.55
1953-54 .. ..	3.52	4.05	3.48	6.41	6.66	4.18	4.59	4.27

After the outbreak of war in the Pacific in December, 1941, the area sown to potatoes increased rapidly and reached a maximum of 241,803 acres in 1944-45. Areas sown in subsequent seasons were considerably less, however, and showed a general decline to the figure for the 1953-54 season, 128,367 acres.

Compared with the yield per acre obtained in other countries, that returned for Australia is low; the production in New Zealand, for example, in 1953-54 averaged 7.20 tons per acre from an area of about 22,000 acres, as compared with a record yield of 4.31 tons per acre in Australia in 1951-52, and 4.27 tons per acre in 1953-54.

2. **Gross Value of Potato Crop.**—The estimated gross value of the potato crop of each State for the 1953-54 season and the value per acre are shown in the following table.

POTATOES : VALUE OF CROP, 1953-54.

Particulars.	N.S.W.	Vic.	Q'land.	S. Aust.	W. Aust.	Tas.	A.C.T.	Aust.
Aggregate value £'000	1,090	4,087	1,142	1,303	1,595	1,940	18	12,075
Value per acre	£121/10/6	£77/9/9	£121/14/5	£185/10/3	£197/13/11	£56/3/10	£157/7/2	£94/1/3

3. **Consumption.**—The annual consumption of potatoes in Australia during each of the three years 1951-52 to 1953-54 amounted to 412,900 tons, 376,100 tons and 485,400 tons respectively, or 108.3 lb., 96.4 lb. and 122.2 lb. respectively per head of population. These figures exclude the quantities used for seed, which averaged about 60,000 tons annually over this period. Consumption during the three years ended 1938-39 averaged 318,500 tons (103.8 lb. per head of population) excluding 37,000 tons for seed. New South Wales, Queensland and, in some seasons, South Australia do not produce the quantities necessary for their requirements and must import from Tasmania and Victoria which have a surplus.

4. **Marketing.**—Commonwealth control of potato marketing under war-time legislation ceased at the end of 1948 with the completion of sales of the 1947-48 crop.

Potato Marketing Boards were subsequently established in all States under separate State legislation. Boards now operate in five States only as the tenure of the Queensland Board was not continued when its term expired in March, 1954.

5. **Exports.**—Prior to the 1939-45 War, small quantities of potatoes were exported, principally to the Pacific Islands and Papua. Since the war the export trade has expanded considerably reaching a peak in 1952-53 but declining in 1953-54. Details showing exports for the years 1949-50 to 1953-54 and the annual average for the period 1934-35 to 1938-39 are given in the following table:—

POTATOES : EXPORTS, AUSTRALIA.

Particulars.	Average, 1934-35 to 1938-39.	1949-50.	1950-51.	1951-52.	1952-53.	1953-54.
Quantity .. tons	1,884	15,183	6,231	12,468	37,570	4,010
Value .. £'000	17	341	190	437	1,237	155

Imports of potatoes are negligible.

## § 11. Onions.

1. **Area, Production and Yield per acre.**—Australia's supply of onions comes chiefly from Victoria, which accounted for 50.0 per cent. of the total area and 49.8 per cent. of the quantity produced in 1953-54. Queensland came next with 34.3 per cent. of the area and 26.1 per cent. of the production, leaving a balance of 15.7 per cent. of area and 24.1 per cent. of production distributed among the remaining four States. The Victorian crop consists almost entirely of brown onions of good keeping qualities, and the bulk of the crop is grown in a small section of the Western Division of the State, where soil conditions have been found to be particularly suitable for onion-growing on a commercial scale. Details of the area, production and yield per acre are given in the following table for the years 1949-50 to 1953-54 together with averages for the ten-year periods ended 1938-39 and 1952-53.

## ONIONS : AREA, PRODUCTION AND AVERAGE YIELD.

Season.	N.S.W.	Vic.	Q'land.	S. Aust.	W.Aust.	Tas.	A.C.T.	Aust.
AREA (ACRES).								
Average, 1929-30 to 1938-39 ..	124	6,159	840	450	109	5	3	7,690
1949-50 ..	225	4,093	2,371	435	371	28	3	7,526
1950-51 ..	211	4,148	2,399	506	379	19	5	7,667
1951-52 ..	401	4,745	2,527	620	334	50	5	8,682
1952-53 ..	363	3,866	2,813	552	414	49	9	8,066
Average, 1943-44 to 1952-53 ..	496	5,781	2,341	556	406	39	6	9,625
1953-54 ..	270	3,641	2,497	471	375	18	7	7,279
PRODUCTION (TONS).								
Average, 1929-30 to 1938-39 ..	354	35,431	2,548	3,414	814	20	11	42,592
1949-50 ..	770	25,436	13,137	4,607	3,611	130	22	47,713
1950-51 ..	539	18,182	7,256	5,242	4,033	89	26	35,367
1951-52 ..	1,937	31,150	9,691	6,302	3,855	243	38	53,216
1952-53 ..	1,171	23,690	11,542	5,500	5,409	196	55	47,563
Average, 1943-44 to 1952-53 ..	1,783	34,354	9,937	5,223	3,644	154	30	55,125
1953-54 ..	1,325	22,783	11,957	4,975	4,626	87	14	45,767
YIELD PER ACRE (TONS).								
Average, 1929-30 to 1938-39 ..	2.85	5.75	3.03	7.59	7.47	4.00	3.67	5.54
1949-50 ..	3.42	6.21	5.54	10.59	9.73	4.64	7.33	6.34
1950-51 ..	2.55	4.38	3.02	10.36	10.64	4.68	5.20	4.61
1951-52 ..	4.83	6.56	3.83	10.16	11.54	4.86	7.60	6.13
1952-53 ..	3.23	6.13	4.10	9.96	13.07	4.00	6.11	5.90
Average, 1943-44 to 1952-53 ..	3.59	5.94	4.24	9.39	8.98	3.95	5.00	5.73
1953-54 ..	4.91	6.26	4.79	10.56	12.34	4.83	2.00	6.29

2. Gross Value of Onion Crop.—The estimated gross value of the onion crop and the value per acre are shown in the following table for the 1953-54 season:—

## ONIONS : VALUE OF CROP, 1953-54.

Particulars.	N.S.W.	Vic.	Q'land.	S. Aust.	W. Aust.	Tas.	A.C.T.	Aust.
Aggregate value £'000	621	769	508	174	145	3	1	1,662
Value per acre ..	£228/16/4	£211/4/3	£203/11/2	£368/19/2	£387/0/10	£169/8/11	£93/5/9	£228/5/9

3. Consumption.—The annual consumption of onions in Australia averaged 46,875 tons or 12.1 lb. per head of population during the three years ended 1953-54, compared with 40,600 tons or 13.2 lb. per head during the three years ended 1938-39. These figures exclude an estimated wastage which averaged 2,400 tons and 2,100 tons respectively.

4. **Imports and Exports.**—Onions are the only root crop, other than potatoes, in which any considerable overseas trade is carried on by Australia. In 1953-54 exports amounted to 3,317 tons, valued at £120,869, and were shipped mainly to Singapore and Canada. The quantity of exports in 1952-53 was 8,283 tons, valued at £249,000. There were no imports in 1952-53 and 1953-54, but 2,397 tons were imported in 1951-52, principally from New Zealand.

Details relating to fresh vegetables other than potatoes and onions are given in § 17.

## § 12. Hay.

1. **General.**—(i) *Area and Production.* As already stated, the chief crop in Australia is wheat grown for grain. Up to and including 1946-47 hay was next in importance in area but in 1947-48 gave place to oats (for grain). In the following year, 1948-49, green fodder replaced hay as the third most important crop and hay has since remained in fourth position.

In 1953-54 the hay area represented 9.2 per cent. of the total area cropped. A graph showing the area sown to hay since 1860 appears on page 859. In most European countries the hay consists almost entirely of meadow and other grasses, but in Australia a very large proportion consists of oats, wheat and lucerne. The area, production and yield per acre of hay of all kinds in the several States during the years 1949-50 to 1953-54 and the averages for the ten-year periods ended 1938-39 and 1952-53 are shown below :—

### HAY : AREA, PRODUCTION AND YIELD PER ACRE.

Season.	N.S.W.	Vic.	Q'land.	S. Aust.	W. Aust.	Tas.	A.C.T.	Aust.
AREA (ACRES).								
Average, 1929-30 to 1938-39 ..	757,010	1,110,616	67,850	541,265	432,217	83,118	2,338	2,994,414
1949-50 ..	339,091	666,525	55,108	294,590	216,320	91,335	2,271	1,605,240
1950-51 ..	238,931	557,454	44,934	260,856	176,090	96,388	1,609	1,377,162
1951-52 ..	334,007	640,418	43,586	257,005	173,855	97,763	2,306	1,548,940
1952-53 ..	387,823	752,932	66,249	213,852	227,082	110,140	3,237	1,761,315
Average, 1943-44 to 1952-53 ..	472,703	718,675	61,497	311,067	242,044	96,963	2,866	1,905,815
1953-54 ..	450,243	807,223	70,451	262,006	219,171	123,249	3,023	1,935,366
PRODUCTION (TONS).								
Average, 1929-30 to 1938-39 ..	958,549	1,263,127	104,297	577,100	463,081	119,826	2,830	3,480,710
1949-50 ..	496,081	1,000,855	116,412	384,604	272,052	155,653	4,332	2,429,989
1950-51 ..	314,940	894,585	101,319	362,162	226,703	100,722	2,509	2,062,940
1951-52 ..	450,774	1,046,764	79,763	379,978	211,629	172,486	3,655	2,344,849
1952-53 ..	578,651	1,245,217	135,673	317,462	290,296	192,381	4,971	2,704,651
Average, 1943-44 to 1952-53 ..	579,366	1,026,067	116,890	387,865	276,691	155,560	3,863	2,546,302
1953-54 ..	638,702	1,360,662	140,097	369,296	293,936	241,582	4,588	3,048,863
YIELD PER ACRE (TONS).								
Average, 1929-30 to 1938-39 ..	1.27	1.14	1.54	1.07	1.07	1.44	1.21	1.17
1949-50 ..	1.46	1.65	2.11	1.31	1.26	1.70	1.91	1.51
1950-51 ..	1.32	1.60	2.25	1.30	1.28	1.67	1.56	1.50
1951-52 ..	1.35	1.63	1.83	1.48	1.22	1.76	1.58	1.51
1952-53 ..	1.49	1.65	2.05	1.48	1.28	1.75	1.54	1.57
Average, 1943-44 to 1952-53 ..	1.23	1.43	1.90	1.25	1.14	1.60	1.35	1.34
1953-54 ..	1.42	1.69	1.99	1.41	1.34	1.96	1.52	1.58

Owing to various causes, particularly the variation in the relative prices of grain and hay and the favourableness or otherwise of the season for a grain crop, the area of hay is apt to fluctuate considerably. The area under hay in Australia during the season 1915-1916, 3,597,771 acres, was the largest on record, whilst the average for the ten years ended 1952-53 was 1,905,815 acres.

(ii) *Varieties Grown.* Information regarding areas cut for hay is available for all States, and details for 1953-54 are given in the following table.

**HAY : AREA UNDER VARIOUS KINDS GROWN, 1953-54.**  
(Acres.)

State.	Wheaten.	Oaten.	Lucerne.	Other.	Total.
New South Wales ..	145,689	114,302	122,462	67,790	450,243
Victoria ..	39,793	240,031	48,674	478,725	807,223
Queensland ..	6,279	3,868	51,626	8,678	70,451
South Australia ..	62,458	118,529	12,451	68,568	262,006
Western Australia ..	37,536	115,305	188	66,142	219,171
Tasmania ..	3,054	28,393	782	91,020	123,249
Australian Capital Territory ..	18	1,554	1,184	267	3,023
Total ..	294,827	621,982	237,367	781,190	1,935,366

For all States and the Australian Capital Territory combined the proportions of the areas sown to the principal kinds of hay in 1953-54 were 32 per cent. for oaten, 15 per cent. for wheaten, 12 per cent. for lucerne, and 41 per cent. for other hay. In that year, oaten hay predominated in the States of South Australia and Western Australia, wheaten in New South Wales, lucerne in Queensland, and meadow and grass in Victoria and Tasmania.

2. 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 1953-54 season :—

**HAY : VALUE OF CROP, 1953-54.**

Particulars.	N.S.W.	Vic.	Q'land.	S. Aust.	W. Aust.	Tas.	A.C.T.	Aust.
Aggregate value £'000.	8,877	13,196	2,712	3,103	2,946	2,309	88	33,231
Value per acre ..	£19/14/4	£16/6/11	£38/9/10	£11/16/11	£13/8/10	£18/14/8	£29/3/0	£17/3/5

3. Farm Stocks of Hay.—Details of stocks of hay held on farms are now collected at the annual census of farm production. Particulars of stocks so held at 31st March in each year 1950 to 1954 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.	Australia.
1950 ..	680,498	1,014,747	101,222	341,888	188,167	116,549	2,530	2,445,601
1951 ..	608,416	940,537	102,487	321,873	154,094	112,887	1,774	2,242,068
1952 ..	500,596	1,129,163	29,766	418,734	142,711	129,893	2,702	2,353,565
1953 ..	628,977	1,347,363	97,492	402,477	186,523	145,375	5,119	2,813,326
1954 ..	700,367	1,479,299	106,794	420,423	216,023	185,549	4,775	3,113,230

4. Imports and Exports.—Under normal conditions, hay, whether whole or in the form of chaff, is somewhat bulky for oversea trade, and consequently does not figure largely amongst the imports and exports of Australia. During 1953-54 exports amounted to 2,955 tons, valued at £67,593.

### § 13. Green Fodder.

1. Nature and Extent.—Considerable areas are devoted to the growing of green fodder, mainly in connexion with the dairying industry. Consequently, green fodder ranks after wheat and oats (for grain) as the third most important crop, in area, grown in Australia. The areas recorded in respect of green fodder include areas of crops cut

for feeding to live-stock as green fodder, together with areas fed off to stock as green forage. Included with the latter are areas which may have been sown with the intention of harvesting for grain, but which, due to adverse seasonal 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 also are so used. In 1953-54 the area under green fodder (2,541,028 acres) consisted of oats (1,494,316 acres), lucerne (263,935 acres), wheat (147,972 acres), sorghum (79,647 acres), maize (52,358 acres), barley (85,410 acres), rye (33,630 acres), sugar-cane (2,269 acres) and other crops (384,491 acres). Particulars concerning the area of green fodder in the several States during each of the years 1949-50 to 1953-54 are given in the following table, together with the average for the period of ten years ended in 1938-39.

**GREEN FODDER : AREA.**  
(Acres.)

Season.	N.S.W.	Vic.	Q'land.	S. Aust.	W. Aust.	Tas.	A.C.T.	Aust.
Average, 1929-30 to 1938-39 .. ..	482,989	(a)	347,804	106,820	189,332	24,255	656	(a)
1949-50 .. ..	584,541	44,928	581,811	277,265	550,690	49,780	2,249	2,091,264
1950-51 .. ..	528,214	41,279	583,304	340,727	566,312	57,331	1,214	2,118,381
1951-52 .. ..	672,633	45,661	604,190	385,079	636,728	57,548	1,225	2,403,064
1952-53 .. ..	661,767	40,303	572,212	285,857	574,790	60,142	1,108	2,196,179
1953-54 .. ..	761,552	56,210	663,097	365,301	507,756	60,127	1,218	2,415,261

(a) Not available.

2. **Value of Green Fodder Crops.**—The value of these crops is variously estimated in the several States, and the Australian total for the season 1953-54, excluding Western Australia, may be taken as approximately £7,720,000.

## § 14. Sugar-cane.

1. **Area.**—Sugar-cane growing appears to have commenced in Australia in or about 1862, and is confined to New South Wales and Queensland. A brief outline of the development of the industry was included in earlier issues of the Official Year Book (see No. 38, page 985). The area of sugar-cane in Australia for the seasons 1949-50 to 1953-54 and the averages for the ten-year periods ended 1938-39 and 1952-53 are shown in the following table. In 1953-54 the total area of sugar-cane (excluding areas cut for green fodder) was again a record at 481,602 acres, an increase of 11.0 per cent. over the previous record area of 433,894 acres in 1952-53.

**SUGAR-CANE : AREA.(a)**  
(Acres.)

Season.	New South Wales.			Queensland.			Australia.			
	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.	Total.
Average, 1929-30 to 1938-39 ..	9,106	9,023	140	229,327	75,409	9,368	238,433	84,432	9,508	332,373
1949-50 ..	8,517	8,081	297	272,812	97,878	10,639	281,329	105,959	10,936	398,224
1950-51 ..	8,207	7,134	236	263,666	106,903	10,976	271,873	114,037	11,212	397,122
1951-52 ..	8,354	5,974	191	273,370	101,731	13,247	281,724	107,705	13,438	402,867
1952-53 ..	5,202	8,581	277	274,757	131,724	13,353	279,959	140,305	13,630	433,894
Average, 1943-44 to 1952-53 ..	7,430	7,842	283	244,764	95,608	12,500	252,194	103,450	12,783	368,427
1953-54 ..	7,787	6,869	468	332,703	120,929	12,846	340,490	127,798	13,314	481,602

(a) Excludes areas cut for green fodder.



2. **Productive and Unproductive Cane.**—The areas shown in the preceding table do not include the small acreage cut for green fodder, which in 1953-54 amounted to 2,269 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. Thus the season in which the highest acreage is recorded may not show the greatest area of productive cane cut for crushing although this was not the case in 1953-54 when both area and production were at record levels.

3. **Production of Cane and Sugar.**—For Queensland, statistics of the production of sugar-cane are not available for seasons prior to 1897-98. In that season the total for Australia was 1,073,883 tons, as against the record production of 9,014,312 tons in the 1953-54 season. Prior to 1953-54 the previous record production was 7,051,555 tons in 1950-51.

The average production of cane during the ten seasons ended 1952-53 was 5,435,120 tons, and of raw sugar 751,236 tons. Particulars of the total production of cane and sugar for the years 1949-50 to 1953-54 and the averages for the ten-year periods ended 1938-39 and 1952-53 are as follows.

### SUGAR-CANE : PRODUCTION OF CANE AND SUGAR.

(Tons.)

Season.	New South Wales.		Queensland.		Australia.	
	Cane.	Sugar.(a)	Cane.	Sugar.(a)	Cane.	Sugar.(a)
Average, 1929-30 to						
1938-39 .. ..	241,402	30,317	4,461,988	626,789	4,703,390	657,106
1949-50 .. ..	330,738	40,706	6,518,042	896,413	6,848,780	937,119
1950-51 .. ..	359,849	41,258	6,691,706	879,844	7,051,555	921,102
1951-52 .. ..	321,388	41,060	5,005,172	704,341	5,326,560	745,401
1952-53 .. ..	125,714	14,272	6,841,536	934,614	6,967,250	948,886
Average, 1943-44 to						
1952-53 .. ..	264,502	32,871	5,170,618	718,365	5,435,120	751,236
1953-54 .. ..	263,249	34,004	8,751,063	1,220,383	9,014,312	1,254,387

(a) Raw sugar at 94 net titre.

The production of raw sugar in Australia in 1953-54 amounted to 1,254,387 tons manufactured from 9,014,312 tons of cane, compared with the previous record production of 948,886 tons in 1952-53.

Official annual data are not available regarding the total number of persons engaged in the sugar industry in New South Wales and Queensland other than the number of separate holdings of 5 acres or more growing cane (7,033 in 1953-54).

According to data obtained from the population census of 30th June, 1954, the number of persons engaged in the sugar-cane industry in New South Wales and Queensland comprised 20,185 males and 431 females, a total of 20,616 persons, of whom 4,245 were employers and 5,118 were self-employed.

4. **Average Production of Cane Sugar.**—Owing to climatic variation, comparison between the average yields of cane per productive acre in Queensland and New South Wales cannot be made accurately except on an annual basis. In New South Wales the crop matures in from 20 to 24 months, whereas in Queensland a period of from 12 to 14 months is sufficient. Allowing for the disparity in maturing periods the average annual yields of cane per productive acre during the ten years ended 1952-53 were 35.60 tons for New South Wales, and 21.12 tons for Queensland. Similarly, the yields of sugar per acre crushed for the same period were estimated at 4.42 tons and 2.93 tons respectively. Apart from the consideration mentioned above, the yields of cane and sugar per acre crushed for Australia for the ten years ended 1952-53 were 21.55 tons and 2.98 tons respectively, as compared with 19.73 tons and 2.76 tons for the ten years ended 1938-39.

## 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, 1929-30 to 1938-39 .. ..	26.51	3.33	7.96	19.46	2.73	7.13	19.73	2.76	7.15
1949-50 .. ..	38.83	4.78	8.13	23.89	3.29	7.27	24.34	3.33	7.31
1950-51 .. ..	43.85	5.03	8.72	25.38	3.34	7.61	25.94	3.39	7.66
1951-52 .. ..	38.47	4.92	7.83	18.31	2.58	7.11	18.91	2.65	7.15
1952-53 .. ..	24.17	2.74	8.81	24.90	3.40	7.32	24.89	3.39	7.34
Average, 1943-44 to 1952-53 .. ..	35.60	4.42	8.05	21.12	2.93	7.20	21.55	2.98	7.23
1953-54 .. ..	33.81	4.37	7.74	26.30	3.67	7.17	26.47	3.68	7.19

5. *Quality of Cane.*—The quantity of cane required to produce a ton of sugar varies with the variety planted, the district and the season. For the ten years ended 1952-53 it required on the average 7.23 tons of cane to produce 1 ton of sugar, or 13.83 per cent. of its total weight, as compared with 7.15 tons for the ten years ended 1938-39. As the result of the systematic study of cane culture in Queensland and improvements in field and mill methods the sugar content of the cane has been considerably increased since the turn of the century when over 9 tons of cane were required to produce 1 ton of sugar. It is believed that this is the highest sugar content obtained anywhere in the world.

The Bureau of Sugar Experiment Stations in Queensland is rendering 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.

6. *Production and Utilization.*—Details of the production and utilization of raw sugar for the three years ended 1938-39 and each year 1949-50 to 1953-54 are shown below. It should be noted that the details of sugar production refer to the annual periods shown, without regard to the season in which the sugar was produced; they include the small quantities of beet sugar produced in certain of these years. Consumption is shown in terms of refined sugar, including that consumed in manufactured products.

## RAW SUGAR : PRODUCTION AND UTILIZATION, AUSTRALIA.

Year.	Changes in Stocks.	Production.	Exports. (a)	Miscellaneous Uses. (b)	Consumption in Australia. (a)	
					Total. (c)	Per Head. (c)
	'000 tons.	'000 tons.	'000 tons.	'000 tons.	'000 tons.	lb.
Average, 1936-37 to 1938-39 .. ..	+ 6.2	779.3	435.3	11.2	326.6	106.5
1949-50 .. ..	-10.4	902.5	483.4	19.5	410.0	114.1
1950-51 .. ..	+ 5.8	906.9	433.3	21.8	446.0	120.2
1951-52 .. ..	+24.7	702.2	206.1	23.8	447.6	117.6
1952-53 .. ..	+ 3.8	948.3	500.8	18.6	425.1	109.0
1953-54 .. ..	+41.3	1243.6	738.7	17.8	445.8	112.2

(a) Includes sugar content of manufactured products.  
(c) In terms of refined sugar.

(b) Includes industrial uses and losses in refining.

7. **Consumption in Factories.**—The quantity of sugar used in factories in 1953-54 amounted to 240,974 tons compared with 241,846 tons in 1952-53 and 123,883 tons in 1938-39. Particulars of sugar used in establishments not classified as factories are not available, and consequently these quantities are deficient to that extent. In 1953-54 consumption by factories engaged in the production of jams, jellies and preserved fruit (including condiments, pickles, etc.) amounted to 66,201 tons and by those producing confectionery, ice cream, etc., amounted to 47,180 tons.

8. **Control of Cane Production in Queensland.**—Agreements between the Commonwealth and Queensland Governments have fixed the wholesale price of sugar and sugar products from time to time. On 1st September, 1946, a Sugar Agreement Act came into operation fixing wholesale and retail prices of sugar and in June, 1951 a new agreement was signed to cover the period to 31st August, 1956. Details of prices are shown in para. 14 of this section (*see page 873*).

The Queensland Government acquires the whole of the sugar production of that State and 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.

Sugar production barely met local requirements in 1923 but increased rapidly until 1925 when approximately 44 per cent. of the production was exported. Steps were taken by the Government to restrict planting of new areas and production was fairly stable until 1929. In that year the pool was reorganized and mills received full pool price for sugar up to the amount of their previous maximum production, further supplies being acquired at export prices.

Between 1929 and 1939 production rose by more than 70 per cent. despite the restrictions mentioned above and the fact that export prices were generally less than half the pool price.

In 1939 following the International Sugar Agreement, which limited exports, the Queensland Government limited the pool (mill peaks) to 737,000 tons in respect of Queensland production. Mill quotas were allotted on the understanding that mills would allot quotas to individual growers. Mill peaks have been raised to 942,300 tons in 1950, 1,045,000 tons in 1953 and 1,170,900 tons in 1954. These latter increases followed the negotiation of the Commonwealth Countries Sugar Marketing Agreement of 1949, which allowed the Queensland Government to initiate a planned expansion of the industry.

9. **Sugar Agreement in Australia—Embargo on Imports, etc.**—Reference was made in Official Year Book No. 37 (pp. 940-41) 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. A new agreement operating from 7th July, 1951 covers the period up to 31st August, 1956. Some of the terms of the 1951 Agreement (in particular, those relating to sugar prices), were amended in 1952, and incorporated in the Sugar Agreement Act 1954.

10. **International Sugar Agreement.**—The International Sugar Agreement of 1937 was superseded by a new agreement which came into force on 1st January, 1954. Details of the 1937 Agreement were given in Official Year Book No. 40, pp. 881 and 882. and previous issues.

The new agreement, which was negotiated by 38 countries, is designed to assure supplies of sugar to importing countries and markets to exporting countries at stable and equitable prices. It is also aimed at increasing world consumption of sugar. Basic export quotas have been allocated with provision for reductions or increases to maintain prices within a specified range.

The British Commonwealth, as a whole, has been granted an export quota of 2,375,000 tons, rising to 2,450,000 tons in 1936, which is not subject to the fluctuations mentioned above. The allocation of this total between exporting members of the British Commonwealth is a matter for the countries and territories themselves, Australia's share being fixed at 600,000 tons. Details of the marketing arrangements for Australian sugar are given in para. 15 below.

11. **Net Return for Sugar Crop.**—Details of the disposal of the crop, net value of exports and the average price realized during each of the years 1938-39 and 1949-50 to 1953-54 will be found in the following table :—

**RAW SUGAR(a) : NET RETURNS, AUSTRALIA.**

Year.	Proportion Exported. (b)	Net Value of Exports per Ton. (b)	Average Price per Ton for Whole Crop.	Estimated Value of Crop.
	Per cent.	£ s. d.	£ s. d.	£'000.
1938-39 .. ..	55.78	8 4 3	15 3 11	12,806
1949-50 .. ..	46.92	29 7 6	26 13 8	25,362
1950-51 .. ..	43.73	32 16 6	28 3 4	26,132
1951-52 .. ..	21.12	36 15 6	34 7 0	24,912
1952-53 .. ..	49.66	41 2 0	42 12 9	40,781
1953-54 .. ..	58.39	39 18 0	42 10 8	52,572

(a) 94 net titre.

(b) As supplied by the Queensland Sugar Board.

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 represent 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 1953-54 amounted to £249,622. The value thus obtained represents the net market value of all raw sugar sold, which, since 1933, has been divided between the growers and millers in the approximate proportions of 70 per cent. and 30 per cent. respectively. Prior to that year the distribution was about two-thirds to the grower and one-third to the miller.

12. **Exports of Sugar.**—Particulars of the exports of cane sugar (raw and refined) for the five years ended 1938-39 and for each year from 1949-50 to 1953-54 are as follows :—

**SUGAR : EXPORTS, AUSTRALIA.**

Particulars.	Average, 1934-35 to 1938-39.	1949-50.	1950-51.	1951-52.	1952-53.	1953-54.
Quantity tons	377,930	432,711	387,841	167,431	459,370	706,801
Value £'000	3,481	14,147	14,792	6,896	21,655	31,592

13. **Sugar By-products.**—Large quantities of molasses are produced as a by-product in the sugar mills. Details for a series of years of the quantities produced and the amounts used for distilling, fuel, manure and other purposes will be found in Chapter IX.—Manufacturing Industry.

Other by-products include industrial chemicals and building boards. These boards are made from the residue of crushed fibre after removal of the sugar content from sugarcane and possess high insulating and sound-absorbing properties which make them particularly suitable for use in walls and ceilings.

14. **Sugar Prices.**—The prices of sugar in Australia from 1949 to 1953 in the case of raw sugar, and from 1947 to 1956 in the case of refined sugar, 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 per Ton.	Retail Price per lb
	Home Consumption.	Exports.(a)	Whole Crop. (a)			
	£ s. d.	£ s. d.	£ s. d.		£ s. d.	d.
1949 ..	24 6 0	29 7 6	26 13 8	4.12.47 to 28.10.49	37 6 8	4½
1950 ..	24 11 0	32 16 6	28 3 4	29.10.49 to 6.7.51	41 9 4	5
1951 ..	33 14 0	36 15 6	34 7 0	7.7.51 to 23.3.52..	53 6 8	6½
1952 ..	44 3 0	41 2 0	42 12 9	24.3.52 to 12.10.52	65 12 10	8
1953 ..	47 18 6	39 18 0	42 10 8	13.10.52 to 31.8.56	73 16 11	9

(a) Including "Excess" Sugar.

15. **Marketing Arrangements.**—Since 1939 the British Ministry of Food has purchased Australia's surplus raw sugar at prices negotiated annually and varying from £ stg. 11 5s. in 1939 to £ stg. 40 15s. in 1955 including tariff preference (for prices in other years see earlier issues of the Year Book). From 1953 the negotiated price applies to 314,000 tons of exports annually, the balance of exports being sold at world prices.

In December, 1949, the United Kingdom Government undertook to find a market for Australia's sugar exports until the end of 1952 when a new British Commonwealth Sugar Agreement came into operation. The new arrangement, as extended annually, provides for Australia to export a maximum of 600,000 tons annually from 1953 to 1962. The United Kingdom Government agreed to take 314,000 tons at annually negotiated prices, the balance to be sold at world prices, plus preference if sold in the United Kingdom or Canada.

The Sugar Bill introduced into the House of Commons on 5th July, 1955, proposes that dealings in sugar in the United Kingdom will revert to a trader to trader basis. However, under the Bill, a Sugar Board is created which will be responsible for the purchase of the negotiated price sugar which the United Kingdom Government has contracted to take under the British Commonwealth Sugar Agreement.

16. **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 to which the Queensland Government contributes £216,000 annually on behalf of the Sugar Industry (contributions were suspended temporarily whilst funds exceeded £500,000).

A rebate of £2 4s. per ton of refined sugar used in processing approved fruit products is paid to Australian manufacturers provided they buy the fresh fruit at prices not lower than those declared by the Committee as reasonable.

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.

Any money remaining may be used 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 fruits.

17. **Sugar Inquiry Committee**.—The Sugar Inquiry Committee was constituted in March, 1952, to investigate the sugar industry and in particular the Sugar Agreement between the Commonwealth and Queensland Governments. As a result of its findings the wholesale and retail prices of sugar were increased from 13th October, 1952 by £8 per ton and 1d. per lb. respectively.

Other amendments were also made, and incorporated in the Sugar Agreement Act, 1954.

18. **Bulk Handling of Sugar**.—Bulk handling facilities are being established at the ports of Mackay and Lucinda Point following successful tests and consideration of two independent reports by the Sugar Board. These are expected to be completed by 1957 and 1958 respectively. Proposals have also been made for installations at other sugar ports.

### § 15. Vineyards.

1. **Progress of Cultivation**.—(i) *Area of Vineyards*. Since the early days of Australian settlement the expansion of the cultivation of vines has been most rapid in Victoria and South Australia, the area under vineyards in the 1954 season in these two States comprising 78 per cent. of the total area. The purposes for which grapes are grown in Australia are (a) for wine-making, (b) for table use, and (c) for drying. The total area of vines in the several States during each of the years 1949-50 to 1953-54 and the averages for the ten-year periods ended 1938-39 and 1952-53 are shown in the following table.

#### VINEYARDS : AREA.

(Acres.)

Season.	N.S.W.	Victoria.	Queensland.	S. Aust.	W. Aust.	Australia.(a)
Average, 1929-30 to 1938-39	15,777	40,563	2,142	54,156	5,666	118,304
1949-50 ..	16,931	45,386	3,135	60,253	9,676	135,381
1950-51 ..	16,917	45,313	3,045	61,971	9,258	136,504
1951-52 ..	17,047	45,267	2,819	61,214	9,358	135,705
1952-53 ..	18,006	45,968	2,808	60,603	9,233	136,618
Average, 1943-44 to 1952-53	16,622	44,274	3,014	59,258	9,721	132,889
1953-54—						
Wine ..	8,273	5,831	317	42,750	2,770	59,941
Table ..	2,637	1,956	2,567	285	1,423	8,868
Drying ..	7,218	37,990	..	19,086	5,009	69,303
Total ..	18,128	45,777	2,884	62,121	9,202	138,112

(a) Excludes particulars for Australian Capital Territory.

(ii) *Wine Production, Bounties, etc.* The total production of wine (beverage and distillation) in Australia has shown a marked increase in recent years, rising from 14.3 million gallons in 1938-39 to 31.7 million gallons in 1953-54. In the same period consumption of beverage wine in Australia has expanded from 4.5 million gallons (0.7 gallons per head of population) to 12.4 million gallons (1.4 gallons per head of population). For many years prior to the 1939-45 War a bounty was paid on wine shipped overseas under the provisions of the Wine Export Bounty Act 1930, as amended from time to time. Details of the bounty, payment of which was discontinued in 1947, may be found in Official Year Book No. 39, page 992.

The quantity of wine produced in the several States during the 1949-50 to 1953-54 seasons, together with the averages for the ten-year periods ended 1938-39 and 1952-53, is shown in the following table :—

**WINE : PRODUCTION.(a)**  
(‘000 Gallons.)

Season.	N.S.W.	Victoria.	Queensland.	S. Aust.	W. Aust.	Australia.
Average, 1929-30 to 1938-39	2,099	1,449	36	12,127	393	16,104
1949-50 ..	5,185	3,230	45	23,702	513	32,675
1950-51 ..	4,372	2,358	43	18,611	652	26,036
1951-52 ..	5,465	3,472	33	25,495	790	35,255
1952-53 ..	4,250	2,267	42	22,733	731	30,023
Average, 1943-44 to 1952-53	4,088	2,447	34	20,758	639	27,966
1953-54 ..	5,066	2,327	59	23,497	717	31,666

(a) Net factory and farm production of beverage and distillation wine excluding the liquid gallanage of spirits added in wine fortifying.

2. Imports and Exports of Wine.—(i) *Imports.* The principal countries of origin of wine imported into Australia were, before the 1939-45 War, France, Spain, Portugal and Italy, the bulk of the sparkling wines coming from France. The bulk of the post-war wine imports have been obtained from France. Imports for 1953-54 amounted to 40,374 gallons valued at £84,088 compared with 7,683 gallons valued at £16,350 in the previous year and an average of 36,685 gallons valued at £39,577 for the five years ended 1938-39.

(ii) *Exports.* Before the 1939-45 War practically all wine exported was sent to the United Kingdom, only about 200,000 gallons per annum being sent elsewhere. Exports in 1953-54 totalled 1,394,960 gallons, of which the United Kingdom received 926,814 gallons, New Zealand 72,236 gallons, Canada 300,772 gallons, and other countries 95,138 gallons.

Exports for the five years ended 1953-54 are shown in the following table in comparison with average exports during the five years ended 1938-39 :—

**WINE : EXPORTS FROM AUSTRALIA.**

Year.	Quantity (Gallons).			Value (£).		
	Sparkling.	Other.	Total.	Sparkling.	Other.	Total.
Average, 1934-35 to 1938-39	3,772	3,559,094	3,562,866	5,400	938,195	943,595
1949-50 ..	6,093	1,097,225	1,103,318	6,323	509,516	515,839
1950-51 ..	3,651	1,219,258	1,222,909	7,121	627,741	634,862
1951-52 ..	6,685	1,155,610	1,162,295	18,983	711,554	730,537
1952-53 ..	7,373	1,160,088	1,167,461	21,277	742,649	763,926
1953-54 ..	4,842	1,390,118	1,394,960	16,631	886,228	902,859

3. **Oversea Marketing of Wine.**—(i) *The Wine Overseas Marketing Act 1929-1954.* This Act was introduced to place the oversea marketing of surplus wine on an orderly basis. The Australian Wine Board (formerly The Wine Overseas Marketing 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 has a London agency which advises on marketing conditions.

During 1954 the Act was amended to enable the Board to engage in the sales promotion of wine in Australia in addition to overseas.

(ii) *The Wine Grapes Charges Act 1929-1954.* This Act provides for the imposition of a levy on all grapes used in Australia for the manufacture of wines or 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.

4. **Other Viticultural Products.**—(i) *Table Grapes.* Grapes for table use are grown in all the States except Tasmania, but the area cultivated to this variety is only about 6 per cent. of the productive area of grapes. The greatest development in the industry has taken place in the drying of raisins and currants, particularly in Victoria and South Australia. The quantities of table grapes produced during the season 1953-54 in each State are shown in § 3 of this chapter. (See p. 835)

(ii) *Raisins and Currants.* The quantities of raisins (sultanas and lexias) and currants dried during each of the seasons 1949-50 to 1953-54 and the averages for the ten-year periods ended 1938-39 and 1952-53 are shown in the following table. Production in 1953-54 was 89,914 tons, 10,819 tons less than the preceding year (100,733 tons), which was the second highest production on record.

#### RAISINS(a) AND CURRANTS : PRODUCTION.

(Tons.)

Season.	N. S. Wales.		Victoria.		South Aust.		Western Aust.		Australia.	
	Raisins.	Currants.	Raisins.	Currants.	Raisins.	Currants.	Raisins.	Currants.	Raisins.	Currants.
Average, 1929-30 to 1938-39 ..	4,234	796	35,235	7,995	11,494	8,007	697	1,789	51,660	18,587
1949-50 ..	5,721	898	42,194	6,930	5,895	4,244	289	1,685	54,099	13,757
1950-51 ..	4,419	971	28,007	6,081	7,870	5,830	402	2,547	40,698	15,429
1951-52 ..	7,005	537	44,834	3,858	7,990	4,730	301	2,522	60,319	11,647
1952-53 ..	9,551	990	55,098	6,589	18,486	7,256	302	2,461	83,437	17,296
Average, 1943-44 to 1952-53 ..	6,270	985	41,513	6,888	10,859	5,961	545	2,751	59,187	16,585
1953-54 ..	8,261	591	51,073	4,669	16,451	6,326	259	2,284	76,044	13,870

(a) Sultanas and lexias.

5. **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. The quantities disposed of in Australia and overseas, as recorded by the Commonwealth Dried Fruits Control Board for the season ended December, 1954, totalled 89,573 tons, Australian consumption amounting to 17,729 tons and oversea exports 71,844 tons. Australian consumption includes amounts delivered to biscuit manufacturers, bakeries, etc., as well as retail sales for household consumption.



The following table shows the oversea exports of raisins and currants during each of the years 1949-50 to 1953-54 compared with the average for the five years ended 1938-39.

**RAISINS AND CURRANTS(a) : EXPORTS, AUSTRALIA.**

Year.	Raisins.		Currants.		Total Raisins and Currants.	
	Quantity.	Value.	Quantity.	Value.	Quantity.	Value.
	Tons.	£'000.	Tons.	£'000.	Tons.	£'000.
Average, 1934-35 to 1938-39	43,191	1,686	15,054	549	58,245	2,235
1949-50 ..	28,558	1,819	7,063	409	35,621	2,228
1950-51 ..	27,122	2,586	7,231	717	34,353	3,303
1951-52 ..	32,669	3,961	5,003	646	37,672	4,607
1952-53 ..	58,886	6,395	10,387	1,053	69,273	7,448
1953-54 ..	51,693	5,561	10,731	1,039	62,424	6,600

(a) Excludes quantities exported as mincemeat.

The chief countries importing Australian raisins and currants are the United Kingdom, New Zealand and Canada, the quantities exported thereto in 1953-54 being 44,683 tons, 4,397 tons and 11,985 tons respectively.

6. *Post-war Contracts.*—Agreements were negotiated between the Governments of the United Kingdom and Australia for the purchase of Australian dried vine fruits during the period 1946-1953. Up to and including 1951 the quantity of fruit to be purchased was limited but in 1952 and 1953 there was no restriction. In April, 1953, it was agreed to extend the contract for one year but in August, 1953 the United Kingdom Government abolished all controls and on 1st December of that year exports reverted to a trader to trader basis.

The British Ministry of Food agreed to subsidize returns from sales of fruit of the 1954 crop sold in the United Kingdom up to 31st May, 1955, if average returns were less than the level of prices agreed upon. The support prices under this arrangement were: Currants 1 and 2 crown, £87 10s. per ton, Currants 3 and 4 crown, £93 15s.; Sultanas 1 crown and upwards, £100; Lexias 4 and 5 crown seeded, £112 10s., unseeded, £100.

Details of contract prices for the years 1946 to 1953 will be found on page 783 of Official Year Book No. 41.

7. *Oversea Marketing of Dried Fruits.*—(i) *The Dried Fruits Export Control Act 1924-1953.* This Act was passed to organize oversea marketing of Australian dried vine fruits. The Dried Fruits Control Board, consisting of growers and Government representatives and members with commercial experience and experience in marketing dried fruits, controls the sale and distribution of dried fruit exports and recommends the conditions under which export licences will be issued.

In conjunction with its London agency the Board has improved dried fruit marketing overseas by its system of appraisement, regulation of shipments and advertising.

(ii) *Dried Fruits Export Charges Act 1924-1929.* This Act provides for a levy on exports of dried fruits to defray costs and expenses incurred by the Board. Provision is made for exemption from the levy upon recommendations by the Board.

## § 16. Orchards and Fruit-Gardens.

1. *Area.*—The largest area of orchards and fruit-gardens prior to the 1939-45 War was 281,899 acres which was attained in 1933-34. From that year until 1942-43, when 260,384 acres were under fruit, there was a gradual decline. In each subsequent

year there was a continuous upward movement to 1947-48 when the area reached a new peak of 290,320 acres. Subsequently there was a continuous decline to about 271,000 acres in 1951-52 and 1952-53. In 1953-54 there was a slight increase to 273,000 acres. The total area of orchards and fruit-gardens in the several States during the years 1949-50 to 1953-54 compared with the average for the ten seasons 1929-30 to 1938-39 is shown in the following table :—

### ORCHARDS AND FRUIT-GARDENS : AREA.

(Acres.)

Season.	N.S.W.	Vic.	Q'land.	S. Aust.	W. Aust.	Tas.	A.C.T.	Aust.
Average, 1929-30 to 1938-39 .. ..	84,025	76,643	32,437	29,365	20,703	32,627	69	275,869
1949-50 .. ..	94,725	71,046	35,986	26,858	22,744	28,471	98	270,928
1950-51 .. ..	91,477	69,911	35,241	28,686	22,013	27,130	103	274,561
1951-52 .. ..	89,162	68,715	35,049	29,375	21,710	26,552	110	270,882
1952-53 .. ..	90,131	67,234	37,280	28,649	21,492	26,075	92	270,953
1953-54 .. ..	90,761	66,180	39,979	29,758	21,542	24,818	95	273,133

2. Varieties of Crops.—The varieties grown differ in various parts of the States, ranging from such fruits as pineapples, papaws and mangoes of the tropics, to strawberries, raspberries and currants of the colder parts of the temperate zone. In New South Wales, citrus fruits (oranges, lemons, etc.) and bananas are the principal crops, although apples, peaches, plums, pears and cherries are extensively grown. The principal varieties grown in Victoria are apples, peaches, pears, oranges, plums and apricots. In Queensland, bananas, pineapples, apples, oranges, mandarins, peaches and plums are the varieties most largely cultivated. In South Australia, in addition to apples, oranges, apricots, plums, peaches and pears, almonds and olives are extensively grown. In Western Australia, apples, oranges, lemons, pears, plums, peaches, apricots and figs are the chief varieties. In Tasmania, apples occupy over two-thirds of the fruit-growing area, but small fruits, such as currants, raspberries and gooseberries are extensively grown, while the balance of the area is mainly taken up with pears, apricots and plums. The following table shows the acreage—bearing and non-bearing—of the principal kinds of fruit, and the quantity and value of fruit produced.

### ORCHARDS AND FRUIT-GARDENS, 1953-54.

Fruit.	N.S.W.	Vic.	Q'land.	S. Aust.	W. Aust.	Tas.	A.C.T.	Aust.
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#### AREA, BEARING AND NON-BEARING (ACRES).

Apples ..	15,089	19,252	8,482	6,802	12,332	18,625	86	80,668
Apricots ..	2,027	4,912	307	4,176	409	1,050	..	12,881
Bananas ..	20,714	..	7,529	..	556	..	..	28,799
Cherries ..	2,436	1,706	11	934	37	81	..	5,205
Citrus—								
Oranges ..	26,473	5,332	3,681	6,678	3,784	..	..	45,948
Mandarins ..	1,940	98	1,482	114	217	..	..	3,851
Lemons and								
Limes ..	3,098	1,659	436	316	549	..	..	6,058
Other ..	735	330	103	302	152	..	..	1,622
Nuts ..	495	771	213	3,022	214	..	..	4,715
Peaches ..	6,693	12,001	1,488	2,522	793	94	4	23,685
Pears ..	3,373	12,857	370	1,676	1,025	1,737	2	21,040
Pineapples ..	461	..	11,625	..	..	..	..	12,136
Plums and Prunes	4,598	3,015	1,304	1,529	888	209	3	11,546
Small Fruits ..	10	518	147	283	11	2,975	..	3,974
Other Fruits ..	2,619	3,609	2,751	1,404	575	47	..	11,005
Total ..	90,761	66,180	39,979	29,758	21,542	24,818	95	273,133

## ORCHARDS AND FRUIT-GARDENS, 1953-54—continued.

Fruit.	N.S.W.	Vic.	Q'land.	S. Aust.	W. Aust.	Tas.	A.C.T.	Aust.
PRODUCTION.								
Apples <i>lbs.</i>	1,764,750	3,333,903	499,699	1,380,053	1,170,030	5,304,000	11,098	12,468,533
Apricots ..	322,664	583,695	15,587	700,058	48,140	70,587	..	1,743,731
Bananas ..	2,747,717	..	532,810	..	4,757	..	..	3,322,284
Cherries ..	148,522	81,834	90	62,503	1,220	8,720	..	302,889
Citrus—								
Oranges ..	3,234,190	678,064	325,469	1,367,946	443,373	..	..	6,049,042
Mandarins ..	183,134	16,023	143,718	30,369	21,599	..	..	395,443
Lemons and								
Limes ..	365,514	151,022	54,521	58,995	94,912	..	..	724,964
Other ..	131,607	52,289	18,349	48,623	24,499	..	..	275,457
Nuts .. <i>lb.</i>	179,793	252,095	70,891	1,703,856	33,398	..	..	2,240,033
Peaches <i>bush.</i>	1,046,130	1,804,896	81,080	317,686	72,736	11,612	60	3,335,400
Pears ..	456,069	3,152,432	33,804	338,797	99,807	360,833	90	4,441,832
Pineapples ..	75,006	..	3,187,648	..	..	..	..	3,262,654
Plums and								
Prunes ..	455,962	208,904	71,470	155,123	81,211	23,515	12	996,197
Small Fruits <i>ewt.</i>	172	9,371	4,849	2,821	155	101,278	..	118,646

GROSS VALUE OF PRODUCTION.  
(£'000.)

Apples ..	3,552	2,222	901	1,503	1,767	4,715	23	14,683
Apricots ..	887	642	61	1,067	78	53	..	2,788
Bananas ..	6,145	..	978	..	188	..	..	7,311
Cherries ..	634	184	1	167	14	11	..	1,011
Citrus—								
Oranges ..	3,097	659	355	1,436	449	..	..	5,996
Mandarins ..	212	21	248	44	32	..	..	557
Lemons and								
Limes ..	361	128	81	26	54	..	..	650
Other ..	95	41	20	21	22	..	..	199
Nuts ..	20	37	5	170	4	..	..	236
Peaches ..	1,270	1,489	140	453	120	8	..	3,489
Pears ..	565	2,837	46	424	167	416	..	4,455
Pineapples ..	93	..	2,255	..	..	..	..	2,348
Plums and Prunes	713	124	127	235	143	9	..	1,351
Small Fruits ..	3	73	54	30	4	356	..	520
Other Fruits ..	252	60	336	111	60	2	..	821
Total ..	17,899	3,517	5,608	5,687	3,111	5,570	23	46,415

3. Principal Fruit Crops.—The area, production and gross value of the principal fruit crops during the periods 1949-50 to 1953-54 compared with the average for the ten seasons 1929-30 to 1938-39 are shown hereunder:—

## PRINCIPAL FRUIT CROPS : AREA, PRODUCTION AND GROSS VALUE OF PRODUCTION.

Season.	Apples.	Apricots.	Bananas.	Citrus Fruits.	Peaches.	Pears.	Plums and Prunes.
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## AREA, BEARING AND NON-BEARING (ACRES).

Average, 1929-30 to 1938-39	100,258	11,632	23,353	50,706	23,390	20,725	15,912
1949-50..	81,744	13,277	29,660	57,367	27,318	21,570	12,226
1950-51..	80,086	13,302	27,515	57,266	26,197	21,737	12,163
1951-52..	80,206	13,282	26,021	58,419	25,693	20,957	11,841
1952-53..	80,194	12,899	27,724	57,605	23,755	21,044	11,485
1953-54..	80,668	12,881	28,799	57,470	23,685	21,040	11,546

**PRINCIPAL FRUIT CROPS: AREA, PRODUCTION AND GROSS VALUE OF PRODUCTION—continued.**

Season.	Apples.	Apricots.	Bananas.	Citrus Fruits.	Peaches.	Pears.	Plums and Prunes.
<b>PRODUCTION ('000 BUSHELS).</b>							
Average, 1929-30 to 1938-39	10,013	1,014	2,270	5,011	1,984	2,130	948
1949-50.. ..	9,225	1,463	3,428	6,394	2,303	2,861	806
1950-51.. ..	9,711	1,309	3,224	7,645	2,435	3,549	940
1951-52.. ..	10,743	1,492	2,749	6,168	2,822	3,534	845
1952-53.. ..	9,231	1,265	2,244	6,064	2,677	3,513	913
1953-54.. ..	12,469	1,744	3,322	7,445	3,335	4,442	996
<b>GROSS VALUE OF PRODUCTION.</b> <b>(£'000)</b>							
Average, 1929-30 to 1938-39	2,677	326	1,072	1,808	679	559	286
1949-50.. ..	7,710	1,328	3,880	5,350	1,687	2,108	786
1950-51.. ..	9,105	1,464	4,532	5,936	2,068	2,927	1,107
1951-52.. ..	13,346	2,307	6,742	8,355	3,274	3,752	1,379
1952-53.. ..	11,039	2,003	6,171	8,050	3,305	3,911	1,586
1953-54.. ..	14,683	2,788	7,311	7,402	3,489	4,455	1,351

4. **Production of Jams and Jellies and Preserved Fruit.**—Considerable quantities of fruit are used in the production of jams and jellies and preserved fruit in Australia. In 1953-54 output of jams and jellies amounted to 85,687,000 lb. whilst output of preserved fruit, excluding preserved apples, amounted to 324,677,000 lb. Production of preserved apples was 13,885,000 lb.

The recorded consumption of fruit in factories for all purposes, including that used for juice and cordial manufacture and for drying, was 224,505 tons in 1953-54.

5. **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 1954-55 are shown in Chapter XXIX.—Miscellaneous, of this Year Book.

6. **Imports and Exports of Fruit.**—(i) *General.* The imports of fresh fruit into Australia are negligible, whilst 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 of the shipments in 1953-54 amounted to £9,384,000 and £7,395,000 respectively. Apples constitute the bulk of the fresh fruit exported, although the exports of citrus fruit and pears are fairly considerable. Shipments of raisins and currants have increased greatly since 1914-15 and are mainly responsible for the growth in the dried fruit exports, although dried tree fruit also figures amongst the exports.

(ii) *Fresh Fruit.* Particulars of the Australian export trade in fresh and frozen fruit for each of the years 1949-50 to 1953-54 and the average of the five years ended 1938-39 are shown in the following table:—

**FRESH AND FROZEN FRUIT : EXPORTS, AUSTRALIA.**

Year.	Apples.		Pears.		Citrus.		Total.(a)	
	Quantity.	Value.	Quantity.	Value.	Quantity.	Value.	Quantity.	Value.
	'000 bus.	£'000.	'000 bus.	£'000.	'000 bus.	£'000.	'000 bus.	£'000.
Average, 1934-35 to 1938-39	4,591	1,396	632	268	533	234	5,865	1,981
1949-50.. ..	3,010	2,438	572	639	563	650	4,225	3,934
1950-51.. ..	3,263	3,393	885	1,301	619	761	4,854	5,727
1951-52.. ..	3,263	4,285	808	1,492	432	779	4,601	6,895
1952-53.. ..	4,696	6,740	937	1,675	433	742	6,181	9,560
1953-54.. ..	4,728	6,089	1,209	2,045	533	809	6,596	9,384

(a) Total, including exports of all other fresh and frozen fruit.

(iii) *Dried Tree Fruit.* The quantity and value of oversea imports and exports of dried fruit, other than raisins and currants, for the years 1945-50 to 1953-54, compared with the average for the five years 1934-35 to 1938-39, are shown below. Normally, the bulk of the imports consists of dates obtained almost entirely from Iraq.

**DRIED TREE FRUIT(a) : IMPORTS AND EXPORTS, AUSTRALIA.**

Year.	Imports.		Exports.		Net Exports.	
	Quantity.	Value.	Quantity.	Value.	Quantity.	Value.
	'000 lb.	£'000.	'000 lb.	£'000.	'000 lb.	£'000.
Average, 1934-35 to 1938-39	12,225	80	4,315	117	-7,910	37
1949-50 ..	10,125	212	10,218	661	93	449
1950-51 ..	11,666	285	24,336	1,366	12,670	1,081
1951-52 ..	12,680	293	4,520	414	-8,160	121
1952-53 ..	5,851	142	3,966	403	-1,885	261
1953-54 ..	11,638	303	6,526	795	-5,112	492

(a) Excludes raisins and currants referred to separately under Vineyards, § 15, par. 5.

NOTE.—Minus sign (—) denotes net imports.

(iv) *Jams and Jellies.* Exports of jams and jellies reached large proportions immediately following the 1939-45 War and in 1946-47 amounted to 65,434,000 lb., compared with the average for the five years ended 1938-39 of 7,118,000 lb. Since 1949-50, when exports totalled 65,229,000 lb., there has been a marked decline and in 1953-54 exports amounted to only 6,315,000 lb., valued at £372,000. Imports of jams and jellies are negligible.

(v) *Preserved Fruit.* The total quantity of fruit preserved in liquid, or partly preserved in liquid or pulped, imported into Australia during 1953-54, was 534,000 lb. valued at £32,000. Large quantities of fruit preserved in liquid are normally exported from Australia, the value of shipments in 1938-39 amounting to £1,271,525. In 1953-54 the value of exports had increased to £14,186,203. In addition, the exports of pulped fruits during 1953-54 amounted to 13,005,000 lb., valued at £1,441,000. Quantities of fruit preserved in liquid exported from Australia in 1953-54 amounted to 199,242,000 lb. compared with average exports of 68,896,000 lb. for the five years ended 1938-39. Exports in 1953-54 were principally made up of peaches (57,009,000 lb.), pears (59,070,000 lb.), apricots (44,797,000 lb.) and pineapples (32,292,000 lb.).

7. *Marketing of Apples and Pears.*—(i) *Apple and Pear Organization Act 1938-1953.* This Act, which was passed by the Commonwealth Parliament at the request of the apple and pear industry, provides for the establishment of an Australian Apple and Pear Board comprised of representatives of growers, exporters, employees and the Commonwealth Government. Oversea representatives may also be appointed by the Board.

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 and allocate consignments from each State.

(ii) *Apple and Pear Export Charges Act 1938-1947.* This Act provides for an export levy to meet the expenses of the Board.

(iii) *Apple and Pear Acquisition*. Exports of apples and pears were seriously curtailed during the war and the 1940 to 1948 crops were acquired and marketed under National Security and Defence Regulations. Details of the acquisition scheme will be found on pages 1003 and 1004 of Official Year Book No. 38 and in earlier issues.

8. *Oversea Marketing of Canned Fruit*.—(i) *The Canned Fruits Export Control Act 1926-1953*. This legislation was introduced with the object of organizing the oversea marketing of canned fruit. The Australian Canned Fruits Board, comprising members representing canneries, pineapple interests and the Commonwealth Government, was appointed with functions mentioned above and also to recommend conditions under which export licences are issued.

The system of marketing adopted by the Board has resulted in the satisfactory disposal of the exportable surplus of canned fruits.

(ii) *The Canned Fruits Export Charges Act 1926-1938*. This Act provides for a levy on exports to meet the Board's expenses. Provision has been made for certain exemptions when recommended by the Board.

## § 17. Vegetables for Human Consumption.

1. *Area and Production of Fresh Vegetables*.—Details of the areas planted and production of individual kinds of vegetables, excluding potatoes and onions referred to in §§ 10 and 11 of this chapter, are shown below for the seasons 1951-52 to 1953-54.

### FRESH VEGETABLES(a) FOR HUMAN CONSUMPTION : AUSTRALIA.

Vegetable.	1951-52.		1952-53.		1953-54.	
	Area Sown.	Production.	Area Sown.	Production.	Area Sown.	Production.
	Acres.	Tons.	Acres.	Tons.	Acres.	Tons.
Beans, French and Runner(b) ..	15,111	19,469	14,556	19,748	13,269	19,109
Beans, Navy ..	2,185	446	2,068	533	2,468	631
Beetroot ..	2,440	16,345	2,075	12,429	1,855	11,242
Cabbages and Brussels Sprouts ..	8,160	81,321	7,347	78,126	6,676	69,174
Carrots ..	5,396	41,761	4,589	33,038	3,992	33,399
Cauliflowers ..	7,506	76,910	7,868	79,713	7,362	79,837
Lettuces ..	3,644	13,838	4,084	15,341	4,012	15,809
Parsnips ..	1,677	13,445	1,631	12,469	1,450	12,055
Peas, Blue ..	7,668	5,332	3,567	1,977	5,365	3,053
Peas, Green ..	41,056	36,231	42,213	41,360	33,191	32,444
Pumpkins ..	29,522	76,754	25,524	72,359	20,168	60,105
Tomatoes ..	17,339	102,092	18,443	101,292	13,136	76,683
Turnips, Swede and White ..	6,977	26,435	5,037	19,268	5,151	24,075
All Other ..	13,142	..	12,889	..	12,872	..
Total ..	161,823	..	151,891	..	130,967	..

(a) Excludes potatoes and onions. (b) Excludes french beans harvested dry; these are included in "All Other".

2. **Production of Canned and Dehydrated Vegetables.**—Total production of canned vegetables in 1953-54 amounted to 40,265,000 lb., which was considerably higher than pre-war production, but only approximately 56 per cent. of the peak war-time production. The principal canned vegetables produced in 1953-54 were green peas 12,114,000 lb., green beans 827,292 lb., baked beans (including pork and beans) 11,755,500 lb., tomatoes 471,773 lb. and asparagus 6,276,312 lb.

The production of dehydrated vegetables, which was initiated during the 1939-45 War by the Commonwealth Government, rose to a maximum of 22 million lb. in 1945-46. but in 1953-54 had declined to approximately 400,000 lb.

3. **Imports and Exports of Vegetables.**—Oversea exports of pulse and fresh vegetables during 1953-54 consisted of:—Pulse, 17,053 tons, £878,000; onions, 3,317 tons, £121,000; potatoes, 4,010 tons, £155,000; other vegetables, 2,617 tons, £227,000. Imports of pulse amounted to 8,403 tons, valued at £525,000, whilst imports of fresh vegetables were negligible.

In 1953-54 exports of vegetables preserved in liquid consisted of:—Peas, 3,961,000 lb., £255,000; tomatoes, 3,435,000 lb., £204,000; other vegetables, 1,704,000 lb., £130,000.

4. **Consumption of Vegetables.**—Details of the estimated consumption of vegetables for a series of years ending with 1954-55 are shown in Chapter XXIX.—Miscellaneous, of this Year Book.

## § 18. Tobacco.

1. **States, Area and Production.** Tobacco-growing promised years ago to occupy an important place amongst the agricultural industries of Australia. As early as the season 1888-89, the area of this crop amounted to 6,641 acres, of which 4,833 were in New South Wales, 1,685 in Victoria, and 123 in Queensland. Thereafter the industry fluctuated for many years reaching a peak in 1932-33 when 26,272 acres were planted.

In 1953-54 the acreage planted was 8,246 acres which was 73 per cent. of the average for the ten years ended 1938-39. Owing to improvement in average yields, however, the production of dried leaf in 1953-54 was 50 per cent. higher than the pre-war average.

In the following table particulars of the area and production of tobacco are given by States for each of the seasons 1949-50 to 1953-54, together with averages for the ten-year periods ended 1938-39 and 1952-53:—

### TOBACCO : AREA AND PRODUCTION.

Season.	N.S.W.	Vic.	Q'land.	S. Aust.	W. Aust.	Tas.	Aust. (a)
AREA (ACRES).							
Average, 1929-30 to 1938-39	1,274	6,237	2,865	292	502	80	11,259
1949-50	327	919	2,677	..	661	..	4,584
1950-51	342	1,071	4,142	..	967	..	6,472
1951-52	432	1,500	5,038	..	1,229	..	8,190
1952-53	445	1,613	4,339	..	1,525	..	7,922
Average, 1943-44 to 1952-53	423	1,310	2,814	..	912	..	5,459
1953-54	501	2,246	4,065	..	1,434	..	8,246

(a) Excludes Northern Territory.

TOBACCO : AREA AND PRODUCTION—*continued.*

Season.	N.S.W.	Vic.	Q'land.	S. Aust.	W. Aust.	Tas.	Aust. (a)
PRODUCTION OF DRIED LEAF ('000 lb.).							
Average, 1929-30 to 1938-39 ..	860	2,354	1,400	83	361	56	5,114
1949-50 .. .. .	299	668	2,540	..	631	..	4,138
1950-51 .. .. .	184	911	2,144	..	972	..	4,211
1951-52 .. .. .	518	1,381	4,667	..	988	..	7,554
1952-53 .. .. .	514	1,472	3,431	..	1,068	..	6,485
Average, 1943-44 to 1952-53 ..	388	899	2,246	..	693	..	4,226
1953-54 .. .. .	587	2,155	4,015	..	912	..	7,669

(a) Excludes Northern Territory.

2. *The Tobacco Industry.*—(i) *Marketing.* In the early days purchase of the leaf at the farms was the usual practice but towards the later part of the 1930's the auction system was introduced by arrangement between the growers' associations and the manufacturers.

On the 9th May, 1941, the Australian Tobacco Board was constituted under the National Security (Australian Tobacco Leaf) Regulations for the purpose of facilitating and regulating the marketing of Australian grown tobacco leaf. All leaf was under the control of the Board, the growers being paid on the valuation as appraised by the Board. The Board ceased to function on the 24th September, 1948 and subsequent crops have been marketed at open auction in the respective States. Queensland has had its own Tobacco Leaf Marketing Board since 1948 and leaf sold in that State has a reserved price, determined by the Board's appraiser. Growers in New South Wales voluntarily submit their leaf to the Queensland Board.

(ii) *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 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 and its terms of reference were as follows:—

“To report annually to the Agricultural Council, through the Standing Committee on Agriculture and also to the Commonwealth Minister for Trade and Customs, through the Chairman of the Council, on the following:—

- (i) The percentage of Australian tobacco which should be incorporated in locally manufactured tobacco under Customs regulations, having regard to the anticipated volume of Australian production of usable leaf available for absorption by the manufacturing industry ;
- (ii) The progress of the industry during the year with particular reference to—
  - (a) marketing problems encountered,
  - (b) a review of prices being paid to farmers in relation to quality of leaf,
  - (c) such other problems as may be retarding the progressive development of the industry, such as the volume of importation of manufactured tobacco and cigarettes.”

(iii) *Industry Inquiries.* The tobacco industry has been the subject of a number of investigations during the past 30 years. The Tariff Board inquired into the industry in 1923, 1926, 1931 and 1940 and reports were issued in respect of the last three inquiries.



(iv) *Commonwealth Grants.* Details of the recommendations by the Tobacco Inquiry Committee and grants periodically approved by the Commonwealth Government up to 30th June, 1953, were given in Official Year Book No. 40, pages 895, 896 and in previous issues.

(v) *Research and Investigations.* 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 of a technique to control "Field Blue Mould" and investigations are now being made into the control of this disease in the field. 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.

The Tobacco Advisory Committee has formulated a programme for increased research and advisory activities. The capital costs of establishing this programme are estimated at £168,000 of which the Commonwealth Government has agreed to contribute £84,000 and tobacco manufacturers the remaining £84,000. It has been estimated that to maintain the programme, it will cost approximately £63,000 per annum, of which the Commonwealth Government is contributing £21,000, tobacco growers £14,000 and tobacco manufacturers £28,000 per annum. A Tobacco Industry Trust Account has been established to receive these contributions.

(vi) *War Service Land Settlement.* A development of considerable interest in the history of tobacco growing in Australia was the inclusion of tobacco farming within the framework of the present war service land settlement scheme. In 1948 the Government approved of projects submitted by Queensland and Western Australia for the settlement of ex-servicemen on tobacco farms.

(vii) *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 rose from 3 per cent. for cigarettes and 5 per cent. for tobacco in November, 1946 to 6 per cent. and 12½ per cent. respectively from 1st July, 1954. The percentages were further increased to 7½ per cent. and 17½ per cent. respectively from 1st July, 1955. In 1953-54 the quantity of cured leaf used in tobacco factories in Australia amounted to 37.9 million lb. of which 4.9 million was of local origin, the balance being imported, chiefly from the United States of America.

3. *Oversea Trade.*—Imports of tobacco and manufactures thereof into Australia during 1953-54 were valued at £17.8 million, including 37.3 million lb. of unmanufactured tobacco valued at £12.4 million. Exports of tobacco and manufactures thereof during 1953-54 were valued at £281,000.

## § 19. Hops.

Hop-growing in Australia is practically confined to Tasmania and some of the cooler districts of Victoria, the total area for 1953-54 being 1,694 acres, of which 1,350 acres were in Tasmania, and 344 acres in Victoria. A small area was also grown in Western Australia, but the details are not available for publication. The Tasmanian area, though still small, has increased during the present century, the total for 1901-2 being 599 acres. The cultivation of hops was much more extensive in Victoria some 60 years ago than at present, the area in 1883-84 being 1,758 acres.

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, imports and exports of hops and the quantity of hops used in breweries are shown for each of the years 1949-50 to 1953-54 in comparison with the average for the five years ended 1938-39.

## HOPS : PRODUCTION AND DISPOSAL, AUSTRALIA.

Year.	Production.		Imports.	Exports.	Net Available Supplies. (a)	Quantity used in Breweries
	Quantity.	Gross Value.				
	Cwt.	£'000.	Cwt.	Cwt.	Cwt.	Cwt.
Average, 1934-35 to 1938-39 .. ..	20,576	173	1,020	78	21,518	18,992
1949-50 .. ..	22,993	465	12,047	..	35,040	31,997
1950-51 .. ..	26,147	620	20,596	11	46,732	36,011
1951-52 .. ..	17,914	517	24,592	..	42,506	38,012
1952-53 .. ..	32,116	1,021	12,512	11	44,617	40,845
1953-54 .. ..	24,666	802	14,675	59	39,282	43,525

(a) Disregards movements in stocks.

The Tariff Board conducted an inquiry into the hop-growing industry and issued a report on 12th June, 1945.

## § 20. Flax.

For many years flax was grown intermittently in parts of Victoria and unsuccessful attempts were made to introduce its cultivation in some of the other States.

During the 1914-18 and 1939-45 Wars there was an acute shortage of flax fibre and expansion of production was encouraged by the Commonwealth Government, the area sown reaching a maximum of more than 61,000 acres in 1944-45. Government assistance was again provided in 1950 and a bounty on scutched flax fibre used was paid during the period July, 1950 to March, 1953, when increased customs duties were introduced. Following recent Tariff Board inquiries the Government has decided to reintroduce the bounty on flax fibre for a period of two years to permit the modernization of plant and machinery. The amount of the bounty is related to the difference between overseas prices and local production costs and it came into operation on 1st November, 1954.

The Government has also decided to proceed with the establishment of a Flax Commission to direct and control Commonwealth flax undertakings previously handled by the Flax Production Committee.

Details of the area under flax and the production of straw are given in the following table :—

## FLAX FOR FIBRE : AREA AND PRODUCTION.

Season.	Victoria.	S. Australia.	W. Aust.	Australia.
AREA (ACRES).				
Average, 1934-35 to 1938-39 .. ..	1,021	..	..	(a) 1,030
1949-50 .. ..	5,261	1,753	2,441	9,455
1950-51 .. ..	3,633	1,198	1,957	6,788
1951-52 .. ..	2,821	1,599	1,965	6,385
1952-53 .. ..	2,840	1,618	2,423	6,881
1953-54 .. ..	9,550	3,040	3,105	15,695

(a) Includes nine acres of unproductive flax in Queensland.

FLAX FOR FIBRE : AREA AND PRODUCTION—*continued.*

Season.	Victoria.	S. Australia.	W. Aust.	Australia.
PRODUCTION (TONS OF STRAW).				
Average, 1934-35 to 1938-39..	61	..	..	61
1949-50 .. .. .	6,925	1,511	2,629	11,065
1950-51 .. .. .	5,071	1,365	2,264	8,700
1951-52 .. .. .	4,065	2,214	1,573	7,852
1952-53 .. .. .	4,379	2,967	2,856	10,202
1953-54 .. .. .	12,984	4,647	4,470	22,101

Prior to 1948-49, the growing of flax for linseed oil had not been developed extensively in Australia. Action has since been taken to develop this industry, however, the ultimate objective being the production of sufficient linseed to meet Australia's total oil requirements. Development of the industry proceeded rapidly until 1951-52 when the record total of 53,741 acres was sown. In 1952-53 there was a decline of 14% to 46,338 acres and in 1953-54 a further decline of 78% leaving the total area sown in 1953-54 at only 6,343 acres. This sudden decline in areas sown was due primarily to the fall in the price paid to the growers for linseed which in turn reflected the decline in world prices for linseed oil.

In Australia linseed is usually grown on land suitable for other grains so that a price differential in favour of linseed is necessary before any expansion will occur in the areas sown. In addition the differential must be sufficient to overcome the higher cost factors involved in growing linseed than in growing other grains. In 1953-54 in particular this price differential was not maintained at the same level as in previous years and many growers reverted to the growing of other grains.

The question of assistance to the industry was investigated by the Commonwealth Tariff Board in 1953 and their conclusions are contained in their Report on *Linseed and Linseed Products* dated 23rd October, 1953.

Details of the area and production of flax for linseed are shown in the following table for the seasons 1949-50 to 1953-54.

## FLAX FOR LINSEED : AREA AND PRODUCTION.

Season.	N.S.W.	Vic.	Q'land.	S. Aust.	W. Aust.	Tas.	Aust.
AREA (ACRES).							
1949-50 .. .. .	6,085	8,148	9,533	3,737	899	453	28,855
1950-51 .. .. .	14,630	9,370	14,986	8,161	543	146	47,836
1951-52 .. .. .	15,785	4,431	28,580	4,853	12	80	53,741
1952-53 .. .. .	15,439	1,063	25,875	3,961	..	..	46,338
1953-54 .. .. .	1,400	1,226	3,647	70	..	..	6,343
PRODUCTION (TONS OF LINSEED).							
1949-50 .. .. .	1,602	1,449	2,249	885	55	153	6,393
1950-51 .. .. .	1,163	1,724	3,561	1,438	36	32	7,954
1951-52 .. .. .	1,617	705	4,174	857	1	39	7,393
1952-53 .. .. .	2,678	176	6,526	551	..	..	9,931
1953-54 .. .. .	256	202	359	5	..	..	822

## § 21. Peanuts.

The production in Australia of peanuts, or groundnuts, is mainly confined to Queensland, although small quantities are grown in New South Wales, Western Australia and the Northern Territory. Details of the area and production are given in the table below.

PEANUTS : AREA AND PRODUCTION, AUSTRALIA.

Season.	Area (Acres).				Production (Tons).			
	N.S.W.	Q'land.	W. Aust.	Australia. (a)	N.S.W.	Q'land.	W. Aust.	Australia. (a)
Average, 1929-30 to 1938-39 ..	29	8,320	100	8,449	(b) 11	3,715	24	3,750
1949-50 ..	133	17,697	27	17,857	52	7,907	9	7,968
1950-51 ..	225	16,656	92	16,973	103	5,312	18	5,433
1951-52 ..	374	13,312	15	13,701	222	4,535	9	4,766
1952-53 ..	789	18,920	10	19,719	409	8,438	7	8,854
1953-54 ..	1,525	36,617	(c)	d 38,142	718	17,866	(c)	d 18,584

(a) Excludes Northern Territory. (b) Average for five years. (c) Not available for publication. (d) Excludes Western Australia for which details are not available for publication.

The gross value of the 1953-54 crop was £2,169,940 which was approximately £1.3 million greater than in 1952-53. This increase was largely the result of the high level of production at 18,584 tons, the highest since 1946-47 when 22,774 tons were produced, and reflected the higher area of 38,142 acres sown in 1953-54 compared with 19,719 acres in 1952-53.

Considerable quantities of peanut kernels were formerly imported annually, chiefly from India, for oil expression purposes. These imports were suspended from 1946 to 1949, but have since been resumed on an increasing scale. Total supplies available for consumption in Australia in 1953-54 of 12,727 tons (shell equivalent) consisted of 8,854 tons grown locally in the 1952-53 season and 3,873 tons imported.

## § 22. Cotton.

1. **General.**—The production of cotton in Australia is restricted to Queensland, where cultivation began in 1860. Details of areas sown for years prior to 1930 and of Government financial assistance to growers up to 1940 appear in Official Year Book No. 39 and earlier issues.

Australia produces only portion of its requirements of raw cotton, the balance being obtained in 1953-54 chiefly from Pakistan, the United States of America, Egypt, India and Brazil. Efforts have been directed towards increasing production by an extension of area, the introduction of irrigation methods and payment of bounties, but so far have not met with much success. Production was increased very considerably during the early war years—it reached a peak of 17,550,000 lb. unginned cotton in 1939-40—but has since fallen away. The expansion of the industries connected with the spinning and weaving of cotton is referred to in Chapter IX.—Manufacturing Industry.

The Raw Cotton Bounty Act 1940 provided an extension until 31st December, 1946 of assistance previously granted by way of bounty. The Act was amended in August, 1946 to provide a guaranteed net average return to cotton-growers of 15d. per lb. of raw cotton for five years from 1st January, 1947. It was superseded by the Cotton Bounty Act 1951, which guaranteed a net average return of 9½d. per lb. of seed cotton for five years from 1st January, 1951. The 1951 Act was amended in 1952 to provide for a guaranteed return of 14d. per lb. of seed cotton for the 1953 crop, and for variation by regulation of the guaranteed return, in succeeding seasons, with a minimum of 9½d. per lb. The Cotton Bounty Act extended the period of the guaranteed return for three years to 31st December, 1958. The guaranteed return has remained at 14d. per lb. of seed cotton since the 1953 season and the Government has announced that this guaranteed return will apply to the 1956 season's crop.

2. Area and Production.—The area under cultivation and the production in Queensland for the years 1949 to 1953 are shown hereunder together with the average for the period of ten years ended 1939 :—

#### COTTON : AREA AND PRODUCTION IN QUEENSLAND.

Season ended December—	Area Sown.	Production of Cotton.				Average Yield per Acre Sown.	
		Unginned.		Ginned.	Ginned- Equiva- lent in Bales. (a)	Unginned.	Ginned.
		Quantity.	Gross Value.				
Average, 1930 to 1939 .. ..	Acres.	'000 lb.	£'000	'000 lb.	Bales.	lb.	lb.
.. ..	58,436	16,617	291	5,564	11,181	284	95
1949 .. ..	2,688	719	26	255	522	267	95
1950 .. ..	2,952	1,102	54	402	806	373	136
1951 .. ..	4,480	1,406	127	549	1,124	314	123
1952 .. ..	5,866	2,184	107	755	1,483	372	129
1953 .. ..	8,965	5,132	316	2,115	4,229	572	236

(a) Bales of approximately 500 lb.

3. Consumption of Raw Cotton.—The following table shows the expansion which has taken place in the consumption of raw cotton in Australia since 1938–39.

#### RAW COTTON : PRODUCTION, IMPORTS AND CONSUMPTION. AUSTRALIA.

('000 lb.)

Year.	Production.	Imports.	Total.	Consumption of Raw Cotton in spinning.
Average, 1936–37 to 1938–39 ..	5,180	9,882	15,062	12,523
1949–50 .. ..	255	28,357	28,612	33,823
1950–51 .. ..	402	45,201	45,603	40,907
1951–52 .. ..	549	43,296	43,845	39,030
1952–53 .. ..	755	24,796	25,551	31,128
1953–54 .. ..	2,115	44,203	46,318	43,994

### § 23. Financial Assistance to Primary Producers.

NOTE.—See also Chapter XX.—Public Finance, pages 775-776.

Direct financial assistance to primary producers by the Commonwealth Government takes the form of bounties, subsidies and other financial assistance, which in 1953-54 amounted to £17,469,000 compared with £13,576,000 in 1952-53 and £22,377,000 in 1951-52.

Brief details of some of the more important payments are given below:—

(i) *Wheat Bounty.* The Wheat Bounty Act 1951 provided for the payment of a bounty on wheat sold for stock feed purposes during the two-year period which expired on 30th November, 1953. Expenditure during the financial year 1953-54 was £1,010,000, which represented the balance of the bounty payable under the Act. In 1952-53 the expenditure on the bounty was £2,759,000.

(ii) *Cotton Bounty.* The Cotton Bounty Act 1951-52 provides for payment of a bounty on seed cotton delivered by growers to processors before 31st December, 1955. The present rate of bounty is designed to give growers an average return of 14d. per lb. The total payment in 1953-54 was £17,650 in respect of 5,400,000 lb. of cotton. There was no payment of cotton bounty in 1952-53.

(iii) *Tractor Bounty.* Under the Tractor Bounty Act 1939-1953, bounties are payable on tractors produced and sold for use in Australia up to 24th October, 1955. The rates of bounty, which were increased by 150 per cent. by the amending Act of 1953, vary between £80 and £240 per tractor, according to belt horse power of the engine. Payments in 1953-54 amounted to £145,000 on 643 tractors as compared with £38,000 on 320 tractors in 1952-53.

(iv) *Dairy Products Bounty.* Under the provisions of the Dairy Industry Assistance Act 1952, a subsidy is paid to dairymen to ensure them a return equal to the average cost of production of their produce. In 1953-54 the rate of subsidy on butter was 89s. 10d. per cwt. and on cheese 32s. per cwt., total payments amounting to £15,400,000. The respective rates in 1952-53 were 85s. and 32s. per cwt. and total payments £15,719,000.

(v) *Artificial Fertilizers.* Prices charged to primary producers for superphosphate and nitrogenous fertilizers (other than sulphate of ammonia produced locally as a by-product on which a surcharge is fixed) have been less than cost, the balance being met by the surcharge on sulphate of ammonia and by Commonwealth subsidy. Total subsidy payments in 1953-54 were £175,000 as compared with £289,000 in 1952-53.

Other forms of financial assistance to primary producers include payments for Cattle Tick Control, the Dairy Industry Extension Grant, Flood and Bush Fire Relief, Food Production, Expansion of Agricultural Advisory Services, Assistance to the Tobacco Industry and Wheat shipped to Tasmania—Freight Subsidy. In 1953-54 payments to primary producers for these purposes totalled £721,000.

### § 24. Fertilizers.

1. *General.*—In the early days of settlement in Australia scientific cultivation was little understood. It was common, as in other new countries, for the land to be cropped continuously to a degree of exhaustion. This practice is very much less in evidence now than in the early days of Australian agricultural development. Under the guidance of the State Departments of Agriculture, scientific farming is now much more widely practised. The importance of fallowing, crop rotation, and the application of suitable fertilizers in adequate quantities is now appreciated by farmers. 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 made productive.

In order to protect the users of artificial fertilizers, legislation has been passed in each of the States regulating the sale and prohibiting the adulteration of fertilizers. A list of these Acts and their main features is given in Official Year Book No. 12, p. 378.

2. Imports and Exports.—The Australian output of prepared fertilizers is derived chiefly from imported rock phosphate and is sufficient for local requirements.

The chief sources of Australia's supplies of rock phosphate are Nauru, Gilbert Islands Group and Christmas Island. Sodium nitrate is obtained chiefly from Chile.

The imports of artificial fertilizers during the five years ended 1953-54, compared with average imports for the period 1934-35 to 1938-39, are shown in the following table:—

#### ARTIFICIAL FERTILIZERS : IMPORTS INTO AUSTRALIA.

Fertilizer.		Average, 1934-35 to 1938-39.	1949-50.	1950-51.	1951-52.	1952-53.	1953-54.
Ammonium	tons	26,090	27,259	42,756	40,848	384	11,187
Sulphate	£'000	215	662	1,050	1,016	10	242
Potash Salts	tons	10,641	12,924	14,605	15,978	14,467	22,234
	£'000	82	266	336	369	314	397
Rock Phosphate	tons	635,097	1,185,402	1,101,678	1,014,100	1,271,139	1,143,330
	£'000	776	2,559	2,217	2,258	2,478	2,432
Sodium Nitrate	tons	7,199	13,416	5,679	15,802	7,848	6,948
	£'000	63	273	130	363	185	183
Other	tons	3,430	673	1,369	2,735	1,837	6,935
	£'000	8	25	47	120	15	151
Total							
..	tons	682,457	1,239,674	1,166,087	1,089,463	1,295,675	1,190,634
	£'000	1,144	3,785	3,780	4,126	3,002	3,405

Exports of fertilizers (practically all of which are manufactured locally) amounted to 1,803 tons valued at £30,000 in 1953-54 compared with 1,511 tons valued at £33,000 in 1952-53 and 4,826 tons valued at £34,000 for the average of the five years ended 1938-39. Superphosphate is the principal fertilizer exported and amounted to 1,605 tons in 1953-54.

3. Quantities Used Locally.—Information regarding the area fertilized with artificial fertilizers and the quantity of artificial fertilizers (superphosphate, bonedust, nitrates, etc.) used in each State during the 1953-54 season is given in the following table. Details of the area manured with natural manure (stableyard, etc.) are no longer collected.

#### AREA FERTILIZED AND QUANTITY OF ARTIFICIAL FERTILIZERS USED, 1953-54.

State or Territory.	Area Fertilized ('000 Acres).			Fertilizers Used (Tons).		
	Crops.	Pasture Lands.	Total.	Crops.	Pasture Lands.	Total.
New South Wales .. ..	2,698	2,908	5,606	104,625	146,815	251,440
Victoria .. ..	3,556	7,555	11,111	170,168	422,235	592,403
Queensland .. ..	415	11	426	95,518	840	96,358
South Australia .. ..	3,336	2,826	6,162	171,458	153,627	325,085
Western Australia .. ..	4,511	3,863	8,374	226,101	178,911	405,012
Tasmania .. ..	191	678	869	25,756	45,259	71,015
Australian Capital Territory ..	5	35	41	286	2,018	2,304
Total .. ..	14,712	17,877	32,589	793,912	949,705	1,743,617

Particulars of the quantity of artificial fertilizers used in each State and Territory during each of the seasons 1949-50 to 1953-54, compared with the average for the five years ended 1938-39, are shown in the next table. These details include the quantity used in the top-dressing of pasture lands.

QUANTITY OF ARTIFICIAL FERTILIZERS USED.  
(Tons.)

Season.	N.S.W.	Vic.	Q'land.	S. Aust.	W. Aust.	Tas.	A.C.T.	Total.
Average, 1934-35 to 1938-39 ..	148,277	305,969	50,651	200,566	230,713	30,272	276	966,724
1949-50 ..	174,171	550,020	72,298	243,768	357,632	53,874	1,098	1,452,861
1950-51 ..	160,871	563,086	73,761	255,781	377,083	56,224	822	1,487,628
1951-52 ..	177,120	579,022	72,610	270,046	399,304	56,719	1,033	1,555,854
1952-53 ..	196,124	619,327	82,222	284,226	409,959	64,439	1,554	1,657,851
1953-54 ..	251,440	592,403	96,358	325,085	405,012	71,015	2,304	1,743,617

As mentioned in § 23 (v) the Commonwealth Government has encouraged the use of artificial fertilizers by providing subsidies to primary producers. In 1953-54 subsidy was paid only on nitrogenous fertilizers.

4. Local Production.—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 1953-54 was 51, made up as follows:—New South Wales, 14; Victoria, 9; Queensland, 8; South Australia, 7; Western Australia, 5 and Tasmania, 8. The production of superphosphate in Australia during 1953-54 amounted to 1,771,000 tons.

## § 25. Ensilage.

1. Government Assistance in Production.—The several State Governments devote a considerable amount of attention to the education of the farming community in 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.

2. Quantity Made and Stocks Held on Farms.—Information regarding production and farm stocks of ensilage for the years ended 31st March, 1952, 1953 and 1954 are 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.
Production during—								
1951-52 season	47,920	24,591	7,654	8,234	11,433	10,638	4	110,474
1952-53 ..	85,135	45,643	12,808	11,670	14,103	17,861	9	187,229
1953-54 ..	84,465	69,830	18,513	13,755	12,070	22,459	..	221,092
Farm Stocks, as at—								
31st March, 1952	74,042	(a)	5,973	5,580	2,235	10,289	101	(a)
„ „ 1953	102,812	(a)	12,980	11,186	3,530	13,588	84	(a)
„ „ 1954	101,262	(a)	18,907	11,497	4,324	19,811	25	(a)

(a) Not available.



The drought of 1902-3 drew increased attention to the value of stocks of ensilage, and during the four seasons ended 1909-10 there was an increase both in the number of holdings on which ensilage was made and in the quantity produced. The accumulated stocks proved of great value during the 1914 drought, though far less than would have been the case if more attention had been paid to production during the previous years when there was a surplus of green fodder. The quantities made since that date have fluctuated considerably, but the output increased up to 1939-40 in which year the production of 303,495 tons was the highest yet recorded. During subsequent seasons output declined to the extremely low level of 94,744 tons during the drought year 1944-45 rising to 180,622 tons in 1947-48 but decreasing again in succeeding years to 110,474 tons in 1951-52. Production increased in 1952-53 and again in 1953-54 to 221,092 tons.

## **§ 26. Agricultural Colleges and Experimental Farms.**

Agricultural colleges, administered by State Departments of Agriculture, have been established in all States except Tasmania. The primary function of these colleges is the training of students in the various phases of agricultural work and live stock 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 officers of the State Departments of Agriculture.

The Commonwealth Scientific and Industrial Research Organization has field stations scattered throughout Australia, and sometimes undertakes joint research with the appropriate State authorities. In general, however, the Commonwealth Scientific and Industrial Research Organization concentrates on fundamental research, except when otherwise specifically invited, while the State Departments of Agriculture study problems of particular significance within their own boundaries. The universities also carry out valuable research work on their own experimental farms.

## **§ 27. Tractors on Rural Holdings.**

The growth of mechanization in agriculture is indicated by the increase in the number of tractors on rural holdings from 41,943 in 1939 to 170,905 in 1954 or by 307 per cent. Since 1943, the first year in which the collection was made by types, wheeled type tractors have increased by 244 per cent., and crawler types by 109 per cent.

The table below sets out the total number of tractors on rural holdings in 1939, and the number of wheeled type and crawler tractors for the five years ended 1954.

## TRACTORS ON RURAL HOLDINGS.

March—	N.S.W.	Vic.	Q'land.	S. Aust.	W. Aust.	Tas.	A.C.T.	Aust.(a)
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## WHEELED TYPE TRACTORS.

1950 ..	25,533	23,235	20,616	11,184	10,323	2,464	84	93,439
1951 ..	30,061	28,132	24,406	13,562	12,331	3,056	107	111,655
1952 ..	35,302	33,678	27,081	15,396	14,579	3,857	142	130,038
1953 ..	39,229	37,484	26,822	16,729	15,381	4,550	158	143,353
1954 ..	41,195	41,953	32,535	18,228	16,577	5,111	163	155,762

## CRAWLER OR TRACK TYPE TRACTORS.

1950 ..	1,831	884	3,111	2,525	1,796	201	8	10,356
1951 ..	2,145	926	3,388	2,566	2,223	264	6	11,518
1952 ..	2,828	1,187	3,810	2,788	2,498	342	6	13,459
1953 ..	3,179	1,271	4,176	3,021	2,932	442	8	15,029
1954 ..	3,221	1,214	4,547	2,514	3,093	547	7	15,143

## TOTAL TRACTORS.

1939(b) ..	12,926	8,802	8,541	5,969	5,680	(c)	25	(d) 41,943
1950 ..	27,364	24,119	23,727	13,709	12,119	2,665	92	103,795
1951 ..	32,206	29,058	27,704	16,128	14,554	3,320	113	123,173
1952 ..	38,130	34,865	30,894	18,184	17,077	4,199	148	143,497
1953 ..	42,408	38,755	33,998	19,750	18,313	4,992	166	158,382
1954 ..	44,416	43,167	37,082	20,742	19,670	5,658	170	170,905

(a) Excludes Northern Territory.  
(d) Excludes Tasmania.

(b) At commencement of year.

(c) Not available.

## § 28. Number and Area of Rural Holdings and Employment Thereon.

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 vitiate comparisons. For the purpose of these statistics, a holding may be defined as land of one acre or more in extent, used in the production of agricultural produce, the raising of live stock or the products of live stock.

There is considerable fluctuation from time to time in 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 under short-term lease or other arrangement and the areas so occupied tend to fluctuate with the season. Similarly, there are rugged areas in the mountain country of some States which are also sporadically occupied.

The following table shows the recorded number and area of the holdings in each State for the seasons 1938-39 and 1949-50 to 1953-54.

## RURAL HOLDINGS : NUMBER AND AREA.

Season.	New South Wales.	Victoria.	Queens-land.	South Australia.	Western Australia.	Tasmania.	Australian Capital Territory.	Australia. (a)
NUMBER OF RURAL HOLDINGS.								
1938-39..	75,365	72,452	41,503	31,280	21,052	11,680	204	253,536
1949-50..	73,987	70,486	41,560	27,900	19,565	11,548	221	245,267
1950-51..	73,195	69,698	41,499	28,248	19,289	11,468	229	243,626
1951-52..	73,122	69,298	41,641	28,698	19,515	11,414	226	243,914
1952-53..	72,940	69,353	42,382	28,832	19,055	11,812	213	245,187
1953-54..	73,371	69,392	42,850	29,220	20,132	11,818	213	246,996

TOTAL AREA OF RURAL HOLDINGS.  
('000 ACRES.)

1938-39..	174,660	40,791	317,782	144,682	211,720	6,778	371	896,784
1949-50..	170,027	38,342	355,803	140,563	211,057	6,411	403	928,606
1950-51..	168,375	38,108	359,606	151,731	213,362	6,476	395	938,653
1951-52..	168,250	37,935	358,320	151,785	215,386	6,438	395	938,509
1952-53..	167,907	37,868	358,332	152,689	215,858	6,559	394	939,607
1953-54..	168,996	37,546	361,520	150,314	221,805	6,511	391	947,083

(a) Excludes Northern Territory.

It is not possible to classify these holdings according to the purpose for which they are used. This arises from a number of factors, the chief of which is mixed farming. The general trend in Australia is for farmers to diversify their activities and consequently it is very difficult to determine whether the purpose of many holdings is mainly agricultural, pastoral or dairying, or any of these in combination.

An approximate classification was, however, made for New South Wales for 1945-46 and details may be found on page 1018 of Official Year Book No. 39.

2. Special Tabulation Relating to Rural Holdings, 1949-50.—With the co-operation of State Statisticians, the second series of special tabulations relating to rural holdings was undertaken for all States for the 1949-50 season. These tabulations have been published in detail in Primary Industries Bulletin No. 44, 1949-50. The following table shows particulars of the number and area of rural holdings classified according to the size of holdings.

## RURAL HOLDINGS : NUMBER AND AREA CLASSIFIED IN AREA SERIES, 1949-50.

Area Series (Acres).	N.S.W.	Vic.	Q'land.	S. Aust.	W. Aust.	Tas.	A.C.T.	Aust.(a)
NUMBER OF HOLDINGS.								
Under 3 ..	941	408	214	317	463	157	..	2,500
3- 4 ..	1,391	967	239	432	469	178	1	3,677
5- 9 ..	3,160	2,445	634	927	1,036	437	14	8,653
10- 24 ..	4,563	6,916	1,596	2,690	1,569	977	9	18,320
25- 49 ..	4,080	5,520	1,852	2,192	761	1,168	15	15,588
50- 99 ..	5,209	7,676	4,060	2,182	663	2,048	9	21,847
100- 149 ..	4,627	6,816	3,733	1,187	745	1,662	4	18,774
150- 249 ..	6,656	8,742	6,720	1,732	1,279	1,708	6	26,843
250- 499 ..	9,034	11,118	7,386	2,969	1,699	1,472	16	33,694
500- 749 ..	6,478	7,047	3,380	2,650	898	510	18	20,981
750- 999 ..	4,657	3,794	1,527	1,897	887	226	16	13,004
1,000- 1,499 ..	6,695	4,128	1,957	2,631	1,905	288	31	17,636
1,500- 2,499 ..	5,925	2,881	1,549	2,584	3,083	256	46	16,324
2,500- 4,999 ..	5,559	1,401	1,523	1,991	2,718	229	21	13,442
5,000- 9,999 ..	2,517	424	1,185	806	746	134	7	5,819
10,000-19,999 ..	1,107	123	1,200	311	143	59	2	2,945
20,000-49,999 ..	832	61	1,640	173	52	32	3	2,793
50,000-99,999 ..	369	11	608	78	37	7	..	1,110
100,000 and over ..	187	8	557	151	412	..	..	1,313
Total	73,987	70,486	41,560	27,900	19,565	11,548	221	245,267

(a) Excludes Northern Territory.

RURAL HOLDINGS: NUMBER AND AREA CLASSIFIED IN AREA SERIES  
1949-50—continued.

Area Series (Acres).	N.S.W.	Vic.	Q'land.	S. Aust.	W. Aust.	Tas.	A.C.T.	Aust.(a)
AREA OF HOLDINGS. ( <sup>1</sup> 000 ACRES.)								
Under 3 .. ..	2	I	..	..	I	..	..	4
3- 4.. ..	5	3	I	I	2	I	..	13
5- 9.. ..	20	16	4	6	7	3	..	56
10- 24.. ..	71	113	25	45	24	16	..	294
25- 49.. ..	148	197	68	77	26	43	..	559
50- 99.. ..	375	555	301	157	47	148	..	1,583
100- 149.. ..	561	824	457	144	90	197	..	2,273
150- 249.. ..	1,292	1,680	1,264	339	246	324	I	5,146
250- 499.. ..	3,249	3,931	2,633	1,112	595	502	6	12,028
500- 999.. ..	3,976	4,343	2,060	1,630	549	308	11	12,879
750- 999.. ..	4,050	3,288	1,315	1,647	796	194	14	11,304
1,000- 1,499.. ..	8,173	5,021	2,352	3,205	2,302	345	41	21,449
1,500- 2,499.. ..	11,374	5,410	3,009	4,876	6,048	496	93	31,306
2,500- 4,999.. ..	19,090	4,677	5,301	6,793	9,275	811	69	46,016
5,000- 9,999.. ..	16,932	2,809	8,349	5,479	4,810	904	56	39,330
10,000- 19,999.. ..	14,918	1,672	17,274	4,344	1,869	763	25	40,865
20,000- 49,999.. ..	26,454	1,756	51,240	5,406	1,879	899	87	87,721
50,000- 99,999.. ..	25,780	685	42,108	5,502	2,711	457	..	77,243
100,000 and over	33,557	1,359	218,032	105,809	179,780	..	..	538,537
Total .. ..	170,027	38,342	355,803	146,563	211,057	6,411	403	928,606

(a) Excludes Northern Territory.

3. **Employment on Rural Holdings.**—The following table shows, for each State of Australia, the recorded number of persons permanently and temporarily working on rural holdings as at 31st March, 1954. Additional particulars relating to the number of males employed in agriculture are available up to 1941-42 in Official Year Book No. 36, page 852, and previous issues. Similar details for later years are not available.

RURAL HOLDINGS: PERMANENT FULL-TIME AND TEMPORARY EMPLOYMENT  
AS AT 31st MARCH, 1954.

Particulars.	N.S.W.	Vic.	Q'land.	S. Aust.	W. Aust.	Tas.	A.C.T.	Aust. (a)
<b>Permanent—</b>								
Owners, Lessees or Share-farmers Males	71,465	69,264	43,579	27,335	19,726	9,610	170	241,149
Females	1,687	4,236	11,934	3,705	1,129	245	8	22,944
Relatives of Owner, Lessee or Share-farmer over 14 years of age, not receiving wages or salary Males	7,416	5,692	5,907	1,413	1,796	500	12	22,736
Females	6,163	1,302	7,925	974	2,128	101	15	18,608
Employees, including Managers and Relatives working for wages or salary Males	33,497	17,367	20,718	9,069	8,281	4,672	144	93,748
Females	1,348	1,358	3,855	886	498	261	24	8,230
<b>Total Permanent</b>								
Males	112,378	92,323	70,204	37,817	29,803	14,782	326	357,633
Females	9,198	6,896	23,714	5,565	3,755	607	47	49,782
<b>Persons</b>	121,576	99,219	93,918	43,382	33,558	15,389	373	407,415
<b>Temporary—</b>								
Males	27,726	16,245	20,382	12,904	4,147	5,205	35	86,644
Females	1,671	1,403	737	2,804	179	1,560	11	8,365
<b>Persons</b>	29,397	17,648	21,119	15,708	4,326	6,765	46	95,009
<b>Total Persons</b> ..	150,973	116,867	115,037	59,090	37,884	22,154	419	502,424

(a) Excludes Northern Territory.

The next table shows for Australia as a whole the number of persons working full-time on rural holdings as at 31st March of the six years 1949 to 1954.

**RURAL HOLDINGS : PERMANENT FULL-TIME AND TEMPORARY EMPLOYMENT, AUSTRALIA.(a)**

Particulars.	As at 31st March—					
	1949.	1950.	1951.	1952.	1953.	1954.
<b>Permanent—</b>						
<b>Males—</b>						
Owners, Lessees or Share-farmers	236,467	235,302	237,251	236,330	241,368	241,149
Relatives of Owner, Lessee or Share-farmer over 14 years of age, not receiving wages or salary .. ..	25,195	25,889	24,676	24,589	23,157	22,736
Employees, including managers and relatives working for wages or salary .. ..	91,177	90,924	91,226	88,264	91,864	93,748
<b>Total, Males .. ..</b>	<b>352,839</b>	<b>352,115</b>	<b>353,153</b>	<b>349,183</b>	<b>356,389</b>	<b>357,633</b>
<b>„ Females .. ..</b>	<b>47,933</b>	<b>53,348</b>	<b>52,346</b>	<b>46,603</b>	<b>48,234</b>	<b>49,782</b>
<b>Total Permanent ..</b>	<b>400,772</b>	<b>405,463</b>	<b>405,499</b>	<b>395,786</b>	<b>404,623</b>	<b>407,415</b>
<b>Temporary—</b>						
<b>Total, Males .. ..</b>	<b>(b)</b>	<b>83,227</b>	<b>83,190</b>	<b>88,356</b>	<b>91,656</b>	<b>86,644</b>
<b>„ Females .. ..</b>	<b>(b)</b>	<b>8,862</b>	<b>8,663</b>	<b>8,576</b>	<b>8,037</b>	<b>8,365</b>
<b>Total Temporary ..</b>	<b>(b)</b>	<b>92,089</b>	<b>91,853</b>	<b>96,932</b>	<b>99,693</b>	<b>95,009</b>
<b>Grand Total .. ..</b>	<b>(b)</b>	<b>497,552</b>	<b>497,352</b>	<b>492,718</b>	<b>504,316</b>	<b>502,424</b>

(a) Excludes Northern Territory.

(b) Not available.

4. **Salaries and Wages Paid to Employees on Rural Holdings.**—Particulars of salaries and wages paid to permanent and temporary employees (including amounts paid to contractors) working full-time on rural holdings have been collected uniformly in all States from 1949–50. Details for each State are set out below for the year 1953–54 and for Australia as a whole for the years 1950–51 to 1953–54.

**RURAL HOLDINGS : SALARIES AND WAGES (a) PAID TO PERMANENT AND TEMPORARY EMPLOYEES, 1953–54.**

(£'000.)

Particulars.	N.S.W.	Vic.	Q'land.	S. Aust.	W. Aust.	Tas.	A.C.T.	Aust.(b)
<b>Permanent—Males ..</b>	19,059	9,231	11,688	5,018	4,599	2,530	115	52,240
<b>Females ..</b>	338	385	1,246	234	139	58	6	2,406
<b>Temporary(c)—Males ..</b>	16,031	8,114	17,415	3,591	4,685	1,370	76	51,282
<b>Females ..</b>	388	225	143	213	62	156	3	1,190
<b>Total .. ..</b>	<b>35,816</b>	<b>17,955</b>	<b>30,492</b>	<b>9,056</b>	<b>9,485</b>	<b>4,114</b>	<b>200</b>	<b>107,118</b>

(a) Including value of keep.  
to contractors.

(b) Excludes Northern Territory.

(c) Includes amounts paid

**RURAL HOLDINGS: SALARIES AND WAGES (a) PAID TO PERMANENT AND  
TEMPORARY EMPLOYEES, AUSTRALIA.(b)**

(£'000.)

Particulars.				1950-51.	1951-52.	1952-53.	1953-54.
Permanent—Males .. ..				34,022	41,328	47,623	52,240
Females .. ..				1,749	2,046	2,270	2,406
Temporary(c)—Males .. ..				29,317	39,735	44,715	51,282
Females .. ..				773	910	1,151	1,190
Total .. ..				65,861	84,019	95,759	107,118

(a) Including value of keep.  
to contractors.

(b) Excludes Northern Territory.

(c) Includes amounts paid

## CHAPTER XXII.

### PASTORAL PRODUCTION.

NOTE.—Except where otherwise indicated, values of Australian oversea trade shown throughout this chapter are expressed as f.o.b., Australian currency, port of shipment.

#### § 1. Initiation and Growth of Pastoral Industry.

1. **Livestock Numbers.**—A detailed account of the various enumerations of livestock in Australia made prior to 1860 was given in previous issues of the Year Book. 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 that year to 1950 and from 1951 onwards in single years are given in the following table, and are shown continuously on the graph on page 911.

#### LIVESTOCK : AUSTRALIA. (‘000.)

Year.	Horses.	Cattle.	Sheep.	Pigs.	Year.	Horses.	Cattle.	Sheep.	Pigs.
1860 ..	432	3,958	20,135	351	1930 ..	1,793	11,721	110,568	1,072
1870 ..	717	4,276	41,594	543	1940 ..	1,699	13,080	119,305	1,455
1880 ..	1,069	7,527	62,184	816	1950 ..	1,057	14,640	112,891	1,123
1890 ..	1,522	10,300	97,881	891	1951 ..	999	15,229	115,596	1,134
1900 ..	1,610	8,640	70,603	950	1952 ..	937	14,893	117,647	1,022
1910 ..	2,166	11,745	98,066	1,026	1953 ..	895	15,247	123,072	993
1920 ..	2,416	13,500	81,796	764	1954 ..	850	15,601	126,944	1,197

While livestock numbers (particularly sheep) have increased substantially since 1860, marked fluctuations have taken place during the period, mainly on account of droughts which have from time to time left their impress on the pastoral history of Australia. These occurred in 1868, 1877, 1883-4, 1892, 1893, 1895, 1901-2, 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 maxima are as follows :—Horses, 1918 (2,527,000); cattle, 1954 (15,601,000); sheep, 1954 (126,945,000); and pigs, 1941 (1,797,000).

The distribution throughout Australia of beef cattle, dairy cattle, sheep and pigs as at 31st March, 1948 was shown in the graphs on pages 905-8 of Official Year Book No. 39.

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 Chapter XXIII.—Farmyard, Dairy and Bee Products.

2. **Minor Classes of Livestock.**—Statistics of the minor classes of livestock (goats, camels, mules, donkeys, etc.) have not been collected in recent years. The last year in which all States, other than Victoria, collected this information was 1941, when total

numbers were as follows :—Goats, 80,366; camels, 2,267; and mules and donkeys, 10,881. Of these, goats were most numerous in Queensland, and camels, mules and donkeys in Western Australia. Further details have been published in earlier issues of the Year Book.

3. Value of Pastoral Production.—(i) *Gross, Local and Net Values, 1953-54.* Values of pastoral production for each State are shown for 1953-54 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 XXIX.—Miscellaneous. Maintenance costs have not been computed in all States and depreciation has not been deducted; consequently the net values are inflated to the extent of these costs.

### GROSS, LOCAL AND NET VALUES OF PASTORAL PRODUCTION, 1953-54.

(£'000.)

State.	Gross Production Valued at Principal Markets. (a)	Marketing Costs.	Gross Production Valued at Farm.	Farm Costs.		Net Value of Production. (b)
				Seed used, and Fodder for Farm Stock.	Value of other Materials used in Process of Production.	
N.S. Wales ..	224,183	13,954	210,229	5,060	(c) 2,730	202,439
Victoria ..	123,226	9,972	113,254	2,000	2,324	108,930
Queensland ..	96,139	9,270	86,869	3,490	1,390	81,989
Sth. Australia	52,975	2,898	50,077	878	1,776	47,423
W. Australia ..	50,783	2,807	47,976	1,504	2,688	43,784
Tasmania ..	10,347	540	9,807	2,358	(c) 298	7,151
Total ..	557,653	39,441	518,212	15,290	11,206	491,716

(a) Excludes £14,279,000 comprising an interim distribution of profits under the Wool Disposals Plan made in April, 1954. (b) No deduction has been made for depreciation and maintenance.

(c) No allowance has been made for costs of power, power kerosene, petrol and other oils.

(ii) *Net Values, 1934-35 to 1953-54.* The net value of pastoral production by States and the net value per head of population for the years 1949-50 to 1953-54 together with the average for the years 1934-35 to 1938-39 are shown below.

### NET VALUE OF PASTORAL PRODUCTION.(a)

Year.	N.S.W. (b)	Vic.	Q'land.	S. Aust.	W. Aust.	Tas. (b)	Australia.
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### NET VALUE.(c)

(£'000.)

Average, 1934-35 to 1938-39 ..	30,592	16,784	13,384	4,583	4,307	1,429	71,079
1949-50 ..	140,027	77,629	57,327	28,558	26,442	7,138	337,121
1950-51 ..	302,642	162,409	100,526	65,797	61,463	11,972	704,809
1951-52 ..	154,386	99,808	67,080	38,965	34,442	5,812	400,493
1952-53 ..	206,872	108,459	82,442	49,918	38,642	7,412	493,745
1953-54 ..	202,439	108,930	81,989	47,423	43,784	7,151	491,716

For footnotes see following page.



NET VALUE OF PASTORAL PRODUCTION—*continued*.

Year	N.S.W. (b)	Vic.	Q'land.	S. Aust.	W. Aust.	Tas. (b)	Australia
NET VALUE PER HEAD OF POPULATION.(c) (£ s. d.)							
Average, 1934-35 to 1938-39	11 8 0	9 1 3	13 11 10	7 15 6	9 9 2	6 2 7	10 8 8
1949-50 ..	44 10 3	35 13 10	48 17 3	41 2 3	48 10 1	26 0 1	42 1 11
1950-51 ..	93 9 1	72 8 2	83 5 5	91 2 11	107 15 3	42 4 6	85 5 7
1951-52 ..	46 12 4	43 4 4	54 2 1	52 8 5	58 7 9	19 16 3	47 3 8
1952-53 ..	61 9 1	45 14 5	64 16 0	65 2 5	63 4 6	24 10 0	56 16 2
1953-54 ..	59 8 11	44 19 2	63 0 11	60 6 9	69 8 5	23 2 2	55 10 7

(a) Excludes payments to wool-growers of profits from the war-time wool disposal plan. (b) No allowance has been made for costs of power, power kerosene, petrol and other oils. (c) No deduction has been made for depreciation and maintenance.

4. Indexes of Quantum and Price of Pastoral Production, 1949-50 to 1953-54.—For details of the methods of calculating these indexes and of the weights used *see* Chapter XXIX.—Miscellaneous.

INDEXES OF QUANTUM AND PRICE OF PASTORAL PRODUCTION :  
AUSTRALIA.

(Base : Average 3 years ended June, 1939 = 100.)

Particulars.	1949-50.	1950-51.	1951-52.	1952-53.	1953-54.
Quantum produced—					
Wool .. ..	115	116	112	131	128
Other products ..	109	100	95	119	117
Total Pastoral ..	112	109	105	126	123
Total per Head of Population ..	96	90	84	97	95
Price—					
Wool .. ..	483	1,098	552	623	621
Other products ..	264	386	423	389	401
Total Pastoral ..	396	818	501	531	534

5. Consumption of Meats.—The quantity of meat (including cured and canned meat) in terms of carcass weight and edible offal available for consumption in Australia in 1953-54 was 888,000 tons. This is equivalent to 223.5 lb. per head compared with 227.7 lb. per head in 1952-53, 214.8 lb. in 1951-52, and an average of 253.0 lb. during the years 1936-37 to 1938-39.

Although it is not easy to obtain strictly comparable particulars for other countries, it appears from data published by the Food and Agricultural Organization of the United Nations in its *Food Balance Sheets* that in recent years consumption of meat in Australia has been at approximately twice the level of that in Canada and about one and a half times the level of that in the United States of America.

6. *Marketing of Meat.*—(i) *General.* 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 1935–1953 was given on p. 801 of Official Year Book No. 40.

(ii) *War-time Marketing.* Details of arrangements for the marketing of meat during the 1939–45 War were given on page 1107 of Official Year Book No. 36.

(iii) *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) were given on page 710 of Official Year Book No. 41 and in earlier issues of the Year Book.

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 that meat. It covers chilled and frozen beef, frozen veal, frozen mutton and lamb, frozen cattle and sheep sundries and edible offal.

Pig meats were not included in the Fifteen Year Meat Agreement, but a two-year arrangement terminating on 30th September, 1954 was negotiated. This arrangement did not limit shipments of pig meats to other markets.

(iv) *Cessation of Bulk Purchasing.* 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 are :—

- (a) Mutton and lamb exported after 1st July, 1954 and beef, veal and pig meats exported after 1st October, 1954 direct to United Kingdom importers are to be sold on the open market under methods similar to those which applied pre-war.
- (b) A schedule of minimum prices to operate until 30th September, 1955 was drawn up. The guaranteed levels for the year ended 30th September, 1955, were :—Beef and veal, 13.18d. stg. f.o.b. per lb.; lamb, 13.61d. stg. f.o.b. per lb.; and mutton, 6.05d. stg. f.o.b. per lb.
- (c) In the event of market prices for the various classifications of meat averaging below the minimum, the Ministry is to make a payment to the Australian Government corresponding to the amount of the deficiency. So as to determine the extent of any deficiency, a procedure designed to measure as accurately as possible the weighted average level of wholesale prices of Australian meat on the United Kingdom market has been agreed upon.

(v) *Private Trading.* After eight months of open trading, the Board estimated that a deficiency payment would be received in respect of beef for the first year. In order to make arrangements for this anticipated deficiency to be passed on to the producer, the Meat Agreement (Deficiency Payments) Act was passed by the Commonwealth Government in May, 1955. Under this Act, the Board paid to exporters a deficiency payment of 1½d. per lb. on beef delivered into store between 1st May and 30th September, 1955, and subsequently exported to the United Kingdom. This payment was made on the understanding that it was, or would be, reflected in the price paid to producers.

To make provision for recoupment by the Board of any overpayment, the Meat Export (Additional Charge) Act was also passed in May, 1955.

Negotiations were held in Australia during August and September, 1955, to fix minimum prices for the year commencing 1st October, 1955, and to review the working of the Agreement generally. The guaranteed levels agreed on for this period were:— for beef and veal and lamb the same as for the year ended 30th September, 1955, and for mutton the average prices realized to the end of April, 1955 (approximately 5.8d. stg. per lb.). In addition minimum beef and veal prices were fixed for the three years 1958–61 at 5 per cent. below those for the 1955–58 period. Australia will, under the terms of the Agreement, be entitled to export 10,000 tons of beef, veal, lamb and mutton to destinations other than the United Kingdom and the Colonies. Additional free quotas can be requested and sympathetic consideration can be expected for any such requests should depressed prices or other circumstances justify an approach of this kind.

## § 2. Horses.

1. *Distribution throughout Australia.*—About 80 per cent. of the total number of horses in Australia are in the States of New South Wales, Queensland and Victoria. In the following table figures are shown for each State and Territory for the years 1950 to 1954 in comparison with the average for the years 1935 to 1939 :—

HORSES : NUMBER.  
(‘000.)

Year.	N.S.W.	Vic.	Q'land.	S. Aust.	W. Aust.	Tas.	N.T.	A.C.T.	Australia.
Average, 1935 to 1939 ..	537	355	444	198	154	31	33	1	1,753
1950 ..	343	200	317	83	59	21	33	1	1,057
1951 ..	329	187	307	71	55	20	29	1	999
1952 ..	311	169	289	63	53	19	32	1	937
1953 ..	298	154	282	57	50	18	35	1	895
1954 ..	280	141	273	52	49	17	37	1	850

The number of horses in Australia attained its maximum during 1918, when a total of 2,527,149 was recorded. The United States of America recorded its highest number in the same year and Canada in 1921. The number in Australia has declined considerably since 1918 owing to the mechanization of transport and farming. During the period 1918 to 1954 the decrease in numbers averaged 46,000 per annum, the rate of decline being 53,000 per annum during the five years ended 1954.

The number of horses in Australia from 1860 onwards may be obtained from the graph on page 911.

The proportion per cent. of the number of horses in each State and Territory for 1954 was :—New South Wales, 33 ; Victoria, 17 ; Queensland, 32 ; South Australia, 6 ; Western Australia, 6 ; Tasmania, 2 ; and Northern Territory, 4.

2. *Oversea Trade in Horses.*—(i) *Exports.* The export of horses from Australia during the early years of this century was fairly considerable, averaging about 15,000 head per annum between 1901 and 1920, exclusive of those used for war purposes during the 1914–18 War. Since then exports have gradually declined and averaged only about 4,000 for the five years ended 1938–39 and just under 1,000 for the five years ended 1953–54.

(ii) *Imports.* The few horses imported into Australia consist mainly of valuable stud animals from the United Kingdom and racehorses from New Zealand. During the five years ended 1953–54 an average of 432 horses valued at £338,000 (equivalent to £783 per head) was imported annually.

## § 3. Cattle.

1. **Purposes for which Raised.**—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. The great impetus which the development of the export trade in Australian butter gave to the dairying industry led to a considerable increase in numbers and an improvement in quality of the dairy herds in the coastal districts of Victoria, New South Wales and southern Queensland in particular, the portion of Australia in the temperate zone which is best adapted to this industry. On the other hand, beef-producing 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.**—Until 1880, New South Wales was the principal cattle-raising State, but in that year Queensland occupied the leading position, which it has since maintained. There was a very rapid increase in the number of cattle in Australia up to the year 1894, when 12,312,000 head were depastured. From 1895 onwards, however, the effects of droughts and the ravages of tick fever reduced the number to 7,063,000 in 1902. Following the disastrous drought which terminated in the latter year the herds were gradually built up, and, despite recurring droughts, they continued to increase up to 14,441,000 in 1921. After that year the number dropped continuously till 1929, largely owing to the decline in the oversea demand for frozen beef. With the expansion of dairying it recovered to 14,049,000 in 1934, but from that year declined continuously to 1939 when it stood at 12,862,000. The upward movement which commenced in 1940 was continued until 1944, the total number of cattle (14,184,000) in the latter year being at its highest level since 1923. Drought conditions and other factors caused a decline in numbers to 13,427,000 in 1947. This was followed by a general upward movement in numbers to a record 15,601,000 in 1954. A graph showing the number of cattle in Australia from 1860 appears on page 911.

The numbers of cattle (beef and dairy) in the several States and Territories in each year 1950 to 1954 compared with the average for the years 1935 to 1939 are shown below.

CATTLE : NUMBER.  
(‘000.)

Year.	N.S.W.	Vic.	Q'land.	S. Aust.	W. Aust.	Tas.	Nor. Terr.	Aust. Cap. Terr.	Aust.
Average, 1935 to 1939 ..	3,198	1,952	6,018	331	819	262	889	9	13,478
1950 ..	3,440	2,231	6,305	464	865	275	1,049	11	14,640
1951 ..	3,703	2,216	6,734	433	841	272	1,019	11	15,229
1952 ..	3,621	2,215	6,435	437	852	265	1,058	10	14,893
1953 ..	3,649	2,297	6,751	483	846	275	936	10	15,247
1954 ..	3,554	2,370	7,086	491	830	295	966	9	15,601

Although the proportion is not as high as it has been in the past, Queensland was carrying 46 per cent. of the cattle in Australia in 1954. The percentage in each State and Territory during that year was :—New South Wales, 23 ; Victoria, 15 ; Queensland, 46 ; South Australia, 3 ; Western Australia, 5 ; Tasmania, 2 ; and Northern Territory, 6.

A graph showing the distribution in 1924–25 of the total cattle in Australia appeared on page 660 of Official Year Book No. 22, while similar graphs showing for 1938–39 the distribution of total cattle and of dairy cows were shown on pp. 453–4 of Official Year Book No. 34 and graphs indicating the distribution of beef and dairy cattle separately in Australia at 31st March, 1948 may be found on pages 905–6 of Official Year Book No. 39.

3. **Classification of Cattle According to Purpose.**—Of the total number of cattle in Australia in 1954, 10,771,000 or 69 per cent. were classified as beef cattle. The numbers classified as beef cattle in the several States and Territories during the years 1943 and 1950 to 1954 were as follows :—

**BEEF CATTLE : NUMBER.**  
(‘000.)

Year.	N.S.W.	Vic.	Q'land.	S. Aust.	W. Aust.	Tas.	Nor. Terr.	Aust. Cap. Terr.	Aust.
1943 .. ..	1,676	577	4,893	171	605	102	978	5	9,007
1950 .. ..	2,167	706	4,872	193	638	117	1,049	8	9,750
1951 .. ..	2,457	727	5,294	189	618	115	1,019	8	10,427
1952 .. ..	2,416	776	5,138	201	621	110	1,058	7	10,327
1953 .. ..	2,405	820	5,378	231	612	113	936	6	10,501
1954 .. ..	2,316	829	5,703	230	600	121	966	6	10,771

A classification of numbers on this basis is not available prior to 1943.

Particulars relating to dairy cattle numbers will be found in Chapter XXIII.—Farmyard, Dairy and Bee Products.

4. **Size Classifications of Cattle Herds.**—A special series of tabulations relating to rural holdings in Australia was compiled for 1949–50 and published in Primary Industries Bulletin No. 44. The tables relating to beef and dairy cattle show classifications according to size of herd and area of holding.

5. **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 for the years 1936–40 and at the latest available date. The figures, which, in general, have been compiled by the United States Department of Agriculture for publication in *Foreign Crops and Markets*, relate to areas embraced by post-war boundaries, but do not cover identical areas for the two periods in all cases.

**CATTLE : NUMBER IN VARIOUS COUNTRIES.**  
(‘000.)

Country.	Average, 1936–40.(a)	Year and Month.	Number
India(b) .. ..	180,000	1952 (January) ..	199,271
United States of America .. ..	66,706	1955 (January) ..	95,433
Brazil .. ..	40,807	1954 (December) ..	58,000
U.S.S.R. .. ..	59,800	1953 (January) ..	56,600
Argentina .. ..	33,762	1955 (July) ..	44,000
Pakistan(b) .. ..	33,000	1953 (January) ..	29,100
China .. ..	25,600	1953 (May) ..	28,800
Ethiopia .. ..	18,000	1954 .. ..	20,000
France .. ..	15,504	1955 (October) ..	17,273
Mexico .. ..	11,716	1954 (December) ..	15,800
<b>Australia .. ..</b>	<b>13,285</b>	<b>1954 (March) ..</b>	<b>15,601</b>
Colombia .. ..	8,010	1954 (December) ..	13,650
Turkey(b) .. ..	8,611	1953 (December) ..	11,803
Union of South Africa .. ..	11,636	1953 (August) ..	11,655
Germany, Federal Republic of ..	12,114	1954 (December) ..	11,521

(a) In some cases census for a single year, and in others an average for two to four years. (b) Includes buffaloes.

6. **Imports and Exports of Cattle.**—The products of the cattle-raising industry figure largely in the export trade of Australia, although the export of live cattle has never been large. The number of cattle imported is also small, consisting, as in the case of horses, mainly of valuable animals for stud purposes. Details for the years 1940–50 to 1953–54 compared with the average for the years 1934–35 to 1938–39 are as follows.

## CATTLE : IMPORTS AND EXPORTS, AUSTRALIA.

Year.	Imports.		Exports.		Net Exports.	
	No.	Value.	No.	Value.	No.	Value.
Average, 1934-35 to 1938-39	295	£'000 22	308	£'000 6	13	— 16
1949-50 ..	160	89	485	40	325	— 49
1950-51 ..	201	123	876	70	675	— 53
1951-52 ..	318	214	681	58	363	— 156
1952-53 ..	494	201	1,643	81	1,149	— 120
1953-54 ..	153	102	1,214	95	1,061	— 7

NOTE.—The minus sign (—) signifies net imports.

The average value per head of the cattle imported during the last five years was £550, while the average value per head of the cattle exported during the same period was £70.

7. Cattle Slaughtered.—The numbers of cattle slaughtered during each of the years ended June, 1950 to 1954 compared with the average for the years 1934-35 to 1938-39 are shown in the following table :—

CATTLE (INCLUDING CALVES) SLAUGHTERED.  
( '000.)

Year ended June—	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, 1934-35 to 1938-39 ..	(a) 1,112	812	1,046	(b) 156	(b) 124	45	(b) 4	2	3,301	3,331
1950 ..	1,156	893	1,102	213	166	58	14	6	3,608	3,648
1951 ..	1,160	915	1,181	226	160	70	13	8	3,735	3,794
1952 ..	1,247	966	1,039	197	152	71	15	9	3,686	3,738
1953 ..	1,406	848	1,272	194	154	70	14	8	3,966	4,008
1954 ..	1,564	1,008	1,366	220	172	62	15	8	4,415	4,475

(a) Year ended March.

(b) Year ended previous December.

8. Production of Beef and Veal.—Details of the production of beef and veal in each State and Territory are shown in the following table for the years indicated :—

PRODUCTION OF BEEF AND VEAL (BONE-IN WEIGHT) : AUSTRALIA.  
( '000 tons.)

Year ended June—	N.S.W.	Vic.	Qld.	S. Aust.	W.A.	Tas.	N.T.	A.C.T.	Aust.
Average 1935 to 1939	(a) 173	115	181	(b) 25	(b) 27	9	(b) 1	..	531
1950 ..	186	125	212	33	35	12	3	1	607
1951 ..	193	137	232	36	34	14	4	2	652
1952 ..	184	138	178	31	32	14	3	2	582
1953 ..	217	124	253	31	32	14	3	1	675
1954 ..	221	140	258	34	35	11	3	2	704

(a) Year ended March.

(b) Year ended previous December.

9. Consumption of Beef and Veal.—For the three pre-war years 1936-37 to 1938-39 the average annual production of beef and veal in Australia was 569,000 tons of which 127,000 tons were exported, leaving a balance of 442,000 tons (or the carcass equivalent of 144 lb. per head per annum) available for consumption as fresh and canned meat.

Due mainly to the effects of rationing, civilian consumption during the war and immediate post-war years of carcass beef and veal (including the carcass equivalent of canned meat) was considerably lower than previously but following the return to more normal conditions it rose to 135.6 lb. per head in 1950-51. From 1951-52, consumption fell again, to 115.8 lb., in 1953-54.

In the following table details of the production and disposal of beef and veal are shown for the periods stated.

**PRODUCTION AND DISPOSAL OF BEEF AND VEAL (BONE-IN WEIGHT) :  
AUSTRALIA.  
(‘000 tons.)**

Year.	Changes In Stock.	Production.	Exports.	For Canning.	Consumption in Australia as Human Food.	
					Total.	Per Head per Annum.
Average, 1936-37 to 1938-39 .. ..	.. ..	569	127	(a)	442	lb. 144.1
1949-50 .. ..	- 9	607	94	75	447	124.3
1950-51 .. ..	+ 10	651	81	72	488	131.6
1951-52 .. ..	- 4	582	52	81	453	118.9
1952-53 .. ..	+ 6	675	96	106	467	119.7
1953-54 .. ..	- 7	704	155	101	455	114.6

(a) Included with exports.

10. **Exports of Frozen Beef and Veal.**—The export of frozen meat from Australia dates from about 1881, and since that year the trade has grown considerably. The quantity of frozen beef and veal exported in 1938-39 amounted to 271,964,000 lb., valued at £4,324,000, but there was a decline during the war years owing to reduced production and the diversion of supplies to meet the requirements of the Australian and Allied Services based on Australia. By 1947-48 the quantity exported had risen again to 237,150,000 lb., valued at £6,193,000, but this was followed by a steady decline until 1951-52 when exports amounted to only 95,876,000 lb. valued at £5,230,000. There was a marked increase in 1953-54 when 316,977,000 lb. valued at £22,046,000 was exported. The quantities and values of frozen beef and veal exported during the five pre-war years ended 1938-39 and in each year 1949-50 to 1953-54 are shown in the following table :—

**EXPORTS OF FROZEN BEEF AND VEAL : AUSTRALIA.**

Year.	Exports of Frozen and Chilled Beef.		Exports of Frozen Veal.	
	Quantity.	Value.	Quantity.	Value.
	‘000 lb.	£’000	‘000 lb.	£’000
Average, 1934-35 to 1938-39	231,355	3,188	10,353	165
1949-50 .. ..	178,128	6,522	4,233	182
1950-51 .. ..	154,832	6,440	3,478	207
1951-52 .. ..	92,926	5,009	2,950	221
1952-53 .. ..	189,176	13,443	3,324	339
1953-54 .. ..	313,198	21,697	3,779	349

Prior to the war the largest purchaser of Australian beef and veal was the United Kingdom, which during 1938-39 took about 90 per cent. of the total shipments. However, at the request of the United Kingdom Government there was a considerable diversion from that country to nearer British possessions during the war years. In 1953-54 shipments to the United Kingdom were valued at £18,016,000 or 82 per cent. of the total value of beef and veal exports compared with £9,690,000 or 70 per cent. in 1952-53. Exports to other British countries amounted to £2,099,000 or 10 per cent. of the total in 1953-54 and £2,032,000 or 21 per cent. in 1952-53.

In view of the preference overseas for chilled beef, the Australian beef industry was at a serious disadvantage until investigations proved that beef could be successfully transported from Australia to United Kingdom in a chilled condition. Trial shipments of 254,000 lb. in 1932-33 and 1,515,000 lb. in 1933-34 were made, and the exports in

subsequent years increased to a maximum of 58,963,000 lb. in 1938-39. However, the advent of war seriously affected the export trade in chilled beef, which declined to a negligible amount after 1939-40.

#### § 4. Sheep.

1. **Initiation of the Pastoral Industry.**—The suitability of the Australian climate and general conditions for the production of a high class of wool were at an early date recognized by Captain Macarthur, one of the pioneer sheep-breeders of New South Wales. While it would appear that the introduction of the merino sheep into Australia was not due to Macarthur, a great deal of the credit for having successfully established the pastoral industry in Australia must certainly be his.

2. **Movement in Sheep Numbers in Australia.**—Fluctuations in the number of sheep recorded in Australia for each year from 1860 onwards may be seen from the graph on page 911. Up to 1945 there were five marked periods of decline, but the losses were made up rapidly. In each of the years 1925 to 1945 the sheep flocks exceeded 100 million, reaching 125.2 million in 1942. At no previous period have such large numbers been depastured continuously, and the development took place despite an increase in the annual slaughter for the meat trade over this period, from about 10 million to 25 million.

However, a sharp decline to 95.7 million occurred during the three years ended 1947 representing a loss from all causes other than slaughtering of about 37 million sheep (30 per cent.) since 1944. This was largely attributable to the severe drought conditions experienced during 1944, 1945 and 1946. The passing of the drought and consequent re-stocking have resulted in a steady increase in sheep numbers which at 31st March, 1954 amounted to 126.9 million, the highest ever recorded.

The following table shows the approximate movement in sheep numbers in Australia in 1938-39 and 1949-50 to 1953-54.

**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.	Annual Net Increase (+) or Decrease (-)
1938-39 ..	25,469	67	18,900	8,817	(b) 111,058	- 2,315
1949-50 ..	30,382	96	20,929	5,201	112,891	+ 4,156
1950-51 ..	29,816	84	16,083	10,944	115,596	+ 2,705
1951-52 ..	27,183	79	15,418	9,635	117,647	+ 2,051
1952-53 ..	31,778	84	21,034	5,235	123,072	+ 5,425
1953-54 ..	32,231	86	20,922	7,351	126,944	+ 3,872

(a) Balance figure. (b) As at 1st January, 1939—Queensland, South Australia, Western Australia, Tasmania, Northern Territory; as at 1st March, 1939—Victoria.

3. **Distribution throughout Australia.**—With the exception of a short period in the early sixties, when the flocks of Victoria outnumbered those of New South Wales, the latter State has occupied the premier position in sheep-raising, depasturing about one half of the sheep of Australia.

A graph indicating the distribution of sheep in Australia at 31st March, 1948, is shown on page 907 of Official Year Book No. 39. Similar graphs for the years 1938-39 and 1924-25 were published in Official Year Books No. 34, page 452 and No. 22, page 659, respectively.



The numbers of sheep in the several States and Territories at 31st March of each year 1950 to 1954 compared with the average for the years 1935 to 1939 are shown in the following table :—

**SHEEP : NUMBER.**  
( '000.)

Year.	N.S.W.	Vic.	Q'land.	S. Aust.	W.Aust.	Tas.	Nor. Terr.	Aust. Cap. Terr.	Australia.
Average, 1935 to 1939 ..	51,774	17,555	21,061	8,515	9,839	2,312	23	240	111,319
1950 ..	53,298	19,161	17,582	9,477	10,923	2,170	26	254	112,891
1951 ..	54,111	20,012	17,478	10,166	11,362	2,181	29	257	115,596
1952 ..	53,676	21,537	16,164	11,470	12,188	2,338	31	243	117,647
1953 ..	57,461	21,368	17,030	12,036	12,475	2,421	34	247	123,072
1954 ..	59,639	21,438	18,194	11,838	13,087	2,465	31	252	126,944

Except when affected by drought, the relative number of sheep depastured in the different States in recent years has remained fairly constant.

The percentage distribution in 1954 was :—New South Wales, 47 ; Victoria, 17 ; Queensland, 15 ; South Australia, 9 ; Western Australia, 10 ; and Tasmania, 2.

4. 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 of the years 1943 and 1950 to 1954. Data in this form are not available prior to 1943.

**SHEEP : AGE AND SEX, AUSTRALIA.**  
( '000.)

Description.	31st March—					
	1943.	1950.	1951.	1952.	1953.	1954.
Rams, 1 year and over ..	1,651	1,497	1,473	1,507	1,560	1,610
Breeding ewes (including ewes intended for mating)	56,674	52,122	52,794	52,954	55,351	55,528
Other ewes, 1 year and over	9,636	6,982	6,760	7,451	7,039	8,430
Wethers, 1 year and over ..	31,986	29,251	31,516	34,032	34,304	36,069
Lambs and hoggets, under 1 year ..	24,667	23,039	23,053	21,703	24,818	25,307
Total, Sheep and Lambs	124,614	112,891	115,596	117,647	123,072	126,944

Particulars relating to the principal breeds of sheep at 31st March, 1953 are shown in the following table :—

**SHEEP : PRINCIPAL BREEDS, 31st MARCH, 1953.**  
( '000.)

Breed.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas.	N.T. (a)	A.C.T.	Australia.
Merino ..	43,713.7	8,271.3	16,776.0	10,135.2	11,273.5	278.6	33.3	223.4	90,705.0
Other recognized breeds	3,541.5	5,220.4	54.2	818.8	461.2	1,100.1	0.1	15.6	11,211.9
Merino comebacks(b) ..	4,141.8	2,251.0	50.0	209.1	185.6	338.5	0.1	2.9	7,179.0
Crossbreeds(c) ..	6,064.0	5,625.5	149.4	873.4	554.4	704.3	0.3	4.9	13,976.2
Total ..	57,461.0	21,368.2	17,029.6	12,036.5	12,474.7	2,421.5	33.8	246.8	123,072.1

(a) As at 31st December, 1952. Distribution between categories has been estimated. (b) Merino comeback is the progeny of a crossbred merino ewe and a merino ram, i.e., finer than half-bred. (c) Half-bred and coarser.

5. Numbers of Sheep on Rural Holdings.—A special series of tabulations relating to rural holdings in Australia was compiled for 1949–50 and published in *Primary Industries Bulletin* No. 44. The tables relating to sheep farming show classifications according to areas of the holdings on which the sheep were carried.

6. Comparison with other Countries.—As regards the size of its flocks and the quantity and quality of wool produced, Australia has long occupied a leading position amongst the sheep raising countries of the world. In 1953–54, Australian flocks numbered

127 million sheep, compared with the estimate of 167 million for the U.S.S.R., China and Eastern Europe, with about 54 million in Argentina and about 38 million in New Zealand. The total world sheep population was estimated at about 827 million in 1953-54. Further details of sheep numbers in the principal wool producing countries of the world for 1938-39, 1952-53 and 1953-54 are given in the table on p. 917.

7. **Oversea Imports and Exports of Sheep.**—As in the case of cattle, the oversea exports of live sheep from Australia are of comparatively little importance. On 27th November, 1929, the export of stud sheep was prohibited, except with the approval of the Minister for Trade and Customs. Sheep for breeding purposes were being exported in increasing numbers up to the outbreak of war in the Pacific, and shipments in 1939-40 amounted to 23,329 sheep valued at £80,000, compared with 1065 valued at £24,000 in 1953-54. The chief countries to which sheep for breeding purposes were consigned in 1939-40 were New Zealand, South Africa, Japan and Korea and, in 1952-53 to New Zealand. During the last five years the principal consignments of ordinary sheep have been made to Singapore from Western Australia. The following table shows the imports and exports of breeding and flock sheep for the years 1949-50 to 1953-54 compared with the average for the years 1934-35 to 1938-39.

#### SHEEP : IMPORTS AND EXPORTS, AUSTRALIA.

Year.	Imports.		Exports.		Net Exports.	
	No.	Value.	No.	Value.	No.	Value.
		£'000.		£'000.		£'000.
Average, 1934-35 to 1938-39	3,795	30	65,188	67	61,393	37
1949-50	260	10	96,595	245	96,335	235
1950-51	103	11	83,799	343	83,696	332
1951-52	300	14	79,177	369	78,877	355
1952-53	267	10	84,397	278	84,130	268
1953-54	247	14	86,526	304	86,279	290

8. **Sheep Slaughtered.**—The following table shows the numbers of sheep slaughtered in the several States during each of the years ended June, 1950 to 1954 compared with the average for the years ended June, 1935 to 1939 :—

#### SHEEP (INCLUDING LAMBS) SLAUGHTERED. ( '000.)

Year.	Slaughterings 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, 1934-35 to 1938-39	a 6,474	7,797	1,101	b 1,703	b 1,178	358	(b) ..	25	18,636	18,693
1949-50	6,787	8,366	959	2,284	1,347	508	3	59	20,313	20,386
1950-51	5,493	5,799	745	1,892	1,230	485	1	51	15,696	15,782
1951-52	5,521	6,082	870	1,680	1,310	482	1	54	15,967	16,010
1952-53	7,065	8,405	1,076	2,740	1,817	577	3	68	21,751	21,833
1953-54	7,360	7,709	1,081	2,637	1,545	594	3	63	20,992	21,065

(a) Average, years ended March.

(b) Average, years ended previous December.

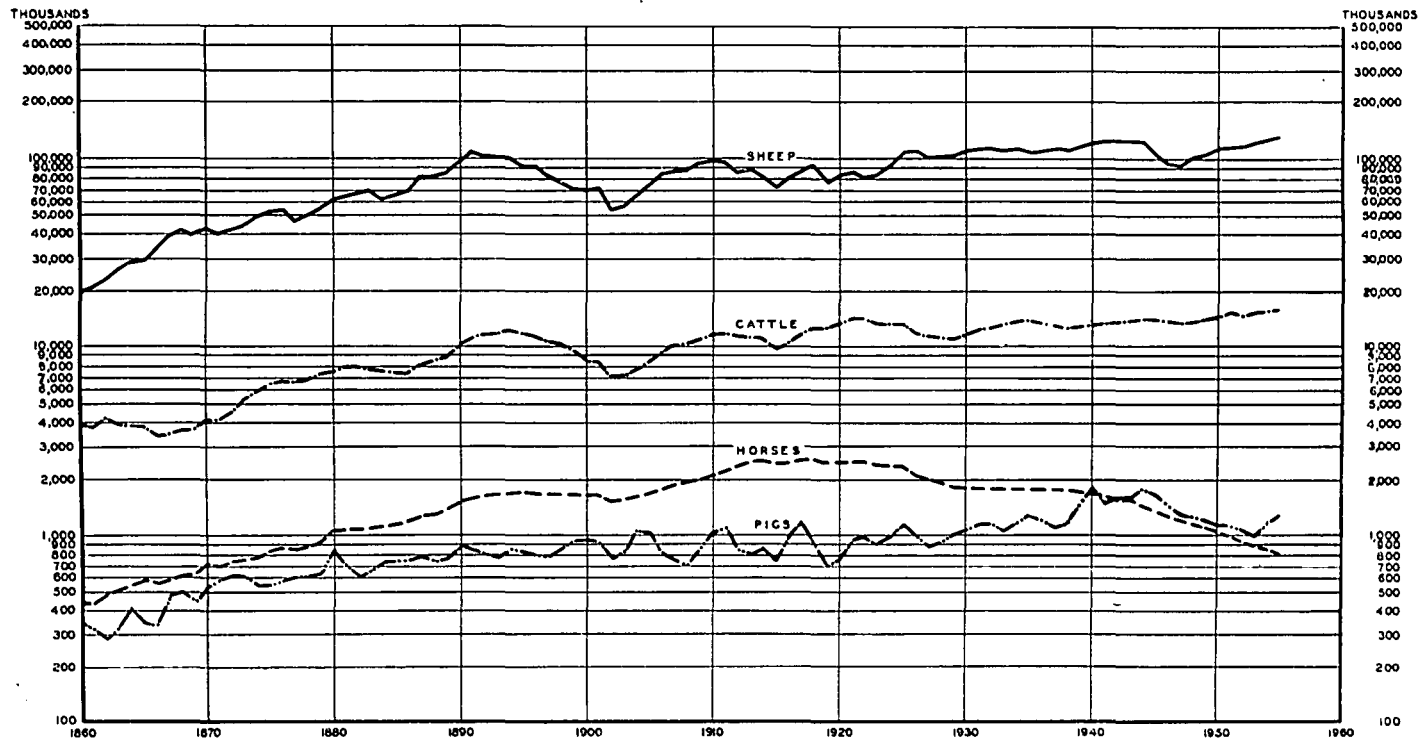
9. **Production of Mutton and Lamb.**—Details of the production of mutton and lamb in each State and Territory are shown below :—

#### PRODUCTION OF MUTTON AND LAMB. (Tons.)

Year.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas.	N.T.	A.C.T.	Aust.
Average, 1934-35 to 1938-39	103,706	135,149	20,166	29,710	20,476	6,035	1	396	315,639
1949-50	119,815	148,254	17,673	39,913	22,446	8,926	57	1,049	358,133
1950-51	92,463	103,052	13,567	34,012	21,550	8,661	27	921	274,253
1951-52	94,076	108,083	14,420	31,222	23,686	8,975	34	960	282,356
1952-53	125,731	153,030	20,371	51,484	32,506	10,656	82	1,230	395,070
1953-54	124,530	135,622	19,002	45,471	27,266	11,073	72	1,086	364,812

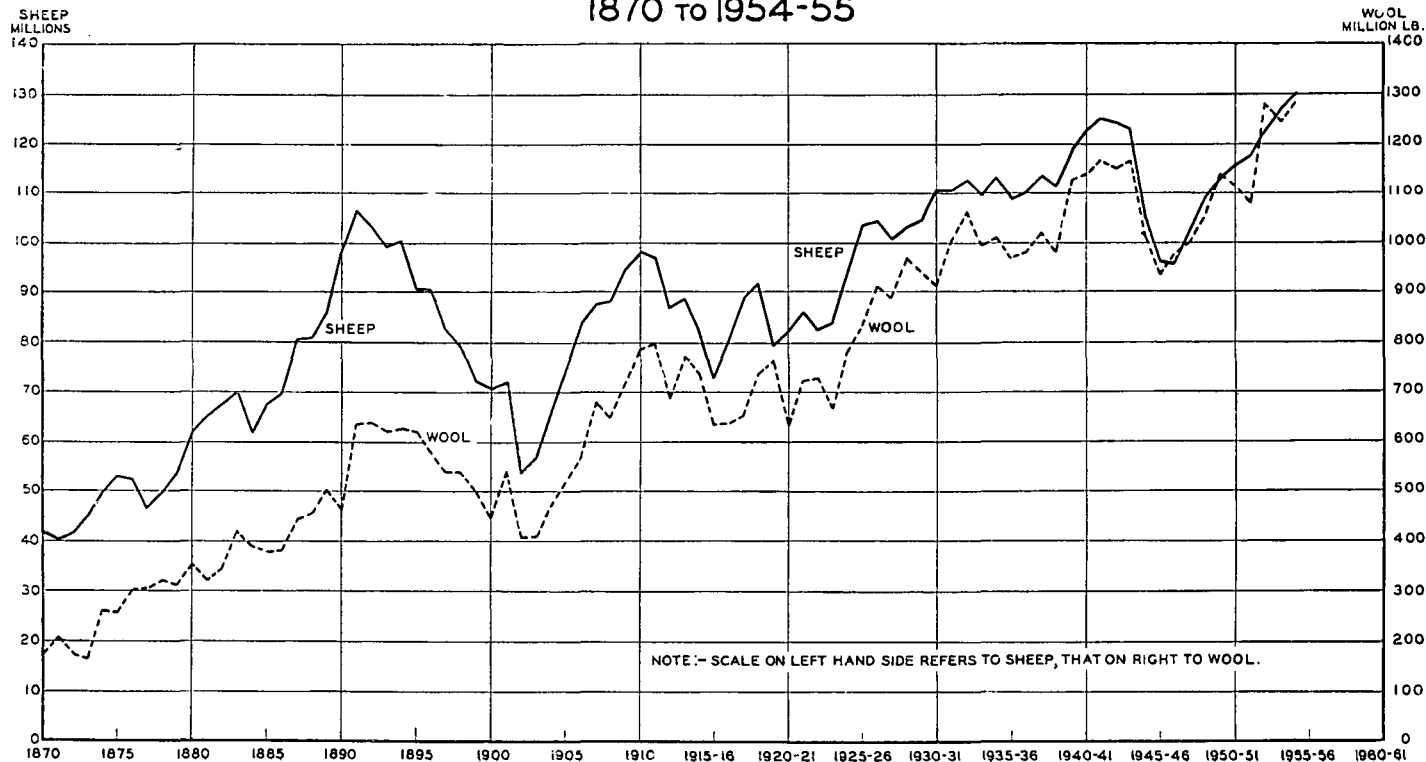
# LIVESTOCK: AUSTRALIA, 1860 TO 1955

RATIO GRAPH



NOTE:- VERTICAL SCALE IS LOGARITHMIC, AND THE CURVES RISE AND FALL ACCORDING TO RATE OF INCREASE OR DECREASE, ACTUAL NUMBERS ARE INDICATED BY SCALE.

# SHEEP NUMBERS AND WOOL PRODUCTION: AUSTRALIA 1870 to 1954-55





The quantities and values of exports of frozen mutton and lamb in each year 1944-50 to 1953-54 compared with the average for the five years ended 1938-39 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.
	'000 lb.	£'000.	'000 lb.	£'000.	'000 lb.	£'000.
Average, 1934-35 to 1938-39	40,584	656	153,606	4,208	194,190	4,864
1949-50 .. .. .	69,744	1,695	123,348	5,758	193,092	7,453
1950-51 .. .. .	8,424	290	45,684	2,394	54,108	2,684
1951-52 .. .. .	5,907	297	25,246	1,621	31,153	1,918
1952-53 .. .. .	80,774	2,790	86,070	5,971	166,844	8,761
1953-54 .. .. .	55,590	1,964	44,102	3,298	99,692	5,262

As with beef, the principal customer in this trade is normally the United Kingdom. In 1953-54 exports of mutton and lamb to this country represented 71 per cent. and 81 per cent., respectively of the total quantities exported.

## § 5. Wool.

1. **General.**—Australia is the leading wool-growing country in the world. With less than one-sixth of the world's sheep Australia produces more than one-quarter of the world's wool, and of the total fine-quality merino wool Australia produces about one-half. The bulk of the production is exported, mainly as greasy wool, although substantial amounts of scoured and carbonized wool and wool on sheep skins and small quantities of semi-manufactured wool are also shipped. The remainder which is used by Australian manufacturers amounted to only 7 per cent. of total production (greasy basis) in 1953-54.

The important position held by Australia among the principal sheep and wool producing countries of the world is shown in the table on p. 917.

2. **Greasy and Scoured Wool.**—Whether the weight of the wool clip should be stated as “in the grease” or as “clean” is a matter which seriously affects comparisons between the clips of different seasons and of different countries. The quantity of grease and other extraneous 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.

From 1946-47 to 1952-53 the Australian Wool Realization Commission, and from 1953-54, the Wool Statistical Service, has assessed annually the clean yield of the Australian wool clip. A steady rise was recorded from 53.4 per cent. clean yield from greasy in 1946-47 to 57.5 per cent. in 1951-52 and 1952-53, but this was followed by a fall to 55.7 per cent. in 1953-54. A standard factor of 93 per cent. is taken as the clean yield of Australian scoured wools.

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 50 per cent. The quantity of this wool exported during the five years ended 1953-54 was approximately 18 per cent. of the total raw wool exports (excluding wool exported on skins) in terms of greasy.

3. **Production.**—The bulk of the Australian wool production is shorn from live sheep; in recent years, approximately 4 per cent. has been obtained by fellmongering and about 5 per cent. has been on skins exported. Statistics of wool production are compiled from data received from growers, fellmongers, etc. The following table shows the production for the five years 1949-50 to 1953-54 compared with average production for the five years ended 1938-39. Particulars of the gross value of wool produced are 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.

## WOOL : TOTAL PRODUCTION (AS IN THE GREASE).

Particulars.	Average. 1934-35 to 1938-39.	1949-50.	1950-51.	1951-52.	1952-53.	1953-54.
	'000 lb.	'000 lb.	'000 lb.	'000 lb.	'000 lb.	'000 lb.
New South Wales ..	480,670	515,043	492,130	437,837	556,555	544,934
Victoria ..	165,586	225,243	218,266	224,958	252,195	223,481
Queensland ..	164,971	162,256	154,667	138,767	163,145	174,414
South Australia ..	85,120	121,248	125,384	135,484	158,658	145,509
Western Australia(a) ..	81,543	98,889	107,341	120,401	128,148	134,442
Tasmania ..	15,504	16,958	17,250	20,513	19,807	20,116
Northern Territory(b) ..	35	230	235	252	332	290
Australian Capital Territory ..	1,827	2,123	2,266	1,765	2,245	2,276
Australia—						
Shorn (including Crutchings)	888,677	1,027,949	1,029,149	998,708	1,168,690	1,138,108
Dead and Fellmongered ..	50,396	51,910	45,337	36,124	45,493	47,000
Exported on Skins ..	56,183	62,131	43,053	45,145	66,894	60,354
Total—Quantity ..	995,256	1,141,990	1,117,539	1,079,977	1,281,086	1,245,462
	£'000.	£'000.	£'000.	£'000.	£'000.	£'000.
„ Value ..	51,182	289,005	651,902	322,615	425,807	409,768

(a) For year ended previous December.

(b) Estimated.

Preliminary estimate of production for 1954-55 was 1,283 million lb., valued at £366,200,000.

4. Care Needed in Comparing Clips.—In comparing successive clips allowance must be made for the circumstance that, owing to climatic or other conditions, the time of shearing may be so far delayed in some areas that one clip may include almost thirteen months' growth of wool, while the succeeding one may include little more than eleven months' growth.

5. Average Weights of Fleeces Shorn.—The average weights of sheep and lamb fleeces shorn in each of the States of Australia and the Australian Capital Territory are shown in the following table for each season 1949-50 to 1953-54 compared with the average for the five seasons 1934-35 to 1938-39.

## AVERAGE WEIGHT OF SHEEP AND LAMB FLEECES SHORN.

(lb.)

State.	Average. 1934-35 to 1938-39. (a)	1949-50.	1950-51.	1951-52.	1952-53	1953-54.
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## SHEEP.

New South Wales ..	8.87	9.82	9.68	8.43	10.18	9.53
Victoria ..	7.84	9.76	9.92	9.62	9.63	9.04
Queensland ..	7.98	9.83	9.10	8.08	9.78	9.87
South Australia ..	10.06	12.28	12.52	12.62	13.14	11.72
Western Australia ..	8.53	8.97	9.61	10.27	10.16	10.53
Tasmania ..	7.62	7.63	7.63	8.88	8.17	8.13
Australian Capital Territory ..	8.32	9.36	9.19	7.66	9.81	9.38
Australia(b) ..	8.57	9.89	9.83	9.18	10.26	9.78

## LAMB.

New South Wales ..	2.75	3.20	3.02	2.74	3.24	3.02
Victoria ..	2.14	2.72	2.83	2.87	2.83	2.53
Queensland ..	2.89	3.80	3.49	3.23	3.72	3.66
South Australia ..	2.57	3.52	3.67	3.70	3.83	3.35
Western Australia ..	2.57	2.62	2.73	2.90	2.82	2.79
Tasmania ..	1.37	1.76	1.91	2.05	2.10	2.04
Australian Capital Territory ..	1.11	1.17	1.30	1.04	1.26	1.31
Australia(b) ..	2.57	3.09	3.05	2.94	3.19	2.97

(a) Mean of average weights in each season.

(b) Excludes Northern Territory.

6. Wool classified according to Quality.—Under control exercised during the 1939-45 War, records were kept of the classification of each lot of wool appraised according to quality, degree of fault and combing or carding type for each of the years 1940-41 to 1945-46. From the resumption of auctions in 1946-47 to 23rd October, 1953 this analysis was continued by the Australian Wool Realization Commission and from 23rd October, 1953 by the Wool Statistical Service, but the basis of the data has been changed to the catalogues of auction sales, and not upon appraisal as previously. The following table provides a detailed analysis of wool appraised or sold at auction according to quality, for the years 1950-51 to 1953-54 compared with 1940-41, according to the records compiled by the Australian Wool Realization Commission. "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 APPRAISED OR SOLD AT AUCTION : AUSTRALIA.

(Bales of approximately 300 lb.)

Pre-dominating Quality.	1940-41.(a)		1950-51.(b)		1951-52.(c)		1952-53.(c)		1953-54.(c)	
	Quantity.	Per cent.	Quantity.	Per cent.	Quantity.	Per cent.	Quantity.	Per cent.	Quantity.	Per cent.
70's and finer	200,951	6.2	124,877	3.7	141,234	4.3	110,903	3.0	98,307	2.7
64/70's ..	679,377	20.8	523,670	15.6	579,117	17.6	451,393	12.0	441,006	12.0
64's ..	869,117	26.7	625,749	18.6	536,872	16.4	557,885	14.9	612,779	16.6
64/60's ..	236,138	7.2	296,029	8.8	229,926	7.0	418,288	11.2	357,936	9.7
60/64's ..	408,534	12.5	525,883	15.7	458,170	13.9	690,981	18.4	702,871	19.1
60's and 60/58's ..	387,164	11.9	427,673	12.7	449,716	13.7	580,944	15.5	596,700	16.2
Total 60's and finer	2,781,281	85.3	2,523,881	75.1	2,395,035	72.9	2,810,394	75.0	2,810,505	76.3
58's ..	270,371	8.3	371,143	11.1	406,786	12.4	413,901	11.0	377,931	10.2
56's ..	135,232	4.2	300,375	9.0	306,996	9.4	324,074	8.6	293,926	8.0
50's ..	39,670	1.2	112,295	3.3	119,758	3.7	131,823	3.5	121,609	3.3
Below 50's	21,089	0.6	27,978	0.8	30,460	0.9	35,821	1.0	43,907	1.1
Oddments ..	12,955	0.4	23,107	0.7	24,643	0.7	35,617	0.9	30,212	1.1
Grand total	3,260,547	100.0	3,358,779	100.0	3,283,678	100.0	3,751,630	100.0	3,687,090	100.0

(a) Appraised greasy wool.  
reserves were applicable.

(b) Greasy wool sold at auction to which Joint Organization's  
(c) All greasy wool sold at auction except "wool re-offered account  
buyer".

7. World Sheep Population and Wool Production.—The following table shows particulars of the sheep population 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 each season 1952-53 and 1953-54 compared with pre-war years. The data for countries other than Australia have been taken from reports published by the Commonwealth Economic Committee compiled from questionnaires prepared by the Committee and the International Wool Textile Organization.

In 1953-54 Australia produced 28 per cent. of the world total of all types of wool, the share of the British Commonwealth representing approximately 50 per cent. The principal wool producers, other than Australia, are New Zealand with 10 per cent. of the world total, Argentina, 9 per cent., United States of America, 7 per cent., and Union of South Africa, 6 per cent. Production in the U.S.S.R., China and Eastern European countries together amounted to 14 per cent. World production of wool (all types) in 1953-54 was about 611 million lb. (12 per cent.) greater than the average for 1934-38.

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. While world production of merino wool in 1953-54 was at about the same level as pre-war, the production of crossbred types has risen by about 27 per cent. Carpet wool production has risen by about 20 per cent.



## ESTIMATED WORLD SHEEP POPULATION AND PRODUCTION OF WOOL.

Country and Type.	Sheep Numbers ('000,000).			Wool Production ('000,000 lb.—in terms of greasy).		
	1938-39.	1952-53.	1953-54. (a)	Average, 1934-38.	1952-53.	1953-54. (a)
<b>British Commonwealth—</b>						
Australia .. ..	111.1	123.1	126.9	995	1,281	1,245
New Zealand .. ..	31.9	36.2	38.0	300	418	425
South Africa(b) ..	39.0	35.5	36.0	261	274	282
Other Commonwealth ..	97.0	96.2	97.1	230	226	224
Total .. ..	281.0	291.0	298.0	1,786	2,193	2,177
<b>Foreign—</b>						
U.S.S.R., China, Eastern Europe(c) .. ..	126.0	161.0	167.0	450	590	623
Argentina .. ..	45.9	54.7	53.5	376	407	397
United States of America ..	51.3	31.9	31.2	470	290	302
Uruguay .. ..	18.0	25.7	26.8	114	190	203
Other Foreign .. ..	224.8	246.7	250.5	611	702	719
Total .. ..	466.0	520.0	529.0	2,024	2,179	2,504
<b>Grand Total</b> .. ..	<b>747.0</b>	<b>811.0</b>	<b>827.0</b>	<b>3,810</b>	<b>4,372</b>	<b>4,681</b>
<b>Type of Wool.</b>						
<b>Apparel Type—</b>						
Merino .. ..	..	..	..	1,491	1,538	1,528
Crossbred .. ..	..	..	..	1,528	1,900	1,942
Carpet type .. ..	..	..	..	791	934	951

(a) Provisional. (b) Basutoland and S.W. Africa Territory excluded from sheep population, but included in wool production. (c) Comprising U.S.S.R., Poland, Czechoslovakia, Hungary, Rumania, Bulgaria, Eastern Germany, Albania, China and Dependencies, Outer Mongolia and Tibet.

8. War-time Contracts.—(i) *Wool.* Details of the contract entered into between the Governments of Australia and the United Kingdom for the purchase of the surplus wool clip of Australia for the duration of the war and one full clip thereafter (1939-40 to 1945-46) will be found in Official Year Book No. 36, page 1106.

(ii) *Sheepskins.* Details of the war-time contract arrangements for the period April, 1940 to June, 1946 between the Australian and United Kingdom Governments for the purchase of Australia's exportable surplus of woolled sheepskins will be found in Official Year Book No. 37, page 875.

9. Australian Wool Realization Commission.—The Australian Wool Realization Commission was the Australian subsidiary of a Joint Organization (commonly referred to as "J.O.") set up by the Governments of the United Kingdom, the Commonwealth of Australia, the Dominion of New Zealand and the Union of South Africa, under the title of "U.K.—Dominion Wool Disposals Limited" to dispose of accumulated war-time stocks of Dominion wool held by the United Kingdom Government at the end of the war. Details of the functions and operations of these organizations appear in earlier issues of the Year Book, particularly No. 38 (pages 919-923).

By the end of 1951 the Joint Organization had disposed of all stocks of wool held and shortly after, it went into voluntary liquidation. Liquidation proceedings were completed on 15th February, 1954.

Australia's share of the profits arising from the operations of J.O. amounted to approximately £93 million (including interest). The task of distributing the profits to growers was entrusted to the Australian Wool Realization Commission and up to June, 1955, all but £2.9 million of the total value of the profits, plus a small amount representing mainly unclaimed moneys, had been distributed to growers. The £2.9 million still to be distributed represents the profits on wool which was submitted by growers for war-time appraisalment through dealers, and is being held pending the settlement of litigation initiated by dealers claiming a share of the profits.

10. Australian Wool Bureau.—(i) *General.* The Australian Wool Bureau was constituted under the Wool Use Promotion Act 1953. It replaced the Australian Wool Board which was originally set up in 1936 to take measures for improving the production and increasing the use of wool.

The Bureau consists of seven members, one the Commonwealth Wool Adviser or the Deputy Commonwealth Wool Adviser appointed by the Minister for Commerce and Agriculture, and six members (three nominated by the Australian Woolgrowers' Council and three by the Australian Wool and Meat Producers' Federation) appointed by the Governor-General for a period of three years.

Particulars of the wool promotional activities of the Bureau are given in paragraph 12, Wool Publicity and Research.

(ii) *Wool Statistical Service.* The Wool Statistical Service, formerly conducted by the Australian Wool Realization Commission, was taken over by the Australian Wool Bureau on 23rd October, 1953. The Statistical Service is responsible for the preparation and publication of statistical material relating to the Australian wool market and the composition of the Australian clip and other special statistical work which may be assigned to it.

It is financed out of the income received by the Australian Wool Bureau from wool sources under its control and from an annual contribution by the Commonwealth Government.

A Statistical Service Committee, consisting of the representatives of the Australian Wool Bureau, the Commonwealth Government, wool buyers, wool growers and wool selling brokers' organizations, acts in an advisory capacity to the Australian Wool Bureau.

(iii) *Wool Stores.* Some three hundred wool stores, formerly the property of the Joint Organization and purchased from it by the Commonwealth Government, were transferred to the ownership of the Australian Wool Bureau by virtue of the Wool Stores Act 1953. The Bureau formally assumed control of these stores on 11th January, 1954, and at the same time received a substantial sum of accumulated rentals and receipts from sales of the stores which had come to hand whilst the stores were held by the Commonwealth Government. Under the Act the Bureau may only dispose of these stores with the permission of the Minister for Commerce and Agriculture and, in the event of war, may be required to return the stores without compensation to the Commonwealth Government. The stores are being let by the Wool Bureau as a commercial proposition. The rental income is used to meet the expenses of maintaining, managing and insuring the stores, to defray the cost of operating the Wool Statistical Service and to help finance the wool promotion activities of the Bureau.

(iv) *The Contributory Charge.*—Associated legislation, namely, the Wool (Contributory Charge) Act 1945 (subsequently replaced by the Wool (Contributory Charge) Act (No. 1) 1950–1951 and the Wool (Contributory Charge) Act (No. 2) 1950–1951) and the Wool (Contributory Charge) Assessment Act 1945–1951 provided for a contributory charge to be imposed on all wool produced in Australia and sold, purchased or processed by a manufacturer or exported on or after a date fixed by proclamation. The charge in 1951–52 was limited to a rate (one-eighth of one per cent.) which, it was calculated, would equal the amount which would otherwise have been raised by the Wool Tax for payment into the Wool Use Promotion Fund. The passage of amending Wool Tax legislation in June, 1952 made it possible to cease collection of the contributory charge at 30th June, 1952, and the legislation under which it was imposed was repealed. Further particulars of the Wool Contributory Charge and the amounts collected appear in Year Book No. 40, pages 675 and 819.

(v) *The Wool Levy.* Whilst the contributory charge legislation, mentioned above, was in force, the Wool Levy, which was imposed by the Wool Tax Act 1936 and the Wool Tax Assessment Act 1936, was not collected. When the Wool Levy was first imposed in 1936, the rate of tax was 6d. per bale, 3d. per fadge or 1d. per bag of wool delivered into the store of a wool dealer or wool selling broker or exported. The proceeds were paid into the Wool Publicity and Research Fund administered by the Australian Wool Board.

When collection of the contributory charge ceased, the Wool Levy again became operative (i.e. from 1st July, 1952) but at a higher rate. For the years 1952–53, 1953–54 and 1954–55 the rate imposed was 4s. per bale, 2s. per fadge and 8d. per bag of shorn

wool. The new rate was provided for in the Wool Tax Act (No. 1) 1952 and the Wool Tax Act (No. 2) 1952, which also provided that in subsequent years the rate could be prescribed, by regulation, between limits of 2s. per bale and 5s. per bale.

11. *Marketing of Wool.*—(i) *Minimum Reserve Price Plan.* Details of the minimum reserve price plan which was completed by the Governments of Australia, New Zealand, South Africa and the United Kingdom in May, 1951, and which was subsequently rejected at a referendum of wool-growers in Australia will be found in Official Year Book No. 39, page 925.

(ii) *Subsidy on Woollen Goods, 1950-51.* Details of the subsidy paid on woollen goods manufactured for consumption in Australia from wool sold during the 1950-51 season will be found in Official Year Book No. 41, page 727.

12. *Wool Publicity and Research.*—(i) *Wool Use Promotion.* The Wool Use Promotion Act of 1953 defines the powers and functions of the Australian Wool Bureau as including measures for promoting by publicity or other means the use of wool in Australia or in other countries.

The Bureau is also authorized to take measures for improving the production of wool in Australia and encouraging research directed to the promotion of the use of wool.

By virtue of its powers the Bureau is represented on the International Wool Secretariat, which was established in 1937 with head-quarters in London, to promote the use of wool through a broad programme of publicity, education and research.

The activities of the Australian Wool Bureau are financed from the Wool Use Promotion Fund into which are paid the proceeds of the Wool Levy, and contributions from the rental income of the wool stores as mentioned in (iii) above.

(ii) *Research.* Until 1945 the Australian Wool Board was responsible for the supervision of economic and scientific research but in that year the Commonwealth Scientific and Industrial Research Organization was made responsible for scientific, technical and biological research into sheep raising and wool production, as well as wool textile research. Economic wool research is the responsibility of the Bureau of Agricultural Economics, a division of the Commonwealth Department of Primary Industry. The economic research work falls into two main categories, namely, farm production economics dealing with economics of wool growing and sheep-station management generally, and commodity research dealing with the economic aspects of the wool industry in Australia and of wool as a commodity in world trade.

Finance for research is provided from a Wool Research Trust Account into which, since 1945, has been paid annually from the Commonwealth Consolidated Revenue a sum equal to the amount which is raised by the wool levy or its equivalent. In 1952-53 the Commonwealth's contribution to the Wool Research Trust Account was set at one-half of the amount raised under the wool levy at its new rate. In addition, expenditure on items of a capital nature for the research programme may be met from the Wool Industry Fund which was constituted as a Trust Account from various moneys accumulated by the Central Wool Committee in war-time.

Ample opportunity is afforded for co-operation in these research activities, with State Departments of Agriculture and other organizations.

13. *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 oversea trade in semi-processed wool (e.g., tops and yarn) as well as woollen goods. They are, however, comparatively simple to calculate and are useful in providing an approximate indication of trends in wool consumption. Estimates of raw wool consumption on the woollen and worsted systems and by felt manufacturers in Australia are shown below for the years 1938-39 and 1949-50 to 1953-54

## ESTIMATED CONSUMPTION OF RAW WOOL IN AUSTRALIA.

('000 lb.)

Year.	Greasy Basis.			Clean Basis.		
	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.
1938-39 ..	77,947	2,248	80,195	39,599	1,068	40,667
1949-50 ..	97,281	9,356	106,637	54,046	4,444	58,490
1950-51 ..	90,801	8,700	99,501	51,397	4,133	55,530
1951-52 ..	72,868	5,546	78,414	42,731	2,634	45,365
1952-53 ..	69,868	5,622	75,490	41,745	2,670	44,415
1953-54 ..	88,106	8,376	96,482	52,975	3,979	56,954

(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 "Consumption of Locally Processed Wool" 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 below for the years 1938-39 and 1949-50 to 1953-54. 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 (since 1949-50) and scoured wool used for felt manufacture. No allowance has been made for overseas trade in woollen piece goods, clothing, etc., because of the obvious difficulties of accurately estimating the wool content of these products.

## ESTIMATED CONSUMPTION OF LOCALLY PROCESSED WOOL IN AUSTRALIA.

('000 lb.)

Year.	Greasy Basis.				Clean Basis.			
	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.
1938-39 ..	31,568	21,393	2,248	55,209	16,353	11,130	1,068	28,551
1949-50 ..	53,821	37,724	9,356	100,901	29,730	21,557	4,444	55,731
1950-51 ..	47,215	34,069	8,700	89,984	26,050	19,818	4,133	50,001
1951-52 ..	41,354	25,079	5,546	71,979	23,603	15,081	2,634	41,318
1952-53 ..	37,357	23,240	5,622	66,219	21,987	14,402	2,670	39,059
1953-54 ..	47,905	28,817	8,376	85,098	28,099	17,828	3,979	49,906

(a) Includes hand knitting yarns used from 1949-50. (b) Includes wool content of yarns containing a mixture of wool and other fibres. (c) Includes woollen yarn, excludes hand knitting yarns.

14. *Exports of Wool.*—(i) *Greasy—Quantities.* Prior to the 1939-45 War, Australian greasy wool exported overseas was sent principally to the United Kingdom and other European countries. In 1938-39, 41.9 per cent. of total shipments were sent to the United Kingdom, other important consignees being France, 20.4 per cent., Belgium, 13.1 per cent., and Japan, 9.1 per cent. During the war, exports to the United Kingdom declined and shipments to the European continent and to Japan virtually ceased, while the quantity shipped to the United States of America showed great expansion. Of the total quantity of greasy wool exported overseas during the five years ended 1953-54, 11 per cent. was sent to the United States of America and 32 per cent. to the United Kingdom. Of the total shipments in 1953-54, 29 per cent. went to the United Kingdom, 16 per cent. to France, 10 per cent. to Japan and 12 per cent. to Italy. The following table shows the quantities of greasy wool exported, and the principal countries of recorded destination.

## EXPORTS OF GREASY WOOL (AUSTRALIAN PRODUCE).

('000 lb.)

Country to which Exported.	Average, 1934-35 to 1938-39.	1949-50.	1950-51.	1951-52.	1952-53.	1953-54.
United Kingdom ..	288,436	379,804	274,442	233,748	353,195	286,495
Other British Countries ..	2,158	7,652	8,773	4,589	8,705	9,672
Belgium ..	107,928	120,913	93,147	53,936	76,327	87,814
France ..	100,476	142,528	131,117	134,199	151,441	162,537
Germany ..	36,955	53,338	37,321	25,437	40,446	53,149
Italy ..	21,748	66,632	63,359	84,212	92,943	114,353
Japan ..	131,302	55,392	69,383	96,002	147,612	95,121
United States of America ..	25,739	116,743	154,203	129,691	69,021	62,889
Other Foreign Countries ..	48,133	114,651	75,686	52,149	38,803	117,979
Total ..	762,880	1,057,653	907,431	823,963	981,493	990,009

(ii) *Scoured and Washed and Carbonized—Quantities.* The exports of "scoured and washed" wool, whether carbonized or not, are shown below according to principal countries of destination.

## EXPORTS OF WOOL—SCOURED AND WASHED AND CARBONIZED (AUSTRALIAN PRODUCE).

('000 lb. actual weight.)

Country to which Exported.	Average, 1934-35 to 1938-39.	1949-50.	1950-51.	1951-52.	1952-53.	1953-54.
United Kingdom ..	32,806	66,537	42,365	19,977	32,629	28,106
Canada ..	2,394	10,345	7,618	4,572	5,593	4,093
Other British Countries ..	935	1,183	1,472	886	1,181	1,709
Belgium ..	8,226	9,695	5,957	4,651	4,837	6,098
France ..	9,301	11,630	6,974	7,218	7,291	7,890
Germany ..	3,097	5,450	3,118	3,692	4,264	5,592
Italy ..	360	6,010	6,081	6,821	5,913	6,314
Japan ..	724	934	7,186	1,085	6,596	1,699
United States of America ..	668	11,630	21,793	23,215	8,012	9,141
Other Foreign Countries ..	5,754	22,711	13,281	10,155	7,782	10,119
Total ..	64,175	146,325	114,975	82,272	84,098	80,763

(iii) *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 (AUSTRALIAN PRODUCE).

('000 lb. actual weight.)

Particulars.	Average, 1934-35 to 1938-39.	1949-50.	1950-51.	1951-52.	1952-53.	1953-54.
Tops ..	5,948	3,946	2,633	3,725	8,423	4,970
Noils ..		3,715	2,728	2,647	2,805	3,722
Waste—Soft wool ..		3,324	2,815	1,438	2,960	3,705
Hard wool ..		5,672	4,450	7,692	9,258	3,258

(iv) *Total Exports—Greasy and Clean Bases.* The following table shows the estimated greasy and clean weights of exports of raw and semi-processed wool for the years 1938-39 and 1949-50 to 1953-54.

**EXPORTS OF WOOL—GREASY AND CLEAN BASES.**  
(<sup>000</sup> lb.)

Particulars.	1938-39.	1949-50.	1950-51.	1951-52.	1952-53.	1953-54.
<b>GREASY BASIS.</b>						
Raw Wool—						
Greasy .. .. .	795,728	1,057,653	907,446	823,063	981,493	990,008
Scoured and Washed .. .. .	137,391	307,627	243,154	172,150	150,277	153,519
and Carbonized .. .. .	58,187	62,131	43,053	45,145	66,894	60,354
Exported on Skins .. .. .						
<b>Total .. .. .</b>	<b>991,306</b>	<b>1,427,411</b>	<b>1,193,653</b>	<b>1,041,258</b>	<b>1,207,664</b>	<b>1,203,911</b>
Semi-processed Wool—						
Tops .. .. .	10,124	7,458	5,003	7,078	14,993	9,095
Yarn .. .. .	58	1,029	1,321	861	54	189
<b>Total Wool .. .. .</b>	<b>1,001,488</b>	<b>1,435,898</b>	<b>1,199,977</b>	<b>1,049,197</b>	<b>1,222,711</b>	<b>1,213,195</b>
<b>CLEAN BASIS.</b>						
Raw Wool .. .. .	(a)	778,339	666,602	589,674	696,985	676,025
Semi-processed Wool .. .. .	5,071	4,052	3,420	4,552	8,791	5,525
<b>Total Wool .. .. .</b>	<b>(a)</b>	<b>782,991</b>	<b>670,122</b>	<b>594,226</b>	<b>705,776</b>	<b>681,550</b>

(a) Not available.

(v) *Total Value of Exports.* The value of wool of Australian origin exported from Australia during the five years ended 1953-54 averaged 54 per cent. of the total value of exports of merchandise of Australian origin, and during 1953-54 the proportion was 51 per cent. The value during the period under review, together with the principal countries to which wool was exported, is shown in the following table.

**VALUE OF WOOL EXPORTS (AUSTRALIAN PRODUCE).**  
(£'000.)

Country to which Exported.	Average, 1934-35 to 1938-39.	1949-50.	1950-51.	1951-52.	1952-53.	1953-54.
United Kingdom .. .. .	19,233	114,983	193,598	89,067	142,277	117,704
Other British Countries .. .. .	703	6,248	14,169	5,999	6,837	6,901
Belgium .. .. .	5,863	24,124	42,161	17,036	23,897	27,522
France .. .. .	5,618	34,851	76,352	43,813	54,910	58,448
Germany .. .. .	2,602	15,504	23,822	11,443	17,447	22,010
Italy .. .. .	1,340	17,627	40,027	30,357	38,287	47,323
Japan .. .. .	7,727	14,003	51,524	40,624	66,686	43,685
United States of America .. .. .	2,252	40,162	132,570	59,047	30,992	30,239
Other Foreign Countries .. .. .	3,429	45,634	59,075	26,042	21,572	56,588
<b>Total .. .. .</b>	<b>48,767</b>	<b>313,136</b>	<b>633,298</b>	<b>323,428</b>	<b>402,905</b>	<b>410,420</b>

15. *Local Sales of Wool.*—In 1946-47 following the cessation of the war-time acquisition scheme which ended with the 1945-46 season, auction sales were resumed in Australia. Sales are conducted at Sydney, Goulburn, Newcastle, Albury, Melbourne, Geelong, Ballarat, Brisbane, Adelaide, Perth, Hobart and Launceston, and are attended by buyers representing manufacturers and merchants in the United Kingdom, France, the United States of America, Japan, U.S.S.R. and many other countries. More than 95 per cent. of the Australian wool clip is now disposed of at auction in Australia.

16. *Stocks of Wool.*—Stocks of raw wool held in Australia at 30th June, 1954 amounted to 63.3 million lb. (as in the grease) of which 49.7 million lb. (32.7 million lb. as greasy and 17.0 million lb. as scoured and carbonized) were held by woollen mills, wool scourers and fellmongers and 13.6 million lb. (unsold wool assumed to be all greasy) were held by brokers. These stocks exclude wool on skins, since this wool is not recorded as production until fellmongered in Australia or exported on skins.

Stocks at 30th June, 1954 were slightly lower than at 30th June, 1953 but both years were higher than at 30th June, 1952 when at 56.1 million lb., they were the lowest recorded since the outbreak of the war. During the war-time and post-war years up to 1951 raw wool stocks were exceptionally high because of the large quantities held in Australia by the Australian Wool Realization Commission on account of Joint Organization. They reached a maximum of 1,749.9 million lb. at 30th June, 1945, but declined in each successive year to 30th June, 1952 by which time all Joint Organization stocks had been sold.

17. Price.—Wool is the chief factor in the pastoral wealth of Australia and the nation's prosperity is largely dependent upon its satisfactory sale. During the five years ended 1953-54 the price of greasy wool sold in the selling centres of Australia averaged 88.7d. per lb. compared with the average United Kingdom contract price of 14.59d. per lb. during the years 1939-40 to 1945-46 and the average selling price of 11.5d. per lb. during the ten years ended 1938-39. The average for the nine years ended 1928-29 was 18d. per lb., and for the seven years ended 1913-14, 9d. per lb.

As indicated in para. 8 above, the price of wool during the 1939-45 War was determined by the British Government wool contract. With the return to auction sales since 1945-46, the average price of greasy wool sold rose rapidly from the contract price of 15.45d. per lb. applicable to 1945-46 to the unprecedented level of 144.19d. per lb. in 1950-51. This was followed by a sharp fall in 1951-52 to 72.42d. per lb. or slightly more than half the price in 1950-51. There was, however, a partial recovery to 81.80d. per lb. in 1952-53. In 1953-54, the price, at 81.50d. per lb. remained at almost the same level.

The following table shows the average auction room price of greasy wool in Australia for 1938-39 and 1949-50 to 1953-54 as compiled by the National Council of Wool Selling Brokers. This price represents the average price realized for all greasy wool of whatever type or quality marketed during the year indicated.

WOOL : AVERAGE MARKET PRICE PER LB.(a)  
(Pence.)

Description.	1938-39.	1949-50.	1950-51.	1951-52.	1952-53.	1953-54.
Greasy .. .. .	10.39	63.35	144.19	72.42	81.80	81.50

(a) Average price realized for all greasy wool of whatever type or quality marketed in Australia during the year. (Source—National Council of Wool Selling Brokers of Australia).

18. Value.—Fluctuation in Australian wool prices has a marked effect on the nation's rural income. In 1945-46 the gross value of wool production was £58,597,000 representing 17.4 per cent. of the gross value of all Rural Industries whilst in 1950-51, when prices reached a peak wool was valued at £651,902,000 or 55.6 per cent. of the total for all Rural Industries. The value of wool production fell in subsequent years and in 1953-54 was £409,768,000.

Details of the value of wool production for the years 1949-50 to 1953-54 compared with the average for the three pre-war years are shown below.

WOOL (AS IN THE GREASE)—ESTIMATED GROSS VALUE OF TOTAL PRODUCTION.(a)  
(£'000.)

Season.	N.S.W.	Vic.	Qld.	S. Aust.	W. Aust.	Tas.	N.T.(b)	A.C.T.	Aust.
Average, 1936-37 to 1938-39	26,276	9,322	9,247	4,111	3,389	980	2	98	53,425
1949-50(c) ..	126,948	37,415	46,878	28,134	25,193	4,765	58	514	289,905
1950-51 ..	288,697	132,946	88,818	66,247	61,575	12,113	135	1,371	651,902
1951-52(c) ..	135,864	63,638	47,190	36,197	33,187	5,891	86	562	322,615
1952-53(c) ..	192,124	78,761	59,903	43,570	39,164	6,380	103	793	425,807
1953-54(c) ..	180,781	73,384	61,125	44,434	42,523	6,655	90	776	409,768

(a) Including shorn, dead and fellmongered wool and wool exported on skins. (b) Estimated.  
(c) Excludes distributions of profits under the Wool Disposal Plan: 1949-50, £23,662,000; 1951-52, £23,662,000; 1952-53, £15,140,000; 1953-54, £14,279,000.

19. **United Kingdom Importation of Wool.**—The important position which Australia occupies in the supply of wool to the United Kingdom is indicated in the following statement of the quantities of wool imported into that country from the principal wool-producing countries during 1938 and each year 1950 to 1954.

**WOOL(a) : IMPORTS INTO UNITED KINGDOM.**  
(<sup>0</sup>000 lb.)

Country of Origin.	1938.	1950.	1951.	1952.	1953.	1954.
<b>Australia</b> .. ..	<b>365,519</b>	<b>383,643</b>	<b>255,941</b>	<b>320,653</b>	<b>365,135</b>	<b>293,534</b>
New Zealand .. ..	197,995	180,144	138,546	190,007	191,826	187,525
Union of South Africa .. ..	106,601	59,747	45,900	64,015	57,213	61,842
India and Pakistan .. ..	46,049	30,269	27,184	26,492	30,932	35,299
Other British Countries .. ..	14,269	15,932	11,747	13,772	19,167	9,390
Argentina .. ..	79,303	2,280	7,698	23,643	60,954	21,784
France .. ..	25,211	19,450	8,793	13,812	16,847	15,707
Uruguay .. ..	22,072	(b)	723	26,548	65,982	37,070
Other Foreign Countries .. ..	24,307	11,375	9,380	15,931	19,655	24,919
Total Quantity .. ..	881,326	702,840	505,912	694,873	827,711	687,070
Total Value (£'000 sterling)	40,996	185,118	238,394	170,957	229,506	185,610

(a) Greasy and Scoured.

(b) Not available.

Australian wool represented 47.4 per cent. of the total quantity imported into the United Kingdom during the five years ended 1954. New Zealand supplied 26.0 per cent. and South Africa 8.4 per cent., while the total quantity received from British countries constituted 88.2 per cent. of all United Kingdom imports.

20. **Principal Importing Countries and Sources of Supply.**—The following table furnishes in respect of the principal importing countries details of their production and imports of wool for 1954 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, 1954.**  
(Million lb.)

Importing Country.	Pro- duction of Importing Country. (a)	Quantity Imported from(b)—					Total Imports.
		Australia.	Union of South Africa.	Argen- tina.	New Zealand.	Other Countries.	
United Kingdom	105	293.5	61.8	21.8	187.5	142.5	687.1
Belgium .. ..	(c)	85.3	13.6	7.4	15.4	20.8	142.5
France .. ..	53	173.9	43.8	22.1	74.1	28.7	342.6
Germany (Federal Republic) .. ..	(c)	61.2	36.0	18.3	24.4	44.0	183.9
Italy .. ..	38	100.5	14.0	1.4	24.7	38.7	169.3
Japan .. ..	(c)	96.9	5.9	26.7	2.3	15.3	147.1
United States of America .. ..	302	(d) 42.4	(d) 14.8	(d) 59.4	(d) 25.4	(d) 64.1	(d) 206.1

(a) As in the grease, 1953-54. (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 304.5 million lb.

As a considerable transit trade exists between continental countries it must not be assumed that the whole of the imports recorded by these countries are retained for their own consumption. The countries chiefly concerned with the transit trade are the United Kingdom (12 per cent. of total imports re-exported in 1954), Belgium and France.



## § 6. Trade in Hides and Skins.

1. *Extent of Trade.*—In addition to the hides and skins treated locally, considerable quantities are exported: the value of cattle and horse hides, and sheep and other skins, sent overseas during the five years ended 1953-1954 amounted to £99,063,000 or an average of £19,814,000 per annum.

2. *Sheepskins with Wool.*—The exports of sheepskins with wool, aggregating £77,162,000 during these five years, constitute the most important item in the values referred to in the preceding paragraph. During 1938-39 France was the largest purchaser of sheepskins with wool, taking 74 per cent. of the total consignments, while the United Kingdom ranked next with 15 per cent., followed by Germany with 7 per cent. In 1953-54, France obtained 74 per cent. of total exports and the United Kingdom 13 per cent. The exports of sheepskins with wool during each of the years 1949-50 to 1953-54 compared with the average for the years 1934-35 to 1938-39 were as follows:—

## EXPORTS OF SHEEPSKINS WITH WOOL : AUSTRALIA.

Particulars.	Average, 1934-35 to 1938-39.	1949-50.	1950-51.	1951-52.	1952-53.	1953-54.
Number .. '000	12,009	14,919	10,201	10,611	15,681	13,647
Value .. £'000	2,780	10,877	20,773	13,159	16,584	15,769

3. *Sheepskins without Wool.*—Up to 1943-44 sheepskins without wool were exported chiefly to the United States of America. During the year mentioned that country accounted for 97 per cent. of the total shipments while the remaining 3 per cent. were exported to the United Kingdom, Canada and the U.S.S.R. There has, however, since been a decline in shipments to the United States of America and an increase in the quantities shipped to the United Kingdom and other countries; in 1953-54 the United States of America received 57 per cent. of total shipments; the United Kingdom 26 per cent. and other countries 17 per cent. Quantities and values for the five years 1949-50 to 1953-54 compared with the average for the years 1934-35 to 1938-39 are shown in the table hereunder:—

## EXPORTS OF SHEEPSKINS WITHOUT WOOL : AUSTRALIA.

Particulars.	Average, 1934-35 to 1938-39.	1949-50.	1950-51.	1951-52.	1952-53.	1953-54.
Number .. '000	808	3,441	3,000	1,454	3,242	2,482
Value .. £'000	70	826	1,272	518	749	671

4. *Hides.*—(i) *Exports.* The export trade in cattle hides and calf skins during 1953-54 was distributed as follows:—Italy, £294,000; United Kingdom, £259,000; Netherlands, £182,000; Sweden, £146,000; Japan, £128,000; Turkey, £105,000 and other countries, £267,000.

The exports during each of the five years 1949-50 to 1953-54 compared with the average for the years 1934-35 to 1938-39 are shown in the table below:—

## EXPORTS OF CATTLE HIDES AND CALFSKINS : AUSTRALIA.

Particulars.	Average, 1934-35 to 1938-39.	1949-50.	1950-51.	1951-52.	1952-53.	1953-54.
Number .. ..	1,677,402	287,850	210,871	178,714	281,625	(a) 18,760,742
Value .. £'000	957	1,358	1,345	1,109	1,161	1,381

(a) lb.

Horse hides exported during the five years ended 1953-54 weighed 14,774,000 lb. and were valued at £1,153,000.

(ii) *Imports.* The imports of cattle hides and calfskins are fairly large, the chief sources of supply being New Zealand and the Pacific Islands. The quantities and values of cattle hides, including calfskins, imported into Australia during the years 1949-50 to 1953-54 compared with the average for the years 1934-35 to 1938-39 were as follows :—

#### IMPORTS OF CATTLE HIDES AND CALFSKINS : AUSTRALIA.

Particulars.	Average, 1934-35 to 1938-39.	1949-50.	1950-51.	1951-52.	1952-53	1953-54.
Quantity .. cwt.	70,781	13,490	12,126	28,590	11,183	16,960
Value .. £ '000	279	76	112	402	64	174

5. *Furred Skins.*—The exports of furred skins were valued as follows :—

#### EXPORTS OF FURRED SKINS : AUSTRALIA.

(£'000.)

De-scription.	Average, 1934-35 to 1938-39.	1949-50.	1950-51.	1951-52.	1952-53.	1953-54.
Rabbit and Hare ..	(a) 1,150	1,640	2,995	1,358	924	849
Opossum ..	125	44	6	26	31	104
Kangaroo ..	173	187	309	530	181	197
Fox ..	58	7	14	6	1	(b)
Wallaby ..	18	6	14	8	6	5
Other ..	11	4	17	4	8	1
Total ..	1,535	1,888	3,355	1,932	1,151	1,156

(a) Excludes hare skins. (b) Less than £500.

These skins were shipped principally to the United States of America, the United Kingdom and Belgium and Luxemburg, the values taken by each in 1953-54 being shown in the following table :—

#### FURRED SKINS : EXPORTS TO PRINCIPAL COUNTRIES OF DESTINATION, 1953-54

(£'000.)

Country.	Rabbit and Hare Skins.	Kangaroo Skins.	Other (Opossum, Wallaby, Fox, etc.)	Total.
United Kingdom ..	65	6	10	81
United States of America ..	676	183	76	935
Belgium and Luxemburg ..	53	..	(a)	53
Other Countries ..	55	8	24	87
Total ..	849	197	110	1,156

(a) Less than £500.

6. *Marketing of Hides and Skins.*—(i) *Sheepskins with Wool.* Details of the wartime agreement between the United Kingdom and Commonwealth Governments for the purchase by acquisition of the "exportable surplus" of woolled sheepskins in Australia were given in Official Year Book No. 37, page 886. The contract expired on 30th June, 1946, and sheepskins have since been marketed mostly at open auction.

(ii) *Sheep and Lamb Pelts.* Details of the marketing control of sheep and lamb pelts were given in Official Year Book No. 38, page 930. Pelts have reverted to open marketing without export restrictions.

(iii) *Hides and Leather.* A hide acquisition and marketing scheme operated from November, 1939 to August, 1954. Until 31st December, 1948, the scheme operated under the National Security Regulations. From 1st January, 1949, it continued under a Commonwealth Act and supporting State Acts. In June, 1952 the Tasmanian legislation lapsed and the scheme did not operate in Tasmania after that date. By August, 1954, the wide gap which had existed between fixed local prices and export prices for hides and leather had almost disappeared and, having in view certain legal difficulties which were hampering the operation of the scheme, the Commonwealth Government decided on its immediate termination.

The Australian Hide and Leather Industries Board, which administered the scheme acquired all cattle hides and yearling and calf skins produced in Australia at set prices and allocated them to tanners at these prices. The prices were 15 per cent. to 20 per cent. above August, 1939 levels until May, 1952 when they were increased by 50 per cent. Surplus hides were disposed of by tender or open auction. The Board retained the amounts realized in excess of appraised values, and supplemented the price to the producers in cases where the realized amount was less than the appraisement values.

Returns from sales of surplus hides and deferred payments levied on leather exported based on the difference between world and Australian prices for the hides involved were paid into a fund by the Board. From this fund, premiums were paid to producers as a proportion of appraised values. These premiums compensated hide producers to some extent for the margin between local and oversea prices. Further details of the war-time operations of the scheme will be found in Official Year Book No. 37, page 887 and Official Year Book No. 38, pages 930-1.

Pre-war, about 40 to 45 per cent. of Australian production was exported, but with the development of the local tanning industry, the proportion now is approximately 12½ per cent.

(iv) *Rabbit Skins.* A marketing control scheme for rabbit skins was introduced under the National Security (Rabbit Skins) Regulations on 10th June, 1940 and terminated in April, 1949. Details of the scheme will be found in Official Year Book No. 38, page 931.

### § 7. Tallow and Lard.

1. *Production.*—Australia's production of tallow and lard is in excess of local requirements and considerable quantities are normally available for export. Before 1952-53, the collection of details of tallow and lard was somewhat defective. In that year, a collection was instituted covering both slaughtering establishments and factories on a fiscal year basis. Details of the production of edible and inedible tallow and lard in each State are shown in the table below for the years 1952-53 and 1953-54.

#### TALLOW AND LARD : PRODUCTION.

(cwt.)

State.	1952-53.			1953-54.		
	Tallow.		Lard.	Tallow.		Lard.
	Edible.	Inedible.		Edible.	Inedible.	
New South Wales .. ..	78,923	514,581	8,924	73,300	500,670	4,802
Victoria .. ..	171,326	493,397	7,480	173,527	503,720	6,730
Queensland .. ..	411,766	199,622	15,339	353,520	211,861	19,866
South Australia .. ..	62,480	106,826	3,242	52,782	101,177	4,939
Western Australia .. ..	38,335	55,561	6,264	36,596	67,539	5,704
Tasmania .. ..	1,639	43,604	1,993	1,337	40,660	905
Australia .. ..	761,469	1,413,591	43,242	691,062	1,425,627	42,946

2. *Consumption of Tallow in Factories.*—Details of consumption are collected from the principal factories using tallow (soap and candle, chemical and woolscouring works).

Total consumption of tallow in factories as shown in the table below for the years 1938-39 and 1949-50 to 1953-54 is deficient, however, to the extent that no allowance is made for the small unrecorded amounts used in other types of establishments.

#### TALLOW : CONSUMPTION IN FACTORIES, AUSTRALIA.

(cwt.)

Year.	Quantity Used.		Year.	Quantity Used.	
1938-39.. ..	..	539,095	1951-52 .. ..	..	1,205,307
1949-50.. ..	..	1,063,194	1952-53 .. ..	..	1,068,181
1950-51.. ..	..	1,217,027	1953-54 .. ..	..	1,172,710

3. Exports of Tallow and Lard.—Particulars of exports of edible (including lard) and inedible tallow are shown in the following table for the five years 1949-50 to 1953-54 in comparison with the average for the five years ended 1938-39.

TALLOW AND LARD : EXPORTS, AUSTRALIA.  
(cwt.)

Particulars.	Average, 1934-35 to 1938-39.	1949-50.	1950-51.	1951-52.	1952-53.	1953-54.
Edible .. ..	(a)	75,497	31,957	27,346	111,020	122,982
Inedible .. ..	606,934	348,214	260,569	126,618	430,227	823,816
Total .. ..	(a)	423,711	292,526	153,964	541,247	946,798

(a) Not available.

4. Marketing of Tallow.—Until 30th September, 1952 the bulk of Australia's exportable surplus tallow, other than collar white mutton tallow was sold to the United Kingdom Ministry of Food under a series of annual contracts. The 1951-52 contract was not renewed and on 9th November, 1952 tallow export control was removed following termination of the industry's equalization pool arrangement and price de-control in most states.

### § 8. Net Exports Of Principal Pastoral Products.

The quantities and values by which the exports of the principal pastoral products of Australia exceeded the imports for the years 1938-39, 1952-53 and 1953-54 were as follows:—

NET EXPORTS OF PASTORAL PRODUCTS : AUSTRALIA.

Product.	Unit of Quantity.	Quantity.			Value (£'000).		
		1938-39.	1952-53.	1953-54.	1938-39.	1952-53.	1953-54.
Animals (living)—							
Cattle .. ..	No.	405	1,149	1,061	1	120	6
Horses .. ..	"	2,294	893	153	..	46	253
Sheep .. ..	"	66,730	84,130	86,279	43	268	290
Bones .. ..	cwt.	21,497	19,880	24,810	11	41	50
Glue-pieces and Sinews .. ..	"	11,145	13,258	439	7	41	1
Glycerine .. ..	'000 lb.	79	1,487	68	1	205	10
Hair and Bristles .. ..	"	1,003	1,595	1,481	7	261	648
Hoofs .. ..	cwt.	(a)	11,484	10,417	8	26	15
Horns .. ..	"	(a)	10,144	8,436	19	61	62
Meats—							
Frozen Beef and Veal(b)	'000 lb.	271,949	192,500	316,978	4,323	13,782	22,046
" Mutton and Lamb .. ..	"	186,488	166,714	99,542	4,807	8,752	5,248
" Rabbits and Hares .. ..	'000 prs.	(a)	11,391	8,439	232	3,400	2,271
" Other .. ..	'000 lb.	19,588	23,207	33,043	419	1,530	2,511
Poited and Concentrated .. ..	"	(a)	1,848	1,488	28	921	846
Preserved in Tins, etc. .. ..	"	14,779	202,213	142,020	494	27,858	21,261
Other (excluding Bacon and Ham) .. ..	"	308	2,801	2,986	6	302	296
Sausage Casings .. ..	cwt.	8,673	15,712	16,893	209	1,144	861
Hides and Skins—							
Cattle .. ..	'000 lb.	(a)	(c) 207,803	16,381	690	1,083	1,177
Calf .. ..	"	(a)	(c) 11,873	173	133	13	40
Horse .. ..	"	(a)	(c) 83,778	2,373	7	313	182
Sheep and Lamb .. ..	"	(a)	c18885011	94,446	2,340	17,321	16,417
Rabbit and Hare .. ..	"	4,205	6,005	4,173	397	907	799
Tallow (Edible and Inedible)	cwt.	d 560,241	508,018	918,242 (d)	481	16	2,530
Wool—							
Greasy .. ..	'000 lb.	779,782	978,980	983,697	36,688	355,649	363,209
Scoured, Tops, Nolls, Waste .. ..	"	70,300	106,540	80,781	5,282	46,401	38,253
Total .. ..					56,547	479,611	477,388

(a) Quantity not available. (b) Includes chilled beef. (c) Number. (d) Inedible Tallow only.

NOTE.—Minus sign (—) signifies net imports.

## CHAPTER XXIII.

### FARMYARD, DAIRY AND BEE PRODUCTS.

NOTE.—Values of Australian oversea trade shown throughout this chapter are expressed as £A. f.o.b. Port of Shipment, except where otherwise indicated.

#### § 1. Introductory.

1. **General.**—The introduction of cattle into Australia and the early history of the dairying industry are referred to in some detail in earlier issues of this publication. It may be noted here that an increased and improved milk supply has resulted from the crossing of imported stud cattle with the original stock and from the further judicious crossing of strains. In Australia dairy cattle thrive in the open throughout the year, local climatic conditions demanding no protection other than tree plantations for shelter and, in certain districts, rugging in the coldest weather. Indigenous and imported grasses furnish food during the greater part of the year, and winter fodder, when necessary, is given to the cattle in the fields. With the wider application of scientific methods in the treatment of animals and pasturages and in the processes of manufacture, coupled with herd testing and effective State supervision, the dairying industry has shown rapid expansion. It has been demonstrated that Australian production and marketing methods do not adversely affect the vitamin content of the butter and that the loss during cold storage even for as long as two years is insignificant.

2. **Mixed Farming.**—Dairying is not, as formerly, wholly confined to agriculturists, since many graziers also give it their attention. In non-coastal regions it is generally carried on in conjunction with agriculture and sheep-raising, sufficient fodder being grown to carry the cattle through the winter months. Local wants are thus met, and in many places remote from the metropolis well-equipped factories have been established. The extent to which dairy cattle were run in conjunction with pig raising and wheat growing in 1947-48 is shown in the relevant tables published in the section "Special Tabulations Relating to Rural Holdings, 1947-48" of *Primary Industries Bulletin* No. 42, 1947-48.

3. **Employment.**—The numbers of persons employed in rural industries are ascertained at the annual census of rural production. The particulars collected are in respect of those persons who were permanently engaged in the actual work of the farm and include owners, lessees, tenants or sharefarmers, relatives over 14 years of age not receiving wages, and other permanent employees, including managers and relatives, working for wages or salary. For some earlier years and uniformly from March, 1950, particulars have also been collected as to numbers of temporary employees at 31st March, of each year. Details of the numbers so engaged are given in Chapter XXI.—Agricultural Production, § 28.

For the years up to 1939-40, information was also collected which enabled the classification of each holding according to the chief purpose for which it was used, thus obtaining a distribution of employment in the three main classes, Agriculture, Pastoral and Dairying. However, because of difficulties in determining with precision

the chief purpose for which holdings are used, this information has since been omitted from the schedules. Consequently it has not been possible to continue to compile details of employment in the dairying industry from data obtained from this source.

Details of the number of persons who described themselves at the population census of 30th June, 1947 as being engaged in dairy farming were shown for each State in Official Year Book No. 38, page 1025. They comprised 96,508 males and 10,018 females, a total of 106,526 persons. At the Census of 30th June, 1954, 100,553 males and 11,004 females a total of 111,557 persons described themselves as being engaged in dairying.

4. **Growth of the Dairying Industry.**—The following table gives some indication of the growth of the dairying industry since 1918–19 :—

DAIRYING INDUSTRY : AUSTRALIA.

Year.	Number of Dairy Cows at 31st March.			Production of—			Milking Machines (No. of Stands). <sup>(a)</sup>
	In Milk.	Dry.	Total.	Milk for all Purposes.	Butter (Factory and Farm).	Cheese (Factory and Farm).	
				Million Gallons.	Tons.	Tons.	
1918–19 ..	1,319,588	582,448	1,902,036	529.6	81,162	10,621	(b)
1928–29 ..	1,744,728	600,342	2,345,070	815.4	129,817	13,490	(b)
1938–39 ..	2,600,707	608,812	3,209,519	1,189.9	203,500	29,304	(b)
1948–49 ..	2,339,885	818,725	3,158,610	1,208.9	165,830	43,202	144,916
1949–50 ..	2,354,217	837,218	3,191,435	1,238.4	173,599	44,796	155,218
1950–51 ..	2,252,741	895,930	3,148,671	1,197.8	163,934	44,309	165,788
1951–52 ..	2,098,560	874,192	2,972,752	1,047.4	135,319	40,598	171,712
1952–53 ..	2,223,410	863,133	3,086,543	1,215.2	167,480	46,606	179,853
1953–54 ..	2,262,783	948,215	3,210,998	1,189.7	159,585	49,057	189,542

(a) "Number of Stands" indicates the number of cows that can be milked simultaneously—i.e., the cow capacity of installed milking machines. (b) Not available.

5. **Official Supervision of Dairying Industry.**—Dairy experts of the various State Agricultural Departments give instruction in approved methods of production, and inspect animals, buildings and marketable produce. A high standard of cleanliness, both of *personnel* and *matériel*, prevails.

The export trade is regulated by the terms of the Commonwealth Customs Act 1901–1953 and the Commonwealth Commerce (Trade Descriptions) Act 1905–1950, and regulations thereunder. It will be sufficient to state here that the true trade description, etc., must 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.

6. **Australian Agricultural Council.**—General information on the constitution and functions of the Australian Agricultural Council is given on page 832 of Chapter XXI.—Agricultural Production. Details were given on pages 833–4 of Official Year Book No. 40, of the production aims for the five-year period ended 1957–58 (including specific targets for the principal dairy products) as set by the Council at its 36th Meeting in April, 1952.

## § 2. Value of Farmyard, Dairy and Bee Production and Indexes of Price and Quantum of Production.

1. **Gross Value of Farmyard, Dairy and Bee Production, 1936–37 to 1938–39 and 1949–50 to 1953–54.**—The following table shows the gross value of recorded farmyard and dairy production at the principal markets in Australia.

GROSS VALUE OF FARMYARD, DAIRY AND BEE PRODUCTION: AUSTRALIA.(a)  
(£'000.)

Particulars.	Average 1936-37 to 1938-39.	1949-50.	1950-51.	1951-52.	1952-53.	1953-54.
Whole Milk(b) used for—						
Butter .. ..	22,550	39,414	36,692	38,875	58,995	57,004
Cheese .. ..	1,505	5,451	5,398	6,700	9,377	10,077
Condensing, Concentrating, etc. .. ..	1,094	5,900	6,223	7,948	10,860	9,583
Human Consumption and other purposes ..	7,971	24,511	28,315	37,261	46,092	49,205
Subsidy Paid on Whole Milk for—						
Butter, Cheese, Condensing, Concentrating, etc. ..	..	8,062	13,629	15,041	15,265	15,468
Human Consumption ..	..	..	..	..	..	..
Total Whole Milk (in- cluding Subsidy) ..	33,120	83,338	90,257	105,825	140,589	141,337
Pigs Slaughtered .. ..	5,526	14,281	15,358	18,516	21,703	23,773
Dairy Cattle Slaughtered ..	1,591	3,492	4,872	5,966	6,509	8,437
Eggs .. ..	9,117	25,766	28,047	37,534	43,637	43,569
Poultry .. ..	2,386	7,726	9,408	10,985	11,231	11,391
Honey .. ..	154	787	871	800	1,113	1,473
Beeswax .. ..	10	50	71	62	84	120
Total .. ..	51,904	135,440	148,884	179,688	224,926	230,105

(a) Excludes Australian Capital Territory and Northern Territory, details for which are not available.  
(b) Excludes Commonwealth subsidy which is shown separately below.

2. Gross and Net Values, 1953-54.—The values of dairy, poultry and bee farming 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 XXIX.—Miscellaneous.

GROSS, LOCAL AND NET VALUE OF FARMYARD, DAIRY AND BEE PRODUCTION,  
1953-54.

(£'000.)

State.	Gross Production valued at Principal Markets.	Marketing Costs.	Gross Production valued at Farm.	Farm Costs.		Net Value of Pro- duction. (a)
				Fodder fed to Farm Stock.	Value of Other Materials used in process of Pro- duction.	

DAIRY PRODUCTION.

New South Wales ..	55,106	6,536	48,570	4,747	(b) 225	43,598
Victoria .. ..	57,730	2,178	55,552	5,000	4,350	46,202
Queensland .. ..	34,084	910	33,174	3,930	800	28,444
South Australia ..	12,119	204	11,915	966	692	10,257
Western Australia ..	7,999	323	7,676	2,414	1,567	3,695
Tasmania .. ..	6,509	285	6,224	1,192	(b) 272	4,760
Total .. ..	173,547	10,436	163,111	18,249	7,906	136,956

(a) No deduction has been made for depreciation and maintenance.  
made for costs of power, power kerosene, petrol and other oils.

(b) No allowance has been

GROSS, LOCAL AND NET VALUE OF FARMYARD, DAIRY AND BEE PRODUCTION, 1953-54—*continued*.

(£'000.)

State.	Gross Production valued at Principal Markets.	Marketing Costs.	Gross Production valued at Farm.	Farm Costs.		Net Value of Production. (a)
				Fodder fed to Farm Stock.	Value of Other Materials used in process of Production.	

## POULTRY PRODUCTION.

New South Wales ..	22,036	2,153	19,883	4,960	(b)	14,923
Victoria ..	21,705	1,628	20,077	6,086	(b)	13,991
Queensland ..	2,411	385	2,026	770	80	1,176
South Australia ..	4,092	436	3,656	1,577	(b)	2,079
Western Australia ..	2,930	391	2,539	905	(b)	1,634
Tasmania ..	1,791	134	1,657	678	(b)	979
Total ..	54,965	5,127	49,838	14,976	(c) 80	34,782

## BEE PRODUCTION.

New South Wales ..	517	53	464	..	(b)	464
Victoria ..	465	63	402	..		402
Queensland ..	143	5	138	..		138
South Australia ..	211	22	189	..		189
Western Australia ..	234	23	211	..		211
Tasmania ..	23	1	22	..		22
Total ..	1,593	167	1,426	..	(b)	1,426

## TOTAL FARMYARD, DAIRY AND BEE PRODUCTION.

New South Wales ..	77,659	8,742	68,917	9,707	(d) 225	58,985
Victoria ..	79,900	3,869	76,031	11,086	4,350	60,595
Queensland ..	36,638	1,300	35,338	4,700	880	29,758
South Australia ..	16,422	662	15,760	2,543	692	12,525
Western Australia ..	11,163	737	10,426	3,319	1,567	5,540
Tasmania ..	8,323	420	7,903	1,870	272	5,761
Total ..	230,105	15,730	214,375	33,225	7,986	173,164

(a) No deduction has been made for depreciation and maintenance. (b) Not available.  
(c) Incomplete, Queensland only. (d) Incomplete, see individual industries above.

3. Net Value of Production, 1934-35 to 1938-39 and 1949-50 to 1953-54.—In the following table the net values of farmyard, dairy and bee production (total and per head of population) are shown by States.



## NET VALUE OF FARMYARD, DAIRY AND BEE PRODUCTION.(a)

Year.	N.S.W. (b)	Vic.	Q'land.	S. Aust.	W. Aust.	Tas.(b)	Total.
NET VALUE. (£'000.)							
Average, 1934-35 to 1938-39	11,848	12,238	7,118	1,938	979	943	35,064
1949-50..	37,843	35,643	19,537	9,140	3,326	2,484	104,673
1950-51..	38,852	39,650	21,141	8,513	3,886	2,755	114,797
1951-52..	44,508	51,935	19,412	11,029	5,265	3,955	135,104
1952-53..	60,612	37,842	31,402	11,708	5,460	4,970	172,024
1953-54..	58,985	60,595	29,758	12,525	5,540	5,761	173,164

## NET VALUE PER HEAD OF POPULATION. (£ s. d.)

Average, 1934-35 to 1938-39	4	8	3	6	12	2	7	4	7	3	5	11	2	3	0	4	0	10	5	2	11
1949-50..	10	15	11	16	7	9	16	13	0	13	3	2	6	2	2	9	1	0	13	0	0
1950-51..	11	19	11	17	13	7	17	10	4	11	15	10	6	16	3	9	14	4	13	17	10
1951-52..	13	8	10	22	9	9	15	13	3	14	16	8	8	18	6	13	9	7	16	0	8
1952-53..	18	0	3	24	7	6	24	13	8	15	5	6	8	18	8	16	8	7	19	15	10
1953-54..	17	6	5	25	0	3	22	17	8	15	18	8	8	15	8	13	12	5	19	11	1

(a) No deduction has been made for depreciation and maintenance or for costs of materials used in the process of production in the Poultry (for States other than Queensland) and Bee-farming Industries.

(b) No deduction has been made for costs of power, power kerosene, petrol and other oils.

4. Indexes of Quantum and Price of Farmyard, Dairy and Bee Production, 1949-50 to 1953-54.—For details of the methods of calculating these indexes and of the weights used see Chapter XXIX.—Miscellaneous.

## INDEXES OF QUANTUM AND PRICE OF FARMYARD, DAIRY AND BEE PRODUCTION: AUSTRALIA.

(Base: Average 3 years ended June, 1939 = 100.)

Particulars.	1949-50.	1950-51.	1951-52.	1952-53.	1953-54.
Quantum of Production—					
Milk .. ..	109	105	92	107	104
Other products .. ..	115	109	108	110	113
Total Farmyard and Dairy .. ..	111	106	97	108	107
Total per Head of Population .. ..	95	88	78	85	83
Price—					
Milk .. ..	220	244	319	373	379
Other products .. ..	248	295	363	423	435
Total Farmyard and Dairy .. ..	228	258	332	387	395

## § 3. Dairy Cattle and Dairy Products.

1. Dairy Herds.—Lack of uniformity in the schedules used by the various States in the collection of livestock statistics make 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 series of years. These statistics show that in 1918-19 there were 1,902,036 dairy cows (in milk and dry), compared with 2,345,070 in 1928-29 and 3,209,519 in 1938-39. The numbers remained at this level until March, 1944, but declined in succeeding years and did not regain the level of 1944 until 31st March, 1954, when the number recorded was 3,210,998. In New South Wales, Victoria, South Australia and Tasmania the proportion of dairy to all cattle is high. In Queensland, the Northern Territory and Western Australia there is a great preponderance of other cattle, the main object in these areas being the production of beef. Since 1939 there have been substantial decreases in the number of dairy cows in New South Wales and Queensland. The numbers of dairy cows for 1950 to 1954 shown in the following table refer to those recorded by farmers as being in milk and dry as at 31st March. The figures shown for the years 1935 to 1939 cover the same categories, but the period differs in some States (see footnote (a)). To this extent the figures lack comparability.

## NUMBER OF CATTLE AND DAIRY COWS (IN MILK AND DRY) AT 31st MARCH.

State.		Average, 1935-39. (a)	1950.	1951.	1952.	1953.	1954.
N.S. Wales	{ All Cattle ..	3,054,164	3,440,461	3,702,848	3,620,953	3,648,733	3,554,016
	{ Dairy Cows..	1,024,761	875,988	855,882	820,518	817,932	874,190
Victoria	{ All Cattle ..	1,892,465	2,230,948	2,216,253	2,214,530	2,297,208	2,370,184
	{ Dairy Cows..	912,621	956,558	943,039	914,809	947,061	987,345
Queensland	{ All Cattle ..	6,047,726	6,304,778	6,733,548	6,434,374	6,751,395	7,086,207
	{ Dairy Cows..	924,875	962,752	967,959	859,434	903,621	946,230
South Australia	{ All Cattle ..	331,488	464,141	432,566	437,468	482,578	490,945
	{ Dairy Cows..	154,370	174,835	160,204	152,192	155,956	164,230
W. Australia	{ All Cattle ..	796,473	864,936	841,204	851,534	846,261	829,694
	{ Dairy Cows..	121,127	129,365	127,544	130,625	133,923	134,129
Tasmania	{ All Cattle ..	260,267	274,740	271,784	266,263	275,131	295,178
	{ Dairy Cows..	93,708	89,546	91,850	92,833	96,040	102,523
Nor. Territory	{ All Cattle ..	893,925	1,048,875	1,019,149	1,057,906	935,602	966,033
	{ Dairy Cows(b)						
Aust. Cap. Ter.	{ All Cattle ..	8,261	11,161	11,477	10,293	9,700	9,394
	{ Dairy Cows..	1,019	2,391	2,184	2,341	2,010	2,351
Australia	{ All Cattle ..	13,284,769	14,640,040	15,228,829	14,803,321	15,246,608	15,601,651
	{ Dairy Cows..	3,232,981	3,191,435	3,148,671	2,972,752	3,086,543	3,210,998

(a) As at 31st March for New South Wales and Australian Capital Territory; 1st March for Victoria; 1st January for Queensland, South Australia, Western Australia and Tasmania. (b) No information available; assumed to be "nil."

In the next table the dairy cattle in each State are shown in various categories as at 31st March, 1952, 1953 and 1954. Information in this detail was not collected uniformly in all States prior to 1943.

## NUMBER OF DAIRY CATTLE.

State.	At 31st March.	Dairy Cows.		Dairy Heifers 1 year and over.	Dairy Calves under 1 year.	Dairy Bulls.	Total Dairy Cattle.
		In Milk.	Dry.				
New South Wales	1952	642,718	187,800	201,604	159,435	23,313	1,204,870
	1953	673,710	174,222	216,203	156,024	24,083	1,244,242
	1954	663,945	210,245	200,540	139,233	24,557	1,238,520
Victoria	1952	655,127	259,682	275,087	210,758	36,960	1,438,523
	1953	673,975	273,086	279,183	220,273	39,263	1,476,980
	1954	685,084	302,261	286,632	225,802	40,951	1,540,730
Queensland	1952	572,448	286,986	224,350	185,990	26,876	1,296,659
	1953	641,400	262,221	231,810	209,093	28,474	1,372,998
	1954	661,256	284,974	214,325	194,510	28,143	1,383,208
South Australia	1952	103,658	48,534	40,166	36,718	7,499	235,575
	1953	100,880	55,076	45,911	41,694	8,342	251,933
	1954	109,210	55,020	48,576	39,452	8,772	261,030
Western Australia	1952	60,092	70,533	40,202	53,556	5,096	230,469
	1953	57,305	76,118	42,370	51,394	6,173	231,860
	1954	58,621	75,508	41,836	47,495	6,056	229,516
Tasmania	1952	73,329	10,504	26,007	32,740	3,047	155,536
	1953	74,400	21,640	26,660	35,422	4,090	162,212
	1954	83,280	19,243	28,426	38,274	4,372	173,595
Australian Capital Territory	1952	1,188	1,153	452	686	66	3,545
	1953	1,240	770	770	640	50	3,470
	1954	1,387	964	303	712	55	3,421
Australia	1952	2,098,560	874,192	808,858	679,001	104,666	4,566,177
	1953	2,223,410	863,133	834,146	714,540	110,475	4,745,704
	1954	2,262,783	948,215	820,638	685,478	112,906	4,830,020

A map showing the distribution of dairy cattle in Australia at 31st March, 1948, appears on page 906 of Official Year Book No. 39.

2. **Size of Dairy Herds.**—A series of special tabulations relating to rural holdings, undertaken for all States for the year 1949–50, covered, *inter alia*, a classification of holdings with dairy cattle according to size of herd. Details of these tabulations are published in *Primary Industries Bulletin* No. 44, 1949–50.

3. **Factory System.**—(i) *General.* Cream separation and butter-making are often carried on together under the co-operative system. The creation of large central butter factories has resulted in a considerable reduction in the cost of manufacture, since improved appliances such as refrigerators, etc., may be profitably worked at the larger establishments. 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 3 gallons, factory butter requires less than 2½ gallons.

(ii) *Number of Factories.* In 1953–54 the factories in Australia for the manufacture of butter, cheese and condensed milk numbered 380 and were distributed among the States as follows:—New South Wales, 78; Victoria, 135; Queensland, 91; South Australia, 40; Western Australia, 15; and Tasmania, 21. More details regarding numbers of factories, output, etc., are given in Chapter IX.—Manufacturing Industry.

4. **Butter and Cheese—Stabilization Schemes.**—(i) *Voluntary Plan.* During the period from January, 1926 to April, 1934, a voluntary scheme known as the “Paterson Plan” was in operation and had the effect of stabilizing the price of butter in Australia. Details of this scheme may be found on page 1028 of Official Year Book No. 38 and in earlier issues.

(ii) *Compulsory Plan.* On 1st May, 1934 the “Paterson Plan” was superseded by a compulsory price equalization plan, details of which were shown on page 1029 of Official Year Book No. 38 and earlier issues. This compulsory plan was invalidated by the decision in 1936 of the Privy Council which declared in the *James (Dried Fruits)* Case that the Commonwealth had no power under the Constitution to regulate trade between the States.

(iii) *Equalization Scheme.* Since the Privy Council decision, the butter price equalization scheme has continued to operate by voluntary action based on the agreements between the manufacturers and the Commonwealth Dairy Produce Equalization Committee Limited. The Committee, which comprises members of the State Dairy Products Boards and other persons representing the industry, enters into agreements with manufacturers to secure to them equal rates from sales of butter and cheese, and for this purpose may fix basic prices at which these products sold in Australia or abroad are to be taken into account. The effect is that local and export trade are distributed in equitable proportions among the manufacturers by means of quotas. The Committee fixes basic prices and equalizes returns to factories through an Equalization Fund. The States originally participating in the scheme were New South Wales, Victoria, Queensland and Tasmania in respect of both butter and cheese, and South Australia in respect of cheese. South Australia and Western Australia entered the scheme in respect of butter on 1st April, 1946 and Western Australia extended its participation to include cheese in January, 1947.

The home consumption prices of butter and cheese were fixed by the Commonwealth Prices Commissioner up to 19th September, 1948, from which date prices have been controlled by State Governments.

5. **Commonwealth Subsidies.**—(i) *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, cheese and processed milk products. 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 Limited through factories to milk producers by payments on butter, cheese and processed milk products manufactured. Subsidy on milk supplied for the manufacture of processed milk products was discontinued from 1st July, 1948 to 30th June, 1949 and again from 1st July, 1952.

The following table shows particulars, in respect of butter and cheese, of the rates realized on local, interstate and overseas sales and the average equalization and subsidy rates in operation for the years ended June, 1939 and 1951 to 1955.

**BUTTER AND CHEESE : RATES REALIZED ON SALES, AVERAGE EQUALIZATION RATES AND RATES OF COMMONWEALTH SUBSIDY UNDER DAIRY INDUSTRY ASSISTANCE ACTS.**

(Rates s. d. per cwt.)

Year ended 30th June.	Rates Realized on Sales.			Average Equalization Rate.	Rate of Subsidy.	Rate of Overall Return to Manu- facturers
	Local.	Interstate.	Overseas.			
BUTTER.						
1939.. ..	154 5.5	146 5.5	121 7.5	136 3.5	..	136 3.5
1951.. ..	208 6.4	193 11.9	307 11.2	241 8.4	82 3.9	324 0.3
1952.. ..	291 9.6	291 7.6	429 1.1	307 8.9	121 4.2	429 1.1
1953.. ..	404 6.0	381 4.0	389 0.0	398 0.4	85 0.0	483 0.4
1954.. ..	405 4.3	377 0.1	401 4.6	400 5.1	89 10.3	490 3.4
1955(a) ..	(b)	(b)	(b)	393 0.0	79 0.0	472 0.0
CHEESE.						
1939.. ..	(c) 94 8.6	59 3.2	71 7.6	..	..	71 7.6
1951.. ..	123 9.8	171 4.2	144 1.6	37 10.9	182 0.5	182 0.5
1952.. ..	184 1.1	240 4.2	208 11.6	31 4.6	240 4.2	240 4.2
1953.. ..	244 3.3	203 4.1	232 4.8	32 0.0	264 4.8	264 4.8
1954.. ..	244 8.6	203 11.1	232 4.7	32 0.0	264 4.7	264 4.7
1955(a) ..	(b)	(b)	213 0.0	24 6.0	237 6.0	237 6.0

(a) Rates are of an interim nature only. (b) Not yet available. (c) A lower rate was determined for cheese sold for processing for local consumption.

(Source : Commonwealth Dairy Produce Equalisation Committee Limited.)

Following representations by industry organizations, the Commonwealth Government established the Joint Dairy Industry Advisory Committee in November, 1946, comprising a chairman nominated by the Government, four representatives of Commonwealth Government Departments and four industry representatives from the several States. The Committee's functions, broadly, were to advise and assist in conducting cost and other surveys of dairy farm production and to act as an advisory body to the Government in these matters. From 1st April, 1947 to 30th June, 1952, the rates of overall return to milk producers determined by the Commonwealth Government for the purpose of subsidy payments were based on recommendations made by the Committee following surveys of production costs in the dairy industry.

Under the Five-year Stabilization Plan which came into operation on 1st July, 1952, the Commonwealth Government, with the approval of the States, determines each season the ex-factory prices of butter and cheese, guarantees to dairy farmers a return, based upon costs of efficient production, in respect of quantities of butter and cheese sold within the Commonwealth, plus an additional 20 per cent. (if produced), and hence determines the amount of subsidy it will make available to lift the return on that part of output covered by the guarantee to the guaranteed level.

Early in 1953, the Dairy Industry Investigation Committee, an independent body consisting of three members was appointed to advise the Commonwealth Government on the guaranteed return to producers during 1953-54. The Committee was re-established in March, 1954, to advise the Government on the guaranteed return for each year of the remaining three year period of the Stabilization Plan.

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. Since 1st July, 1952, it has been available to the industry to be used, in whatever manner considered desirable by it, 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. After allowing for outstanding debits the amount standing to the credit of the Dairying Industry Stabilization Fund at 30th June, 1955 totalled approximately £1,828,000.

(ii) *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 Official Year Book No. 38, page 1031.

6. **Total Dairy Production.**—The dairy production for each State in 1953-54 is shown below :—

## DAIRY PRODUCTION, 1953-54.

Particulars.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas.	A.C.T.	Total
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## MILK ('000 GALLONS).

Used for—								
Butter ..	(a) 152,030	(b) 296,846	(c) 190,885	33,517	29,145	35,015	36	737,474
Cheese ..	7,334	54,945	15,162	24,945	2,850	634	..	105,870
Condensing and concentrating	19,535	50,653	43,665	26,552	18,001	11,993	707	75,773
Other purposes ..	103,288	71,914						270,535
Total ..	282,187	474,358	249,712	85,614	49,996	47,642	743	1,189,652

## BUTTER (TONS)

In Factories On Dairy and other Farms ..	(d) 29,713	(e) 63,616	(f) 41,797	7,586	6,142	7,263	..	156,117
	1,641	780	357	276	139	270	5	3,468
Total ..	31,354	64,396	42,154	7,862	6,281	7,533	5	159,585

## CHEESE (TONS).

In Factories On Dairy and other Farms ..	3,210	25,977	(g) 6,746	11,612	1,205	293	..	49,043
	..	10	..	..	3	1	..	14
Total ..	3,210	25,987	6,746	11,612	1,208	294	..	49,057

(a) Includes 4,631,498 gallons of milk the produce of New South Wales, sent as cream to factories in Victoria and Queensland. (b) Includes 917,000 gallons of milk, the produce of Victoria, sent as cream to New South Wales. (c) Includes 618,000 gallons of milk the produce of Queensland, sent as cream to New South Wales. (d) Includes 333 tons of butter made from cream, the produce of Victoria and Queensland. (e) Includes 881 tons of butter made from cream, the produce of New South Wales. (f) Includes 115 tons of butter made from cream, the produce of New South Wales. (g) Includes 119 tons of cheese made in establishments not classified as factories.

7. Whole Milk.—(i) *Production and Utilization.* During the five years ended 1938–39 approximately 80 per cent. of Australia's milk supply was used for making butter, 4 per cent. for cheese manufacture, 2 per cent. for condensery products and 14 per cent. for fluid consumption and other purposes. There has since been a considerable decline in the proportion of milk used for butter-making, with corresponding increases in the quantities used for other purposes. In 1953–54, 62 per cent. of the total milk supply was used for butter, 9 per cent. for cheese, 6 per cent. for condensery products and 23 per cent. for other purposes.

Details of the production of whole milk for various purposes are shown in the following table for each year 1949–50 to 1953–54 in comparison with the average for the years 1934–35 to 1938–39 :—

#### PRODUCTION AND UTILIZATION OF WHOLE MILK : AUSTRALIA.

('000 Gallons.)

Year.	Total Production.	Quantity used for—			
		Butter (Factory and Farm).	Cheese (Factory and Farm).	Condensery Products.	Other purposes.
Average, 1934–35 to 1938–39	1,149,697	913,754	48,595	28,116	159,232
1949–50 .. ..	1,238,402	804,426	96,757	89,565	247,654
1950–51 .. ..	1,197,808	760,622	96,532	84,828	255,826
1951–52 .. ..	1,047,376	626,560	87,360	76,324	257,132
1952–53 .. ..	1,215,241	771,522	100,224	83,411	260,084
1953–54 .. ..	1,189,652	737,474	105,870	75,773	270,535

In the following table, particulars of production of whole milk in the several States are shown for the years 1949–50 to 1953–54, compared with the average for the five years ended 1938–39. Victoria is the principal milk-producing State and in 1953–54 the output from that State, 474.4 million gallons, represented 40 per cent. of total production. Output from New South Wales was 282.2 million gallons or 24 per cent. of the total and that of Queensland 249.7 million gallons (21 per cent.). Production in the remaining States accounted for 15 per cent. of the total Australian output.

#### TOTAL PRODUCTION OF WHOLE MILK.

('000 Gallons.)

Year.	N.S.W.	Vic.	Q'land.	S. Aust.	W. Aust.	Tas.	A.C.T.	Total.
Average, 1934–35 to 1938–39 ..	331,963	402,447	278,226	63,538	40,394	32,797	332	1,149,697
1949–50 .. ..	311,580	469,253	281,125	89,388	49,476	36,886	694	1,238,402
1950–51 .. ..	298,159	445,671	278,111	83,545	52,407	39,228	687	1,197,808
1951–52 .. ..	241,209	446,818	181,148	86,482	48,937	42,189	593	1,047,376
1952–53 .. ..	317,385	436,417	285,533	84,249	49,830	41,139	688	1,215,241
1953–54 .. ..	282,187	474,358	249,712	85,014	49,996	47,642	743	1,189,652

(ii) *Production per Cow.* The quantity of milk produced by a dairy cow reaches as high as 1,000 gallons per year, varying greatly with breed, locality and season. For the whole of Australia for all dairy cows and for all seasons prior to 1916 production has averaged considerably less than 300 gallons per annum. In recent years not only has there

been an improvement in the quality of the cattle, but the application of scientific methods has been continually extended, and the 300-gallon average has been exceeded in each year since 1924. In 1952-53 the average yield of 401 gallons constituted a record. The annual average yields per cow shown in the following table are 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. It should be noted that there are many difficulties attending the collection of particulars of the total quantity of milk obtained during any year. In addition, there is the further difficulty of ascertaining with reasonable accuracy the average number of cows in milk during the same period. The average yield per cow shown hereunder may be accepted as sufficiently reliable to show the general trend :—

## AVERAGE MILK PRODUCTION PER DAIRY COW.

(Gallons.)

Year.	N.S.W.	Vic.	Q'land.	S. Aust.	W. Aust.	Tas.	A.C.T.	Aust.
Average, 1934-35 to								
1938-39 .. ..	322	440	306	412	334	350	347	357
1949-50 .. ..	356	497	292	514	377	424	321	390
1950-51 .. ..	344	469	288	499	408	432	300	378
1951-52 .. ..	283	481	198	554	379	457	262	342
1952-53 .. ..	380	469	324	547	377	436	316	401
1953-54 .. ..	328	490	270	531	373	480	341	378

8. Butter Production.—There was a steady increase in the annual output of butter for many years prior to the 1939-45 War. The average annual production rose from 126,000 tons for the five years ended 1928-29 to 195,000 tons for the five years ended 1938-39.

Following the record output of 211,988 tons in 1939-40 the general trend of butter production declined until 1946-47, when 143,308 tons were produced. Output increased again to 173,599 tons in 1949-50, but in 1950-51 decreased to 163,934 tons and in 1951-52 to 135,319 tons. Production increased to 167,480 tons in 1952-53 but in 1953-54 there was another decrease to 159,585 tons, due to unfavourable conditions in New South Wales and Queensland. The fall in these two States was partly offset by an excellent season in Victoria. The foregoing figures include butter produced on farms which has shown a decline from 8,714 tons in 1938-39 to 3,468 tons in 1953-54.

The following table shows production of butter in factories in each State for the years 1949-50 to 1953-54, compared with the average for the five years ended 1938-39.

## BUTTER PRODUCTION IN FACTORIES.

(Tons.)

Year.	N.S.W.	Vic.	Q'land.	S. Aust.	W. Aust.	Tas.	Aust.(a)
Average, 1934-35 to							
1938-39 .. ..	52,949	62,489	53,255	7,570	5,459	3,811	185,533
1949-50 .. ..	36,817	63,358	48,196	8,236	6,769	5,069	168,445
1950-51 .. ..	34,318	57,982	47,447	7,377	6,797	5,710	159,631
1951-52 .. ..	23,438	59,236	27,850	7,767	6,705	6,170	131,166
1952-53 .. ..	37,087	57,323	49,008	7,630	6,480	6,059	163,587
1953-54 .. ..	29,713	63,616	41,797	7,586	6,142	7,263	156,117

(a) Northern Territory and Australian Capital Territory : nil.

The table below shows the monthly production of factory butter in Australia in each of the years 1938-39 and 1949-50 to 1953-54. The annual output of farm butter is also shown.

**PRODUCTION OF BUTTER IN FACTORIES AND ON FARMS : AUSTRALIA.**  
(Tons.)

Particulars.	1938-39.	1949-50.	1950-51.	1951-52.	1952-53.	1953-54.
<b>Factories—</b>						
July .. ..	9,415	7,393	7,338	7,013	7,862	6,941
August .. ..	11,645	10,169	10,355	9,119	10,325	8,906
September .. ..	15,531	13,903	14,417	11,511	15,139	12,781
October .. ..	20,485	19,083	19,897	16,748	19,329	17,481
November .. ..	22,561	21,524	21,245	16,051	19,468	19,640
December .. ..	20,710	21,334	20,629	13,889	19,537	18,585
January .. ..	15,872	17,389	18,181	12,337	16,905	17,038
February .. ..	15,816	14,725	13,791	9,501	15,052	15,410
March .. ..	17,729	15,126	12,619	10,197	14,063	15,465
April .. ..	16,583	11,146	8,841	9,132	10,440	9,933
May .. ..	15,568	9,484	6,584	8,219	8,286	7,646
June .. ..	12,871	7,169	5,734	7,449	7,181	6,291
<b>Factory Total(a) ..</b>	<b>194,786</b>	<b>168,445</b>	<b>159,631</b>	<b>131,166</b>	<b>163,587</b>	<b>156,117</b>
<b>Made on Farms(b) ..</b>	<b>8,714</b>	<b>5,154</b>	<b>4,303</b>	<b>4,153</b>	<b>3,893</b>	<b>3,468</b>
<b>Grand Total ..</b>	<b>203,500</b>	<b>173,599</b>	<b>163,934</b>	<b>135,319</b>	<b>167,480</b>	<b>159,585</b>

(a) Year ended June.

(b) Year ended March.

9. **Cheese Production.**—Until 1916 the annual production of cheese had not reached 10,000 tons. From 1916 to 1932-33 it ranged between about 10,000 and 16,000 tons, rising in subsequent years with some reversals of trend to an output of 44,796 tons in 1949-50. Production decreased slightly in 1950-51 and more substantially in 1951-52 to 40,598 tons but, by 1953-54 had risen to a record output of 49,057 tons. The States contributing chiefly towards the general increase over the years are Victoria and South Australia.

The following table shows production of cheese in factories in each State in the years 1949-50 to 1953-54 in comparison with average output during the years 1934-35 to 1938-39 :—

**CHEESE PRODUCTION IN FACTORIES.**  
(Tons.)

Year.	N.S.W.	Vic.	Q'land.	S. Aust.	W. Aust.	Tas.	Aust.(a)
<b>Average, 1934-35 to 1938-39 ..</b>	<b>3,332</b>	<b>6,177</b>	<b>5,071</b>	<b>5,437</b>	<b>390</b>	<b>1,210</b>	<b>21,617</b>
1949-50 .. ..	2,827	21,193	9,050	10,587	701	418	44,776
1950-51 .. ..	2,960	22,570	8,678	8,932	748	412	44,300
1951-52 .. ..	1,995	22,240	4,700	10,615	624	408	40,582
1952-53 .. ..	3,162	22,377	9,439	10,454	895	265	46,592
1953-54 .. ..	3,210	25,977	6,746	11,612	1,205	293	49,043

(a) Northern Territory and Australian Capital Territory : nil.



The monthly production of cheese in factories in Australia, together with the annual output from farms, is shown in the table below for 1938-39 and each of the years 1949-50 to 1953-54.

**PRODUCTION OF CHEESE IN FACTORIES AND ON FARMS: AUSTRALIA.**  
(Tons.)

Month.	1938-39.	1949-50.	1950-51.	1951-52.	1952-53.	1953-54.
<b>Factories—</b>						
July .. ..	1,517	1,995	1,654	2,135	2,218	1,979
August .. .	1,950	3,104	3,020	3,050	3,607	3,315
September ..	2,820	4,625	5,064	4,666	5,246	5,376
October .. .	4,028	6,265	6,975	6,290	6,837	7,345
November ..	3,990	6,525	7,175	6,112	6,923	7,366
December ..	3,462	6,208	6,175	5,158	6,297	6,619
January .. .	2,212	4,591	4,442	3,715	4,869	5,075
February .. .	1,715	3,175	2,783	2,442	3,287	3,603
March .. .	1,826	2,833	2,612	2,165	2,616	3,084
April .. .	1,656	2,316	1,635	1,682	1,739	1,901
May .. .	1,898	1,790	1,323	1,565	1,474	1,661
June .. .	1,900	1,349	1,442	1,602	1,479	1,719
Factory Total(a) ..	28,074	44,776	44,300	40,582	46,592	49,043
Made on Farms(b) ..	330	20	9	16	14	14
Grand Total .. .	29,304	44,796	44,309	40,598	46,606	49,057

(a) Year ended June.

(b) Year ended March.

10. **Condensed, Concentrated and Powdered, etc., Milk Production.**—The manufacture of these products has expanded greatly since 1938-39 to meet the needs of the Services during the 1939-45 War and for export purposes since the war. The output of condensed milk (sweetened and unsweetened) in 1953-54 was 144 per cent. higher than in the three years ended 1938-39 while that of powdered milk (full cream and skim) was 309 per cent. higher. Over the same period the quantity of whole milk used in the manufacture of the products shown below increased from 33.2 million gallons to 75.8 million gallons or by 128 per cent. These products are manufactured mainly in Victoria, which produced 67 per cent. of the total (in terms of whole milk equivalent) in 1953-54. New South Wales accounted for 26 per cent. and the remaining States for 7 per cent.

The following table shows details of the output of condensed, concentrated, powdered, etc., milk during the years 1949-50 to 1953-54, compared with the available details for the years 1936-37 to 1938-39.

**PRODUCTION OF CONDENSED, CONCENTRATED AND POWDERED, ETC., MILK : AUSTRALIA.**

Year.	Full Cream Milk Products.					Milk By-Products.	
	Condensed Milk (Sweetened and unsweetened).	Concentrated Whole Milk.(a)	Powdered Full Cream Milk.	Infants' and Invalids' Foods (Including Malted Milk and Milk Sugar).	Total Whole Milk Equivalent of Full Cream Milk Products.	Skim Milk.	Powdered Butter-milk and Whey.
	Tons.	Tons.	Tons.	Tons.	'000 gals.	Tons.	Tons.
Average, 1936-37 to 1938-39 ..	17,347	(b) 1,355	9,464	(c) 1,131	33,226	(d)	(e) 701
1949-50 ..	49,767	17,270	22,539	10,531	89,565	9,393	2,989
1950-51 ..	50,507	18,351	17,594	12,100	84,828	6,583	3,192
1951-52 ..	52,467	16,743	15,121	12,066	76,324	10,887	2,938
1952-53 ..	55,385	14,493	22,393	10,042	83,411	16,103	4,073
1953-54 ..	42,386	19,404	18,905	11,740	75,773	19,804	5,358

(a) Mainly for ice-cream manufacture. (b) Incomplete. (c) Malted milk and milk sugar only. (d) Not available separately; included with powdered full cream milk. (e) Excludes powdered whey.

11. **Local Consumption of Butter and Cheese.**—The production of butter and cheese less net exports and adjusted to account for movements in stocks, represents the quantity available for consumption in Australia.

A system of butter rationing introduced as a war-time measure and retained until 16th June, 1950, had the effect of considerably reducing civilian consumption. In the last year of rationing, 1949–50, consumption was 25.3 lb. per head per annum compared with an average of 32.9 lb. during the years 1936–37 to 1938–39. Following the cessation of rationing, consumption rose sharply to 30.9 lb. per head in 1950–51 and to 31.2 lb. in 1951–52, but fell in 1952–53 to 29.4 lb. In 1953–54 consumption again rose to 30.6 lb. per head.

Cheese consumption rose considerably during the period of butter rationing, from 4.4 lb. per head pre-war to 6.3 lb. per head in 1949–50. There was a further slight rise in 1950–51 to 6.5 lb. per head, and after a decline in 1951–52 and 1952–53 consumption rose again in 1953–54 to 6.6 lb. per head.

The following table shows details of the production and disposal of butter and cheese for each of the years 1949–50 to 1953–54 compared with the average for the years 1936–37 to 1938–39.

**PRODUCTION AND DISPOSAL OF BUTTER AND CHEESE : AUSTRALIA.**

Year.	Changes in Stock.	Production.	Exports. (a)	Consumption in Australia.	
				Total.	Per Head per annum.
	'000 tons.	'000 tons.	'000 tons.	'000 tons.	lb.
<b>BUTTER.</b>					
Average, 1936–37 to 1938–39	(b)	191.0	(c) 90.0	101.0	32.9
1949–50.. .. .	(d) +0.8	173.6	81.9	90.9	25.3
1950–51.. .. .	(d) –5.9	163.9	55.2	114.6	30.9
1951–52.. .. .	(d) +3.5	135.3	12.9	118.9	31.2
1952–53.. .. .	(d) +2.5	167.5	50.5	114.5	29.4
1953–54.. .. .	(d) –3.0	159.6	40.9	121.7	30.6
<b>CHEESE.</b>					
Average, 1936–37 to 1938–39	(b)	24.9	11.5	13.4	4.4
1949–50.. .. .	– 1.0	44.8	23.1	22.7	6.3
1950–51.. .. .	.. .. .	44.3	20.1	24.2	6.5
1951–52.. .. .	– 0.1	40.6	17.9	22.8	6.0
1952–53.. .. .	– 0.1	46.6	23.7	23.0	5.9
1953–54.. .. .	+ 0.4	49.0	22.4	26.2	6.6

(a) Figures for butter include ghee expressed as butter as well as butter shipped as ships' stores. Figures for cheese include ships' stores after allowance for a small quantity of cheese imported. (b) Not available. (c) Excludes ghee. (d) Includes allowance for movements in stocks other than those held in main cold stores.

12. **Marketing of Dairy Products.**—(i) *The Dairy Produce Export Control Act 1924–1954.* Introduced at the request of the dairying industry this Act was passed by the Commonwealth Parliament with the object of organizing the overseas marketing of Australian dairy produce. A Dairy Produce Control Board was appointed and was in existence from 1924 to 1935. It dealt with matters relating to the organization and supervision of overseas marketing of dairy produce. In the course of its functions the Board regulated shipments to ensure regularity of supply in the London market, controlled forward selling, obtained reductions in overseas freights and insurance rates and participated in an advertising campaign in the United Kingdom.

Prior to the appointment of the Dairy Produce Control Board, a voluntary body—the Australian Dairy Council—was established to advise and make recommendations to the Governments on problems connected with the production, manufacture and quality of dairy produce, pasture improvement and diseases of dairy cattle.

Following a recommendation by the Australian Agricultural Council the functions of these bodies were combined by an amending Act of 1935 under the Australian Dairy Produce Board and provision was made for the allocation of money from the Board's

funds for research and investigation into pastures, diseases of dairy cattle and the quality of butter. The functions of the Board were later extended to enable it to advise the Government in connexion with the transport of dairy produce, the securing of new markets, the expansion of existing markets and other matters.

The Australian Dairy Produce Board was re-constituted in 1947 by an amendment to the Dairy Produce Export Control Act, its membership being reduced from seventeen to twelve. The functions of the Board were extended to enable it to purchase and sell, on behalf of the Commonwealth, dairy produce intended for export, and to control all matters concerning the handling, storage, protection, treatment, transfer and shipment of the produce so purchased or sold. In 1953 the direct farmer representation on the Board was increased from two to three members thus raising the total membership from twelve to thirteen.

In April, 1954 the Act was further amended to prepare for the implementation of an export marketing plan to follow the expiration of the United Kingdom-Australia Butter and Cheese Contract. The amendment will enable the Board to purchase dairy produce intended for export to the United Kingdom and to sell such produce on behalf of the dairying industry in lieu of its present function of selling on behalf of the Commonwealth Government. In the interests of the stability of the industry, the Act provides that the Board may be the sole Australian exporter of butter and cheese to the United Kingdom.

(ii) *The Dairy Produce Export Charges Act 1924-1937.* This Act provides for the imposition of a levy on all butter and cheese exported from Australia to cover the administrative expenses of the Board and for advertising and other purposes. The rate of the levy is fixed by regulation.

13. **Butter and Cheese Contracts.**—(i) *General.* Details of the war-time contracts arranged between the United Kingdom and Australian Governments whereby the former undertook to purchase Australia's surplus butter and cheese were shown on pp. 985 and 986 of Official Year Book No. 37. The purchase of butter and cheese in 1944-45 and subsequent years has been covered by the Long-Term Purchase Agreement (*see sub-par. (ii) following*).

For the years 1943-44 to 1947-48 the United Kingdom Government reimbursed the Australian Government to the extent of subsidy paid on butter and cheese exported on Ministry of Food account. From 1st July, 1948 to 30th November, 1950 in respect of butter, and for the year 1948-49 in the case of cheese, however, contract prices paid by the United Kingdom Government were in excess of the basic return to the Australian manufacturer. As a result, subsidy on butter and cheese exported was discontinued from that date and returns from export sales in excess of the basic return to the producer have been credited to the Dairying Industry Stabilization Fund (*see pp. 936 and 937*). The Fund was drawn upon to cover the deficiencies in export prices during 1951-52 and since July, 1952 has been available to make good the deficiency in respect of all exports other than the 20 per cent. provided for under the Five-year Stabilization Plan.

The following table indicates the prices per cwt., Australian currency f.o.b. port of shipment, payable under the Long-term Purchase Agreement for the various grades of butter and cheese for the years 1948-49 to 1954-55.

#### PRICES OF BUTTER AND CHEESE : UNITED KINGDOM CONTRACTS.

*Per cwt. Australian currency, f.o.b.*

(s. d.)

Period.	Choice.	1st.	2nd.	Pastry.	Whey, 1st.	Whey, 2nd.	Whey, Pastry.
<b>BUTTER.</b>							
1948-49 ..	291 10½	290 3½	285 7½	281 10½	281 10½	276 10½	271 10½
1949-50 ..	313 9	312 4	307 6	303 9	303 9	298 9	293 9
1950-51 ..	339 4½	337 9½	307 6	303 9	303 9	298 9	293 9
1951-52 ..	365 0	363 5½	352 6	347 6	272 0	267 0	262 0
1952-53 ..	392 6	390 11½	380 0	367 6	367 6	361 3	355 0
1953-54 ..	407 6	405 11½	395 0	382 6	382 6	376 3	370 0
1954-55 ..	392 6	390 11½	380 0	367 6	367 6	361 3	355 0

**PRICES OF BUTTER AND CHEESE: UNITED KINGDOM**  
**CONTRACTS—continued.**

*Per cwt. Australian currency, f.o.b.*  
*(s. d.)*

Period.						Choicest, 1st.	2nd.	3rd.
CHEESE.								
1948-49	..	..	..	..	..	164 4½	161 10½	159 4½
1949-50	..	..	..	..	..	175 0	172 6	170 0
1950-51	..	..	..	..	..	188 9	172 6	170 0
1951-52	..	..	..	..	..	201 10½	189 4½	176 10½
1952-53	..	..	..	..	..	220 0	207 6	195 0
1953-54	..	..	..	..	..	228 1½	215 7½	203 1½
1954-55	..	..	..	..	..	211 3	198 9	186 3

(ii) *Long-term Purchase Agreement.* Early in 1945 an agreement was completed between the United Kingdom and Australian Governments covering the sale to the former of Australia's surplus butter and cheese for the four years 1944-45 to 1947-48. The Agreement was later extended to cover the period up to 30th June, 1955. In the original agreement, prices were stipulated for the initial two years ended June, 1946, while any variation in price for the succeeding years was not to exceed 7½ per cent. of the price paid for the preceding year. The United Kingdom undertakes responsibility for storage costs, if unable to provide ships to lift butter and cheese from store after 90 days, and makes advances against stored stock in this event. The usual provisions relative to quality, packing, etc., continued to obtain, but in regard to payment the United Kingdom now pays the whole of the value on shipment, instead of 97½ per cent. on shipment and 2½ per cent. 60 days after the date of the last bill of lading, as formerly.

14. *Oversea Trade in Butter, Cheese and Milk.*—(i) *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 the seasonal conditions. Exports of butter, which averaged 90,000 tons in the three pre-war years, were maintained to a certain extent during the war-time and post-war years by the restriction of supplies for local consumption, but, because of lower production they nevertheless fell as low as 41,800 tons in 1944-45. In the last year of rationing, 1949-50, exports were 79,200 tons, but they fell to 11,300 tons by 1951-52. In 1952-53 they were 49,300 tons and in 1953-54 39,300 tons. In addition small quantities of ghee have been exported during the post-war period. Exports of cheese, which averaged 11,500 tons pre-war, rose to a maximum of 26,000 tons in 1948-49, but they subsequently fell and in 1953-54 amounted to 22,800 tons.

During 1938-39, 96,900 tons of butter (95 per cent. of all butter exported) were shipped to the United Kingdom. With the decline in total exports there has also been a substantial reduction in the quantity shipped to the United Kingdom. In 1953-54 it amounted to 29,100 tons (74 per cent. of total butter exports.)

In 1938-39, exports of cheese totalled 16,000 tons of which 15,500 tons or 97 per cent. were exported to the United Kingdom. Of the total of 22,800 tons exported in 1953-54 17,900 tons or 79 per cent. were shipped to the United Kingdom.

Total quantities and values of exports of Australian origin of butter, cheese and condensed, concentrated, etc., milk and cream are shown on page 952.

(ii) *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 the supervision, inspection and examination of 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 Bulletin* No. 48, Part 1.—*Rural Industries*, 1953-54.

**BULK BUTTER AND CHEESE GRADED FOR EXPORT : AUSTRALIA.**  
(Per Cent.)

Grade.	Butter.			Cheese.		
	1951-52.	1952-53.	1953-54.	1951-52.	1952-53.	1953-54.
Choicest .. ..	56.4	48.8	46.3	3.4	3.3	1.7
First Quality .. ..	34.3	39.7	42.7	70.7	80.0	82.9
Second Quality .. ..	7.3	9.5	8.6	25.9	16.7	15.4
Third Quality(a) .. ..	2.0	2.0	2.4	(b)	(b)	(b)
Total .. ..	100.0	100.0	100.0	100.0	100.0	100.0

(a) Includes rejected.

(b) Included with Second Quality.

### § 4. Pigs and Pig Products.

1. Pigs.—The number of pigs in Australia first reached a million in 1905. It fluctuated about this level up to 1940, when it reached 1,455,311 while in 1941 the record number of 1,797,340 was recorded. There was a decline in the following two years but the numbers rose again to 1,746,721 in 1944; thereafter there was an almost continuous decline until 1953 when the number of pigs was only 992,532. In 1954 however, the number increased to 1,197,640 which is the highest figure since 1948. Details of the number of pigs in each State and Territory for each of the five years 1950 to 1954, together with the average for the five years 1935 to 1939, are given in the following table.

#### NUMBER OF PIGS.

As at 31st March.	N.S.W.	Vic.	Qld.	S. Aust.	W. Aust.	Tas.	N.T.(a)	A.C.T.	Total.
Average, 1935 to 1939(b) .. ..	391,874	287,140	294,777	80,548	83,999	42,772	479	544	1,182,133
1950 .. ..	333,198	212,901	391,836	69,523	79,126	35,841	419	423	1,123,267
1951 .. ..	316,833	237,127	374,991	67,517	89,910	45,446	1,122	642	1,133,588
1952 .. ..	292,829	213,670	316,529	64,903	86,224	46,926	794	249	1,022,124
1953 .. ..	209,600	182,824	335,809	58,657	76,195	30,378	799	180	992,532
1954 .. ..	371,608	232,384	384,453	60,619	100,912	46,256	1,132	276	1,197,640

(a) As at 1st January.

(b) As at 31st March for New South Wales and Australian Capital Territory; 1st March for Victoria; 1st January for Queensland, South Australia, Western Australia and Tasmania.

Further details relating to pig numbers are given in Chapter XXII.—Pastoral Production. A map showing the distribution of pigs in Australia at 31st March, 1948, appeared on p. 908 of Official Year Book No. 39.

2. Size of Pig Herds.—A series of special tabulations relating to rural holdings undertaken for all States for the year 1949-50 covered, *inter alia*, a classification of holdings carrying pigs according to size of herd. Full details of these tabulations were published in *Primary Industries Bulletin* No. 44, 1949-50.

3. **Pigs Slaughtered.**—The number of pigs slaughtered during each of the years 1949–50 to 1953–54 and the average for the years 1934–35 to 1938–39 are shown in the following table :—

## PIGS SLAUGHTERED.

('000.)

Year.	Slaughterings Passed for Human Consumption.							Total Slaughtering (including Boiled Down).
	N.S.W.	Vic.	Q'land.	S. Aust.	W. Aust.	Tas.	Total.(a)	
Average, 1934–35 to 1938–39	555	484	525	154	119	61	1,899	1,912
1949–50 ..	479	299	504	110	111	51	1,557	1,568
1950–51 ..	454	312	460	115	113	58	1,516	1,529
1951–52 ..	468	339	370	108	132	66	1,488	1,500
1952–53 ..	458	297	400	115	122	66	1,463	1,474
1953–54 ..	492	298	461	104	115	59	1,534	1,545

(a) Including Australian Capital Territory and Northern Territory.

4. **Pork.**—(i) *Production.* In the following table details of the production of pork in each State are shown for the years 1949–50 to 1953–54 compared with average production during the years 1934–35 to 1938–39.

## PRODUCTION OF PORK (BONE-IN WEIGHT).

(Tons.)

Year.	N.S.W.	Vic.	Q'land.	S. Aust.	W. Aust.	Tas.	N.T.	A.C.T.	Total.
Average, 1934–35 to 1938–39 ..	9,938	12,236	9,867	3,215	1,741	1,240	7	38	38,282
1949–50 ..	10,260	6,645	12,911	2,009	1,793	1,208	42	90	34,958
1950–51 ..	9,307	7,596	11,751	2,774	2,116	1,499	64	150	35,237
1951–52 ..	10,382	8,716	8,604	2,551	2,550	1,981	70	170	35,024
1952–53 ..	9,611	6,925	6,548	2,836	2,436	1,920	60	132	30,468
1953–54 ..	12,949	7,332	7,216	2,253	2,032	1,399	69	146	33,396

(ii) *Consumption.* As in the case of other meats, pork was subject to rationing during the 1939–45 War and immediate post-war years and consumption was at a much lower level than pre-war. By 1948–49 it had returned to about 7 lb. per head, remaining at this level until 1951–52. In 1952–53 consumption fell to 5.8 lb., but rose again in 1953–54 to 7.7 lb. per head. In the following table details of the production and disposal of pork are shown for the years 1949–50 to 1953–54 compared with averages for the three years 1936–37 to 1938–39.

## PRODUCTION AND DISPOSAL OF PORK (BONE-IN WEIGHT) : AUSTRALIA.

Year.	Changes in Stock.	Production. (a)	Exports.	Canning.	Consumption in Australia.	
					Total.	Per Head per annum.
	'000 tons.	'000 tons.	'000 tons.	'000 tons.	'000 tons.	lb.
Average, 1936–37 to 1938–39 ..	..	45.5	13.7	..	31.8	10.4
1949–50 ..	+0.1	35.0	6.7	2.2	26.0	7.2
1950–51 ..	+0.5	35.3	5.6	4.0	25.2	6.8
1951–52 ..	+0.4	35.0	1.7	5.3	27.6	7.3
1952–53 ..	+0.8	30.5	1.5	5.5	22.7	5.8
1953–54 ..	—1.1	33.4	1.2	2.8	30.5	7.7

(a) Includes an estimate of trimmings from baconer carcasses.

5. **Bacon and Ham.**—(i) *Production.* As in the case of pork, the increased demand for bacon and ham during the war years stimulated production to a level not previously attained. Production reached its peak in 1944-45 when 56,246 tons of bacon and ham were cured. This was followed by a continuous decline in output in each succeeding year to 36,628 tons in 1951-52. In 1952-53 there was a slight recovery in production to 38,545 tons followed by another decline to 36,990 tons in 1953-54. Details of production are shown by States in the following table for each year 1949-50 to 1953-54 compared with the average production for the five pre-war years ended 1938-39.

#### PRODUCTION OF BACON AND HAM (CURED WEIGHT).

(Tons.)

Year.	N S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas.	A.C.T.	Australia.
Average, 1934-35 to 1938-39	9,963	7,614	9,269	2,950	2,013	970	1	32,780
1949-50 .. ..	12,955	9,779	10,018	3,318	3,542	991	..	40,603
1950-51 .. ..	12,629	7,905	8,764	3,042	3,558	946	..	36,844
1951-52(a) .. ..	12,514	8,964	7,669	2,969	3,683	820	..	36,128
1952-53(b) .. ..	13,228	8,165	9,510	3,063	3,693	886	..	38,545
1953-54(a) .. ..	11,875	7,044	10,655	3,024	3,443	949	..	36,990

(a) Pressed and canned bacon and ham have been converted to bone-in weight.

(ii) *Consumption.* Consumption per head declined in the early stages of the 1939-45 War from the pre-war average of 10.2 lb. per annum, but subsequently increased to 12.7 lb. in 1946-47. Since that year there has been a steady decline to 7.2 lb. per head during 1953-54. Details of production and disposal of bacon and ham for the years 1949-50 to 1953-54 compared with average production and disposal for the period 1936-37 to 1938-39 are shown in the following table:—

#### PRODUCTION AND DISPOSAL OF BACON AND HAM (CURED WEIGHT) : AUSTRALIA.

Year.	Changes in Stock.	Production.	Exports.	Canning.	Consumption in Australia.	
					Total.	Per head per annum.
	'000 tons.	'000 tons.	'000 tons.	'000 tons.	'000 tons.	lb.
Average, 1936-37 to 1938-39 .. ..	(a)	32.5	1.0	..	31.5	10.2
1949-50 .. ..	+0.1	40.6	3.3	2.6	34.6	9.6
1950-51 .. ..	+0.2	36.8	3.0	2.9	30.7	8.3
1951-52(b) .. ..	+0.2	36.6	2.8	6.1	27.5	7.2
1952-53(b) .. ..	-0.7	38.5	2.0	8.9	28.3	7.3
1953-54(b) .. ..	+0.4	37.0	1.6	6.5	28.5	7.2

(a) Not available.

(b) Pressed and canned bacon and ham have been converted to bone-in weight.

6. **United Kingdom Contracts.**—Details relating to the several war-time contracts and the more recent Long-term Purchase Agreement between the Governments of the Commonwealth and the United Kingdom for the sale of Australia's surplus production of meats (including pigmeats) are included in Chapter XXII.—Pastoral Production.

7. **Oversea Trade in Pigs and Pig Products.**—Total quantities and values of exports of Australian origin of pigs and pig products (bacon and ham, lard and frozen pork) for the years 1938-39, 1952-53 and 1953-54 are shown on page 952.

### § 5. Poultry-farming.

1. *General.*—Poultry-farming has been carried on in Australia for many years and the State Departments of Agriculture have encouraged its development by appointing experts to advise on the care and management of poultry and by conducting egg-laying competitions. Originally the industry was conducted in conjunction with other branches of rural activity, mainly dairying, but it is now a specialized and distinct industry and it is from this source that the bulk of the commercial production is obtained. Practically all farms keep poultry for the purpose of supplying their own domestic requirements and in many cases some supplies from this source are also marketed. In addition, many private homes keep small numbers of fowls in backyard runs and this helps to maintain domestic needs particularly when eggs are in short supply.

2. *Numbers of Poultry.*—In pre-war years the numbers of the principal kinds of poultry were a normal feature of the annual census of livestock in all States except Victoria and Tasmania. These data were collected on a restricted scale by all States in 1942-43, the details obtained being confined to farms of one acre or more producing eggs or poultry for sale. The collection has since been discontinued in some States. Because of their incompleteness, details of poultry numbers are not published.

3. *Recorded Production and Disposal of Eggs.*—(i) *Shell Eggs.* Available statistics of the production and disposal of eggs in Australia are restricted to those recorded by the Egg Boards of the several States. As Boards were not set up in all States until 1943, comparable statistics of recorded production of eggs for Australia as a whole are not available prior to 1943-44. Details of production in the respective States as recorded by these authorities for the years 1949-50 to 1953-54 are shown in the following table :—

**SHELL EGGS : PRODUCTION(a) RECORDED BY EGG BOARDS.**  
(<sup>000</sup> Dozen.)

State.	1949-50.	1950-51.	1951-52.	1952-53.	1953-54.
New South Wales ..	52,269	50,465	50,271	50,884	51,884
Victoria .. ..	20,985	25,573	23,492	24,701	25,306
Queensland .. ..	11,176	10,858	8,426	7,860	8,555
South Australia ..	13,089	11,663	10,741	11,354	12,040
Western Australia ..	7,653	7,437	8,077	8,783	9,283
Tasmania .. ..	1,514	1,297	1,027	1,107	934
Total .. ..	115,686	107,293	102,034	104,694	108,002

(a) Receipts from consignors and sales by producer agents.

(ii) *Egg Pulp.* Prior to the 1939-45 War, production of egg pulp was about 7 million lb. per annum. This was used almost entirely for the manufacture of cakes, pastry and biscuits, only negligible quantities being exported. Production was expanded greatly during the war years to meet the requirements of the Armed Services and has since been maintained at a high level for export purposes and to meet increased local requirements.

Particulars of the production of whole egg pulp as recorded by the Egg Boards in the several States are shown in the following table.

**LIQUID WHOLE EGG : PRODUCTION RECORDED BY EGG BOARDS.**  
(<sup>000</sup> lb.)

State.	1949-50.	1950-51.	1951-52.	1952-53.	1953-54.
New South Wales ..	14,760	16,003	12,357	16,991	20,942
Victoria .. ..	8,565	6,153	6,559	6,467	8,295
Queensland .. ..	4,498	4,008	2,278	2,315	3,703
South Australia ..	6,574	5,692	5,629	6,284	8,178
Western Australia ..	1,837	1,939	2,878	3,490	3,894
Tasmania .. ..	407	353	249	359	239
Total .. ..	36,641	34,148	29,950	35,906	45,251



In addition to liquid whole egg, production was also recorded of liquid egg whites and liquid egg yolks. Output in 1953-54 amounted to 298,371 lb. and 191,179 lb. respectively compared with 387,032 lb. and 253,742 lb. respectively in the previous year.

(iii) *Egg Powder.* The production of dried egg powder was established in Australia in 1942, to treat Australia's surplus eggs so as to maintain exports under war-time conditions to the United Kingdom. Production was continued after the end of the war for export purposes, but since 1946-47 has declined to negligible proportions.

4. *Production and Consumption of Eggs.*—Statistics of total egg production must necessarily 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 (a) : AUSTRALIA.

Year.	Changes in Stock.	Estimated Total Production.	Exports.	For Drying and Pulping.(b)	Consumption in Aus- tralia as Human Food.	
					Total.	Per head per annum.
	'ooo tons.	'ooo tons.	'ooo tons.	'ooo tons.	'ooo tons.	lb.
Average, 1936-37 to						
1938-39 .. ..	(c)	89.5	7.6	3.2	78.7	25.7
1949-50 .. ..	— 0.3	116.5	14.0	19.0	83.8	23.3
1950-51 .. ..	+ 0.2	110.4	8.4	17.0	84.8	22.9
1951-52 .. ..	+ 1.1	106.9	8.5	14.9	82.4	21.6
1952-53 .. ..	— 1.2	108.6	12.6	16.8	80.4	20.6
1953-54 .. ..	+ 0.2	111.8	7.9	21.0	82.7	20.8

(a) The average weight of an egg in Australia is taken as 1.75 oz.

(b) Includes wastage.

(c) Not available.

Details of the consumption of shell eggs, liquid whole egg and total shell egg equivalent (expressed in lb. and in number of eggs) per head of population per annum are shown in the following table :—

#### SUPPLIES OF EGGS AND EGG PRODUCTS (a) MOVING INTO CONSUMPTION : AUSTRALIA.

(Per head per annum.)

Commodity.		Average, 1936-37 to 1939-39.	1949-50.	1950-51.	1951-52.	1952-53.	1953-54.
Shell Eggs ..	lb.	25.7	23.3	22.9	21.6	20.6	20.8
Liquid Whole Egg and Egg Powder(a) ..	lb.	0.9	2.6	2.2	2.3	1.7	1.5
Total— {							
Number(b)		26.6	25.9	25.1	23.9	22.3	22.3
		243	236	229	219	204	204

(a) In terms of weight of shell eggs.  
1.75 oz.

(b) The average weight of an egg in Australia is taken as

5. *Marketing of Eggs.*—(i) *United Kingdom Contracts.* Details of the annual contracts entered into between the United Kingdom and Australian Governments will be found in Official Year Book Nos. 38, pp. 1048-9 and 40, p. 930.

In respect of the 1953-54 season the Ministry of Food agreed to pay to the Australian Government the actual United Kingdom market realizations for eggs in shell, less actual cost, paid by the Ministry up to the point of delivery to wholesalers. For the same

season the contract price for egg pulp was fixed at £294 sterling per ton, f.o.b. Australian ports which is equivalent to 3s. 3.375d. per lb. (Australian currency) and represents an increase of 3½d. per lb. (Australian currency) over the contract price for the 1952-53 season. The United Kingdom market realizations for Australian eggs in shell during the 1953-54 season were nearly 25 per cent. below those received during 1952-53, the final year of the contract, when the contract price was 4s. 2.25d. per dozen for packs of 15 lb. In order to cushion the effect of the collapse of the United Kingdom market in the first year following de-control in the United Kingdom, the Commonwealth Government in 1954 made a special grant of £250,000 to egg producers. Commencing from the 1954-55 season, however, the Ministry of Food discontinued its system of control over the distribution and sale of imported eggs. Prices realized for Australian eggs were slightly below the realizations for the 1953-54 season. Egg pulp was also sold under free market conditions. Australian pulp exported to the United Kingdom amounted to approximately 95,000 tons and was sold at prices ranging from £210 to £215 sterling per ton f.o.b. port of shipment.

(ii) *Egg Export Control Act 1947.* Following the termination of Commonwealth control over the production and marketing of eggs on 31st December, 1947, functions relating to the local marketing of eggs reverted to State Egg Boards which became responsible for stabilizing prices and marketing of eggs produced in the respective States. In order to assist in marketing Australia's surplus production of eggs under the Long-term Purchase Agreement with the United Kingdom, the Commonwealth established the Australian Egg Board under the Egg Export Control Act 1947. The Board, which commenced to operate on 1st January, 1948, was empowered to buy and sell, on behalf of the Commonwealth Government, eggs and egg products intended for export which comply with the provisions of the Export (Dairy Produce) Regulations. In addition, the Board was authorized to deal with all matters relating to the export of eggs and egg products from Australia, to make such experiments as are likely to lead to the improvement of the quality of Australian eggs and to promote their sale overseas. The Board consisted of ten members, including six representatives of egg producers and one representative of the Commonwealth Government.

Due to the discontinuance of inter-Governmental trading in eggs and egg products, the Egg Export Control Act was amended in April, 1954, to provide for the reconstruction of the Australian Egg Board and the implementation of an egg export marketing scheme. The new Board, established on 17th June, 1954, comprises nine members including a representative of the Commonwealth Government and representatives from each State Egg Marketing Board (except Tasmania). The Board is empowered to act as a trading authority selling eggs and egg pulp as agent for State Egg Boards. However any State Board desiring to export on its own account may do so subject to general terms and conditions to be laid down by the Australian Egg Board.

**6. Oversea Trade in Poultry Products.**—The Australian oversea export of poultry products has in the past been confined chiefly to eggs in shell and egg contents, which are consigned mainly to the United Kingdom. In 1949-50 exports of eggs in shell reached the record level of 23.0 million dozen, but in the two succeeding years amounted to less than 14 million dozen, and in 1953-54 to 12.9 million dozen.

Prior to the 1939-45 War, exports of egg contents were small and in 1939-40 there was an excess of imports. During the war years, exports expanded greatly, mainly to meet Service requirements, and since the close of the war there was further expansion until 1947-48 when 30.6 million lb. of egg contents were shipped. Between 1947-48 and 1952-53 exports declined but rose again in 1953-54 to 37.1 million lb.

Since the close of the war there has also been a considerable increase in the exports of frozen poultry, exports amounting to 308,000 pairs in 1953-54 compared with the average for the pre-war years 1934-35 to 1938-39 of 37,913 pairs.

Total quantities and values of exports of Australian origin of poultry products (live poultry, frozen poultry, eggs in shell, egg pulp and powder and undressed feathers) for the years 1938-39, 1952-53 and 1953-54 are shown on page 952.

## § 6. Bee-farming.

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, but its place in Australia's rural economy is not very significant. The returns of honey from productive hives during 1953-54 showed an average of 108 lb. per hive and the average quantity of wax was 1.3 lb. per productive hive.

The number of hives and the production of honey and bees-wax during the year 1953-54 are shown in the following table.

**BEEHIVES, HONEY AND BEES-WAX, 1953-54.**

State.	Beehives.			Honey Produced.		Bees-wax Produced.	
	Pro- ductive.	Unpro- ductive.	Total.	Quantity.	Gross Value.	Quantity.	Gross Value.
	'000.	'000.	'000.	'000 lb.	£	lb.	£
New South Wales ..	109	35	144	10,381	475,794	122,985	40,739
Victoria ..	87	22	109	9,383	430,020	100,562	35,197
Queensland ..	30	12	42	2,888	132,374	43,045	10,761
South Australia ..	74	18	92	6,378	193,459	78,455	17,139
Western Australia	28	5	33	6,325	219,956	72,833	14,448
Tasmania ..	4	1	5	365	21,310	4,342	1,850
Australian Capital Territory ..	(a)	(a)	(a)	17	845	152	50
Australia(b) ..	332	93	425	35,737	1,473,758	422,374	120,184

(a) Less than 500.

(b) Excludes Northern Territory.

The production of honey and bees-wax fluctuates considerably and is determined mainly by the flow of nectar from flora of the eucalypts, which varies greatly from year to year. In recent years there has been a pronounced upward trend in the output of honey, the 1948-49 figure, 53,200,000 lb., being an all-time record. Production in 1953-54, 35,737,000 lb., although much lower than in 1948-49, was still higher than pre-war.

The table hereunder shows the production of honey and bees-wax for the five years ended 1953-54 in comparison with the averages for the years 1934-35 to 1938-39.

**HONEY AND BEES-WAX PRODUCTION.**

Year.	N.S.W.	Vic.	Q'land.	S. Aust.	W. Aust.	Tas.	Aust.
HONEY ('000 lb.).							
Average, 1934-35 to 1938-39 ..	3,827	3,600	680	3,388	1,125	181	(a) 12,810
1949-50 ..	9,227	7,744	1,187	5,179	2,041	285	(a) 25,663
1950-51 ..	9,994	8,088	1,925	5,803	1,314	315	(a) 27,439
1951-52 ..	6,814	5,208	706	4,191	3,480	254	(a) 20,653
1952-53 ..	8,046	6,235	2,166	7,656	3,393	309	(b) 27,810
1953-54 ..	10,381	9,383	2,888	6,378	6,325	365	(b) 35,737

**BEES-WAX (lb.).**

Average, 1934-35 to	N.S.W.	Vic.	Q'land.	S. Aust.	W. Aust.	Tas.	Aust.
1938-39 ..	55,927	41,856	10,318	41,083	18,855	2,382	(a) 170,421
1949-50 ..	117,939	78,124	22,162	76,442	32,045	3,724	(a) 324,436
1950-51 ..	126,047	90,605	29,907	78,838	16,968	4,218	(a) 346,583
1951-52 ..	85,801	55,963	13,080	58,178	44,860	3,266	(a) 263,148
1952-53 ..	94,297	71,536	29,703	102,733	39,912	3,548	(b) 341,779
1953-54 ..	122,985	100,562	43,045	78,455	72,833	4,342	(b) 422,374

(a) Excludes Australian Capital Territory and Northern Territory.

(b) Excludes Northern Territory.

2. **Oversea Trade in Bee Products.**—Prior to the 1939-45 War the production of honey exceeded Australian requirements and a small quantity was available for export. In 1948-49 the record quantity of 32.09 million lb., was exported. In 1952-53 exports amounted to 16.61 million lb. and in 1953-54 to 14.36 million lb.

The wider use of frame hives has reduced the production of wax, and as a result the quantity of bees-wax imported generally exceeded that exported up to 1945-46. During each year, however, since 1946-47, with the exception of 1951-52, production has been high on account of exceptionally good seasons, and exports have exceeded imports by substantial margins. In 1953-54 exports exceeded imports by an amount of 169,170 lb.

Total quantities and values of exports of Australian origin of honey and bees-wax for the years 1938-39, 1952-53 and 1953-54 are shown in §7 below.

### § 7. Exports of Australian Farmyard, Dairy and Bee Products.

The quantities and values of Australian farmyard, dairy and bee products exported during 1952-53 and 1953-54 are shown below in comparison with those of 1938-39.

#### AUSTRALIAN FARMYARD, DAIRY AND BEE PRODUCTS: EXPORTS OF AUSTRALIAN ORIGIN.

Particulars.	Unit of Quantity.	Quantity.			Value (£A'000 f.o.b. Port of Shipment).		
		1938-39.	1952-53.	1953-54.	1938-39.	1952-53.	1953-54.
Bees-wax .. ..	lb.	5,565	156,932	178,707	(a)	2F	39
Butter .. ..	'000 lb.	229,543	110,428	88,030	12,892	20,075	16,052
Cheese .. ..	"	35,924	53,006	50,959	1,074	5,851	5,329
Eggs in Shell .. ..	'000 doz.	10,144	20,911	12,902	638	4,344	2,751
Eggs not in Shell—							
Egg Pulp .. ..	'000 lb.	650	23,743	37,147	23	3,552	5,775
Egg Powder .. ..	"	(b)	304	731	(a)	22	124
Feathers, undressed .. ..	"	(b)	(b)	(b)	(a)	4	2
Honey .. ..	'000 lb.	687	16,613	14,355	14	773	634
Lard .. ..	"	(c) 5,491	183	501	(c) 68	26	24
Meats—							
Bacon and Ham .. ..	"	(d) 1,739	3,649	2,792	(d) 120	774	622
Frozen Poultry .. ..	'000 prs.	22	980	308	20	1,629	676
Frozen Pork .. ..	'000 lb.	30,716	3,453	2,758	882	472	462
Milk—							
Condensed, Preserved, &c.—							
Sweetened Full Cream .. ..	"	12,572	84,913	57,186	406	6,263	4,908
Skim .. ..	"	"	69	91	"	3	4
Unsweetened .. ..	"	754	4,604	3,451	19	290	265
Dried or Powdered—							
Full Cream .. ..	"	3,001	27,338	17,917	93	3,308	2,349
Skim .. ..	"	575	30,209	34,885	6	1,577	1,599
Malted .. ..	"	565	3,167	3,613	57	519	551
Infants' and Invalids' .. ..	"	"	"	"	"	"	"
Foods—							
Essentially of Milk .. ..	"	1,637	4,252	5,107	210	696	929
Other .. ..	"	"	4,622	4,365	"	821	808
Pigs, live .. ..	Number	61	736	611	(a)	17	15
Poultry, live .. ..	"	2,189	47,551	66,469	1	8	8
Total .. ..					16,523	51,058	43,926

(a) Less than £500. (b) Quantity not available. (c) Includes lard oil and refined animal fats. (d) Excludes tinned bacon.

## § 8. Imports of Dairy and Farmyard Products into United Kingdom.

NOTE.—Values of imports in this section are expressed in £ sterling at the landed c.i.f. point.

1. Summary, Principal Products.—The following table shows the quantities and values of the principal dairy products imported into the United Kingdom during the years 1939, 1953 and 1954.

## DAIRY PRODUCTS : IMPORTS INTO UNITED KINGDOM.

Product.	Unit of Quantity.	1939.		1953.		1954.	
		Quantity.	Value.	Quantity.	Value.	Quantity.	Value.
			£'000.		£'000.		£'000.
Butter .. ..	'000 cwt.	8,737	48,424	5,638	94,889	5,646	98,084
Cheese .. ..	"	2,845	8,669	2,920	30,454	2,640	27,366
Milk, powdered and pre-served .. ..	"		2,818		11,539		5,970
Bacon and ham ..	'000 cwt.	7,953	37,105	6,612	86,923	6,309	77,405
Pork (a) .. ..	"	989	3,036	892	11,216	655	8,008
Eggs in shell ..	'000 doz.	283,315	12,835	134,526	23,947	119,713	19,577
Eggs, not in shell, liquid or frozen .. ..	'000 cwt.	800	2,292	532	7,004	579	7,977

(a) Excluding pork in airtight containers.

2. Butter.—Until 1950 Australia had regularly supplied between 20 and 30 per cent. of the butter imported into the United Kingdom. Since 1950, when butter rationing was abolished in Australia, the quantity shipped has been considerably lower and in 1954 amounted to 583,474 cwt., or 10.3 per cent. of the total United Kingdom imports. New Zealand supplied 43.4 per cent. of the total quantity imported during 1954 and Denmark, 35.9 per cent.

In the following table particulars of the quantity and value of butter imported into the United Kingdom are shown for the years 1938, 1953 and 1954, according to country of origin.

## BUTTER : IMPORTS INTO UNITED KINGDOM.

Country from which Imported.	1938.		1953.		1954.	
	Quantity.	Value.	Quantity.	Value.	Quantity.	Value.
	'000 cwt.	£'000.	'000 cwt.	£'000.	'000 cwt.	£'000.
New Zealand ..	2,592	14,524	2,620	43,502	2,453	42,033
Australia .. ..	1,798	9,630	551	9,135	583	9,968
Other Commonwealth Countries and Republic of Ireland ..	423	2,455	..	..	106	1,087
Denmark .. ..	2,365	12,960	2,074	35,861	2,026	35,459
Netherlands ..	712	3,466	240	3,919	285	5,306
Other Foreign Countries	1,628	7,838	154	2,486	193	3,331
Total .. ..	9,518	50,873	5,639	94,903	5,646	98,084

3. Cheese.—The value of cheese imported into the United Kingdom in 1954 was £27,365,587. Of this, £18,127,910 was imported from New Zealand, £3,574,521 from Australia, £2,284,030 from Denmark and £1,547,967 from the Netherlands.

4. Bacon.—Of a total import in 1954 of bacon (excluding bacon in airtight containers) valued at £70,445,769, the value of that supplied by Denmark was £49,995,829, Poland, £10,156,135, and the Netherlands, £6,183,846.

5. Pork.—The value of the United Kingdom imports of pork (excluding pork in airtight containers) was £8,008,191 in 1954. Imports from Republic of Ireland, valued at £3,480,131, New Zealand, £1,876,386, and Denmark, £1,367,777, comprised 84 per cent. of the imports into the United Kingdom.

6. Eggs.—In 1954 the value of eggs imported into the United Kingdom was £27,553,885, comprising eggs in shell, £19,577,318, and liquid or frozen eggs, £7,976,567. The Australian share in this trade amounted to £6,929,546. Eggs in shell were supplied principally by Denmark, £15,051,030, and Australia, £1,670,267.

7. Milk Products.—In 1954 the value of preserved milk imported into the United Kingdom was £5,969,992. Of this total, imports from Australia amounted to £1,442,615.

8. Other Products.—The imports into the United Kingdom from Australia of poultry (excluding poultry meat in airtight containers) amounted to £264,359, while those of bees-wax, lard and honey in 1954 were unimportant.

## CHAPTER XXIV.

## FORESTRY.\*

## § 1. General.

NOTE.—Values of Australian oversea trade shown throughout this Chapter are expressed in £A f.o.b., Port of Shipment, except where otherwise indicated.

1. **Objects of Forestry.**—The main object of forestry is to manage the forests of a country in the way 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, and aesthetic effects.

Forestry aims to improve existing forests and woodlands by properly controlled exploitation, by protection from destructive agencies such as fire, and by inducing natural regeneration where it is desirable. Forestry also aims to provide a partial tree cover on denuded lands when such cover is necessary for protective purposes, and a complete cover when the land is better under forest than under any other crop.

2. **General Account of Forests and Timbers.**—The area of land in Australia suitable for the production of commercial timber as the primary crop is very small in comparison with the size of the continent. It is concentrated mainly around the wetter coastal belts and the eastern highlands and it includes the bulk of the land suitable for intensive development by agricultural or pastoral undertakings.

The allocation of land for agricultural and pastoral purposes led to the clearing of much of the original forest of Australia, particularly of the more readily accessible parts. In the early period of agricultural and pastoral expansion, only the best timbers found their way into commerce, and species now prized as providing high quality woods were often put to inferior uses. During this period the forest resources of the country were considered by the majority of the people to be inexhaustible, and relatively little care was taken to prevent the degradation of the remaining forests by fire and uncontrolled grazing. This state of affairs is rapidly changing; it is now recognized that the remaining forest land must be protected and properly managed in the interests of the community.

The trees which make up the forests of Australia are mainly evergreen hardwoods. The characteristic genus is *Eucalyptus*. There are over six hundred different kinds of eucalypts and with few exceptions the natural occurrence of all of them is restricted to Australia. The genus includes such species as the mountain ash (*Eucalyptus regnans*) of Victoria and Tasmania, and karri (*E. diversicolor*) of Western Australia, which are the tallest-growing hardwoods in the world. At the other end of the scale there are many eucalypts which do not grow to tall trees, including the species collectively known as the "mallees". The mallees develop a number of small stems from an underground structure called the "mallee root".

\* A specially contributed article dealing with Forestry in Australia appeared as part of Chapter XIX in Official Year Book No. 19 (see pp. 701-12 therein). See also "The Commercial Timbers of Australia, Their Properties and Uses" by I. H. Boas, published by the Council for Scientific and Industrial Research in 1947, "Timbers and Forest Products of Queensland" by E. H. S. Swain, published in 1925 and "Australian Standard Nomenclature of Australian Timbers" published by the Standards Association of Australia.

Less than 100 eucalypts are used for sawmilling and not more than 30 to 40 are exploited extensively. The main commercial eucalypts were listed in Official Year Book No. 39 and earlier issues.

The eucalypts satisfy the Australian requirement for timbers having great strength and durability. They also provide a large proportion of the building timber and some of the wood required for packaging. In recent years some eucalypts have been used extensively for papermaking and for the manufacture of hardboard and fibreboard. The species most commonly used for pulping are mountain ash (*E. regnans*), alpine ash (*E. gigantea*), and messmate, stringybark or Tasmanian oak (*E. obliqua*).

A large number of other genera represented in the Australian forest flora also produce commercial hardwoods. Among the outstanding furniture cabinet and veneer timbers are red cedar (*Cedrela toona* var. *australis*), Queensland maple (*Flindersia brayleyana*), Southern and Northern silky oak (*Grevillea robusta* and *Cardwellia sublimis*, respectively), Queensland walnut (*Endiandra palmerstoni*), blackwood (*Acacia melanoxylon*), rose mahogany (*Dysoxylum fraserianum*), etc. Turpentine (*Syncarpia laurifolia*) ranks with the world's best as a harbour piling timber. Coachwood (*Ceratopetalum apetalum*) came into prominence for rifle furniture and for aircraft plywood, during the 1939-45 War.

The foregoing are but a few examples indicating the range of use of the timbers of the Australian hardwood forests.

The most important indigenous softwood resources of Australia were in the forests of hoop pine (*Araucaria cunninghamii*) of Queensland and New South Wales. These forests occurred on rich land suitable for intensive agriculture. The greater part of the original hoop pine forest has gone but the wood removed made an important contribution to the Australian timber industry. Some areas of the hoop pine forest have been replanted with this species in Queensland and, to a lesser extent, in New South Wales.

There are still considerable areas of the useful white-ant resisting cypress pine (*Callitris* spp.) in the inland areas of Queensland and New South Wales. They have been seriously overcut but are gradually being brought under management.

Other native softwoods which have played a useful but minor part in the Australian timber industry include bunya pine (*Araucaria bidwillii*) and kauri (*Agathis* spp.) of Queensland, and huon pine (*Dacrydium franklinii*), celerytop pine (*Phyllocladus rhomboidalis*) and King William pine (*Athrotaxis selaginoides*) of Tasmania.

The savannah woodlands of the interior of Australia yield commercial commodities such as sandalwood, tanbarks and essential oils. They also have an important function in providing fuel and rough timbers for the development of agricultural and pastoral holdings.

**3. Extent of Forests.**—According to data assembled for the Sixth British Commonwealth Forestry Conference held in Canada in 1952, the total area of forest in Australia is estimated at 159,751 square miles, or about 5.4 per cent. of the total land area of the continent. The estimated forest area is distributed amongst the States as follows (the proportion of forest land to the total area of each State is shown in parenthesis):—New South Wales and the Australian Capital Territory, 47,356 square miles (15 per cent.); Victoria, 26,236 (30 per cent.); Queensland, 22,300 (3 per cent.); South Australia, 10,311 (including 4,600 square miles of mallee suitable for firewood only) (3 per cent.); Western Australia, 41,256 (4 per cent.); and Tasmania, 12,292 (47 per cent.). The areas given are rough estimates only and are considerably in excess of those which are both suitable for reservation and likely to be maintained for timber production. Considerable areas of low grade forest which, in many cases, are suitable for little more than the production of firewood are included. It is doubtful if the remaining prime native forest area of Australia exceeds 20,000 square miles. The proportion of Australia carrying commercial forests is therefore very low and apart from forests on the coastal fringe of the continent, the tree density is very low.



The table below shows a classification of the estimated total forest area referred to above :—

CLASSIFICATION OF FOREST AREA : AUSTRALIA (a).

Class of Forest.	Area (Square Miles).				Proportion of Total Forest Area.
	State Forest.	Communal Forest.	Private Forest.	Total.	
Exploitable—					%
Softwood .. ..	4,157	5	1,072	5,234	3.3
Mixed wood .. ..	729	..	..	729	0.5
Hardwood .. ..	41,020	74	11,050	52,144	32.6
Total .. ..	45,906	79	12,122	58,107	36.4
Potentially Exploitable—					
Softwood .. ..	156	..	78	234	0.1
Mixed wood .. ..	..	..	..	..	..
Hardwood .. ..	15,063	..	12,877	27,940	17.5
Total .. ..	15,219	..	12,955	28,174	17.6
Other Land Classed as Forest .. ..	67,294	450	5,726	73,470	46.0
Grand Total ..	128,419	529	30,803	159,751	100.0

(a) Based on the 1950 classification of forests.

State forests accounted for 80.4 per cent. of the total forest area, private forests for 19.3 per cent. and communal forests for 0.3 per cent.

The bulk of the softwood area of approximately 5,468 square miles is in Queensland and New South Wales and consists principally of natural forest, a large proportion of which is slow-growing cypress pine (*Callitris spp.*) in low rainfall areas. The volume of this species per acre is comparatively low.

4. Forest Reservations.—The first attempt to determine the forest area which should be reserved solely for purposes of timber production was made at an Interstate Forestry Conference held at Hobart in 1920. This Conference decided that an area of 24½ million acres of indigenous forest should be permanently reserved. According to statements furnished by State and Commonwealth authorities, reservations of forest areas in Australia at 30th June, 1954, totalled 31,932,993 acres of which 20,970,361 acres were Dedicated State Forests and 10,962,632 acres were Timber, Fuel and Other Reserves. The distribution of these areas is shown by States in § 4, para. 2 of this chapter.

In general, the Timber Reserves are temporary and are liable to be alienated after the timber on them has been exploited. Some of these areas contain land of high value for forestry purposes, but the greater part does not justify permanent reservation.

If the permanently reserved areas were all of good quality, accessible, and fully productive forests supplying the class of timber required, they could be regarded as adequate for a much larger population than exists in Australia at the present time. Actually, however, a considerable proportion is in inaccessible mountainous country and many of the forests contain a mixture of species, some only of which are at present of commercial value: much of it consists of inferior forest and a large proportion of the whole has been seriously degraded by recurrent fires. Also the indigenous forest does not contain adequate supplies of softwoods producing commercial timbers and Australia's requirements of these have to be met largely by imports from other countries.

It is freely acknowledged by Australian forestry authorities that information on forest resources is very imperfect. It is not possible at present to give a reliable estimate of the forest areas needed to meet all future demands because of the number of unknown variables involved; in particular the yield capacity per acre, future consumption of different classes of timber per head, and the future population. It appears however, that all available potentially good forest country, including adequate areas for plantations of conifers, will need to be reserved, protected and systematically managed, if Australia is to approach the goal of self sufficiency in timber supplies in the future. One of the most urgent requirements in this connexion is a comprehensive estimate of forest resources.

5. **Plantations.**—Reference has been made to the inadequacy of indigenous softwood supplies, but, as a result of the planned policy of the forest services of the States and the Commonwealth and, to a less extent, 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 received earliest attention in South Australia as it is the State most poorly endowed with natural forest. This State 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. The total production is now in the vicinity of 100,000,000 superficial feet and this quantity is expected to be increased very substantially during the next decade. Production is also increasing in the other States and first thinnings from their plantations are already supplying a significant portion of the requirements of the case-making industry.

The total net area of Commonwealth and State softwood plantations at 30th June, 1954, was 310,669 acres. In addition, the area of privately owned plantations was about 58,000 acres. Hardwood plantations (mainly *Eucalyptus* spp.) comprise a much smaller area and the total acreage is about 30,000 acres, nearly two-thirds of which is mallet (*Eucalyptus astringens*) which has been established in Western Australia for tan bark production.

6. **Fire Protection.**—Fire control measures in Australia are the responsibility of the individual State Governments, and the provision of adequate fire protection is one of the main problems facing forest authorities at the present day. In each State a Bush or Rural Fires Act provides the main legislative basis for the control of forest fires.

The responsibility for the protection of private property outside urban areas rests with 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 4,000 registered volunteer bush fire brigades with a membership exceeding 150,000. Although both 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.

The annual cost of protecting from fire 23.6 million acres of dedicated and reserved forest over the three year period 1952 to 1954 has been estimated at £1,150,000 or about 11.7d. per acre annually. The cost of rural fire control as a whole cannot be estimated with any degree of accuracy owing to the fact that by far the greatest contribution comes from the personal efforts of volunteer brigade members.

The Australian fire season is very variable, with a particularly bad fire season every seven years or so. Such years were 1926, 1939, 1944 and 1952, and they account for a large proportion of the average area burnt each year which, for the period 1945 to 1955, amounted to 2.16 million acres or 2.3 per cent. of the total forested area, both Crown and private, in Australia. In disastrous fire seasons, such as 1938-39 and 1951-52, the acreage burnt on protected forest areas may rise to as high as 15 per cent.

During the post-war decade Forest Services greatly expanded their fire detection facilities and big advances were made in the use of power pumping equipment. Radio communication is now being used extensively by both Forest Services and rural organizations, and considerable progress has been made in the provision of legislative power for the rural bush fire movement, although the volunteer movement itself dates back to the turn of the century.

Recognizing that fire prevention is one of the most important aspects of the fire problem, intensive campaigns have been conducted to reduce the incidence of man-caused fires. A study of fire causes in recent years reveals that human agencies account for 95 per cent. of all fires, and of this figure at least 80 per cent. are preventable. Burning off, much of which is started illegally, accounts for 35 per cent. of all fires, smokers, hunters, fishermen and travellers cause 13 per cent. of all fires, whilst only 5 per cent. of fires in Australia are caused by lightning.

## § 2. Forestry Activities of the Commonwealth.

1. *Prior to 1925.*—When the Commonwealth of Australia was established on the 1st January, 1901, forestry was not included among the matters transferred from the States to the control of the Commonwealth, and Federal jurisdiction was therefore restricted to the then relatively unimportant forests of the Australian Territories. After the 1914–18 War these Territories (including Papua-New Guinea and Norfolk Island) covered a large area, and in the aggregate contained substantial forest resources. In the early twenties of this century a professional forester was appointed as forestry adviser to the Commonwealth Government, and he submitted preliminary reports on the forest resources of Papua-New Guinea, Norfolk Island and the Australian Capital Territory, with suggestions for future policy.

2. *Forestry and Timber Bureau.*—In 1925 the Commonwealth Forestry Bureau was instituted, and the Commonwealth Forestry Adviser became the Inspector-General of Forests. By an Act of 1930, the Bureau received statutory powers, and its functions included the advising of the various Territorial Administrations on forestry matters, the management of forests placed under its control, the establishment of experimental forest stations, the training of students in forestry, etc.

At the end of the 1939–45 War, the Commonwealth Government decided to continue certain advisory functions which during the War had been carried out by War-time Timber Control, and such functions were incorporated in the Forestry and Timber Bureau Act 1946, under which the title of the Bureau was altered to Forestry and Timber Bureau. The powers and functions of the Bureau were extended to embrace the collection of statistics and information, and advising the Governments of the Commonwealth and the States or other interested bodies on matters relating to the supply, production, overseas trade and distribution of timber in Australia. The Bureau was placed under the administration of a Director-General.

The activities of the Bureau under its statutory functions are summarized below :—

(a) *Forestry Education.* The Australian Forestry School was opened at Adelaide University in 1926 in continuation of the School of Forestry of that University established in 1911. In 1927 the School was transferred to Canberra. The purpose of the School is to train students as professional officers to manage the forests of Australia. It also accepts students from overseas.

Training at the School covers the third and fourth years of a four-year course. The first two years are spent at an Australian University in a study of prescribed science subjects. Courses at the School lead to Commonwealth Diplomas in Forestry and in Forest Technology, and in the case of the former, can lead further to a Degree in Forestry of an Australian University. Applicants possessing a University Degree granted for approved natural science subjects, or applicants with academic qualifications accepted

by the Director-General as equivalent, may also be admitted to this School and proceed to the Diplomas. Graduates or Diploma holders approved by the Director-General may be admitted to the School to take selected subjects or to carry out research work.

The Board of Higher Forestry Education advises regarding pre-requisite University courses leading to the Diploma courses and in regard to the maintenance of the standard of the School Diploma course.

In addition to students nominated by State Governments and other Australian and overseas authorities and organizations, private students are accepted at the School, and the Commonwealth Government offers up to ten forestry scholarships each year. These scholarships provide a salary allowance for the four years of the full Diploma course.

During 1950 the number of students enrolled reached 80, owing to the intake of ex-servicemen taking University courses under the Commonwealth Reconstruction Training Scheme. The normal capacity of the School is 40.

(b) *Silvicultural Research.* Research head-quarters and a Central Experimental Station have been established at Canberra. Other Forest Experimental Stations have been established at Mount Burr in the south-east of South Australia, in Tasmania, and at Dwellingup in Western Australia, on a co-operative basis with the Forest Services of those States. It is proposed to establish similar co-operative Experimental Stations in other States and Territories.

With its present limited staff, the research work of the Bureau has been concentrated largely upon studies of forest and climatic conditions, the genetical relationships and silvicultural requirements of various species, forest nutrition and the improvement of forest yields. A considerable expansion in the research activities is planned for the next few years as suitable trained staff becomes available.

(c) *Forest Management Research.*—In the national interest it is essential that over-cutting of forests should be avoided and in consequence it is a matter of primary importance that reliable information be available as to the country's forest resources and potentialities. To this end a national forest stocktaking is being carried out by the Bureau in co-operation with the Forest Services of the States and, to assist in the work of forest assessment, special consideration is being given to the development of the use of aerial surveys.

Consideration is also being given, in co-operation with the State Forest Services, to the establishment of increased areas of plantations of exotic pines with a view to providing additional supplies of softwood timber to meet requirements.

The general economics of forest management are also being studied.

(d) *Timber Supply.* The value of reliable statistical data covering availability of timber and timber requirements was so forcibly demonstrated during the 1939-45 War that it was considered essential to maintain at least a skeleton organization against times of future national emergency. Apart from this, it became clear that for many years to come shortages of timber on the one hand and heavy post-war reconstruction demands on the other, accentuated by a rapidly increasing population, would necessitate assessment of requirements and availability of supplies being kept constantly under review as a basis for short and long term policies of timber supply and distribution.

Advice is currently provided to Government Departments and the trade in matters pertaining to timber supply, including—(a) the availability of total quantities and quantities of particular grades and specifications required to meet Australia's needs; (b) the quantity of timber that should be imported; (c) the extent to which exports of timber and related products might be allowed without detriment to local needs; and (d) distribution of timber within Australia.

(e) *Management of Forests.* The Bureau manages the forests of the Australian Capital Territory and maintains a forestry officer in the Northern Territory. In addition, it is responsible for advising the administrations of the Northern Territory and the External Territories on the management of the forests under their charge.

3. **Commercial Forests.**—The forest areas under Commonwealth control include the following :—

- (a) *Australian Capital Territory.* The forests of the Australian Capital Territory are administered by a Division of the Forestry and Timber Bureau. Further information is contained in Chapter V.—The Territories of Australia.
- (b) *Northern Territory.* The forests of the Northern Territory are administered under ordinance by the Administrator of that Territory. The native forests of the Territory are very limited, consisting largely of open eucalypt forest in the North, with very restricted patches of rain forest along streams, river-fringing forests of paper bark tea-tree, patches of cypress pine, and elsewhere savannah woodland deteriorating to mallee and mulga in the interior. The Bureau maintains a forestry officer in the Territory for investigation and advisory purposes.
- (c) *Norfolk Island.* The forests of Norfolk Island are administered by the Administrator of that Territory. The area reserved for forest covers 1,037 acres, of which the main species is Norfolk Island pine.
- (d) *Papua and New Guinea.* The forests of the Territory of Papua and New Guinea are managed by a Forestry Department under the control of a Director, and are administered under an ordinance of the Territorial Administration. Forestry in the Territory commenced with the appointment of two officers in 1938. Further information is contained in Chapter V.—The Territories of Australia.

4. **Forest Products Research.**—Fundamental investigations connected with the properties and uses of timber and forest products generally are carried out by the Forest Products Division of the Commonwealth Scientific and Industrial Research Organization. These investigations cover a very wide field, e.g., pulp, paper, seasoning, structure and chemistry of wood, tans, etc.

Details can be obtained from the annual reports and publications of the Forest Products Division.

### § 3. Forest Congresses.

The first British Empire Forestry Conference was held in London in 1920. Subsequent conferences were held in Ottawa in 1923, Australia and New Zealand, 1928, South Africa, 1935 and again in the United Kingdom in 1947. In 1952 (the name of these conferences having been changed in conformity with the development of the British Commonwealth of Nations) the Sixth British Commonwealth Forestry Conference was held in Canada. It is proposed to hold the next conference in Australia and New Zealand in 1957.

### § 4. State Forestry Departments.

1. **Functions.**—Except for Queensland, the powers and functions of State forest authorities are laid down under Forestry Acts and Regulations. In each State there is a department or commission to control and manage the forests of the State. The functions of these administrations are as follows :—(a) The securing of an adequate reservation of forest lands; (b) the introduction of proper measures for scientific control and management of forest lands; (c) the protection of forests; (d) the conversion, marketing and economic utilization of forest produce; and (e) the establishment and maintenance of coniferous forests to remedy the existing deficiency in softwoods. Annual

reports are issued by each State forest authority. In Queensland, forestry is a sub-department of the Department of Public Lands. Victoria maintains a forestry school at which recruits are trained for the forestry service of that State.

2. **Forest Reservations.**—As mentioned in § 1, para. 4 above, State forest authorities agreed that, in order to secure Australia's future requirements, an area of 24½ million acres should be permanently reserved. In June, 1954, the area of State forests reserved in perpetuity totalled 20,970,361 acres or 86 per cent. of the area recommended as the goal to be attained.

In addition to the work of permanently reserving areas in each State, foresters are endeavouring to survey all timbered lands with a view to the elimination of those unsuitable for forestry. Considerable areas have been revoked in certain States, while dedications of new areas have resulted in gains to the permanent forest estate. The Forestry Departments also usually control all timber on open Crown lands as well as over 10 million acres of Timber Reserves, National Parks, etc., but, while these areas contain some land of high value for forestry purposes, the greater part does not justify permanent reservation.

In the following table details of forest areas as recorded by State Forest Authorities, distinguishing between Dedicated State Forests, Timber Reserves and Other Forest Reserves are shown for each State as at 30th June, 1954. In addition, details of forest reservations in Northern Territory and Australian Capital Territory are shown.

#### AREA OF FOREST RESERVATIONS, 30th JUNE, 1954.

(Acres.)

State or Territory.	State Forests.	Timber Reserves.	Other Reserves.	Total.
New South Wales .. .. .	6,188,125	1,370,488	..	7,558,613
Victoria .. .. .	4,466,704	716,633	(a) 164,621	5,347,958
Queensland .. .. .	4,666,786	3,223,340	(b) 778,549	8,668,675
South Australia .. .. .	261,428	..	103,600	455,028
Western Australia .. .. .	3,462,239	1,831,502	(a) 1,024,763	6,318,505
Tasmania .. .. .	1,918,179	137,028	1,039,107	3,094,314
Northern Territory .. .. .	6,900	..	352,000	358,900
Australian Capital Territory .. .. .	..	..	131,000	131,000
<b>Australia .. .. .</b>	<b>20,970,361</b>	<b>7,278,992</b>	<b>3,683,640</b>	<b>31,932,993</b>

(a) Timber reserves under the Land Act.

(b) National Parks.

3. **Employment.**—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 respect of the Australian Capital Territory and the Northern Territory, at 30th June, 1954.

#### PERSONS EMPLOYED BY FORESTRY DEPARTMENTS. AT 30th JUNE, 1954.

Occupational Group.	N.S.W.	Vic.	Qld.	S.A.	W.A.	Tas.	N.T.	A.C.T.	Aust.
Professional Staff .. .. .	162	182	71	44	33	22	..	5	519
Non-professional Staff .. .. .	213	184	85	4	84	62	..	..	632
Clerical Staff .. .. .	307	181	155	65	55	53	..	4	820
Extraction of Timber .. .. .	1,298	104	115	22	454	..	..	6	5,586
Milling of Timber .. .. .		44	..	421		..	..	..	
Labour (forest workers, etc.) .. .. .		928	1,650	252		228	..	64	
<b>Total .. .. .</b>	<b>1,980</b>	<b>1,623</b>	<b>2,076</b>	<b>808</b>	<b>626</b>	<b>365</b>	<b>..</b>	<b>79</b>	<b>7,557</b>

## § 5. Forestry Production.

1. Timber.—Particulars of logs treated and the production of rough sawn timber by sawmills and other woodworking establishments are shown in the following table by States for the year 1953-54.

OUTPUT OF NATIVE TIMBER : ALL MILLS, 1953-54.  
( '000 super. feet.)

Particulars.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas.	Aust.(a)
<b>LOGS TREATED, INCLUDING THOSE SAWN ON COMMISSION.(b)</b>							
Hardwood ..	482,665	525,563	337,894	8,642	481,260	222,562	2,051,586
Softwood ..	98,151	46,764	137,153	106,370	7,165	5,772	401,374
Total ..	580,816	572,327	475,047	115,012	488,425	228,334	2,452,960
<b>SAWN TIMBER PRODUCED FROM LOGS ABOVE.(c)</b>							
Hardwood ..	307,332	315,551	231,538	5,184	213,723	115,536	1,159,164
Softwood ..	57,306	23,106	86,812	63,006	2,298	2,735	235,383
Total ..	364,738	338,657	288,350	68,190	216,021	118,271	1,394,547

(a) Excludes Australian Capital Territory and Northern Territory details for which are not available.

(b) Includes logs used for plywood and veneer production. (c) Includes the sawn equivalent of timber peeled or sliced for plywood and veneers.

The following table shows logs used and the sawn timber produced in Australia for the years 1938-39 and 1949-50 to 1953-54.

OUTPUT OF NATIVE TIMBER : ALL MILLS, AUSTRALIA.(a)

Particulars.	Unit.	1938-39.	1949-50.	1950-51.	1951-52.	1952-53.	1953-54.
Logs used—							
Hardwood ..	'000 super. feet (hoppus measure)	1,015,136	1,637,236	1,797,226	2,000,032	1,970,126	2,051,586
Softwood ..	" "	293,680	415,712	300,052	363,829	369,881	401,374
Total ..	" "	1,308,816	2,052,948	2,097,278	2,363,861	2,340,007	2,452,960
Sawn Timber Produced—							
Sawn equivalent of Timber Peeled or Sliced for Plywood and Veneers	'000 super. feet	21,639	26,046	27,322	29,159	21,606	28,545
Used for other purposes ..	" "	695,376	1,197,014	1,234,018	1,363,607	1,318,191	1,366,002
Total Sawn Timber—							
Hardwood ..	" "	526,220	965,142	1,068,096	1,166,114	1,115,422	1,159,164
Softwood ..	" "	190,786	257,918	193,244	226,652	224,374	235,383
Total ..	" "	717,015	1,223,060	1,261,340	1,392,766	1,339,797	1,394,547

(a) Excludes Australian Capital Territory and Northern Territory, details for which are not available.

The next table shows the sawn output of native timber in sawmills and other woodworking establishments in each State for the years 1938-39 and 1949-50 to 1953-54.

SAWN OUTPUT (a) OF NATIVE TIMBER : ALL MILLS.  
( '000 super. feet.)

State.	1938-39.	1949-50.	1950-51.	1951-52.	1952-53.	1953-54.
New South Wales ..	179,350	341,144	338,347	380,633	350,702	364,728
Victoria ..	120,197	308,790	329,640	348,478	322,209	338,957
Queensland ..	193,250	251,127	252,378	291,581	285,074	288,380
South Australia ..	14,537	56,775	59,393	67,121	68,500	68,190
Western Australia ..	125,453	138,077	156,810	178,290	203,314	216,021
Tasmania ..	84,228	127,147	124,772	126,563	109,908	118,271
Australia (b) ..	717,015	1,223,060	1,261,340	1,392,766	1,339,797	1,394,547

(a) Includes the sawn equivalent of timber peeled or sliced for plywood and veneers. (b) Excludes Australian Capital Territory and Northern Territory, details for which are not available.

In addition to the sawn timber shown in the preceding table, a large amount of other timber, e.g., sleepers, piles, poles, fencing material, timber used in mining, and fuel, is obtained from forest and other lands. Complete information in regard to the volume of this output is, however, not available. In Western Australia particulars are obtained of the quantities of timber hewn by contractors for the Railway Department, mines, etc., as well as of the quantities produced by other agencies, but the figures have not been included in the preceding tables. The quantities so produced in Western Australia in the six years shown in the preceding table were as follows: 1938 30, 35,862,540 super. feet; 1949-50, 16,823,566 super. feet; 1950-51, 19,396,134 super. feet; 1951-52, 21,156,790 super. feet; 1952-53, 20,011,008 super. feet; and 1953-54, 24,979,694 super. feet. The annual reports of the Forest Departments of the States contain particulars of the output of timber from areas under departmental control, but owing to lack of uniformity in classification and measurement, accurate determination of total production cannot be made. Moreover, there is a moderate quantity of hewn timber produced from privately owned land, but information regarding output is not available.

2. Wood Pulp and Paper.—(i) *Wood Pulp*. The manufacture of wood pulp from Australian-grown timber was established in Australia in 1939, after years of experimentation with eucalypt hardwoods, production in 1938-39 being 6,165 tons of wood pulp. At the end of 1955, four wood pulp mills were operating in three States and production during 1953-54 was 83,624 tons of chemical pulp and 53,022 tons of mechanical pulp, a total of 136,646 tons.

(a) *Victoria*. In Victoria, Australian Paper Manufacturers Ltd. produce wood pulp at Maryvale in Gippsland by a chemical process known as the kraft or sulphate process. The timber used at this mill consists mainly of eucalypt hardwoods at present unsuitable for other purposes and, in addition, a small quantity of plantation pine thinnings and mill waste and special softwood for production of cellulose. During 1954-55 the wood taken from Crown Lands for the production of pulpwood and cellulose amounted to 4,523,375 cubic feet of which 3,882,199 cubic feet were hardwood and 641,176 cubic feet were radiata pine. Pine plantations are being established in Gippsland by A.P.M. Forests Pty. Ltd. The initial aim is 20,000 acres to provide a perpetual yield of 20,000 tons of long-fibred pulp per annum. Planting commenced in 1951 and by the end of 1955 it was estimated that 14,000 acres had been planted.

(b) *South Australia*. In South Australia a pulp and paper board mill operates near Millicent. This mill uses the mechanical or groundwood method of producing wood pulp from softwoods from the Mt. Burr and Penola pine plantations. Recently this mill has adopted a semi-chemical process for part of its production of wood pulp. During 1953-54, 6,134,099 super. feet of pulp wood were produced from South Australian forests.

(c) *Tasmania*. In Tasmania two large mills are making pulpwood from indigenous hardwoods. At Burnie on the north-west coast Associated Pulp and Paper Mills Ltd. use a chemical method, the soda process, to produce wood pulp for fine writing and printing papers from eucalypt hardwoods. This plant is of the most modern design and pulp and paper manufacture are combined with sawmilling and hardboard production. Offcuts and rejects from the timber mill are used as pulp wood as well as small trees removed in thinning the forests. A continuous digester has been installed at the Burnie mill, making it the only one in Australia using a continuous pulping process. Supplies of pulpwood for this mill are drawn from freehold and concession forest areas. The forests are managed on a permanent yield basis with regeneration of the eucalypts in all suitable areas. Some pine plantations have also been established to provide softwoods for pulping.

Australian Newsprint Mills Ltd. at Boyer, 20 miles from Hobart is the only producer of newsprint in Australia. Wood pulp is produced there by mechanical process from hardwoods drawn from State timber concession areas. This mill operates continuously, stopping only for maintenance. Eucalypts provide about 80 per cent. of its requirements for wood pulp, the remainder being imported long-fibred softwood pulp.



A pulp and paper board mill was established at Launceston by Tasmanian Board Mills Ltd. but after operating for about a year it was closed down in April, 1955.

(ii) *Paper and Paper Board.* Paper and paper board are manufactured in all States but the industry is centred mainly in New South Wales, Victoria and Tasmania. At the end of 1955, sixteen paper mills were operating, six in Victoria, four in New South Wales, three in Tasmania and one each in Queensland, South Australia and Western Australia. Sixteen paper machines and eighteen board machines are installed in these mills, and it is planned to instal five additional paper machines and one new board machine in the next few years. Paper mills operate in conjunction with all wood pulp mills, and pulp produced in mills operated by Australian Paper Manufacturers Ltd. and Associated Pulp and Paper Mills Ltd. is used, together with some imported pulp, in other paper and board mills owned and operated by the respective companies. Other paper and paper board mills use imported pulp, waste paper, straw and processed waste. A wide variety of papers and paper boards is produced, the quantity and value of paper produced in 1953-54 being as follows:—newsprint, 60,406 tons valued at £4,179,250; blotting, 664 tons, £97,590; duplicating, 2,543 tons, £368,031; printing and writing, 29,530 tons, £4,483,843; kraft wrapping, 37,374 tons, £5,445,279; other wrapping, 3,103 tons, £480,570; felt and carpet felt, 3,323 tons, £339,434; and other paper, 22,173 tons, £2,105,670. In addition, 123,440 tons of paper boards worth £11,092,900 were produced in 1953-54.

3. Other Forest Products.—(i) *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. Recently, however, this has been considerably extended, and much greater use has been made of locally-grown timbers, both hardwoods and softwoods. In recent years special attention has been paid to the selection of logs suitable for peeling.

The following table shows the production of plywood for each of the years 1938-39 and 1949-50 to 1953-54:—

PLYWOOD PRODUCED.  
(’000 square feet  $\frac{3}{4}$  in. basis.)

State.	1938-39.	1949-50.	1950-51.	1951-52.	1952-53.	1953-54.
New South Wales ..	24,194	28,008	32,287	31,784	22,557	28,601
Queensland ..	66,100	111,048	104,799	110,028	81,400	114,545
Other States ..	14,511	17,977	16,412	17,341	11,771	18,135
Australia ..	104,805	157,033	153,498	159,153	115,728	161,581

Of the total plywood produced in 1953-54, 136,214,000 square feet  $\frac{3}{4}$  in. basis was classed as "Commercial", 21,593,000 as "Waterproof" and 3,774,000 as "Case."

During 1953-54, 393.8 million square feet ( $\frac{1}{8}$  in. basis) of veneers were produced by the rotary process for the manufacture of plywood, and 119.2 million square feet ( $\frac{1}{8}$  in. basis) were sold or added to stock, the bulk of which would eventually be used in the production of plywood. In addition, 22.4 million square feet of sliced veneers were produced.

(ii) *Hardboard.* The production in Australia from pulped wood of hardboard for building purposes has increased considerably in recent years. There were three factories producing hardboard in 1955 and during the three years ended 30th June, 1954, the following quantities and values of hardboard were produced in Australia:—1951-52, 10,089,000 square yards; £1,787,000; 1952-53, 12,150,000 square yards, £2,472,000; and 1953-54, 16,992,000 square yards, £3,284,000.

(iii) *Eucalyptus Oil.* Oil may be distilled from the foliage of all varieties of Eucalyptus, and several of them furnish a product widely known for its commercial and medicinal uses. Complete information regarding Australian production and consumption of eucalyptus oil is not available, but considerable quantities are manufactured, particularly in New South Wales and Victoria. The value of oversea

exports of eucalyptus oil distilled in Australia was £445,206 in 1951-52; £215,283 in 1952-53; and £163,763 in 1953-54. The quantities exported in the years 1951-52 to 1953-54 were, 1,254,618 lb., 721,330 lb. and 504,628 lb. respectively.

(iv) *Gums and Resins.* Gums and resins are produced in most States of Australia, the main product being grass tree, or yacca gum. This gum which is used in the preparation of varnishes and lacquers comes chiefly from South Australia while small quantities are also produced in New South Wales and Western Australia. The recorded production of gums and resins in 1953-54 was 18 cwt. in New South Wales, 12,560 cwt. in South Australia and 2,816 cwt. in Tasmania, giving a total production of 15,394 cwt. in Australia. Exports of yacca gum from Australia during the same period amounted to 13,128 cwt. valued at £17,995.

(v) *Tanning Barks.* The forests of Australia are capable of yielding a wealth of tanning materials; many species of eucalyptus and other genera contain varying proportions of tannin, chiefly in the bark, but also in the wood and twigs. Scattered distribution however, has resulted in only the richest tan-bearing species being used in Australia. These are:—Golden wattle (*Acacia pycnantha*), black or green wattle (*Acacia decurrens* or *mollissima*), and mallet (*Eucalyptus astringens*). Mallet (*E. astringens*), of Western Australia, is not extensively used in Australian tanneries, but is exported to Europe and other countries. Reference to oversea trade in tanning barks is made in § 6, para. 3.

The production of extract from the bark of karri (*E. diversicolor*), of which very large quantities are available at karri sawmills, has passed the experimental stage, and private enterprise has started production on a commercial scale. The experimental work in kino impregnated karri (*E. calophylla*) bark is not yet complete. The production of tanning bark in Australia approximated 25,000 tons per annum in the years prior to 1939, but since then production has declined and in 1953-54 was approximately 7,000 tons. However, this decrease is offset by the increased use of vegetable tanning extract.

4. *Value of Production.*—(i) *Gross and Local Values, 1953-54.* The values of forestry production on a gross and local basis are shown in the following table for the year 1953-54.

#### GROSS AND LOCAL VALUE OF FORESTRY PRODUCTION, 1953-54.

(£'000.)

State.	Gross Production Valued at Principal Markets.	Marketing Costs.	Gross Production Valued at Place of Production.
New South Wales .. ..	13,315	410	12,905
Victoria .. ..	10,190	715	9,475
Queensland .. ..	9,117	1,320	7,797
South Australia .. ..	4,509	136	4,373
Western Australia .. ..	3,839	224	3,615
Tasmania .. ..	4,085	530	3,555
Australia(a) .. ..	45,055	3,335	41,720

(a) Excludes Australian Capital Territory and Northern Territory, details for which are not available.

No information is available on the value of materials used in the process of production or of depreciation and maintenance charges for 1953-54 and hence it is not possible to calculate net value of forestry production.

(ii) *Local Values, 1934-35 to 1938-39 and 1949-50 to 1953-54.* 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 1949-50 to 1953-54 in comparison with the average for the five years ended 1938-39. Local value is gross value less marketing costs and is the value at place of production.

## LOCAL VALUE OF FORESTRY PRODUCTION.

Year.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas.	Aust.(a)
LOCAL VALUE. (£'000.)							
Average, 1934-35 to 1938-39 (b) ..	2,094	837	2,226	547	1,176	394	7,274
1949-50 ..	7,185	5,570	4,020	2,300	2,021	2,099	23,195
1950-51 ..	8,966	6,437	5,029	2,656	2,908	2,432	28,428
1951-52 ..	12,461	8,479	7,040	3,179	3,689	3,057	37,905
1952-53 ..	13,672	8,904	7,102	3,790	3,328	3,248	40,044
1953-54 ..	12,905	9,475	7,797	4,373	3,615	3,555	41,720

## LOCAL VALUE PER HEAD OF POPULATION. (£ s. d.)

Average, 1934-35 to 1938-39 (b) ..	0 15 7	0 9 1	2 5 2	0 18 7	2 11 8	1 13 9	1 1 4
1949-50 ..	2 5 8	2 11 3	3 8 6	3 6 3	3 14 2	7 12 11	2 17 11
1950-51 ..	2 15 5	2 17 5	4 3 4	3 13 7	5 2 0	8 11 7	3 8 10
1951-52 ..	3 15 3	3 13 5	5 13 7	4 5 6	6 5 1	10 8 5	4 9 3
1952-53 ..	4 1 4	3 15 1	5 11 8	4 18 11	5 8 11	10 14 8	4 12 2
1953-54 ..	3 15 10	3 18 3	5 19 11	5 11 3	5 14 7	11 9 10	4 14 3

(a) Excludes Australian Capital Territory and Northern Territory, details for which are not available.  
 (b) Net value of production (i.e. local value less value of materials used in the course of production) has been included for certain years for Victoria and Western Australia.

5. *Employment.*—(i) *Forestry Operations.* The estimated number of persons employed in forestry operations at 30th June, 1954 is shown in the following table. These estimates, which have been based upon preliminary data from the 1954 Census, include working proprietors, but exclude those employed in the sawmilling industry, for which particulars are shown in the next table.

## ESTIMATED NUMBERS EMPLOYED IN FORESTRY, 30th JUNE, 1954.(a)

(Excluding Sawmilling Industry.)

Sex.	N.S.W. and A.C.T.	Vic.	Q'land.	S. Aust. and N.T.	W. Aust.	Tas.	Aust.
Males ..	4,659	3,902	3,837	921	1,005	955	15,279
Females ..	16	16	11	16	7	1	67
Total ..	4,675	3,918	3,848	937	1,012	956	15,346

(a) Preliminary 1954 Census figures, subject to revision.

(ii) *Milling Operations.* Details of the average number of persons employed, including working proprietors, in the milling operations of sawmills during the year 1953-54 are shown in the next table. Further details regarding the operations of these mills are shown in Chapter IX.—Manufacturing Industry.

## SAWMILLS : AVERAGE NUMBER OF PERSONS EMPLOYED, 1953-54.

Sex.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tasmania.	Australia (a)
Males ..	9,592	7,134	6,964	1,931	4,222	2,154	31,997
Females ..	355	189	287	135	36	35	1,038
Total ..	9,947	7,323	7,251	2,067	4,258	2,189	33,035

(a) Excludes Northern Territory and Australian Capital Territory, details for which are not available.

## § 6. Imports and Exports of Timber and Tanning Substances.

1. Imports of Dressed and Undressed Timber. The quantities of timber imported into Australia during the years 1950-51 to 1953-54 inclusive are shown in the following table according to countries of origin :—

### IMPORTS OF DRESSED AND UNDRESSED TIMBER INTO AUSTRALIA : COUNTRIES OF ORIGIN. (‘000 Super. feet.)

Country of Origin.	Dressed Timber (a)				Undressed Timber.(b)			
	1950-51	1951-52	1952-53	1953-54	1950-51	1951-52	1952-53	1953-54
United Kingdom ..	43	7	2	7	143	101	57	132
Canada ..	606	9,193	250	..	85,083	77,168	41,928	93,230
New Zealand ..	404	3,235	1,981	1,004	10,709	26,331	8,565	21,984
Other British Countries ..	140	12	67	135	35,877	34,083	21,777	30,648
Indonesia ..	..	..	..	10	1,197	2,280	955	2,523
Norway ..	15,114	12,525	374	3,777	79	395	..	..
Sweden ..	64,700	50,337	7,025	7,352	53,018	26,768	1,127	1,685
United States of America ..	..	7,554	..	..	58,845	115,576	37,560	67,498
Other Foreign Countries ..	4,021	15,786	611	2,017	50,776	47,671	7,170	17,815
Total ..	85,113	107,649	10,310	14,502	304,577	331,293	114,134	244,595

(a) Excludes timber not measured in super. feet.

(b) Includes logs not sawn.

The figures in the table above exclude dressed and undressed timber such as architraves, veneers, plywood, staves, etc., quantities for which either are not shown, or are expressed in dissimilar units in the Customs entries. The total value of the items so excluded amounted to £225,938 in 1953-54.

The bulk of the imports of dressed timber now comes from Sweden, Norway and New Zealand and consists of softwoods cut for making boxes, and tongued and grooved timber, weatherboards, etc. The total value of dressed timber shown in the table above amounted to £962,000 during 1953-54, the major items being timber for box making and tongued and grooved weatherboarding. Undressed timber imported totalled £9,575,000 of which more than 80 per cent. was softwood. The principal undressed timber imported was oregon pine from Canada and the United States of America. The balance was mainly hemlock from North America, pines from New Zealand, Indonesia and the United States of America, and hickory from the United States of America.

2. Exports of Undressed Timber and Railway Sleepers.—The quantities of undressed timber and railway sleepers exported during the years 1950-51 to 1953-54 are shown below, together with the countries of destination.

### EXPORTS OF UNDRESSED TIMBER (a) AND RAILWAY SLEEPERS FROM AUSTRALIA : COUNTRIES OF DESTINATION. (‘000 super. feet.)

Country of Destination.	Undressed Timber (excluding Railway Sleepers).				Railway Sleepers.			
	1950-51	1951-52	1952-53	1953-54	1950-51	1951-52	1952-53	1953-54
United Kingdom ..	7,266	4,840	8,289	5,424	325	217	..	..
Ceylon ..	..	..	5	299	346	..	..	1,979
Mauritius ..	539	187	400	449	..	..	..	375
New Zealand ..	7,536	14,507	26,244	15,121	5,059	4,148	8,136	13,009
Union of South Africa ..	2,854	1,258	2,880	2,897	1,401	97	..	15
Other British Countries ..	2,657	2,966	1,927	3,058	120	286	214	380
Foreign Countries ..	695	105	7,633	2,594	268	..	17	2,723
Australian Produce ..	21,537	23,872	47,492	29,842	7,519	4,748	8,367	18,481
Re-exports ..	299	124	231	514	..	..	..	..
Total ..	21,836	23,996	47,723	30,356	7,519	4,748	8,367	18,481

(a) Excludes timber not measured in super. feet.

Exports of undressed timber were consigned mainly to New Zealand and the United Kingdom, and consisted largely of the Western Australian hardwoods, jarrah and karri, which have earned an excellent reputation for such purposes as harbour works and wood paving, etc. The total value of exports of undressed timber, excluding railway sleepers, during 1953-54 was £1,843,139 (hardwood £1,799,842, softwood £43,297). Railway sleepers exported were valued at £921,101.

3. Classification of Imports and Exports.—(i) *General*. The quantities and values of timber, according to items, imported and exported during the years 1952-53 and 1953-54 are shown in the following table :—

TIMBER : IMPORTS AND EXPORTS, AUSTRALIA.

Item.	Imports.				Exports.			
	1952-53.		1953-54.		1952-53.		1953-54.	
	'000 sup. ft.	£A. f.o.b.	'000 sup. ft.	£A. f.o.b.	'000 sup. ft.	£A. f.o.b.	'000 sup. ft.	£A. f.o.b.
Logs, not sawn—								
Softwood ..	3,567	70,888	2,606	53,029	..	..	69	2,209
Hardwood ..	13,374	284,169	23,957	533,323	12,331	762,166	8,748	470,751
Timber, undressed—								
Boxmaking timber ..	468	25,308	1,037	35,476	..	..	..	..
Railway sleepers ..	981	34,894	3	89	8,367	355,047	18,481	921,101
Other Undressed—								
Softwood ..	90,644	4,009,314	203,518	8,105,822	305	28,459	557	41,088
Hardwood ..	5,099	318,931	13,474	847,195	35,087	2,461,330	20,982	1,329,091
Timber, dressed—								
Bent or cut into shape	(a)	25,615	(a)	49,070	(a)	2,719	(a)	521
Boxmaking timber ..	4,809	324,846	2,046	126,117	..	..	5	116
Tongued and grooved								
weatherboards ..	4,514	316,501	11,849	793,554	760	43,626	926	89,871
Other, dressed or								
moulded ..	987	81,447	607	42,167	(a)	272	(a)	3,164
	'000 sq. ft.		'000 sq. ft.		'000 sq. ft.		'000 sq. ft.	
Veneers ..	3,073	54,347	6,965	134,560	4,748	71,991	2,840	48,016
Plywood ..	914	37,646	1,552	39,548	1,161	41,123	907	47,494
Total ..	..	5,583,906	..	10,759,950	..	3,766,733	..	2,953,424

(a) Not available.

(ii) *Tanning Bark*. Imports of tanning bark have declined considerably in recent years from a record figure of 105,315 cwt. valued at £53,553 during 1943-44 to 2,634 cwt. valued at £5,245 in 1953-54. Exports, on the other hand, have expanded in recent years. In 1947-48, 1949-50 and 1951-52 exports were nil, but in 1953-54, 31,557 cwt. of tanning bark valued at £57,900 were exported.

The imports of tanning bark consist almost exclusively of wattle bark from the plantations in South Africa. One species of Australian wattle, *Acacia mollissima*, is chiefly relied upon for the production of wattle bark in the South African plantations, most of the seed being obtained from the best wattle bark areas in eastern Tasmania and western Victoria. Two reasons are given to account for the success of the industry in the Union of South Africa :—(a) The suitability of the treeless, grassy highlands of Natal; and (b) the availability of native labour.

(iii) *Other Tanning Substances.* Considerable quantities of tanning substances other than bark are imported annually into Australia. The total value in Australian currency of the imports in 1953-54 was £574,646, and was composed as follows:—tanners' bates, £5,831; wattle bark extract, £443,644; other extracts, £62,734; and valonia, myrobalans, cutch, etc., £62,437.

Exports of tanning extracts and other tanning substances from Australia amounted to £491,818 in 1953-54.

## CHAPTER XXV.

## FISHERIES.

## § 1. General.

1. *Fish Resources.*—The waters surrounding the Australian continent contain a great variety of marine fauna. Despite this, the fish stocks of Australia, in common with those of other countries of the Southern Hemisphere, are small by comparison with the stocks in the Northern Hemisphere. The reasons for this comparative shortage have not been fully explained but it seems clear that the basic factors involved are the absence of large expanses of shallow water and the much lower fertility of the oceans of the Southern Hemisphere.

The existence of greater fish stocks largely explains why approximately 98 per cent. of the world production of fish comes from the Northern Hemisphere. Nevertheless the Australian catch is low even after making allowance for the smaller resources available. Further explanation must be sought in terms of the socio-economic factors which determine the demand for and supply of fish.

By comparison with the populations of other countries, notably those in the Northern Hemisphere, Australians are not large fish eaters. As a result, there is not the pressure on resources so necessary to induce expansion in the fishing industry and to encourage the investment of large amounts of capital. On the other hand, even this somewhat restricted Australian demand for fish cannot be met from purely local sources of supply. The result is that large quantities of fish are imported each year.

This apparent paradox is explained by the fact that the Australian fishing industry has consistently over-exploited some sources of supply and under-exploited others.

Thus, on the one hand, the fisheries in the estuaries of the Australian coasts (the so-called estuarine fisheries) and those offshore for fish that dwell on the bottom of the sea (the demersal fisheries) have frequently been overfished with a consequent diminution of stocks. On the other hand, those species of fish which dwell near the surface of the sea (the pelagic species) have barely been exploited at all.

It is anticipated that the greatest future development of the Australian fishing industry will take place in the pelagic fisheries. However, no great contribution to the supplies of fresh fish can be expected from this source since most of the pelagic species caught are canned or processed.

An increase in the supply of fresh fish available to the Australian consumer will therefore have to come largely from an expansion of the estuarine and demersal fisheries. In view of the over-exploitation of existing estuarine and demersal fisheries, such an expansion will require the development of new fishing areas.

While it is known that promising fishing grounds exist to the south and north of Australia, it appears that the trawling grounds of the Great Australian Bight are the most suitable for development. It is not considered, however, that any great expansion of production can come from this source.

2. *Fishing Areas.*—The principal fishing areas at present are the coastal lakes, streams, estuaries and beaches, from Cairns in Queensland to Ceduna in South Australia, and from Esperance to Geraldton in Western Australia. For the most part, these fishing grounds are associated with the coastal streams. The demersal grounds fall into two classes—(a) the reefs from which cod, snapper, etc. are taken; and (b) the grounds from which flathead, morwong, etc., are taken. The reefs extend intermittently from northern Queensland around the southern part of the continent to Shark Bay in Western Australia. The flathead grounds lie on the continental shelf off south-east Australia, chiefly from Crowdy Head to south of Cape Everard and further off the east Tasmanian coast from Babel Island southwards to Storm Bay. As mentioned in the previous section other demersal grounds exist in the Great Australian Bight but would require large modern trawlers for commercial exploitation. The demersal shark grounds lie principally in Bass Strait and on the continental shelf off eastern South Australia. Other grounds have been located off southern Western Australia.

The grounds of existing pelagic fisheries include that for the Spanish mackerel off the north-eastern coast from about Coff's Harbour to Cairns and that for barracouta in Bass Strait and off eastern Tasmania. Jack mackerel is found in the waters of eastern Tasmania,

the south-east coast of New South Wales, and Western Australia. Tuna is now being taken in commercial quantities on the New South Wales coast.

Of the crustaceans exploited in Australia, crayfish are the most important and are taken on reefs of the continental shelf in the waters of all southern States, the fishery extending (with a major interruption in the Bight) from Port Macquarie in New South Wales to Geraldton in Western Australia. Considerable development has taken place in the crayfish fisheries, particularly in South Australian and Western Australian waters, owing to the opening up of markets in the United States of America for frozen crayfish tails. Crabs of various species are found in practically all coastal waters. Prawns are taken in the temperate waters of Queensland and New South Wales.

In the mollusc group, edible oysters are found in the temperate waters of Queensland, New South Wales and Victoria. Some cropping of natural resources takes place in Queensland, but the principal cultivation grounds are found in New South Wales. The scallop is taken commercially only in Tasmanian waters.

Pearlshell is fished from Cooktown in Northern Queensland, and from Thursday Island, round the north coast of Australia to Exmouth Gulf in Western Australia. Trochus shell is obtained from Mackay in Queensland round the north coast to King Sound in Western Australia.

Whales emigrating from Antarctic waters to their breeding grounds in the warmer waters of low latitudes pass up both the western and eastern coasts of Australia, returning to the Antarctic in the spring. Three whaling stations operate in Western Australia (Pt. Cloates, Babbage Island near Carnarvon and Cheynes Beach near Albany), one in New South Wales (Byron Bay) and one in Queensland (Moreton Bay).

3. **Fishing Boats and Equipment.**—The fishing equipment includes almost every possible type of gear, and appropriate boats are employed. The on-shore equipment includes mesh-nets, trawl-nets, and traps of various types. The demersal reef-fishery is worked with traps, hand lines and long lines. The demersal flathead fishery is worked by both otter trawl (with Vigneron-Dahl gear) and Danish seine; in addition some hand-lining is carried out. The demersal shark fishery is worked by long lines. The pelagic mackerel fishery employs trolling gear with lures of various types, while the pelagic barracouta fishery employs principally barbless jigs. Tuna is taken by trolling and, more recently, by pole fishing with live bait.

The boats for the on-shore fisheries are almost invariably small vessels fitted with low-power petrol engines. The vessels working the reefs are larger (up to 50 feet) and have more power. The otter trawl vessels are steam trawlers, and the Danish seine vessels are 40 to 70 feet in length with diesel engines. The shark boats have diesel power and range from 35 to 50 feet in length.

4. **Administration.**—The fisheries are administered by State Departments while the Commonwealth Fisheries Office, a division of the Department of Primary Industry, co-ordinates fisheries administration and develops the fisheries of Australia.

The administration of the fisheries was discussed in greater detail in Official Year Book No. 41, page 844 and in earlier issues.

## § 2. Development and Present Condition of the Fishery.

1. **Fisheries Proper.**—(i) *General.* The development of Australian fisheries has almost invariably followed the same sequence at each centre. The earliest fisheries were on-shore followed by demersal reef fishing using long lines. Trawling operations have followed line fishing in suitable areas and more recently again the exploitation of pelagic fisheries has commenced.

Until about 1900 the expansion of the industry consisted chiefly of the extension of on-shore and demersal fishing with long lines into areas previously unworked. Barracouta was fished in Tasmanian waters at least by 1880, if not earlier, although the main development of this fishery occurred towards the end of the 1939-45 War and post-war to meet demands for canned fish.

The first major development of the industry came with the institution of trawling operations off the New South Wales coast in 1918 by the New South Wales Government. The State enterprise failed, but the fishery was found very profitable by private enterprise.



In 1936 the use of Danish seine vessels began and the fleet of these vessels rapidly expanded, and in 1946 (after the return of vessels requisitioned in war-time) a peak was reached when thirteen steam trawlers and 120 Danish seine vessels were licensed. The total catch of trawled fish in 1946-47 was 16,000,000 lb. Of the species taken by the trawl fishery, tiger flathead, morwong and nannygai are the most important and of these flathead may be regarded as the prime fish and commands a higher price. Since 1917 the composition of the catch has changed, because of depletion of the flathead stocks, and the lower-priced fish have become a larger proportion of the catch. In 1954-55 six steam trawlers (all based at Sydney but fishing right down the coast to Bass Strait) and a considerably larger number of Danish seine vessels in New South Wales and Victoria were engaged in the trawl fishery.

In Queensland waters since 1930 the Spanish mackerel has been taken by line fishermen, operating in off-shore waters out to the Barrier Reef between Gladstone and Cairns.

In 1930 also, fishing for snapper shark commenced in south-eastern waters, particularly off the Victorian and Tasmanian coasts. This fishery rapidly extended its area of operations, and by 1953-54 the catch of edible sharks had reached 8,600,000 lb. round weight. Great impetus was given to the fishery during war years by the demand for livers for fish oil production for medicinal purposes. Demand eased with the return of cod-liver oil and availability of synthetic vitamin "A". In 1955, processors ceased accepting shark livers because of availability of imported oils and synthetics at cheaper prices. The shark fishery is still important, however, as its flesh, which is sold as "flake", brings substantial prices, mainly in Melbourne.

As far as pelagic fisheries are concerned, pilchards occur in the southern waters of Australia from Port Stephens to the south-west of Western Australia. Commercial catches have been made with lampara nets and to a lesser extent with purse seines. Anchovies in Port Phillip Bay and sprats in Tasmanian waters are caught in payable quantities, though there is usually some difficulty in finding a market for them. Jack mackerel have been caught in commercial quantities off the east coast of Tasmania and off Eden in New South Wales.

The tuna fishery was established on the New South Wales coast during 1949, when fishermen, using improvised trolling gear, caught 1,000 tons of southern blue-fin tuna. The catch was canned at Eden and Narooma and some was frozen raw and sold direct to Californian canneries. The American-owned tuna clipper *Senibua*, whose operations were subsidized by the Commonwealth, demonstrated that Australian tunas could be caught by pole fishing with live bait. In 1955, 40 tuna boats were operating on the south coast of New South Wales, but their catch was limited by the canneries to quantities which could be marketed in canned form in Australia and overseas. The price of raw tuna in California was reduced below the level necessary to make export profitable. In 1955, a new plant on the south coast of New South Wales began producing smoked and cooked tuna, this giving further support to the tuna fishery.

Southern blue-fin tuna occurs all along the southern coastline of the continent. In addition, albacore, yellow-fin, striped (skipjack) and northern bluefin tuna occur, but their capture has not been developed.

(ii) *Production.* The statistics of production published in this issue of the Official Year Book are not fully comparable with those published in earlier issues. Previously production has been shown in "recorded" weights, whereas in this issue "round" or "gross" weights have been used. The change to round weights makes use of conversion factors, which allow for the fact that weights as recorded are frequently the weight of the fish in a gutted, headed and gutted, or otherwise reduced condition.

Publication on a round weight basis has been made possible largely as a result of the efforts of the Commonwealth Fisheries Office.

In interpreting Australian fisheries statistics, allowance should be made for the incomplete coverage. Returns are collected in most States from licensed professional fishermen only, and as a result the published totals fall short of total fish production to the extent of the catch by amateur fishermen, the commercial catch by persons not licensed as professional fishermen and unrecorded catch by professional fishermen.

Production by States for the years 1950-51 to 1953-54 is shown in the following table on a round weight basis.

**RECORDED PRODUCTION OF FISH.**  
(EQUIVALENT ROUND WEIGHT.)  
(‘000 lb.)

State.	1950-51.	1951-52.	1952-53.	1953-54.
New South Wales .. ..	26,333	28,331	32,660	32,332
Victoria(a) .. ..	12,044	13,285	13,069	13,820
Queensland .. ..	9,454	9,594	11,354	10,525
South Australia .. ..	6,874	7,856	8,102	8,317
Western Australia .. ..	8,652	7,344	9,225	10,913
Tasmania(a) .. ..	7,924	5,162	6,882	2,821
Northern Territory .. ..	56	62	87	100
Total .. ..	(b) 71,337	71,634	81,379	78,828

(a) Catch by Victorian fishermen in Tasmanian waters is included in Victoria from 1951-52 onwards.

(b) Incomplete, excludes catch by Victorian fishermen in Tasmanian waters.

In the following table total Australian recorded production of fish by species is shown in terms of equivalent round weight for each of the years 1950-51 to 1953-54, details by States also being shown for the latter year. As an aid to identification scientific names have been listed in addition to common names. Data on catch by species is not available for years prior to 1950-51 and has not been published in previous issues of the Year Book.

**FISH—RECORDED PRODUCTION BY SPECIES.**  
(EQUIVALENT ROUND WEIGHT.)  
(‘000 lb.)

Species.	1950-51.	1951-52.	1952-53.	1953-54.						
				N.S.W.	Vic.a	Qld.	S.A.	W.A.	Tas.a	Aust.
Mullet—										
<i>Mugil dobula</i> , <i>Aldrichetta forsteri</i> , <i>Moolgarda argentea</i> , <i>Myrus elongatus</i> , <i>Mugil caeruleomaculatus</i>	10,449	11,155	13,969	6,288	751	4,561	500	691	10	12,807
Australian Salmon—										
<i>Arripis trutta</i> .. ..	6,845	6,629	8,118	2,578	1,427	..	1,000	6,011	382	11,398
Shark—										
<i>Galeorhinus australis</i> , <i>Emissola antarctica</i> , <i>Flokeus megalops</i> , <i>Pristiophorus cirratus</i> ..	5,824	6,707	7,698	1,903	3,149	..	2,100	318	1,116	8,581
Flathead—										
<i>Neoplatycephalus richardsoni</i> , <i>Truidis caeruleopunctatus</i> , <i>P. bassensis</i> , <i>Platycephalus fuscus</i> , <i>P. indicus</i> , <i>P. arenarius</i> , <i>Leviprora laevigata</i> .. ..	6,256	5,887	6,661	4,011	1,696	214	..	23	106	6,050
Barraouta—										
<i>Thryxites atun</i> .. ..	8,336	8,151	9,275	337	4,632	..	..	..	799	5,768
Snapper—										
<i>Chrysophrys guttulatus</i> , <i>C. unicolor</i> .. ..	3,875	2,872	3,501	1,301	163	241	470	1,224	..	3,391
Morwong, Jackass-Fish, Perch, Queen Snapper—										
<i>Nemadactylus macropterus</i> , <i>N. valenciennesi</i> , <i>Other N. spp.</i> , <i>Cheilodactylus spp.</i> .. ..	2,437	2,606	3,320	2,772	..	..	..	1	11	2,784
Leatherjacket—										
<i>Aluteridae</i> .. ..	3,350	4,719	3,187	2,667	13	6	..	23	(c)	2,704
Whiting—										
<i>Sillago ciliata</i> , <i>S. macculata</i> , <i>S. bassensis</i> , <i>Sillaginodes punctatus</i> ..	3,006	3,001	2,941	130	176	493	1,000	395	..	2,194
Mackerel—										
<i>Scomberomorus commersoni</i> , <i>S. queenslandicus</i> .. ..	1,450	1,560	2,303	..	..	1,980	..	17	..	1,997
Other Species .. ..	19,500 (d)	18,247 (d)	20,406 (d)	10,345	1,813	3,030	3,247	2,210	397	21,142 (d)
Total .. ..	71,327	71,634	81,370	32,332	13,820	10,525	8,317	10,913	2,821	78,828

(a) Catch by Victorian fishermen in Tasmanian waters is included in Victoria.

(b) Incomplete; excludes catch by Victorian fishermen in Tasmanian waters, details of which are not available.

(c) Less than 500 lb.

(d) Includes Northern Territory production—species details not available.

2. **Crustaceans and Molluscs.**—Crayfish are taken (in pots) in all States other than Queensland. Cray fisheries have developed greatly since the War to take advantage of the market in the United States of America for frozen crayfish tails, the total catch increasing from approximately 3 million lb. in 1945-46 to 17.4 million lb. in 1953-54.

Prawns are taken by otter trawl in the waters of New South Wales, Queensland and Western Australia. Prawns have been found in considerable quantity in the ocean waters of northern New South Wales and southern Queensland. An important development is anticipated with improvement of handling and distribution and opening up of overseas markets.

Initially the Australian oyster fisheries depended solely upon the harvesting of naturally grown stock in littoral and submarine areas. However, the stocks soon deteriorated and attention was turned to methods of cultivation. This is carried on mainly in New South Wales where there has been constant improvement in methods, and the present technique in certain areas is highly efficient. The production for Australia in 1953-54 was 9,688,000 lb. (in shell). Scallops are taken by dredge in the D'Entrecasteaux Channel in Tasmania.

Details of production of crustaceans and molluscs are shown in the table below on a gross (in-shell) weight basis for each year 1950-51 to 1953-54, details by States being also shown for the latter year.

**RECORDED PRODUCTION OF CRUSTACEANS AND MOLLUSCS.**  
(GROSS (IN-SHELL) WEIGHT.)  
(‘000 lb.)

Item.	1950-51.	1951-52.	1952-53.	1953-54.						
				N.S.W.	Vic.(a)	Qld.	S.A.	W.A.	Tas.(a)	Aust.
<i>Crustaceans—</i>										
Crayfish ..	12,463	14,590	15,806	601	1,519	8	3,850	9,224	2,218	17,420
Crabs ..	568	466	580	131	..	395	..	16	..	542
Prawns ..	4,626	2,204	3,336	3,558	..	700	..	43	..	4,303
<b>Total ..</b>	<b>17,657</b>	<b>17,260</b>	<b>19,722</b>	<b>4,290</b>	<b>1,519</b>	<b>1,103</b>	<b>3,850</b>	<b>9,285</b>	<b>2,218</b>	<b>22,265</b>
<i>Molluscs—</i>										
Oysters ..	6,809	8,098	8,276	9,283	71	275	..	..	59	9,688
Scallops ..	1,803	1,628	3,229	..	..	..	..	..	3,779	3,779
Other ..	20	35	214	48	25	22	..	8	..	103
<b>Total ..</b>	<b>8,632</b>	<b>9,761</b>	<b>11,719</b>	<b>9,331</b>	<b>96</b>	<b>297</b>	<b>..</b>	<b>8</b>	<b>3,838</b>	<b>13,570</b>

(a) Catch by Victorian fishermen in Tasmanian waters is included in Victoria. (b) Incomplete; excludes catch by Victorian fishermen in Tasmanian waters, details of which are not available.

3. **Pearl-shell and Trochus.**—The industry, which ceased operations on Japan entry into the war in December, 1941, did not resume on a commercial basis at Queensland centres until late in 1945, and at Western Australian centres until 1946, while operations off the Northern Territory coast were not resumed until 1948.

Before the war a large proportion of the key men were Japanese; the others included Malays, Chinese, Koepangers, Filipinos, Papuans and Torres Straits Islanders. On the resumption of operations without the Japanese, the labour available was, with few exceptions, inefficient. Queensland with a more ready source of labour from the Torres Strait Islands and mainland was able to expand its fishing more rapidly, and in the 1949 season, achieved its second highest pearl shell production on record. The expansion of the industry at Darwin has been retarded by the fact that the key men lack the local knowledge acquired by the Japanese. Western Australian centres also suffered from lack of skilled labour. In 1953 the Commonwealth permitted the employment at Broome, under certain conditions, of 35 Japanese divers, tenders and engine-drivers.

In 1953 a Japanese fleet, which had been pearling in the Arafura Sea while a Japanese Mission in Canberra was discussing a fisheries agreement with the Australian Government, moved into an area in which they had been asked not to fish. Their action was regarded

as having broken off the negotiations, and proclamations were issued in September 1953 declaring Australia's sovereign rights over the natural resources of the sea bed and sub-soil of the Continental Shelf adjoining Australia, its territories and the Trust Territory of New Guinea. In September the Pearl Fisheries Act 1952-53, providing for licensing and control of pearling, was brought into operation.

Japan disputed Australia's right to apply this legislation to foreign ships, and Australia agreed to refer the dispute to the International Court of Justice on condition that meantime Japanese pearling in Australian waters would be conducted in conformity with the Australian Government's policy of regulation and conservation, and that Japan would abide by the Court's decision. On these conditions, a Japanese pearling fleet operated in prescribed waters in 1954 and again in 1955.

Australian production of pearl-shell and trochus-shell was 2,337,000 lb. and 3,057,000 lb. respectively in 1953-54. In addition, Japanese pearlers took 2,110,000 lb. of pearl-shell in Australian waters.

Reference to inquiries into the pearl-shell fishing industry by a Royal Commission in 1912, and by the Tariff Board in 1935, appears on page 1031 of Official Year Book No. 37.

### § 3. Marketing and Distribution.

1. **Marketing.**—The greater portion of Australian fish is sold in metropolitan markets. In Queensland, fish marketing is under the control of a Fish Board, which has representatives of producers, wholesalers and consumers, and a Government nominee as chairman. A central market is located in Brisbane and there are branch markets or depots at fourteen centres along the coast. The organization ensures that all fish is marketed through these channels, and the board has encouraged to a very marked extent the steadily increasing fish production of the State. The fish marketing methods in this State have proved successful. In New South Wales the central market in Sydney is conducted by the Chief Secretary's Department, and the port depots in various centres along the coast by fishermen's co-operatives. These co-operatives distribute some of their fish to local centres and to inland country districts, and send the balance to the central market in Sydney. In Victoria, South Australia and Western Australia, fish is sold in central markets by agents. The greater part of the catch of fish in Tasmania is either processed in canneries in that State or exported to the mainland. There is some interstate export of fish from the northern rivers of New South Wales to Queensland, from Tasmania to New South Wales and Victoria, and from South Australia to Victoria.

2. **Consumption of Fish.**—Prior to the 1939-45 War, Australians consumed annually the fresh and canned equivalent of about 131 million lb. of round fish, or 19.0 lb. per person. About 70 million lb. were produced locally and the remainder was imported. Total consumption (including canned and cured) during 1953-54 is estimated at 87.3 million lb. edible weight (9 8 lb. per head) as compared with 69.9 million lb. edible weight (8 0 lb. per head) in the previous year. This is equivalent to approximately 172.3 million lb. fresh round weight (19.4 lb. per head) and 141.8 million lb. fresh round weight (16.2 lb. per head) respectively. Fish is not, as in many countries, a staple item in the diet of Australians and, away from the seaboard, is still regarded as rather a luxury.

3. **Processing, including Canning.**—The equipment for handling fish was in the past rather inadequate, but in most States cold storage facilities have been improved and increased in recent years. In Queensland and New South Wales, particularly, the depots which have been established at fishing ports have been equipped with cold storage space. In several States there has been a development of establishments equipped for snap freezing of fish, in particular the freezing of crayfish tails for export. A number of vessels have been equipped with freezing plants to process crayfish at sea.

In all States there has been a development of facilities for light processing of fish.

Reference to the production of processed fish and number of factories operating will be found in § 5, para. 4, page 980. Considerable expansion has taken place in the industry, particularly since 1945-46. In 1938-39, three factories processed 1,472,592 lb. of fish valued at £29,581, whereas in 1953-54 eleven factories processed 10,988,393 lb., valued at £350,114.

4. **By-products.**—Processing of offal for fish-meals, etc., has been established in certain States. The processing of livers for vitamin-rich oils was undertaken in several States but as mentioned previously has now been discontinued.

## § 4. Inquiries and Research.

1. **General.**—The Australian fishing industry has been the subject of a number of official inquiries seeking an explanation of the very slow rate of development and the unfortunate conditions prevailing within the industry as well as the paucity of supplies available to the public. Details of the inquiries undertaken, the recommendations arising from them, and subsequent developments will be found in Official Year Book No. 38, page 1082.

2. **Commonwealth Scientific and Industrial Research Organization, Division of Fisheries and Oceanography.**—Details of the establishment, organization and functions of the Division of Fisheries of the Commonwealth Scientific and Industrial Research Organization will be found in Official Year Book No. 38, page 1083. The scientific basis on which the work of the Division is carried out has now been widened, and to provide for this, the name of the Division has been amended to "Division of Fisheries and Oceanography".

Research carried out by the Division has assisted greatly in the development and preservation of Australian fisheries. Details may be found in Official Year Book No. 41 page 848 and in previous issues.

3. **Commonwealth Fisheries Office.**—The Commonwealth Fisheries Office, a division of the Department of Primary Industry, arose out of a Tariff Board recommendation in 1941, following a public inquiry into the fishing industry, that a Commonwealth developmental authority should be established. Details of the establishment, organization and functions of the office will be found in Official Year Book No. 38, page 1084.

In accordance with the Tariff Board report, scientific research, as distinct from developmental and administrative functions, was left to the Commonwealth Scientific and Industrial Research Organization which had established a Division of Fisheries for this purpose in 1937.

The Commonwealth is responsible for extra-territorial waters, whaling, pearling, rehabilitation of ex-servicemen in the fishing industry, fishery training schools, commercial development of fisheries, promotion of uniform conditions governing catches of various species of fish, statistics, information and publications.

4. **North Australia Development Committee.**—In 1946 the North Australia Development Committee recommended that a hydrological and oceanographical survey should be made of North Australian waters. It also suggested that a biological survey should be made of the pearl oyster with particular reference to the possibility of instituting pearl culture.

Further reference to these and other recommendations may be found in Official Year Book No. 41, p. 848.

The C.S.I.R.O. Division of Fisheries subsequently set up a biological research station on Thursday Island, mainly for the pearl and pearl-shell investigations. Since 1951 a research vessel has been based on Thursday Island and is used for diving, biological and hydrological work.

5. Whaling.—The Commonwealth Fisheries Office carried out extensive investigational and preparatory work for the establishment of an Australian whaling industry. In 1949 a privately-owned station began operating at Pt. Cloates, Western Australia. The same year the Australian Whaling Commission was established. The Commission built a station at Babbage Island, near Carnarvon, Western Australia, but it did not begin operating until almost the end of the 1950 season. Legislation has now been passed to provide for the dissolution of the Commission, for the sale of its assets to the company operating at Pt. Cloates and for the use of the proceeds of the sale in developing the Australian fishing industry. There is also a small station in Western Australia at Cheynes Beach near Albany. A large station began operating in 1952 at Moreton Island (Queensland), and in 1954 a small station began operating at Byron Bay (New South Wales). In 1954 these five stations processed 2,039 whales, producing whale oil and other products valued at £1,960,000. A table showing statistics of whaling operations appears in §5, para. 2 following.

The Director of Fisheries represents Australia on the International Whaling Commission, which controls whaling throughout the world.

### § 5. The Fishing and Whaling Industry—Statistics.

1. Fisheries.—(i) *Quantity and Gross Value of Take.* Recorded production for all fisheries is shown in the following table.

#### RECORDED FISHERIES PRODUCTION: QUANTITY AND GROSS VALUE OF TAKE.

Particulars.	Unit.	1950-51.	1951-52.	1952-53.	1953-54.						
					N.S.W.	Vic. (a)	Qld.	S.A.	W.A.	Tas. (a)	Aust. (b)
<b>Fish—</b>											
Equivalent Round Weight ..	'000 lb.	6 71,337	71,634	81,379	32,332	13,820	10,525	8,317	10,913	2,821	78,828
Gross Value ..	£'000	3,317	3,810	4,514	1,082	896	530	700	474	124	4,716
<b>Crustaceans—</b>											
Gross Weight—											
Crayfish ..	'000 lb.	6 12,463	14,597	15,806	601	1,519	8	3,850	9,224	2,218	17,420
Crabs ..	"	568	466	580	131	..	395	..	16	..	542
Prawns ..	"	4,626	2,204	3,336	3,558	..	700	..	45	..	4,303
Total ..	"	17,057	17,266	19,722	4,290	1,519	1,103	3,850	9,285	2,218	22,265
Gross Value ..	£'000.	1,200	1,863	2,106	675	167	111	427	936	191	2,510
<b>Molluscs—</b>											
In-shell Weight—											
Oysters ..	'000 lb.	6,809	8,098	8,276	9,283	71	275	..	..	56	9,688
Scallops ..	"	1,803	1,628	3,229	..	..	..	..	..	3,779	3,779
Other(d) ..	"	20	35	214	48	25	22	..	8	..	103
Total ..	"	8,632	9,761	11,719	9,331	96	297	..	8	3,838	13,570
Gross Value ..	£'000	369	436	487	522	1	13	..	..	105	641
<b>Shark-livers—</b>											
Gross Weight ..	'000 lb.	(c) 250	199	308	..	52	..	133	..	69	254
Gross Value ..	£'000.	(c) 25	25	40	..	7	..	18	..	9	34
<b>Pearl-shell—(e)</b>											
Weight ..	'000 lb.	2,441	1,906	2,048	..	..	965	..	1,001	..	2,337
Gross Value ..	£'000	479	450	487	..	..	215	..	285	..	569
<b>Trochus-shell—(e)</b>											
Weight ..	'000 lb.	2,883	2,634	2,238	..	..	3,046	..	11	..	3,057
Gross Value ..	£'000	228	234	146	..	..	259	..	1	..	260

(a) Catch by Victorian fishermen in Tasmanian waters is included in Victoria. (b) Includes Northern Territory; 100,000 lb. of fish valued at £10,000 and 371,000 lb. of pearl-shell valued at £60,000. (c) Incomplete; excludes catch by Victorian fishermen in Tasmanian waters, details of which are not available. (d) Squid, clam and pipi. (e) Western Australia. season ended 15th December. Northern Territory, season ended 31st January.

(ii) *Boats and Men Engaged, etc.* The following table shows particulars of boats and equipment used and persons engaged in the various fisheries. Details relating to oyster leases are also shown.

## FISHERIES: BOATS AND EQUIPMENT IN USE AND PERSONS ENGAGED.

Particulars.	Unit.	1953-54.										
		1950-51.	1951-52.	1952-53.	N.S.W.	Vic.	Qld.	S.A.	W.A. (a)	Tas.	N.T.	Aust.
<i>General Fisheries—(b)</i>												
Boats Engaged	No.	8,625	8,872	9,407	2,540	715	3,950	1,300	600	635	16	9,877
Value of Boats and Equipment	£'000	4,149	4,613	5,025	1,877	695	1,374	477	1,055	150	5	5,936
Persons Engaged	No.	14,876	16,602	17,461	2,243	1,045	8,684	4,310	1,125	1,144	35	18,598
<i>Edible Oyster Fisheries—</i>												
Boats Engaged	"	1,020	1,114	1,079	905	4	63	..	..	6	..	978
Value of Boats and Equipment	£'000	90	95	103	119	(d)	10	..	..	(e)	..	129
Persons Engaged	No.	664	901	871	557	5	132	..	..	6	..	700
Leases Granted	"	5,403	5,195	5,513	5,233	5	396	..	..	..	..	5,634
Length of Foreshore in Leases(f)(g)	'000 yds	1,016	1,006	1,039	1,004	16	(f)	..	..	..	..	1,020
<i>Pearl, Pearl-shell and Trochus-shell Fisheries—</i>												
Boats Engaged	No.	154	132	114	..	..	87	..	27	..	10	124
Value of Boats and Equipment	£'000	558	523	441	..	..	373	..	84	..	45	502
Persons Engaged	No.	1,621	1,516	1,152	..	..	1,034	..	275	..	77	1,386
<i>Total, All Fisheries—</i>												
Boats Engaged	No.	9,802	10,118	10,606	3,445	749	4,100	1,388	627	644	26	10,979
Value of Boats and Equipment	£'000	4,797	5,234	5,572	1,996	698	1,757	477	1,139	450	50	6,567
Persons Engaged	No.	17,155	19,019	19,424	2,800	1,050	9,850	4,310	1,400	1,150	115	20,684

(a) Year ended 31st Dec., 1953. (b) Includes Crustacean and Scallop Fisheries. (c) Value of boats engaged in Oyster Fisheries is included in General Fisheries. (d) Less than £500. (e) As at 30th June, 1954. (f) Length of foreshore in leases not available for Queensland. (g) Also (in N.S.W.) 5,628 acres offshore in 1950-51; 5,749 in 1951-52; 5,888 in 1952-53; and 6,296 in 1953-54.

2. Whaling.—The information summarized in the table below was supplied by the Commonwealth Fisheries Office. Details relate to seasons extending from about May to October of each year.

## WHALING STATISTICS, AUSTRALIA.

Particulars.	Unit.	1950.	1951.	1952.	1953.	1954.
Seasonal Quota(a)	No.	(b)	1,250	1,850	2,000	2,040
Whales Taken	..	388	1,224	1,787	2,001	(c) 2,039
Whales Processed	..	387	1,220	1,780	2,001	(c) 2,039
Average Length of Whales Processed	ft.	40.4	40.3	40.1	40.0	39.8
Average Oil Production per Whale Processed	Barrel d	42.6	45.0	51.3	51.2	49.1
Persons Employed—at Sea	No.	48	48	110	110	114
Persons Employed—Ashore	..	170	230	390	390	400
Whale Oil Produced—Quantity	Barrel d	16,494	56,051	91,360	102,354	100,068
Whale Products—Value	£'000	362	1,601	1,670	1,803	1,960

(a) In terms of humpback whales, as determined by the Minister for Primary Industry, acting on the advice of the Director of Fisheries. For quota purposes, 1 blue whale is taken as equivalent to 2 fin whales, 2½ humpback whales or 6 sei whales. (b) Quotas did not operate. (c) Includes one blue whale. (d) 6 barrels = 1 ton.

3. Value of Production.—(i) *Gross and Local Values, 1953-54.* Although statistics of the value of production of the fishing industry have been on an established basis for some years, attention is drawn to the fact that the actual collection of statistics of the quantity of fish taken presents many difficulties and consequently any defects which may occur in the collection must necessarily be reflected in the value of production. Particulars of the value of other materials used in the process of production are not available for all

States, so the values can only be stated at the point of production and not on a net basis as has been done with other industries. Variations in the relative proportions of marketing costs to gross production suggest that complete uniformity in method has not yet been attained.

### GROSS AND LOCAL VALUE OF PRODUCTION ; FISHING AND WHALING, 1953-54.

(£'000.)

State.					Gross Production Valued at Principal Markets.	Marketing Costs.	Gross Production Valued at Place of Production.
New South Wales	..	..	..	..	3,179	537	2,642
Victoria	..	..	..	..	986	152	834
Queensland	..	..	..	..	1,221	270	951
South Australia	..	..	..	..	1,143	128	1,015
Western Australia	..	..	..	..	1,904	37	1,867
Tasmania	..	..	..	..	432	..	432
Total	..	..	..	..	8,865	1,124	7,741

(ii) *Local Values, 1934-35 to 1938-39 (Average) and 1949-50 to 1953-54.* In the following table the local value of fisheries production and the local value per head of population are shown by States for the average of years 1934-35 to 1938-39 and for each of the years 1949-50 to 1953-54. Local value is gross value less marketing costs and is the value at the place of production. 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.

### LOCAL VALUE OF FISHING AND WHALING PRODUCTION.

Year.	N.S.W.	Vic.	Q'land.	S. Aust.	W. Aust.	Tas.	Total.
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LOCAL VALUE.  
(£'000.)

Average, 1934-35 to 1938-39 ..	588	159	292	182	229	80	1,530
1949-50 ..	1,449	615	760	287	697	426	4,234
1950-51 ..	1,730	700	812	404	812	411	4,869
1951-52 ..	1,821	706	835	701	1,225	441	5,729
1952-53 ..	2,233	753	844	851	1,610	606	6,897
1953-54 ..	2,642	834	951	1,015	1,867	432	7,741

### LOCAL VALUE PER HEAD OF POPULATION.

(s. d.)

Average, 1934-35 to 1938-39 ..	4 5	1 9	5 11	6 3	10 0	6 11	4 6
1949-50 ..	9 2	5 8	12 11	8 3	25 7	31 0	10 7
1950-51 ..	10 8	6 3	13 5	11 2	28 6	29 0	11 9
1951-52 ..	10 11	6 1	13 5	18 11	41 6	30 1	13 6
1952-53 ..	13 3	6 4	13 3	22 3	52 8	40 1	15 11
1953-54 ..	15 6	6 10	14 7	25 10	59 2	27 11	17 6

4. *Fish Preserving.*—The attempt to establish the fish preserving industry at the commencement of this century met with little success although a bounty was paid to encourage production. The industry, however, continued to operate, but there was



no marked development until about 1945-46 when the production of canned fish amounted to 1,700,000 lb. After that year production increased considerably and reached a peak of 10,900,000 lb. in 1948-49, but by 1950-51 it had declined to 7,300,000 lb. It increased again to 7,700,000 lb. in 1952-53, but declined again to 6,600,000 lb. in 1953-54.

In addition to the canning of fish, other fish products are produced. In 1953-54 these included 286,000 lb. of smoked fish, 1,128,000 lb. of fish paste and a considerable quantity of frozen crayfish tails for export.

In 1939 New South Wales and Tasmania were the only States canning fish, but the industry has since been extended to Victoria, South Australia and Western Australia. Details of production are given in the following table for the years 1938-39 and 1949-50 to 1953-54.

#### PRODUCTION OF CANNED FISH (a) : AUSTRALIA.

Particulars.	1938-39.	1949-50.	1950-51.	1951-52.	1952-53.	1953-54.
Number of factories operating ..	3	15	18	17	13	11
Quantity produced lb.	603,302	7,442,521	7,279,033	7,294,622	7,705,081	6,604,587
Value .. £	13,700	676,812	723,689	965,100	1,020,307	838,179

(a) Including the canning of fish loaf and crustaceans.

The varieties canned in the several States differ according to the species caught, but separate details for each variety are not available. In New South Wales, Australian salmon and tuna are the principal varieties. Barracouta is of major importance in Victoria and Tasmania; and Australian salmon predominates in South Australia and Western Australia; herrings are also important in the latter State.

5 State Revenue from Fisheries.—The revenue from fisheries during the year 1953-54 was £66,420, compared with £63,552 in 1952-53 and £34,273 in 1938-39. Of the total of £66,420 in 1953-54, New South Wales collected £31,779, Victoria £3,980, Queensland £13,181, South Australia £4,397, Western Australia (year ended December, 1953) £7,734, Tasmania £5,204 and Northern Territory £145.

### § 6. Oversea Trade in Fishery Products.

NOTE.—Values of Australian oversea trade shown in this section are expressed in £A. f.o.b., port of shipment.

1. Imports of Fish.—The equivalent, in the round, of imported fish consumed in Australia in 1953-54 was 33 per cent. of the total consumption. Particulars of the imports of fish are shown below for the years 1949-50 to 1953-54 in comparison with 1938-39.

#### FISH (INCLUDING SHELL FISH) : IMPORTS INTO AUSTRALIA.

(Cwt.)

Classification.	1938-39.	1949-50.	1950-51.	1951-52.	1952-53.	1953-54.
Fresh or preserved by cold process ..	84,028	59,152	103,926	150,972	86,397	140,787
Potted or concentrated ..	9,435	1,908	1,959	1,766	583	1,359
Preserved in Tins—						
Fish—						
Herrings ..	38,917	81,569	95,227	88,149	20,030	61,277
Pilchards ..	(a)	735	930	4,041	462	845
Salmon ..	166,695	14,848	14,923	20,387	24,855	27,339
Sardines (including Sild)	29,372	50,253	80,645	70,334	3,380	40,850
Other ..	14,306	5,974	4,535	15,455	916	3,459
Shell Fish—						
Crustaceans ..	6,829	2,386	6,194	3,308	2,150	4,141
Oysters ..	1,939	59	121	198	115	272
Other ..	(a)	201	74	225	113	137
Smoked or Dried (not salted)	8,122	70,524	64,099	56,235	55,929	50,291
Other (including salted) ..	7,987	8,577	8,655	11,911	6,878	11,296

(a) Not recorded separately.

The value of fish and fish products imported during 1953-54 amounted to £4,104,000, compared with £1,470,854 in 1938-39.

Canned fish (total imports of which in 1953-54 were valued at £2,442,768) constituted the largest proportion of the imports; salmon from the U.S.S.R. and Japan, herrings from the United Kingdom and Norway, pilchards from the Union of South Africa and sardines from Norway were the chief varieties imported. A considerable proportion of the fresh fish imported in 1953-54 came from the United Kingdom, the Union of South Africa and New Zealand, and the potted fish came chiefly from the United Kingdom; the bulk of the remainder came from South Africa, the United Kingdom and New Zealand.

2. **Exports of Fish.**—During 1953-54 the exports of fish of Australian origin were as follows:—Fresh or frozen crustaceans, 38,625 cwt., £1,553,667; other fish, fresh or preserved by cold process, 395 cwt., £4,284; oysters in shell, 261 cwt., £5,365; potted or concentrated, 67 cwt., £2,101; fish preserved in tins, 5,771 cwt., £137,432; shell fish in tins, 541 cwt., £22,238; smoked or dried, 91 cwt., £1,316, and other fish, 74 cwt., £1,304.

3. **Exports of Pearl and other Shell.**—The exports of pearl, trochus and other shell of Australian origin are shown hereunder for the years 1938-39 and 1949-50 to 1953-54.

**PEARL, TROCHUS AND OTHER SHELL : EXPORTS FROM AUSTRALIA.**

Article.			1938-39.	1949-50.	1950-51.	1951-52.	1952-53.	1953-54.
Pearl-shell ..	cwt.		52,532	33,840	22,877	14,473	24,714	23,020
	£		244,266	624,517	485,685	370,096	694,029	653,797
Trochus-shell ..	cwt.		9,108	10,765	27,460	42,815	34,751	47,415
	£		34,166	49,170	231,580	515,067	247,483	591,511
Other shell ..	cwt.		4	1,239	621	2,531	5,732	5,853
	£		151	16,225	6,517	35,933	58,713	69,283

## CHAPTER XXVI.

### MINERAL INDUSTRY.

#### § 1. The Mineral Wealth of Australia.

1. *Place of Mining in Australian Development.*—The discovery of gold in payable quantities first attracted population to Australia in large numbers and was thus a significant factor in its early development. In more recent times the rapid growth of Australia's secondary industries has been associated with considerable expansion in mining for silver-lead-zinc, copper and iron ores, and coal. However, the value of mineral production has lagged behind that recorded for Australia's large rural industries and in 1953 represented only about 10 per cent. of the net value of production of all primary industries.

2. *Extent of Mineral Wealth.*—The extent of the mineral wealth of Australia, as in any country, is not determined fully at any point in time. Regional and detailed investigations are being carried out by the Commonwealth Bureau of Mineral Resources, Geology and Geophysics, by the Geological Surveys of the State Governments and by the exploration departments of mining companies but large areas of the country still await geological survey. Important prospects of copper, iron, lead and zinc, oil, uranium ore, bauxite (aluminium ore) and some other minerals have been recorded recently and are being investigated in detail.

3. *Standardization of Mineral Statistics.*—At the 1945 Conference of Australian Statisticians, consideration was given to the defective nature of Australian mineral production statistics arising from the widely differing methods adopted by individual States in collecting, compiling and publishing the data. Further attention was given to the problem by a conference in 1948 of officers of the Bureau of Mineral Resources, Geology and Geophysics, State Mines Departments and State and Commonwealth Statistical Bureaux. Following work subsequently undertaken by the Bureau of Mineral Resources, the Commonwealth Bureau of Census and Statistics and other authorities concerned, a specific plan for standardization of Australian mineral production statistics was adopted in 1950. In accordance with the plan, numerous improvements have been introduced and with the introduction of annual Australia-wide industrial censuses for mining and quarrying in 1952, Australian mineral statistics are now considered to be adequate for present needs. It should be noted that the statistics included in this chapter omit particulars relating to uranium-bearing minerals.

The fundamental provision of the plan for standardization of Australian mineral statistics is that quantities and values of individual minerals produced should be reported in terms of the products in the form in which they are despatched from the locality of each mine. This involves the inclusion in the mining industry of ore-dressing and elementary smelting of metallic minerals (e.g., in the case of gold) and miscellaneous treatment of non-metallic minerals, where these operations are carried out in an associated plant at or near the 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 plan provides for the reporting of contents of metallic minerals and of contents or average grade of selected non-metallic minerals. Wherever 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.

For the purpose of compiling and publishing data relating to employment, value of output, value of production, etc., a detailed statistical classification for the mining industry has been used in Australia from 1950. For the purpose of this classification, the "Mining Industry" includes all mining and quarrying and the recovery of minerals from ore dumps, tailings, etc. As mentioned above, ore dressing 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 Mining Industry. However, establishments primarily engaged in smelting and/or refining (including the smelting and refining sections of the large plants operated at Mt. Morgan and Mt. Isa in Queensland and at Mt. Lyell in Tasmania) are omitted and classified to the Manufacturing Industry. The classification divides the industry into four major groups, namely, Metal Mining, Fuel Mining, Non-metal (excluding Fuel) Mining and Construction Material Quarrying.

The adoption of revised methods of compiling and presenting mineral statistics in 1950 caused a break in continuity of the data published for earlier years, and the introduction of industrial censuses of the mining and quarrying industry in all States in 1952 has caused a further break in continuity of data, particularly those relating to values.

4. **Quantity and Value of Minerals Produced, 1954.**—(i) *Quantities.* In the following table particulars of the quantities of principal minerals produced are shown for each State and the Northern Territory for 1954.

In the main, the data consist of official statistics of Mines Departments furnished to this Bureau by the Statisticians of the several States and by the Northern Territory Mines Branch. These statistics have been supplemented, as necessary, by data obtained from the Australian Mines and Metals Association (Inc.), the Bureau of Mineral Resources, Geology and Geophysics and several other sources. The particulars shown have been compiled as far as practicable on the standardized basis outlined in para. 3 above. This has involved some re-arrangement of official statistics published by Mines Departments for some States.

In these tables individual minerals are arranged in four groups, **Metallic Minerals**, **Fuel Minerals**, **Non-metallic (excluding Fuel) Minerals** and **Construction Materials**, to correspond with the major groups of the statistical classification of the mining industry.

The particulars shown in the group "Construction Materials" cover, broadly, data similar to those previously included under the heading of "Quarries".

## QUANTITIES OF PRINCIPAL MINERALS PRODUCED, 1954.

Mineral.	Unit.	N.S.W.	Vic.	Q'land.	S. Aust.	W. Aust.	Tas.	N.T.	Aust
<b>METALLIC MINERALS.</b>									
Antimony Ore and Concentrate ..	ton	(a) 156	5	16	..	45	..	..	222
Beryllium Ore ..	lb.	20,832	..	16,128	..	296,016	..	..	332,976
Copper Ore, Concentrate and Precipitate ..	ton	2,144	..	144,594	3	..	45,025	2,503	194,269
Gold Ore, Concentrate, etc. ..	"	87	15	..	..	..	..	..	102
Gold—Other Forms (b) ..	oz.	23,377	(c)	(c)	(c)	(c)	(c)	(c)	(c)
Iron Ore ..	'000 tons	..	..	..	2,867	652	..	..	3,519
Lead Ore, Concentrate ..	ton	319,184	..	121,604	55	2,167	11,618	3	454,631
Manganese Ore ..	"	(a) 1,616	..	138	..	26,448	..	..	28,202
Pyritic Ore and Concentrate ..	"	10,736	..	85,750	..	56,150	54,142	..	206,778
Rutile Concentrate ..	"	22,734	..	21,925	..	..	..	..	44,659
Tantalite-Columbite Concentrate ..	"	..	..	..	..	116,719	..	1,045	117,767
Tin Concentrate ..	"	(a) 377	36	1,035	..	121	1,374	32	2,975
Tungsten Concentrate—Schaeelite Concentrate ..	"	(a) 9	..	(d)	..	4	1,318	..	1,331
Wolfram Concentrate ..	"	(a) 3	..	58	..	..	581	80	722
Zinc Ore and Concentrate ..	"	390,741	..	38,339	..	..	54,664	..	483,744
Zircon Concentrate ..	"	27,489	..	13,064	..	..	..	..	41,453

**FUEL MINERALS**

Coal, Black—									
Semi-Anthracite ..	'000 tons	..	..	73	..	..	1	..	74
Bituminous ..	"	15,066	141	2,378	..	..	263	..	17,848
Sub-Bituminous ..	"	17	..	310	495	1,019	..	..	1,841
Total ..	"	15,083	141	2,761	495	1,019	264	..	19,763
Coal, Brown (including Lignite) ..	"	..	9,331	..	..	..	..	..	9,331

**NON-METALLIC (EXCLUDING FUEL) MINERALS.**

Asbestos ..	ton	616	..	..	..	4,097	..	..	4,713
Barite ..	"	2,000	..	..	3,828	1,044	..	..	6,872
Clays—									
Brick Clay and Shale ..	'000 tons	1,604	(e) 845	278	303	(e) 420	(e) 69	..	3,519
Other ..	"	468	(f) 115	(f) 10	(f) 91	(f) 24	(f) 8	..	(f) 716
Cupreous Ore and Concentrate—For Fertilizer ..	ton	..	..	..	..	4,748	..	18	4,766
Diatomite ..	"	3,708	905	676	..	150	..	..	5,439
Dolomite ..	"	3,855	..	2,680	118,612	..	2,847	..	127,994
Felspar (including Cornish Stone) ..	"	9,538	..	..	3,620	3,226	..	..	16,384
Glaucosite ..	"	..	..	..	..	1,776	..	..	1,776
Gypsum ..	"	128,790	75,012	..	194,772	41,142	..	..	439,716
Limestone (g) ..	'000 tons	1,544	695	74	950	..	196	(d)	3,459
Magnesite ..	ton	42,825	..	..	235	..	92	..	43,152
Mica—Muscovite ..	lb.	15,680	..	..	..	..	..	149,803	165,483
Salt ..	ton	..	(h)	(h)	303,893	(h)	..	..	380,000
Silica (Glass, Chemical, etc.) ..	"	102,044	..	..	17,912	7,803	6,169	..	133,958
Talc (including Steatite) ..	"	037	..	..	0,088	2,920	..	..	12,940

**CONSTRUCTION MATERIALS. (f)**

Sand ..	'000 tons	1,444	812	(c)	1,146	(i) 38	(c)	(c)	3,440
River Gravel and Gravel Boulders ..	"	1,288	97	(c)	676	(i) 225			2,286
Dimension Stone (j) ..	"	95	19	6	53	(i) 118			291
Crushed and Broken Stone ..	"	1,739	2,687	648	3,114	(i) 512			8,700
Other (Decomposed Rock, etc.) ..	"	10,013	281	(c)	78	(c)			10,372

(a) Despatches from the mine (or sales) as distinct from production. (b) Bullion, alluvial, retorted gold, etc. (c) Not available. (d) Less than half the unit of quantity shown. (e) Estimated. (f) Incomplete. (g) Excludes quantities used directly as a building or road material. (h) Not available for publication; included in total for Australia. (i) Year 1954-55. (j) Includes some quantities of stone dressed at the quarries.

(ii) *Principal Contents of Metallic Minerals.* The following table provides a summary of the principal contents of metallic minerals produced in 1954. Further particulars, including data for earlier years, are shown in the several sections dealing with individual minerals later in this chapter.

## PRINCIPAL CONTENTS OF METALLIC MINERALS PRODUCED, 1954.

Content of Metallic Minerals Produced.	Unit.	N.S.W.	Vic.	Q'land.	S. Aust.	W. Aust.	Tas.	N.T.	Aust.
Antimony .. ..	ton	697	3	8	..	27	..	..	731
Cadmium .. ..	..	826	..	..	..	..	77	..	903
Cobalt .. ..	..	99	..	..	..	..	..	..	69
Copper .. ..	..	3,182	..	27,207	(a)	..	9,880	588	40,857
Gold .. ..	fine oz.	31,374	52,665	97,951	54	861,992	19,368	54,338	1,117,742
Iron .. ..	'000 tons	..	..	b	1,863	411	..	..	2,274
Lead .. ..	ton	230,392	..	41,424	14	1,497	11,533	2	284,862
Silver .. ..	'000	..	..	..	..	..	..	..	..
Sulphur(c) .. ..	fine oz.	8,680	3	3,584	1	238	1,321	(a)	13,827
Tin .. ..	ton	127,648	..	53,368	..	24,458	44,249	..	249,723
Tungsten(d) .. ..	..	272	26	730	..	80	947	20	2,075
Zinc .. ..	..	8	..	(b)	38	3	1,272	51	1,372
		202,646	..	10,615	..	74	30,324	..	252,659

(a) Less than half the unit of quantity shown.  
zinc concentrate.

(b) Estimated.

(c) Sulphur content of

(d) In terms of  $WO_3$ .

(iii) *Values.* Particulars of the estimated values of minerals (mine and quarry products) produced in 1954 are shown in the following table. The values represent the estimated selling value at the mine or quarry of minerals produced during the year.

VALUE OF MINERALS PRODUCED, 1954.  
(£'000.)

Mineral.	N.S.W.	Vic.	Q'land.	S. Aust.	W. Aust.	Tas.	N.T.	Aust.
METALLIC MINERALS.								
Copper Ore, Concentrate and Precipitate ..	118	..	(a)	(b)	..	(a)	114	9,912
Gold Ore, Concentrate, etc. ..	2	1	..	..	..	..	..	3
Gold—Other Forms ..	316	856	277	1	13,385	(b)	839	15,674
Iron Ore ..	..	..	..	(a)	(a)	..	..	3,923
Lead-Silver and Lead-Silver-Zinc Ores ..	20	..	..	2	20	..	(b)	42
Lead Concentrate ..	22,216	..	4,700	..	43	559	..	27,518
Manganese Ore ..	17	..	(a)	..	(a)	..	..	512
Pyritic Ore and Concentrate ..	(a)	..	245	..	(a)	153	..	897
Rutile Concentrate ..	779	..	818	..	..	..	..	1,597
Tin Concentrate ..	211	23	548	..	61	749	14	1,606
Tungsten Concentrates ..	7	..	41	..	(a)	(a)	53	2,347
Zinc Concentrate ..	4,273	..	571	..	..	1,687	..	6,531
Zircon Concentrate ..	200	..	124	..	..	..	..	324
Other Metallic Minerals ..	79	7	8	..	150	7	2	253
Total, Metallic Minerals ..	28,295	887	14,304	3,300	15,223	8,108	1,022	71,139

## FUEL MINERALS.

Coal, Black .. ..	42,762	886	6,474	650	3,589	523	..	54,884
Coal, Brown .. ..	..	3,945	..	..	..	..	..	3,945
Total, Fuel Minerals ..	42,762	4,831	6,474	650	3,589	523	..	58,829

## NON-METALLIC (EXCLUDING FUEL) MINERALS.

Total, Non-metallic (excluding Fuel) Minerals ..	2,129	1,063	518	1,949	1,078	208	123	7,068
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## CONSTRUCTION MATERIALS. (c)

Total, Construction Materials ..	5,016	3,299	307	2,654	(d) 851	116	..	(e) 12,346
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## TOTAL.

Total, All Minerals and Construction Materials ..	78,202	10,080	21,603	8,553	20,741	8,955	1,145	140,182
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(a) Not available for publication. (b) Less than £500. (c) Incomplete. (d) Year ended 30th June, 1955. (e) Includes Australian Capital Territory, £103,000.

5. Mine Production of Principal Metals and Production of Coal and Sulphur, 1939 and 1950 to 1954.—Particulars of the mine production of principal metals (i.e., metallic contents of minerals produced) and production of coal and sulphur in the years 1939 and 1950 to 1954 are shown in the following table.

### MINE PRODUCTION OF PRINCIPAL METALS AND PRODUCTION OF COAL AND SULPHUR.

Particulars.	Unit.	1939.	1950.	1951.	1952.	1953.	1954.
<b>Metallic Content of Minerals Produced(a)—</b>							
Copper .. ..	ton	20,560	17,481	17,926	18,578	36,565	40,857
Gold .. ..	fine oz.	1,645,697	869,537	895,551	980,435	1,075,181	1,117,742
Lead .. ..	ton	280,003	225,367	212,013	228,196	269,344	284,862
Iron(b) .. ..	"	1,548,031	1,417,608	1,605,400	1,883,087	2,131,865	2,274,330
Silver .. ..	'000 fine			10,244	11,278	12,539	13,827
Tin .. ..	ton	15,320	10,984	10,244	11,278	12,539	13,827
Zinc .. ..	ton	3,067	1,854	1,559	1,611	1,553	2,075
Production of—	"	214,823	197,783	189,227	196,450	239,324	252,659
Coal—Black ..	'000 tons	13,535	16,543	17,608	19,404	18,411	19,761
Brown .. ..	"	3,651	7,327	7,836	8,104	8,257	9,331
Sulphur(c) ..	ton	151,008	179,843	183,126	217,242	225,197	254,403

(a) Mine production of metals. (b) Estimated. (c) Total sulphur content of zinc concentrate and pyrite produced and of spent oxide roasted.

6. Value of Output and Value of Production for Mining and Quarrying.—(i) *Individual Industries*, 1953. The following two tables show particulars of the value of output and value of production of individual mining and quarrying industries and for all mining and quarrying for the year 1953. The data were obtained from industrial censuses of the mining and quarrying industry which were made on a substantially uniform basis in all States and Territories for the year 1953.

### MINING AND QUARRYING : VALUE OF OUTPUT(a), 1953. (£'000.)

Industry.	N.S.W.	Vic.	Q'land.	S. Aust.	W. Aust.	Tas.	N.T.	Aust.
<b>Metal Mining—</b>								
Gold Mining ..	225	1,033	271	7	13,375	..	820	15,738
Silver-Lead-Zinc Mining ..	22,817	..	(b)	(b)	310	1,903	..	31,672
Copper-Gold Mining ..	21	..	(b)	(c)	3	(b)	18	4,384
Tin Mining ..	303	..	21	..	68	1,258	15	1,855
Other Metal Mining ..	1,322	6	(b)	(b)	1,401	(b)	266	9,170
Total, Metal Mining	24,684	1,039	10,563	2,989	15,157	7,264	1,119	62,819
<b>Fuel Mining—</b>								
Black Coal Mining ..	41,630	946	5,861	461	3,073	453	..	52,424
Brown Coal Mining ..	..	3,628	..	..	..	..	..	3,628
Total, Fuel Mining	41,630	4,574	5,861	461	3,073	453	..	56,052
<b>Non-metal (excluding Fuel) Mining—</b>								
Clays .. ..	704	270	80	242	209	52	..	1,557
Gypsum .. ..	79	28	..	136	19	..	..	262
Limestone(d) ..	77b	456	(b)	487	(b)	(b)	..	2,463
Salt .. ..	..	(e)	(f)	478	(e)	..	..	478
Other Non-metal (excluding Fuel) Mining	345	7	(b)	226	(b)	(b)	102	1,474
Total, Non-metal (excluding Fuel) Mining	1,906 (g)	761	645	1,569 (g)	1,052	199	102 (g)	6,234
Total, All Mining ..	68,224 (g)	6,370	17,069	5,019 (g)	19,282	7,916	1,221 (g)	125,105
<b>Construction Material Quarrying ..</b>								
.. ..	4,122 (h)	2,955 (g)	215	1,184 (i)	729	121	..	9,437
Total, All Mining and Quarrying ..	72,346 (g)	9,329 (g)	17,284	6,203 (g)	20,011	8,037	1,221 (g)	134,542

(a) Selling value at point of sale of mine or quarry products, less transport costs from mine or quarry to point of sale, i.e., value of output at mine or quarry. (b) Not available for publication. (c) Less than £500. (d) Excludes quarries primarily engaged in obtaining construction material. (e) Not available. (f) Not available for publication; included with "Other Non-metal Mining". (g) Incomplete. (h) Year ended 30th June, 1953. (i) Year ended 30th June, 1954. (j) Includes £111,000 for the Australian Capital Territory.

**MINING AND QUARRYING : VALUE OF PRODUCTION(a), 1953.**  
(£'000.)

Industry.	N.S.W.	Vic.	Q'land.	S. Aust.	W. Aust.	Tas.	N.T.	Aust.
<b>Metal Mining—</b>								
Gold Mining ..	142	677	200	(b)	8,837	..	744	10,600
Silver-Lead-Zinc Mining ..	16,858	..	(c)	(c)	233	1,659	..	23,319
Copper-Gold Mining ..	13	..	(c)	..	3	(c)	16	2,878
Tin Mining ..	256	..	152	..	51	1,084	12	1,555
Other Metal Mining ..	1,015	4	59	(c)	1,197	(c)	247	7,852
<b>Total, Metal Mining</b>	<b>18,284</b>	<b>681</b>	<b>7,388</b>	<b>(c)</b>	<b>10,321</b>	<b>(c)</b>	<b>1,019</b>	<b>46,234</b>
<b>Fuel Mining—</b>								
Black Coal Mining ..	34,067	790	4,874	(c)	2,501	(c)	..	42,973
Brown Coal Mining ..	..	3,266	..	..	..	..	..	3,266
<b>Total, Fuel Mining</b>	<b>34,067</b>	<b>4,056</b>	<b>4,874</b>	<b>(c)</b>	<b>2,501</b>	<b>(c)</b>	..	<b>46,239</b>
<b>Non-metal(excluding Fuel) Mining—</b>								
Clays ..	(d) 704	255	(c)	215	208	47	..	(e) 1,420
Gypsum ..	57	20	..	92	14	..	..	183
Limestone(f) ..	541	255	(c)	394	(c)	(c)	..	1,826
Salt ..	..	(g)	(c)	431	(g)	..	..	(e) 431
Other Non-metal (excluding Fuel) Mining	267	7	(c)	193	(c)	(c)	98	980
<b>Total, Non-metal (excluding Fuel) Mining</b>	<b>1,569</b>	<b>(e) 537</b>	<b>481</b>	<b>1,325</b>	<b>(f) 702</b>	<b>147</b>	<b>98</b>	<b>(e) 4,856</b>
<b>Total, All Mining ..</b>	<b>53,920</b>	<b>(e) 5,274</b>	<b>12,743</b>	<b>4,466</b>	<b>(f) 13,523</b>	<b>6,286</b>	<b>1,117</b>	<b>(e) 97,331</b>
<b>Construction Material Quarrying ..</b>	<b>4,122</b>	<b>(h) 2,003</b>	<b>(e) 163</b>	<b>583</b>	<b>(i) 475</b>	<b>106</b>	..	<b>(j) 7,541</b>
<b>Total, All Mining and Quarrying ..</b>	<b>58,042</b>	<b>(e) 7,277</b>	<b>(e) 12,906</b>	<b>5,051</b>	<b>(e) 13,998</b>	<b>6,392</b>	<b>1,117</b>	<b>(e) 104,875</b>

(a) 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) Less than £500. (c) Not available for publication. (d) Cost of power, fuel, light and other materials have not been deducted. (e) Incomplete. (f) Excludes quarries primarily engaged in obtaining construction material. (g) Not available. (h) Year ended 30th June, 1953. (i) Year ended 30th June, 1954. (j) Includes £92,000 for the Australian Capital Territory.

(ii) *States, 1939 and 1949 to 1953.* Values for individual minerals produced based on estimated selling value at the mine or quarry are shown for the year 1954 in para. 4 (iii) above. Australian State and Commonwealth Statisticians have for many years used values for mine and refinery products as recorded by Mines Departments and other relevant data (including censuses of the industry in some States) to estimate value of output and value of production for the mining and quarrying industry as a whole. The following table shows estimates on this basis for the years 1939 and 1949 to 1951 together with the values ascertained from the Australia-wide mineral industry censuses of 1952 and 1953. The estimates for 1951 and the earlier years shown are approximate, and as value added in ore-dressing and similar treatment plants situated at or near the mine was excluded in some cases, they are not strictly comparable with the 1952 and 1953 valuations which consistently include the value of such mine treatment. The Northern Territory is omitted for years prior to 1952 and the Australian Capital Territory for years prior to 1953.

**MINING AND QUARRYING : VALUE OF OUTPUT AND VALUE OF PRODUCTION.**  
(£'000.)

Year.	N.S.W.	Vic.	Qld.	S.A.	W.A.	Tas.	N.T.	A.C.T.	Aust.
<b>VALUE OF OUTPUT.(a)</b>									
1939 ..	12,914	2,709	3,438	3,648	12,496	2,145	(b)	(b)	37,430
1949 ..	35,295	4,215	7,096	3,118	9,799	4,629	(b)	(b)	64,152
1950 ..	46,102	5,274	10,829	4,428	12,037	7,049	(b)	(b)	85,719
1951 ..	67,877	6,949	10,922	4,938	13,474	10,552	(b)	(b)	114,712
1952 ..	77,097	8,535	17,499	6,047	17,704	8,750	1,282	(b)	136,844
1953 ..	72,346	9,370	17,281	6,203	20,011	8,037	1,221	111	134,542

For footnotes see next page.



**MINING AND QUARRYING : VALUE OF OUTPUT AND VALUE OF PRODUCTION—continued.**

(£'000.)

Year.	N.S.W.	Vic.	Q'land.	S. Aust.	W. Aust.	Tas.	N.T.	A.C.T.	Atct.
<b>VALUE OF PRODUCTION.(c)</b>									
1939 ..	10,927	2,111	2,688	3,444	9,268 (d)	2,145	(b)	(b)	30,583
1949 ..	30,191	2,263	5,606	2,941	6,697 (d)	4,629	(b)	(b)	52,327
1950 ..	39,634	2,969	8,559	4,188	8,751 (d)	7,049	(b)	(b)	71,150
1951 ..	59,385	4,209	8,632	4,646	9,775 (d)	10,552	(b)	(b)	97,199
1952 ..	63,166	6,632	13,860	5,153	12,410	7,325	1,125	(b)	109,671
1953 ..	58,042	7,277	12,906	5,051	13,998	6,392	1,117	92	104,875

(a) Selling value of mine and quarry products at the mine or quarry. (b) Not available.  
(c) Value of output less cost of power, fuel, light and other materials and stores used; depreciation and maintenance costs have not been deducted. (d) Value of output; value of production not available.

7. Industrial Census of the Mining and Quarrying Industry, 1953.—Industrial censuses of the mining and quarrying industry (covering employment, salaries and wages paid, fixed assets, value of output, costs of materials used, etc.) have been taken in some Australian States for many years, but on different bases. In 1952 and 1953 censuses were taken in all States and Territories on a substantially uniform basis, thus providing important Australian statistics on mining and quarrying operations which were not previously available. A summary of the statistics collected in 1953 is shown in the following table.

**MINING AND QUARRYING : SUMMARY OF OPERATIONS, AUSTRALIA, 1953.**

Particulars.	Unit.	Metal Mining.	Fuel Mining.	Non-metal (excluding fuel) Mining. (a)	Total, All Mining.	Construction Material Quarrying. (b)	Total All Mining and Quarrying.
Mines and Quarries ..	No.	1,099	285	703	2,087	679	2,766
Persons Employed (c) ..	"	21,594	28,204	2,046	52,744	3,803	56,547
Salaries and Wages Paid <i>d e</i> ..	£'000	22,282	25,654	1,684	49,620	2,007	51,627
Value of Output (f) ..	"	62,819	56,052	6,234	125,105	9,437	134,542
Total Fuel, Materials, etc., Used (g) ..	"	16,585	9,813	1,376	27,774	1,593	29,667
Value of Production (h) ..	"	46,234	16,239	4,858	97,331	7,544	104,875
Value of Fixed Assets (d)(i) ..	"	42,587	35,352	4,418	82,357	3,376	85,733

(a) Incomplete for some non-metal (excluding fuel) mining industries outside the normal administrative control of State Mine Departments (e.g., clays and salt). (b) Incomplete in some States.  
(c) Average number employed (including working proprietors) during whole year. (d) Excludes mines and quarries employing less than four persons (less than five persons in Western Australia).  
(e) Excludes drawings by working proprietors; the amounts are net after deducting value of explosives sold to own employees. (f) Value at mine or quarry. (g) Includes value of explosives sold to own employees.  
(h) Value of output less cost of power, fuel, light and other materials and stores used; depreciation and maintenance costs have not been deducted. (i) Depreciated value (i.e., book value less any depreciation reserves) at end of year.

In the next table statistics of numbers of mines and quarries, persons employed, value of output and value of production are shown for each State, the Northern Territory and the Australian Capital Territory for the year 1953.

## MINING AND QUARRYING : SUMMARY OF OPERATIONS, 1953.

State or Territory.	Mines and Quarries.	Persons Employed. (a)	Salaries and Wages Paid. (b)(c)	Value of Output. (d)	Total Fuel, Materials, etc., Used. (e)	Value of Production. (f)	Value of Fixed Assets. (b)(g)
	No.	No.	£'000.	£'000.	£'000.	£'000.	£'000.
New South Wales..	907	29,798	28,898	72,346	14,304	58,042	38,947
Victoria..	259	4,816	4,108	9,329	2,052	7,277	11,966
Queensland ..	685	7,648	6,245	17,284	4,378	12,906	10,698
South Australia ..	523	2,065	1,422	6,203	1,152	5,051	5,199
Western Australia	270	8,722	7,840	20,011	6,013	13,998	14,739
Tasmania ..	72	2,984	2,850	8,037	1,645	6,392	3,088
Northern Territory	47	472	228	1,221	104	1,117	1,058
Australian Capital Territory ..	3	42	36	111	19	92	38
Australia ..	2,766	56,547	51,627	134,542	29,667	104,875	85,733

(a) Average number employed (including working proprietors) during whole year. (b) Excludes mines and quarries employing less than four persons (less than five persons in Western Australia). (c) Excludes drawings by working proprietors; the amounts are net after deducting value of explosives sold to own employees. (d) Value at mine or quarry. (e) Includes value of explosives sold to own employees. (f) Value of output less cost of power, fuel and light and other materials and stores used; depreciation and maintenance costs have not been deducted. (g) Depreciated value (i.e. book value less any depreciation reserves) at end of year.

## § 2. Gold.

1. **Discovery in Various States.**—A detailed account of the discovery of gold in the various States appears under this section in Official Year Books Nos. 1 to 4.

2. **Mine Production.**—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 of the ten decennial periods from 1851 to 1950, and in single years from 1951 to 1954. Owing to defective information in the earlier years it is likely that the recorded production falls considerably short of the actual totals.

## GOLD : MINE PRODUCTION.(a)

('000 fine oz.)

Period.	N.S.W.	Vic.	Q'land.	S. Aust.	W. Aust.	Tas.	N.T.	Aust
1851-60 ..	2,715	21,973	3	..	..	186	..	24,877
1861-70 ..	3,220	15,327	489	..	..	3	..	19,039
1871-80 ..	2,019	9,564	2,527	136	..	165	19	14,430
1881-90 ..	1,014	6,689	3,259	58	42	357	168	11,587
1891-1900 ..	2,432	7,040	5,648	52	5,252	550	214	21,188
1901-10 ..	2,253	7,095	5,512	73	17,784	604	111	33,432
1911-20 ..	1,145	3,067	2,263	55	10,671	202	23	17,426
1921-30 ..	204	593	434	10	4,557	43	2	5,843
1931-40 ..	560	1,052	1,021	53	8,474	130	84	11,383
1941-50 ..	573	801	749	13	6,682	157	148	9,123
1951 ..	49	66	79	(b)	648	15	39	896
1952 ..	39	68	85	(b)	727	16	45	980
1953 ..	26	64	92	(b)	823	17	53	1,075
1954 ..	32	53	98	(b)	862	19	54	1,118
Total, 1851-1954..	16,290	73,452	22,259	450	56,522	2,464	960	172,397

(a) Gold content of minerals produced.

(b) Less than 500 fine ounces.

The amount of gold raised in Australia in any one year attained its maximum in 1903, when Western Australia also reached its highest point. For the other States the years in which the greatest yields were obtained were as follows:—New South Wales, 1852; Victoria, 1856; Queensland, 1900; South Australia, 1904; and Tasmania, 1899.

Owing to the exhaustion of the more easily worked deposits and increased costs due to deep mining the production of gold in Australia declined from 3,837,979 fine oz. in 1903 to 427,160 fine oz. in 1929, the lowest output since its discovery.

Increased activity in prospecting due to prevailing economic conditions resulted in some improvement in 1930, but the marked development between that year and 1939 was caused by the heavy depreciation of Australian currency in terms of gold. Following the outbreak of the 1939-45 War there was a sharp fall in gold production to 656,867 fine oz. in 1944 and 657,213 fine oz. in 1945, but with the release of man-power after the war there has been a slight upward trend in mine production of gold, which, in 1953, exceeded 1,000,000 fine oz. for the first time since 1942. The devaluation of Australian currency in September, 1949 gave an impetus to gold production, but this was offset in the following years by increasing costs which brought about the closing of several large producers in New South Wales, Victoria and Western Australia. To enable the industry to meet the increase in costs, sales of gold on overseas premium markets at prices in excess of the official price were permitted from December, 1951. During 1952 and 1953, premium sales of gold brought an additional return to the industry amounting to about £1,800,000, but towards the end of 1953 the price of gold on overseas premium markets fell sharply and subsequent sales have been made at prices very little above the official price. This had an adverse effect on the financial position of the gold-mining industry and the Commonwealth Government passed the Gold-Mining Industry Assistance Act in 1954 to prevent any serious decline in gold-mining activity. Despite the difficulties referred to above, the production of gold in Australia has increased in each successive year since 1951, mainly owing to increased output in Western Australia, Northern Territory and Queensland.

3. **Refinery Production.**—The quantities and values of the refinery production of new gold of Australian origin are shown in the following table for each of the years 1945 to 1954. The value of the refined new gold is based on the price fixed by the Commonwealth Bank, but allowance is made in the 1952, 1953 and 1954 figures for premiums on sales of gold overseas and for industrial purposes in Australia.

**GOLD : REFINERY PRODUCTION OF NEWLY WON GOLD OF AUSTRALIAN ORIGIN.**

Year.	Quantity.	Value.	Year.	Quantity.	Value.
	'000. fine oz.	£'000.		'000. fine oz.	£'000.
1945 .. ..	613	6,556	1950 .. ..	844	13,077
1946 .. ..	820	8,830	1951 .. ..	850	13,172
1947 .. ..	969	10,430	1952 .. ..	979	16,037
1948 .. ..	884	9,517	1953 .. ..	1,053	16,780
1949 .. ..	879	10,670	1954 .. ..	1,063	16,521

The unit value of refinery production of newly won gold of Australian origin rose to £12 2s. 10d. in 1949 as a result of the increase in the price to £15 9s. 10d. per fine oz. fixed by the Commonwealth Bank on 19th September, 1949, consequent upon alteration in the rate of exchange. In 1950 and 1951, the unit values were the Bank's price of £15 9s. 10d. per fine oz., while in 1952, 1953 and 1954 allowance was made for premiums on gold sold for industrial purposes in Australia and on premium markets overseas, the average value for these years being £16 7s. 7½d., £15 18s. 9½d. and £15 10s. 10d. per fine oz. respectively. From 1st May, 1954 the official price of gold in Australia was raised to £15 12s. 6d. per fine oz. The previous gold price was based on the price for which gold could be sold abroad in official markets less costs of movement; the new price reflects the "parity" value of Australian currency established by the International Monetary Agreement Act, 1947. Further information regarding the price of gold realized, including particulars of prices for newly won gold sold on overseas premium markets since December, 1951, is given in Chapter XIX.—Private Finance.

4 **Changes in Stocks of Gold held in Australia.**—The following table shows particulars of production, imports and exports of gold and changes in stocks of gold held in Australia for each of the years 1950-51 to 1954-55.

**CHANGES IN STOCKS OF GOLD HELD IN AUSTRALIA.**  
(Fine oz.)

Particulars.	1950-51.	1951-52.	1952-53.	1953-54.	1954-55.
Mine Production of Gold (a) .. ..	891,428	908,813	1,037,885	1,111,420	1,080,190
Imports of Gold (b)(c) .. ..	158,661	208,143	228,407	189,628	173,846
<b>Total .. ..</b>	<b>1,050,089</b>	<b>1,116,956</b>	<b>1,266,292</b>	<b>1,301,048</b>	<b>1,254,036</b>
Exports of Gold (b) .. ..	19	416,652	1,250,162	863,464	864,423
Gold Content of Ores and Concentrates Exported .. ..	10,662	14,503	23,204	19,848	12,116
Net Industrial Absorption of Gold .. ..	40,425	33,838	37,816	51,543	45,253
<b>Total .. ..</b>	<b>51,106</b>	<b>464,993</b>	<b>1,311,182</b>	<b>934,855</b>	<b>921,792</b>
Changes in Stocks of Gold held in Australia(d)	+ 998,983	+ 651,963	- 44,890	+ 366,193	+ 332,244

(a) Gold content of minerals produced in Australia.

(b) Includes gold contained in matte.

(c) Excludes gold imports in some minor minerals.

(d) Includes gold content of mineral products awaiting refining; excludes gold specie.

5 **Production in Principal Countries.**—The quantities of gold produced in the principal producing countries in each of the years 1939 and 1949 to 1953 are shown in the table hereunder.

**GOLD : PRODUCTION IN PRINCIPAL COUNTRIES.**  
(’000 fine oz.)

Country.	1939.	1949.	1950.	1951.	1952.	1953.
Union of South Africa ..	12,822	11,705	11,664	11,516	11,819	11,941
Canada .. ..	5,094	(a)4,124	(a)4,441	(a)1,303	(a)4,472	(a)4,061
United States of America ..	4,673	1,902	2,394	1,081	1,803	1,958
<b>Australia .. ..</b>	<b>1,646</b>	<b>889</b>	<b>870</b>	<b>896</b>	<b>980</b>	<b>1,075</b>
British West Africa(b) ..	843	682	695	703	695	733
Rhodesia .. ..	800	529	513	488	499	504
Mexico .. ..	842	406	408	393	459	483
Philippines .. ..	999	288	334	394	469	481
Colombia .. ..	570	385	406	431	422	437
Belgian Congo .. ..	465	334	330	352	369	371

(a) Includes Newfoundland.

(b) Includes Gold Coast, Nigeria and Sierra Leone.

6. **Employment in Gold Mining.**—Particulars of the numbers of persons employed in gold mining are shown in § 13 (page 1021).

7. **Assistance to Gold-mining Industry.**—In 1939 a tax was imposed on gold produced in Australia or any Australian Territory but this tax was suspended in 1947. Further relief was given to the gold-mining industry in 1952 and 1953 by permitting sales of gold on overseas premium markets, but with the disappearance of high premium prices overseas in late 1953, many producers were faced with the prospect of closing down. To meet this situation, the Gold-Mining Industry Assistance Act was assented to on 18th November, 1954. The purpose of this Act was to assist the gold-mining industry by the payment of subsidy subject to certain conditions on the production and sales of gold during the two financial years 1954-55 and 1955-56. The subsidy payable to small producers whose annual output does not exceed 500 fine oz. of gold is a flat rate of £1 10s. od. per fine oz. For large producers the formula for determining the amount of subsidy payable is:—

Three-quarters of the excess of average cost of production per fine oz. over £13 10s. od.

The maximum rate of subsidy which may be paid is £2 per fine oz. 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 shall be reduced by the amount of the excess. The subsidy will also be limited to the extent that the annual net profit of a producer will not, with the addition of the subsidy, exceed 10 per centum of the capital investment in the company. A further condition of the Act is that the recovery rate of the mine shall be maintained at the level of the year previous to the Act. In 1956 the operation of the Act was extended for a further three years to 1958-59.

### § 3. Silver, Lead and Zinc.

1. Mine Production.—(i) *Australia*. The following table shows for 1953 and 1954 the mine production (metallic contents of ores and concentrates produced) of silver, lead and zinc in Australia, and the respective minerals in which these metals were contained.

#### SILVER, LEAD AND ZINC : CONTENT OF ORES AND CONCENTRATES PRODUCED.

Mineral in which contained.	Silver (fine oz.).		Lead (tons).		Zinc (tons).	
	1953.	1954.	1953.	1954.	1953.	1954.
Copper Ore and Concentrate ..	853,176	1,069,600	1,744	2,845	869	..
Gold Concentrate, etc. ..	241,870	245,691	..	..	..	..
Lead-Silver Ore ..	26,833	27,398	1,079	627	..	..
Lead-Silver-Zinc Ore ..	5,193	2,118	255	93	68	74
Lead Concentrate ..	10,804,437	11,838,567	261,289	275,955	1,367	..
Silver Ore ..	8,160	..	..	..	..	..
Zinc Concentrate ..	599,513	643,664	4,977	5,342	237,020	252,585
Total ..	12,539,152	13,827,038	269,344	284,862	239,324	252,659

The following table shows the mine production of silver, lead and zinc in Australia for the years 1950 to 1954 compared with 1939.

#### SILVER, LEAD AND ZINC : CONTENT OF ORES AND CONCENTRATES PRODUCED, AUSTRALIA.

Metal.	Unit.	1939.(a)	1950.	1951.	1952.	1953.	1954.
Silver ..	'000 fine oz.	15,320	10,984	10,244	11,278	12,539	13,827
Lead ..	ton	280,003	225,367	212,013	228,196	269,344	284,862
Zinc ..	..	217,256	197,783	189,227	196,450	239,324	252,659

(a) Source : Australian Mines and Metals Association.

The following table shows the quantities of silver, lead and zinc contained in minerals won in the several States of Australia in the years 1953 and 1954 :—

#### SILVER, LEAD AND ZINC : CONTENT OF ORES AND CONCENTRATES PRODUCED, STATES.

State.	Silver (fine oz.)		Lead (tons).		Zinc (tons).	
	1953.	1954.	1953.	1954.	1953.	1954.
New South Wales ..	8,069,013	8,680,114	217,574	230,392	189,526	202,646
Victoria ..	6,268	3,443	..	..	..	..
Queensland ..	2,980,669	3,583,776	37,012	41,424	19,961	19,615
South Australia ..	699	625	20	14	..	..
Western Australia ..	241,629	237,639	4,700	1,497	68	74
Tasmania ..	1,240,619	1,321,385	10,038	11,533	29,769	30,324
Northern Territory ..	255	56	..	2	..	..
Australia ..	12,539,152	13,827,038	269,344	284,862	239,324	252,659

Particulars of the values ascribed to the various minerals containing silver, lead and zinc for the year 1954 are shown in the detailed table relating to mineral production on page 986.

(ii) *New South Wales.* By far the most silver-lead-zinc ore in New South Wales, in fact in Australia, is won from the massive silver-lead-zinc sulphide deposit at Broken Hill. The companies concerned in operating this gigantic lode are North Broken Hill Limited, which mines the northern limb of the ore-bearing structure, Broken Hill South Ltd., and Zinc Corporation Ltd. (with which is associated New Broken Hill Consolidated), which are conducting operations on the southern limb.

The present-day sulphide ores are concentrated by gravity and flotation methods at Broken Hill. The lead (galena) concentrates are railed to Port Pirie and smelted to produce lead bullion which is later refined by a continuous lead refining process for the elimination of arsenic and antimony and the recovery of silver and gold. About half of the zinc concentrates produced at Broken Hill are exported from Australia. Most of the remainder are treated at Risdon in Tasmania and a small proportion are roasted by fertilizer plants in South Australia for the recovery of sulphur dioxide for sulphuric acid manufacture.

At Captain's Flat, Lake George Mines Limited is operating a lode of similar constitution. Concentration of the ore is carried out at the mine itself, after which process individual concentrates of zinc and lead (containing silver) are despatched to Port Kembla, New South Wales, for further treatment. Concentrates of copper, pyrites and gold are also produced at this mine.

Silver-lead-zinc ore has been mined in small quantities in various other parts of the State, the more important localities being Howell, Yerranderie and Kangiara. The Conrad Mine at Howell in northern New South Wales is being re-opened.

(iii) *Victoria.* Small quantities of lead sulphide ore occur on most of Victoria's goldfields and in minor amounts in the Omeo, Bethanga and Cassilis districts. There has been no production of lead ore in recent years, the total recorded production being about 800 tons valued at £5,892.

The whole of the Victorian mine production of silver of 6,268 fine oz. in 1953 and 3,443 fine oz. in 1954 was won as a by-product of the gold mining industry.

(iv) *Queensland.* Silver produced in Queensland is obtained mainly as a by-product of ores of other metals such as lead-zinc and copper ores at Mt. Isa and copper-gold ore at Mt. Morgan. An exception is the ore at the Silver Phantom Mine in the Cloncurry district, which produced 32,848 oz. of silver from 27 tons of ore during 1954. The total production of silver in Queensland was 2,980,669 fine oz. in 1953 and 3,583,776 fine oz. in 1954.

Nearly all the output of lead in Queensland is produced at Mt. Isa in the far north-west of the State, where mining is carried out on extensive silver-lead-zinc ore and copper ore bodies. After concentration by flotation in the concentrating mill, the silver-lead concentrate is converted to bullion in the smelter. All Mt. Isa lead bullion is exported overseas, where certain impurities, such as antimony, arsenic and copper, as well as silver, are removed to yield a pure lead suitable for commercial use.

Zinc concentrates produced by Mt. Isa are also exported overseas. During the 1939-45 War, operations on silver-lead-zinc ores at Mt. Isa were suspended while the mine was engaged in mining copper, but in 1946 copper mining ceased, and operations on silver-lead-zinc ores were resumed. Copper mining has recommenced at Mt. Isa with the opening there of a new copper smelting plant in 1953.

(v) *South Australia.* Output of lead from local ores has been very small in recent years. In 1954, 55 tons of lead-silver ore valued at £1,472 were produced, containing 14 tons of lead and 625 fine oz. of silver.

There has been no recorded zinc production since 1903, when the zinc was contained in lead ores and concentrates which came mainly from the Glen Osmond and Strathalbyn districts.

(vi) *Western Australia.* During recent years, lead-silver-zinc ore and lead concentrates have been produced in Western Australia. Main centres of production have been the Northampton area, the Ashburton area and the West Kimberley district.

The bulk of the mine production of silver in Western Australia is obtained as a by-product of the gold-mining industry.

(vii) *Tasmania*. There are two large centres of silver-lead-zinc mining in Tasmania. The more important is the field operated by the Electrolytic Zinc Company of Australasia Ltd. at Read-Rosebery. These are primarily zinc mines, although lead and copper-lead concentrates are also produced. This company also operates the electrolytic zinc reduction works at Risdon near Hobart.

The lead concentrates and copper-lead concentrates produced at Rosebery are exported overseas.

The zinc concentrates, containing some lead, which are the principal product from the mine, are sent to Risdon for roasting and refining. The Risdon plant also treats considerable quantities of zinc concentrates from the Broken Hill mines.

Of secondary importance to Rosebery is the Mount Farrell field, situated 6 miles north-east of Rosebery. These ore-bodies are mainly silver-lead lodes which yield a lead concentrate with high silver content. The zinc content is insufficient to warrant recovery.

Most of the State's silver is contained in concentrates produced at Rosebery and Mount Farrell. Some silver is obtained from the Mount Lyell copper refinery tank house slimes which are treated at Port Kembla in New South Wales.

(viii) *Northern Territory*. There was no production of lead-silver ore in the Northern Territory in 1953. However, 3 tons of ore valued at £198 and with a content of 56 fine oz. of silver and 2 tons of lead were won in 1954 from Murray Downs, 150 miles north-east of Alice Springs.

2. **Production and Sales of Refined Silver, Lead and Zinc.**—In the following table, details are given of the production and sales of refined primary silver, lead and zinc as recorded from data received from the Australian Mines and Metals Association and from other sources. The figures shown for refined silver production include small quantities recovered from imported materials. The data relating to lead production include small quantities recovered from scrap for the year 1939.

#### REFINED SILVER, LEAD AND ZINC : PRODUCTION AND SALES, AUSTRALIA.

Particulars.	1939.	1950.	1951.	1952.	1953.	1954.
SILVER ('000 fine oz.).						
Production (a) .. .. .	9,552	6,882	6,870	6,773	6,595	8,505
Sold to Australian consumers (b) ..	1,794	1,324	1,939	1,045	1,447	1,977
Exported or sold for export (b) ..	7,518	5,745	4,924	5,876	4,755	6,989
LEAD (tons).						
Refined Lead—						
Production (a) .. .. .	199,437	160,526	165,758	156,630	172,468	200,409
Sold to Australian consumers (b) ..	32,217	43,661	54,620	31,566	31,667	42,088
Exported or sold for export (b) ..	164,684	121,380	112,332	119,648	141,007	153,847
Lead Bullion—						
Produced for export (a) .. .. .	43,955	37,021	31,872	37,700	34,050	38,146
ZINC (tons).						
Production (a) .. .. .	71,220	83,652	77,010	87,438	90,178	104,523
Sold to Australian consumers (b) ..	31,088	45,141	45,950	50,174	58,524	61,478
Exported or sold for export (b) ..	43,137	38,553	29,411	38,132	32,881	36,130

(a) Source : Bureau of Mineral Resources.

(b) Source : Australian Mines and Metals Association.

3. **Silver, Lead and Zinc : Production in Principal Countries and World Total, 1953.**—The following table shows, for the year 1953, particulars of silver, lead and zinc production (mine basis) in principal producing countries, together with the estimated world total, according to data published by the Mineral Resources Division of the Colonial Geological Surveys.

**SILVER, LEAD AND ZINC: MINE PRODUCTION IN PRINCIPAL COUNTRIES  
AND WORLD TOTAL, 1953.**

Country.	Silver.	Lead.	Zinc.
	'000 fine oz.	Tons.(a)	Tons.(a)
United States of America .. .. .	37,571	305,183	488,777
<b>Australia</b> .. .. .	<b>12,539</b>	<b>269,344</b>	<b>239,324</b>
U.S.S.R. .. .. .	(b)	(c) 240,000	(c) 225,000
Mexico .. .. .	47,886	218,049	213,119
Canada .. .. .	28,299	176,097	356,093
Peru .. .. .	19,216	120,958	132,009
Yugoslavia .. .. .	3,048	83,807	59,023
Italy .. .. .	699	36,304	96,786
Bolivia .. .. .	6,787	23,412	23,595
Poland .. .. .	(b)	(c) 21,000	(c) 140,000
Japan .. .. .	6,028	18,359	93,563
Belgian Congo .. .. .	4,951	..	123,809
<b>Estimated World Total</b> .. .. .	<b>190,000</b>	<b>1,908,000</b>	<b>2,587,000</b>

(a) Long tons.

(b) Not available.

(c) Estimated.

In 1954, the Australian mine production of lead, 284,862 tons, was the highest in the world for the first time in the history of the lead-zinc industry. This was due not only to increased production in Australia, but also to the continued fall in production in the former leading country, the United States of America.

4. **Prices of Silver, Lead and Zinc.**—In view of the close association in Australia, particularly in New South Wales, of ores containing these metals, relevant particulars of the prices of each of the metals have been included in the following table. The table shows average prices in Australia and on the London Metal Exchange during the years 1938 and 1950 to 1954. Lead and zinc prices were controlled in Australia and the United Kingdom after the outbreak of war in 1939, but were decontrolled in Australia on 21st April, 1953. Free trading in lead in the United Kingdom, after thirteen years of Government control, was resumed on 1st October, 1952, while the fixing by regulation of the price of zinc was abandoned from 1st January, 1953. Silver prices have not been controlled in Australia and the United Kingdom.

**PRICES OF SILVER, LEAD AND ZINC.**

Metal.	1938.	1950.	1951.	1952.	1953.	1954.
<b>Australian Prices, in Australian currency—</b>						
Silver, per fine oz. (a) ..	s. d. 2 2	s. d. 6 9	s. d. 8 2	s. d. 7 9	s. d. 7 8	s. d. 7 5
Lead, per ton (b)(c) 22	(b)(c) 22	(b) 44	(b) 65	(b) 75	(d) 104	(e) 114
Zinc, per ton (b)(c) 22	(b)(c) 22	(b) 47	(b) 65	(b) 75	(d) 92	(e) 101
<b>London Metal Exchange Prices, in sterling—</b>						
Silver, per fine oz. (e) ..	s. d. 1 9	s. d. 5 5	s. d. 6 6	s. d. 6 2	s. d. 6 2	s. d. 6 2
Lead, per ton (b) 15	(b) 15	(b) 106	(b) 162	(f) 135	(e) 91	(e) 96
Zinc, per ton (b) 14	(b) 14	(b) 119	(b) 172	(b) 150	(e) 75	(e) 78

(a) Silver prices have not been fixed by regulation in Australia, the prices shown representing export parity calculated from London Metal Exchange prices. (b) Prices fixed by regulation. (c) From February, 1940. (d) Price regulation was abandoned from 21st April, 1953; average market prices have been used for balance of year. (e) Average market prices. (f) Price regulation was abandoned from 1st October, 1952; average market prices have been used for balance of year.

5. **Employment in Silver, Lead and Zinc Mining.**—Particulars of the number of persons employed in mining for these metals are shown in § 13, page 1021.



### § 4. Copper.

1. **Production.**—Copper is widely distributed throughout Australia. However, the principal producing States in 1954 were Queensland, Tasmania and New South Wales, in that order of magnitude. The opening of a new smelting plant at Mt. Isa in Queensland early in 1953 doubled the output of copper in Australia over the previous year, and the production of 40,857 tons in 1954 was the highest recorded since 1913. The table hereunder shows the quantity of mine production of copper (copper content of ores and concentrates produced) in Australia for the years 1951 to 1954. It should be noted that the minerals shown below contain, in addition to copper, certain other metals.

#### COPPER : CONTENT OF ORES AND CONCENTRATES PRODUCED, AUSTRALIA. (Tons.)

Mineral in which Contained.	1951.	1952.	1953.	1954.
Copper Ore, Concentrate and Precipitate	15,739	16,125	33,007	37,041
Gold Ore, Concentrate, etc. . . . .	5	1	1	(a)
Lead Ore and Concentrate . . . . .	1,874	2,163	3,037	3,241
Zinc Concentrate . . . . .	308	289	540	575
Total . . . . .	17,926	18,578	36,585	40,857

(a) Less than half a ton.

Particulars of the copper content of ores and concentrates produced in each producing State and the Northern Territory, as published by the Australian Mines and Metals Association for the year 1939, and as recorded by this Bureau from data obtained from the several State Mines Departments and other sources for the years 1950 to 1954, are shown in the table below.

#### COPPER : CONTENT OF ORES AND CONCENTRATES PRODUCED, STATES. (Tons.)

State.	1939.	1950.	1951.	1952.	1953.	1954.
New South Wales . . . . .	1,155	3,893	3,679	3,562	3,626	3,182
Queensland . . . . .	5,798	5,424	5,432	6,966	23,955	27,207
South Australia . . . . .	110	..	(a)	2	1	(a)
Western Australia . . . . .	1	1	7	7	15	..
Tasmania . . . . .	13,453	7,884	8,657	7,722	8,902	9,880
Northern Territory . . . . .	43	279	151	319	86	588
Australia . . . . .	20,560	17,481	17,926	18,578	36,585	40,857

(a) Less than half a ton.

2. **Sources of Production.**—(i) *New South Wales.* The copper content of ores and concentrates produced in New South Wales amounted to 3,626 tons in 1953 and to 3,182 tons in 1954. The principal sources of this production were ores mined at Broken Hill and Captain's Flat.

(ii) *Queensland.* In 1954 mine production of copper in this State amounted to 27,207 tons compared with 23,955 tons in 1953 and 6,966 tons in 1952. The bulk of the production in 1950, 1951 and 1952 came from Mt. Morgan. In February, 1953, a new copper smelter was brought into operation at Mt. Isa to treat ore from Mt. Isa Mines, the Cloncurry field generally and other centres. Copper was produced from copper ore at Mt. Isa during the 1939-45 War, but production was suspended in 1946 and until 1953 operations had been confined to silver-lead-zinc ores. Mt. Isa now produces about half the total Australian output of copper. Some of the blister copper produced at Mt. Isa is exported to the United States of America, but the bulk is sent to Port Kembla in New South Wales for refining.

(iii) *South Australia.* Deposits of copper were found in the past over a large portion of South Australia, but the principal fields have been exhausted and output in recent years has been negligible.

(iv) *Western Australia.* The ore sent to smelters in 1953 amounted to 50 tons, containing 15 tons of copper. In 1954 there was no production of copper. Cupreous ore is mined in Western Australia and details of its production are given in § 12. Non-Metallic Minerals (see page 1020).

(v) *Tasmania*. The quantity of copper produced in Tasmania during 1953 was 8,902 tons and during 1954, 9,880 tons, the Mount Lyell Mining and Railway Co. Ltd. providing the greater part thereof. The remainder consisted mainly of copper in copper-lead concentrates exported from Read-Rosebery.

(vi) *Northern Territory*. Copper has been found at various places in the Territory. In 1953 the output of copper fell to 86 tons owing to the cessation of copper mining operations at Barrow Creek and the interruption of mining at the Peko Mine at Tennant Creek while new surface treatment plant was being installed. Although the Peko Mine was originally worked as a gold mine, high-grade copper ore was discovered there, and since the new milling plant came into operation in June, 1954, the mine has become the major producer of copper in the Northern Territory. The total output of copper in the Northern Territory during 1954 was 588 tons.

3. **Production and Sales of Refined Copper.**—There are two refining plants in Australia, one operated by the Electrolytic Refining and Smelting Co., Port Kembla, New South Wales, and the other by The Mount Lyell Mining and Railway Co. Ltd., Mt. Lyell, Tasmania. The electrolytic process has been employed in both refineries up to 1954. As blister copper from Mt. Isa can be satisfactorily fire-refined and the process is cheaper, part of the blister copper sent from Mt. Isa to Port Kembla is now refined by that process. The quantity of copper refined by this method in 1954 was 2,935 tons. At Mt. Lyell, copper is produced in cathode form, which, with the exception of a quantity sold to the trade in Tasmania, is shipped to Port Kembla for conversion into the various customary refinery shapes. In the following table, details are given of the production and sales of refined copper, as recorded from data received from the Australian Mines and Metals Association and other sources.

**REFINED COPPER(a) : PRODUCTION AND SALES, AUSTRALIA.**  
(Tons.)

Particulars.	1939.	1950.	1951.	1952.	1953.	1954.
Production(b) ..	17,867	13,231	13,543	19,623	16,682	29,287
Sold to Australian consumers(c).	18,808	11,632	14,806	17,884	15,115	29,361
Exported or sold for export (c)	100	..	..	..	2,607	..

(a) Refined from domestic primary copper.

(b) Source : Bureau of Mineral Resources.

(c) Source : Australian Mines and Metals Association.

Although the embargo on the export of copper in any form from Australia remains in force, it has been relaxed during recent years to meet varying circumstances. Up to 1952, local demand for copper considerably exceeded Australian refinery production and substantial quantities of copper were imported. A large proportion of the imports in 1948 and later years comprised blister copper imported mainly from South Africa and refined in Australia. However, in 1953 the large increase in blister copper production from the Mt. Isa smelter could not be handled with available refining capacity and considerable quantities of blister copper were exported for treatment overseas. During that year, imports of copper were very small. In 1954 imports of copper in primary shapes were considerably higher than in the previous year, due partly to the return from overseas treatment of Mt. Isa blister copper as refinery shapes.

4. **World Production of Copper.**—The world's estimated mine production of copper during the years 1939 and 1949 to 1953 is shown below.

**COPPER : WORLD MINE PRODUCTION.**  
(Tons.)

1939.	1949.	1950.	1951.	1952.	1953.
2,160,000	2,250,000	2,490,000	2,620,000	2,720,000	2,750,000

The yields in 1953 from the principal copper-producing countries reporting, as published by the Mineral Resources Division of the Colonial Geological Surveys, were as follows :—

**COPPER : MINE PRODUCTION IN PRINCIPAL COUNTRIES, 1953.**

(Tons.)(a)

Country.	Production.	Country.	Production.
United States of America ..	827,186	Japan ..	57,953
Rhodesia ..	367,245	Australia ..	36,585
Chile ..	357,400	Union of South Africa ..	35,575
U.S.S.R. ..	(b) 340,000	Yugoslavia ..	34,759
Canada (c) ..	224,654	Peru ..	33,836
Belgian Congo ..	210,734	Turkey ..	26,913
Mexico ..	59,198	Cyprus ..	22,100

(a) Long tons.

(b) Estimated.

(c) Includes Newfoundland.

During 1953 the share of the United States of America in the world's mine production of copper amounted to 30 per cent. while the Australian proportion was only 1.3 per cent.

5. Prices.—From the outbreak of war in 1939 to August, 1953 in the United Kingdom and October, 1954 in Australia, the price of copper was fixed by regulation. Private trading has now been resumed in both countries. Details of the average price for the years shown are given in terms of Australian currency and sterling in the following table :—

**AVERAGE PRICE PER TON OF ELECTROLYTIC COPPER IN AUSTRALIA AND THE UNITED KINGDOM.**

(£.)

Country.	December, 1939.	1950.	1951.	1952.	1953.	1954
Australia — in Aust. currency	64	189	254	309	330	(b) 310
United Kingdom — in sterling ..	62	179	220	259	(c) 253	249

(a) Ex works Port Kembla.

(b) Average market prices from 26th October, 1954.

(c) Average market prices from 5th August, 1953.

6. Employment in Copper Mining.—Particulars of the numbers of persons engaged in the mining of copper and copper-gold ores are shown in § 13, page 1021.

**§ 5. Tin.**

1. Production.—Tasmania, Queensland and New South Wales are the principal producing States.

The following table shows the tin content of concentrates produced in each State and the Northern Territory for the year 1939 as published by the Australian Mines and Metals Association, and the years 1950 to 1954 as recorded by this Bureau.

**TIN : CONTENT OF TIN CONCENTRATES PRODUCED : STATES.**

(Tons.)

State.	1939.	1950.	1951.	1952.	1953.	1954.
New South Wales ..	775	482	413	396	342	272
Victoria ..	118	29	36	39	31	26
Queensland ..	867	600	340	330	292	730
Western Australia ..	7	36	41	65	76	80
Tasmania ..	1,250	685	706	772	788	947
Northern Territory ..	20	22	23	9	24	20
Australia ..	3,067	1,854	1,559	1,611	1,553	2,075

2. **Sources of Production.**—(i) *New South Wales.* Production of tin concentrates in 1954 was 377 tons, with a tin content of 272 tons, compared with 483 tons (tin content 342 tons) in 1953. A large proportion of the output in this State is obtained by dredging and sluicing, principally in the New England district.

(ii) *Victoria.* The tin produced in this State was obtained solely as a by-product from the gold dredging operations at Eldorado. With the closing down of the Eldorado gold dredge in July, 1954, the production of tin in Victoria ceased. The production in 1954 amounted to 36 tons of concentrates, with a tin content of 26 tons, compared with 44 tons (tin content, 31 tons) in 1953.

(iii) *Queensland.* The chief districts in Queensland producing tin concentrates during 1954 were Herberton, 850 tons; Cooktown, 68 tons; Chillagoe, 64 tons; Kangaroo Hills, 25 tons and Stanthorpe, 16 tons. The total production in 1954 amounted to 1,034 tons, compared with 411 tons in 1953. The tin content in 1953 and 1954 was 292 tons and 730 tons respectively. It is interesting to compare these production figures with those recorded in this State in the early years of this century when the output ranged between 2,000 and 5,000 tons per annum.

(iv) *Western Australia.* The quantity of tin concentrates reported in this State in 1954 amounted to 121 tons (tin content, 80 tons), compared with 113 tons in 1953 (tin content, 76 tons). Production was mainly in the Pilbara and Greenbushes fields.

(v) *Tasmania.* For 1954 the output amounted to 1,374 tons of tin concentrates, an increase of 242 tons on the output of the previous year. The tin content for 1954 was 947 tons and for 1953, 788 tons.

(vi) *Northern Territory.* The production for 1954 amounted to 32 tons of concentrates compared with 40 tons of concentrates produced during 1953. The tin content for 1954 and 1953 was 20 tons and 24 tons respectively.

3. **Production of Refined Tin.**—There are two firms engaged in the smelting of tin in Australia, both located in Sydney, New South Wales. The following table shows details of refined tin produced in Australia during the years 1939, and 1950 to 1954.

REFINED TIN PRODUCTION (a) : AUSTRALIA.  
(Tons.)

—	1939.	1950.	1951.	1952.	1953.	1954.
Production of Refined Tin .. ..	3,294	2,014	1,459	1,700	1,443	2,063

(a) Source : Bureau of Mineral Resources.

4. **World Production.**—The world production of tin ore, *in terms of metal*, during each of the years 1939 and 1949 to 1953, as published by the Mineral Resources Division of the Colonial Geological Surveys, was as follows :—

TIN : WORLD PRODUCTION.  
(Tons.)

1939.	1949.	1950.	1951.	1952.	1953.
174,000	161,500	167,200	167,300	171,000	175,800

The production of tin reached its maximum in 1941 when 241,400 tons were recorded. The following are the chief producing countries of the world :—Federation of Malaya, Bolivia, Indonesia, Belgian Congo, Thailand and Nigeria. In recent years these countries have produced approximately 90 per cent. of the total production. Australia's share of the world's tin production is about 1 per cent.

The production of tin ore, *in terms of metal*, as published by the International Tin Study Group and other authorities, for the principal producing countries in 1953 was as follows.

**TIN : PRODUCTION IN PRINCIPAL COUNTRIES, 1953.**  
(Tons.) (a)

Country.	Production.	Country.	Production.
Malaya, Federation of ..	56,254	Australia .. ..	1,553
Bolivia .. ..	34,825	Portugal .. ..	1,367
Indonesia .. ..	33,750	Union of South Africa ..	1,361
Belgian Congo .. ..	15,293	Burma .. ..	(b) 960
Thailand .. ..	10,126	United Kingdom .. ..	935
Nigeria .. ..	8,228	Spain .. ..	795
China .. ..	(b) 6,300	Japan .. ..	737

(a) Long tons.

(b) Estimated.

5. Prices.—At the outbreak of war in September, 1939, the price of tin in Australia and London was fixed by regulation. London control of tin prices ceased on 14th November, 1949, while the Australian price was decontrolled on the 21st April, 1953. Details of the movement in average prices for the years shown are given in terms of Australian currency and sterling in the following table :—

**AVERAGE PRICE PER TON OF TIN IN AUSTRALIA AND THE UNITED KINGDOM.**  
(£.)

Country.	December, 1939.	1950.	1951.	1952.	1953.	1954.
Australia — in Aust. currency (a)	299	725	1,222	1,151	919	911
United Kingdom — in sterling (b)	(c) 271	746	1,080	965	731	720

(a) Prices fixed by regulation *ex* smelters for sales of 10 cwt. or more or in ingots of 70 lb. or more to 21st April, 1953; average market prices thereafter. (b) Average spot market prices for standard tin. (c) Prices fixed by regulation for standard tin.

6. Employment in Tin Mining.—The number of persons employed in tin mining is shown in § 13 (page 1021).

### § 6. Iron.

1. General.—Although iron ore is widely distributed throughout Australia, the only known ore bodies of large extent and high grade which are easily accessible are those situated at Iron Knob, South Australia and at Yampi Sound, Western Australia. Estimates of the high grade reserves at these centres place the quantities available at approximately 200 million tons and 100 million tons respectively. Bearing in mind the expansion of the iron industry in Australia, and the limitations of these reserves, the Commonwealth Government prohibited the export of iron ore from 1st July, 1938.

2. Production.—(i) *Australia.* Production of iron ore for smelting purposes and estimated iron ore content are shown below for the years 1939 and 1950 to 1954 :—

**IRON ORE : PRODUCTION, AUSTRALIA.**  
(Tons.)

Particulars.	1939.	1950.	1951.	1952.	1953.	1954.
Production of Iron Ore	2,575,758	2,364,719	2,436,229	2,907,754	3,298,718	3,518,804
Estimated Iron Content	1,548,031	1,417,608	1,605,400	1,883,087	2,131,865	2,274,330

(ii) *New South Wales.* Since 1945 no iron ore has been mined in this State for conversion into pig-iron. For many years the chief source of supply for New South Wales blast furnaces has been South Australia.

Small quantities of iron oxide produced in New South Wales are used by the various gas-works for purifying gas, and also in the manufacture of paper, and for pigments. These supplies are drawn chiefly from the deposits in the Port Macquarie Division. During 1954, 5,221 tons of oxide were won.

(iii) *Queensland.* Extensive deposits of iron ore are known to exist in Queensland. Their location and size, however, in comparison with the more favourable deposits of South Australia and Western Australia, preclude their exploitation. The output of 162 tons of iron oxide for 1954 came mainly from the Biggenden district.

(iv) *South Australia.* The main production of iron ore in Australia is from the deposits worked by The Broken Hill Proprietary Co. Ltd. in the Middleback Ranges near Whyalla. Production in 1954 reached a record level of 2,867,060 tons (estimated iron content, 1,863,589 tons).

(v) *Western Australia.* Plans drawn up in 1927 to develop the rich iron ore deposits on Koolon and Cockatoo Islands in Yampi Sound were realized on 24th July, 1951 when regular shipments of ore for smelting at the steelworks at Newcastle and Port Kembla commenced from Yampi Sound. Iron ore is also obtained from deposits at Wundowie and Koolyanobbing. Production of iron ore during 1954 amounted to 634,514 tons at Yampi Sound, 9,825 tons at Koolyanobbing and 7,405 tons at Wundowie, giving a total production of 651,744 tons with an estimated iron content of 410,741 tons.

The whole iron pyrite production of Western Australia is won at the Iron King and Norseman mines and is railed, in the form of ores and concentrates, to superphosphate manufacturers in Perth.

(vi) *Tasmania.* There has been no production of ironstone in Tasmania since 1943 when 7 tons were produced. The iron pyrite concentrate produced, which in 1954 amounted to 54,142 tons (sulphur content, 26,757 tons), is a by-product from the flotation of copper ores at Mount Lyell. This product is exported to the mainland, where it is used in the manufacture of chemical fertilizers.

In 1954, 6,380 tons of iron oxide were produced for gas purification and fluxing purposes.

3. *Production of Iron and Steel.*—(i) *Australia.* The production of pig-iron and steel in Australia, of which New South Wales is the main producing State, is shown in the following table for each of the years ended 31st May, 1946 to 1955.

#### PIG-IRON AND STEEL : PRODUCTION, AUSTRALIA.

(Tons.)

Year Ended 31st May.	Pig-iron (a)	Steel Ingots.	Year Ended 31st May.	Pig-iron. (a)	Steel Ingots.
1946 .. ..	906,283	1,061,918	1951 .. ..	1,313,332	1,443,831
1947 .. ..	1,143,132	1,312,439	1952 .. ..	1,430,027	1,521,386
1948 .. ..	1,235,574	1,344,692	1953 .. ..	1,691,693	1,801,028
1949 .. ..	1,044,957	1,178,010	1954 .. ..	1,826,711	2,116,813
1950 .. ..	1,097,635	1,217,971	1955 .. ..	1,865,487	2,208,700

(a) Includes pig-iron for castings; excludes ferro-alloys.

The principal producers in Australia are The Broken Hill Proprietary Co. Ltd. and Australian Iron and Steel Ltd., both in New South Wales, the former situated at Newcastle and the latter at Port Kembla. The steelworks at Port Kembla are being further expanded by the construction of two new open hearth steel furnaces which will add a further 350,000 tons to the annual output of steel. During 1955 the new hot strip mill came into full production at Port Kembla. The new mill has an installed capacity of 1,500,000 tons of wide continuously-rolled hot strip a year. Work has also begun on a tinplate plant which will produce initially 70,000 tons of tinplate a year by the hot dip method. At Newcastle steelworks a beginning has been made on the installation of a new skelp mill. In South Australia, at Whyalla, The Broken Hill Proprietary Co. Ltd. operate a blast furnace, and also produce a small quantity of steel ingots by means of an electric furnace.

In Western Australia, pig iron is produced under the direction of the State Department of Industrial Development at Wundowie. The output during the year 1953-54 amounted to 10,515 tons. At Kwinana the construction of a merchant steel rolling mill is proceeding and production there on a limited scale, mainly of steel fencing posts, has already begun.

(ii) *Principal Countries.* Particulars of the production in the principal countries and the estimated world total production during the years 1939, 1952 and 1953, according to figures published by the Mineral Resources Division of the Colonial Geological Surveys, are shown in the next table. Australia ranked fifteenth in order of output of both pig-iron and steel production in 1953.

## PIG-IRON AND STEEL : PRODUCTION IN PRINCIPAL COUNTRIES.

('000 Tons.) (a)

Country.	Pig-iron and Ferro-alloys.			Steel Ingots and Castings.		
	1939.	1952.	1953.	1939.	1952.	1953.
U.S. of America .. ..	31,855	56,566	68,973	47,142	83,186	99,652
U.S.S.R. (b) .. ..	15,000	24,900	27,100	18,500	33,900	37,400
United Kingdom .. ..	7,980	10,728	11,175	13,221	16,418	17,609
Germany (Federal Republic) ..	17,202	12,673	11,470	22,123	15,556	15,176
France .. ..	7,304	9,615	8,527	7,783	10,695	9,839
Japan .. ..	3,144	3,529	4,579	6,588	6,878	7,541
Belgium .. ..	3,010	4,713	4,150	3,955	4,987	4,375
Estimated World Total	100,000	149,900	165,400	134,000	207,000	230,000

(a) Long tons.

(b) Estimated.

(c) Pre-war Germany.

## § 7. Other Metallic Minerals.

1. **Tungsten.**—Tungsten ores occur in all States. Particulars of scheelite concentrates from King Island, in Bass Strait, the major producer, are included with Tasmanian production. Other important deposits of tungsten ores occur in Queensland, New South Wales, the Tasmanian mainland and the Northern Territory, but production from Victoria, South Australia and Western Australia has been comparatively unimportant. In recent years the largest producer has been Tasmania. Production of tungsten concentrates and contents during 1954 in each State, etc., is shown below :—

## TUNGSTEN CONCENTRATES : PRODUCTION, 1954.

(Tons.)

Particulars.	N.S.W.	Q'land.	W. Au-t.	Tas.	N. Terr.	Australia.
Scheelite Concentrate .. ..	9	(a)	4	1,318	..	1,331
WO <sub>3</sub> Content .. ..	6	(a)	3	852	..	861
Wolfram Concentrate .. ..	3	58	..	581	80	722
WO <sub>3</sub> Content .. ..	2	38	..	420	51	511

(a) Less than half a ton.

The following table shows production for Australia for the years 1939 and 1950 to 1954 :—

## TUNGSTEN CONCENTRATES : PRODUCTION, AUSTRALIA.

(Tons.)

Particulars.	1939.	1950.	1951.	1952.	1953	1954.
Scheelite Concentrate .. ..	191	800	1,031	989	1,185	1,331
WO <sub>3</sub> Content .. ..	124	532	632	602	729	861
Wolfram Concentrate .. ..	726	282	697	1,035	1,008	722
WO <sub>3</sub> Content .. ..	482	198	467	672	672	511

2. **Mineral Sands.**—The recovery of mineral sands from beaches in northern New South Wales and Queensland commenced in 1934. The industry was expanded considerably following the 1939-45 War and Australia is now one of the world's largest producers of the two principal minerals obtained from treatment of the sands, namely, rutile and zircon. Small quantities of ilmenite and monazite are also produced, but most producers either prepare a low grade concentrate which is stockpiled or make no attempt to recover the ilmenite and monazite from the beach sands, the tailings being dumped after extraction of rutile and zircon. Particulars of the quantity of rutile and zircon concentrates produced are shown in the following table for the years 1950 to 1954.

## RUTILE AND ZIRCON PRODUCTION, AUSTRALIA.

(Tons.)

Year.	Rutile Concentrates.		Zircon Concentrates.	
	Quantity.	TiO <sub>2</sub> Content.	Quantity.	Zircon Content.
1950 .. .. .	18,312	18,089	21,805	21,536
1951 .. .. .	35,189	33,432	42,410	41,420
1952 .. .. .	38,014	36,861	27,696	27,371
1953 .. .. .	38,039	37,067	27,207	26,858
1954 .. .. .	44,659	43,011	41,453	40,920

3. **Cadmium and Cobalt.**—The sources of cadmium in Australia are lead and zinc concentrates. The cadmium content of these concentrates produced during 1953 was 806 tons and in 1954, 903 tons. Most of the concentrates are treated at Risdon, Tasmania and at Port Pirie, South Australia, for the extraction of cadmium. The remainder are exported.

Cobalt is present in zinc concentrate produced at Broken Hill, New South Wales, and at Rosebery, Tasmania. The cobalt is recovered in the form of cobalt oxide at the zinc refining plant at Risdon, Tasmania, and is sold as such to industry. The cobalt metal content of zinc concentrate produced in 1953 is estimated at 53 tons and in 1954 at 69 tons.

Production of refined cadmium and cobalt oxide for the years 1939 and 1950 to 1954 is shown in the following table :—

## CADMIUM (REFINED) AND COBALT OXIDE : PRODUCTION.(a)

(Tons.)

Year.	Cadmium (Refined).			Cobalt Oxide.
	Extracted from Ores Mined in—			Extracted from Ores Mined in New South Wales.(b)
	New South Wales.	Tasmania.	Total.	
1939 .. .. .	124	48	172	20
1950 .. .. .	250	44	294	16
1951 .. .. .	195	36	231	13
1952 .. .. .	245	41	286	16
1953 .. .. .	257	40	297	17
1954 .. .. .	239	49	288	18

(a) Source : Bureau of Mineral Resources.  
from Tasmanian ores in each of the years shown.

(b) Excludes less than a ton of cobalt oxide produced

The figures shown in the table above refer to production in Australia only and do not include the metallic contents of cadmium and cobalt oxide contained in the ores and concentrates exported overseas.

4. **Manganese.**—There has been considerable expansion of manganese ore production in recent years, due mainly to increased output in Western Australia at Ragged Hills, 250 miles east of Port Hedland, and at Horseshoe, north of Meekatharra. Export of manganese ore is prohibited under the Commonwealth Government's policy to conserve strategic minerals of which domestic reserves are limited. Permits were granted in 1953 for some shipments to the United States, and this led to the opening up of the Ragged Hills deposits which are of high grade (84% MnO<sub>2</sub>).

The following table shows the production of metallurgical grade and battery and other grades of manganese ore for the years 1939 and 1950 to 1954.



## MANGANESE ORE PRODUCTION : AUSTRALIA.

(Tons.)

Year.	Metallurgical Grade.					Battery and Other Grades.
	New South Wales.	Queensland.	South Australia.	Western Australia.	Australia.	
1939 ..	146	..	7	..	153	(a)
1950 ..	1,673	..	237	11,962	13,872	(b) 997
1951 ..	1,054	..	..	5,257	6,311	(c) 1,658
1952 ..	981	..	..	5,045	6,026	(d) 1,043
1953 ..	1,015	43	..	30,457	31,515	(d) 1,428
1954 ..	749	138	..	26,448	27,335	(d) 867

(a) Included with "Metallurgical Grade". (b) New South Wales 426 tons; Queensland 571 tons (includes some "Metallurgical Grade"). (c) New South Wales 1,631 tons; South Australia 27 tons. (d) New South Wales only.

5. Other.—The production, in 1954 (1953 shown in parentheses) of other metallic minerals worthy of note, is as follows :—

**Antimony.** The antimony content of antimony-bearing minerals produced was 731 tons (791 tons). Of this amount 614 tons (578 tons) were in lead concentrate and 117 tons (213 tons) in 222 tons (450 tons) of antimony ore and concentrate.

**Bauxite.** 5,487 tons (4,052 tons) of bauxite ore were produced mainly in New South Wales and Victoria. At present it is not intended to mine bauxite in Australia for the production of aluminium at the Australian Aluminium Production Commission's smelter at Bell Bay, Tasmania which began operations in 1955, bauxite being imported from Malaya for that purpose.

**Beryllium.** Production of beryl ore was 332,976 lb. (280,941 lb.) of which 296,016 lb. (279,149 lb.) came from Western Australia where the Pilbara gold field was the main producing area. The beryllium oxide content of the beryl ore was 38,602 lb. (33,747 lb.)

**Chromite.** Western Australia was the main source of chromite, producing 4,270 tons (1,968 tons) of the total output of 4,943 tons (2,741 tons), the remaining production being from Queensland. The chromium sesquioxide content of the total Australian production was 2,094 tons (1,131 tons).

**Tantalite-Columbite.** The production of tantalite-columbite concentrate was 117,767 lb. (18,124 lb.) and the whole of this output, excepting 1,048 lb. produced in the Northern Territory in 1954, came from Western Australia. The tantalum pentoxide and columbium pentoxide content of the concentrates was 60,348 lb. (13,304 lb.).

**Other.** Other metallic minerals produced in Australia in small quantities during 1954, were bismuth concentrate, molybdenite concentrate, native osmiridium, and platinum concentrate.

## § 8. Coal.

1. Total Production of Coal.—An account of the discovery of coal in each State appears in preceding issues of the Official Year Book (*see* No. 3, pp. 515-16). The quantity and value of the production in each State and in Australia for 1939, and for each of the years 1950 to 1954 are shown in the following table. Of the total production of black coal in 1954, 73,621 tons were classified as semi-anthracite, 17,848,220 tons as bituminous and 1,841,198 tons as sub-bituminous.

## COAL PRODUCTION.

Year.	Black Coal.							Brown Coal.
	N.S.W.	Vic.	Q'land.	S. Aust.	W. Aust.	Tas.	Australia.	Victoria.
QUANTITY ('000 tons).								
1939 ..	11,196	365	1,317	..	558	99	13,535	3,651
1950 ..	12,798	127	2,321	261	814	222	16,543	7,327
1951 ..	13,513	148	2,474	388	848	237	17,608	7,836
1952 ..	15,022	144	2,742	418	830	248	19,404	8,104
1953 ..	14,174	152	2,517	448	886	234	18,411	8,257
1954 ..	15,083	141	2,761	495	1,019	264	19,763	9,331
VALUE (a) (£'000).								
1939 ..	7,027	260	1,168	..	363	74	8,892	386
1950 ..	22,121	382	3,562	131	1,185	232	27,613	1,707
1951 ..	29,326	601	4,490	400	1,717	305	36,839	2,755
1952 ..	43,283	728	5,956	430	2,457	475	53,329	3,255
1953 ..	41,630	946	5,861	461	3,073	453	52,424	3,628
1954 ..	42,762	886	6,474	650	3,589	523	54,884	3,945

(a) At the mine.

The mining of black coal on a large scale by open-cut methods first began in Australia at Blair Athol in Queensland, where in 1937, the first year of production, 18,494 tons were produced. Open-cut mining of black coal was introduced in New South Wales in 1940, in Western Australia in 1943, in South Australia in 1944, and in Tasmania in 1950. The output from open-cuts rose slowly up to 1943 when 119,406 tons were produced, but increased rapidly from 1944 reaching an output of over four million tons in 1952, from which level it declined to 3,138,976 tons in 1953 and 2,989,795 tons in 1954. This decline has been mainly due to the closing down of large open-cuts in New South Wales, as overproduction of coal began to occur late in 1952 and it was the policy of the Joint Coal Board that open-cut mining should provide the quantity of coal by which underground mine production failed to meet total requirements.

The production of black coal from underground and open-cut mines in each State for the years 1939 and 1950 to 1954 is shown in the following table.

**BLACK COAL PRODUCTION : UNDERGROUND AND OPEN-CUT.**  
(<sup>'000</sup> Tons.)

Year.	Method of Mining.	N.S.W.	Vic.	Qld.	S.A.	W.A.	Tas.	Aust.
1939 ..	Underground ..	11,196	365	1,274	..	558	99	13,492
	Open-cut ..	..	..	43	..	..	..	43
	Total ..	11,196	365	1,317	..	558	99	13,535
1950 ..	Underground ..	11,196	127	1,860	..	556	222	13,961
	Open-cut ..	1,602	..	461	261	258	(a)	2,582
	Total ..	12,798	127	2,321	261	814	222	16,543
1951 ..	Underground ..	11,224	148	1,857	..	480	231	13,940
	Open-cut ..	2,280	..	617	388	368	6	3,668
	Total ..	13,513	148	2,474	388	848	237	17,608
1952 ..	Underground ..	12,492	144	2,006	..	419	210	15,301
	Open-cut ..	2,530	..	736	418	411	8	4,103
	Total ..	15,022	144	2,742	418	830	248	19,404
1953 ..	Underground ..	12,452	152	1,941	..	493	234	15,272
	Open-cut ..	1,722	..	576	448	393	(a)	3,130
	Total ..	14,174	152	2,517	448	886	234	18,411
1954 ..	Underground ..	13,703	141	2,067	..	608	254	16,773
	Open-cut ..	1,380	..	694	495	411	10	2,990
	Total ..	15,083	141	2,761	495	1,019	264	19,763

(a) Less than 500 tons.

2. **Production of Coal in each State.**—(i) *New South Wales.* The coal deposits of New South Wales are the most important and extensively worked in Australia. The principal fields are known as the Northern, Southern and Western, and are situated in the vicinity of Newcastle, Bulli and Lithgow respectively.

The coal from the various districts differs in quality or, geologically speaking, rank—that from the Northern district being especially suitable for gas-making, household purposes and steam, while the product of the Southern and Western districts is essentially a steaming coal. The Permian Coal Measures in the Northern division are being worked extensively in the Hunter River Valley area, particularly in the vicinity of Maitland, Cessnock and, more recently, Muswellbrook. This district is the most important, from the aspect of coal mining, in Australia.

The following table shows particulars of New South Wales coal production classified according to type of mining and rank during the five years 1950 to 1954 compared with 1939. Small quantities of semi-anthracite coal produced in some years are included with bituminous.

**COAL : PRODUCTION, NEW SOUTH WALES.**

('000 Tons.)

Particulars.		1939.	1950.	1951.	1952.	1953.	1954.
Underground Mines ..	..	11,196	11,196	11,224	12,492	12,452	13,703
Open-cut Mines ..	..	..	1,602	2,289	2,530	1,722	1,380
Total ..	..	11,196	12,798	13,513	15,022	14,174	15,083
Bituminous ..	..	11,194	12,786	13,508	15,009	14,165	15,066
Sub-bituminous ..	..	2	12	5	13	9	17

(ii) *Victoria.* (a) *Black Coal.* Production of black coal in Victoria is restricted to the Gippsland district. The State Coal Mine at Wonthaggi is the main producer, the remaining production coming from small privately-owned mines. In 1954, production of bituminous coal was 141,318 tons compared with 151,907 tons in 1953. 1953

(b) *Brown Coal.* The mining of brown coal in Australia is carried on only in Victoria, where extensive deposits exist; estimates place the available reserves at 40,000 million tons. Large-scale developmental projects are in progress; these, when completed, will greatly reduce the dependence on fuel from other States. Brown coal produced in Victoria in 1954 amounted to 9,331,255 tons, of which 8,393,263 tons, or 90 per cent., were won at the State open-cuts at Yallourn. During 1953-54, 7,980,844 tons of brown coal were produced at Yallourn, of which 5,306,825 tons went to electricity generating stations, and 2,339,470 tons to the briquette factory.

The briquetting plant of the State Electricity Commission at Yallourn started operations in November, 1924, and the output, which in 1926 was 95,477 tons, had increased to 180,905 tons in 1930 and to 587,252 tons in 1953-54. Approximately two and a half tons of brown coal are required to make one ton of briquettes.

A brown coal gasification plant is at present being established at Morwell near the new open-cut brown coal mine and briquetting plants of the State Electricity Commission of Victoria. The Gas and Fuel Corporation plans to commence gas making at this plant in 1956 with an initial output of 18 million cubic feet per day, increasing to 144 million cubic feet per day over the next 20 years. The brown coal gas will be made by the Lurgi process which is widely used in Germany.

The table following shows the production and distribution of brown coal and the production of briquettes in Victoria for the years 1949-50 to 1953-54, compared with 1938-39.

**BROWN COAL : PRODUCTION AND UTILIZATION, VICTORIA.**  
(<sup>'000</sup> Tons.)

Year.	Total Production.	Consumption as Fuel.			Consumption as Raw Material in Briquette Manufacture.	Balance (available for consumption and accumulation of stocks).	Briquettes Manufactured.
		Electricity Generation.	Briquette Factory.	Other. Factories. (a)			
1938-39 ..	3,663	2,096	516	(b)	1,031	20	400
1949-50 ..	7,637	4,408	776	764	1,553	136	589
1950-51 ..	7,300	4,338	696	746	1,391	129	511
1951-52 ..	8,096	4,784	776	876	1,553	107	568
1952-53 ..	8,075	4,933	729	837	1,457	119	545
1953-54 ..	8,731	5,307	780	920	1,560	164	587

(a) Recorded consumption.

(b) Not available.

(iii) *Queensland.* The production of coal classified according to type of mining and rank during the years 1939 and 1950 to 1954 was as follows :—

**COAL : PRODUCTION IN QUEENSLAND.**  
(<sup>'000</sup> Tons.)

Particulars.	1939.	1950.	1951.	1952.	1953.	1954.
Underground Mines ..	1,274	1,860	1,857	2,006	1,941	2,067
Open-cut Mines ..	43	461	617	736	576	694
Total ..	1,317	2,321	2,474	2,742	2,517	2,761
Semi-anthracite ..	1,317	99	81	83	81	72
Bituminous ..		2,057	2,138	2,312	2,215	2,378
Sub-bituminous ..		165	255	347	221	311

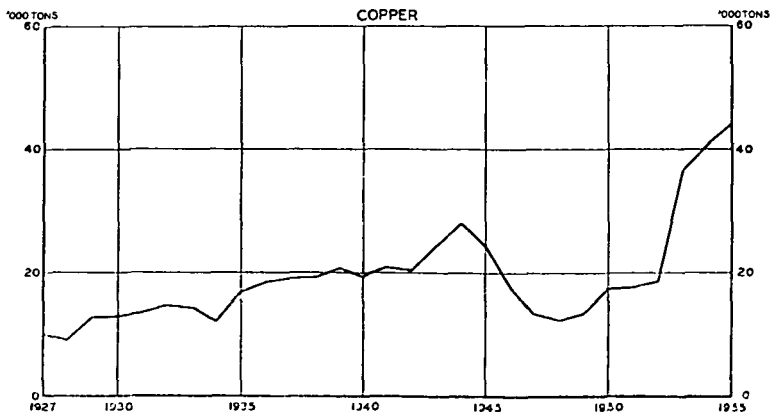
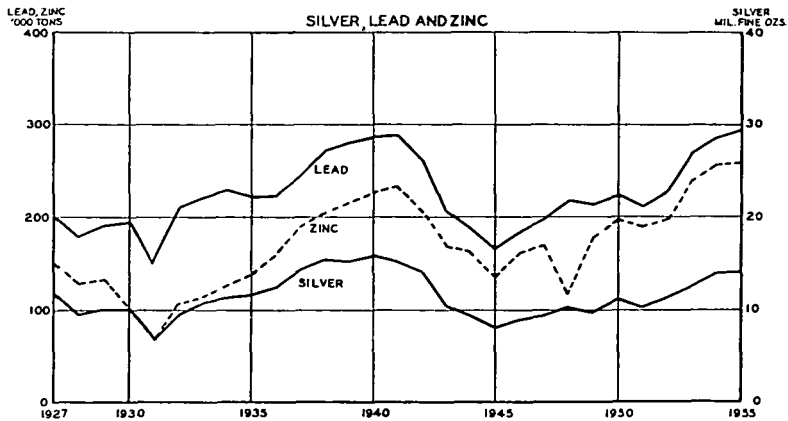
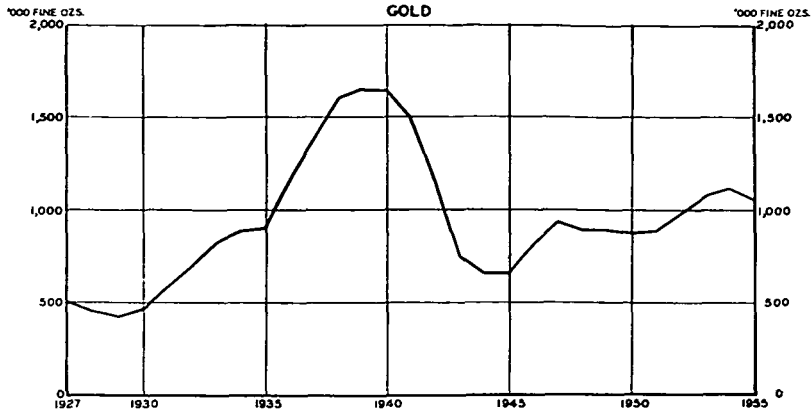
The principal coal-producing districts in Queensland are Ipswich, Clermont, Mt. Morgan and Bowen; output from these areas in 1954 amounted to 2,299,942 tons or 83 per cent. of the total.

The open-cut method of mining for black coal has advanced considerably in Queensland in recent years. In 1946, 106,444 tons (or 7 per cent. of total production) were won from open-cuts while in 1954, 694,022 tons (25 per cent.) were mined in this manner.

(iv) *South Australia.* Coal mined in South Australia is won by open-cut methods at Leigh Creek, some 380 miles by rail north of Adelaide. This important deposit yields a low grade sub-bituminous coal of Triassic age, and has known reserves of about 380 million tons. However, this State relies to a great degree on bituminous coal from New South Wales to supplement the demand created by industrial expansion. In the first year of major production of the Leigh Creek mine in 1944, 34,620 tons were won. Production has risen considerably in more recent years, and amounted to 495,106 tons in 1954.

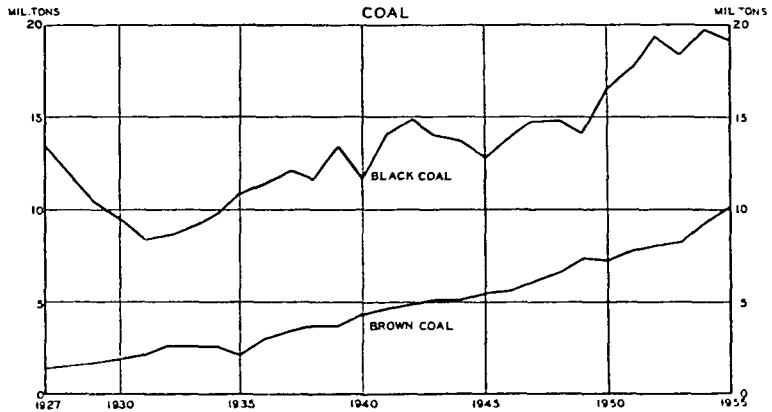
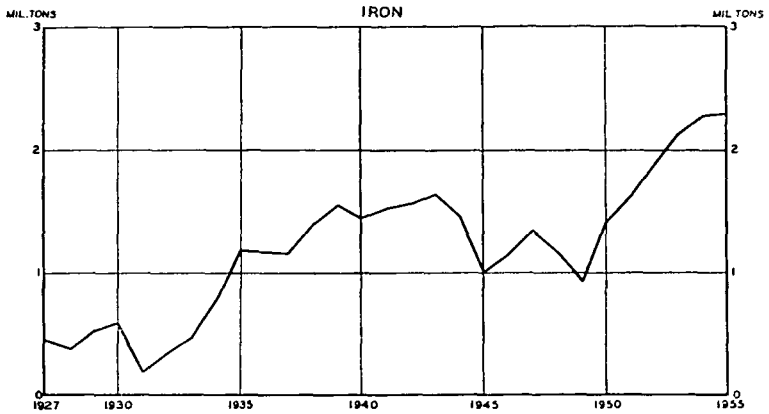
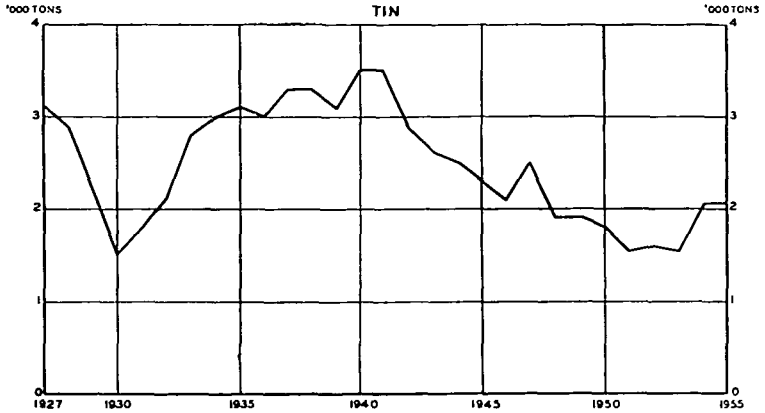
(v) *Western Australia.* The only coal deposits which have been developed on a commercial scale are at Collie in the south-west of the State. Collie coal is sub-bituminous in rank. Production in 1954 was 1,018,343 tons, compared with 557,535 tons in 1939.

MINE PRODUCTION OF PRINCIPAL METALS  
(METALLIC CONTENT OF MINERALS)  
AUSTRALIA, 1927 TO 1955



# MINE PRODUCTION OF PRINCIPAL METALS (METALLIC CONTENT OF MINERALS) AND PRODUCTION OF COAL

AUSTRALIA, 1927 TO 1955



Although a large proportion of the coal produced in Western Australia comes from open-cut mines, the amount available from these mines is limited, as present surveys estimate that only 8,000,000 tons can be extracted by open-cut methods.

(vi) *Tasmania.* Two periods of coal formation are represented in Tasmania. The older (Permo-Carboniferous) seams contain fairly high ranking semi-anthracitic coal, with a high sulphur content, but production from these mines represents less than one per cent. of Tasmanian black coal output. The more recent Mesozoic coal of bituminous rank is mined in the north-east of the island, the Cornwall and Mt. Nicholas mines being the most prolific producers. In 1954, output amounted to 264,202 tons compared with 99,392 tons in 1939.

(vii) *Australia's Coal Reserves.* The latest available estimate of the actual and probable coal reserves of Australia is that prepared by the Coal and Lignites Panel of the Power Survey Sectional Committee of the Standards Association of Australia in March, 1953. This places total Australian reserves at about 56,830 million tons, of which 14,250 million tons are of anthracitic and bituminous rank and 42,580 million tons of sub-bituminous and lignitic rank. New South Wales has the largest reserves of anthracitic and bituminous coal (about 10,000 million tons) while the greater part of the sub-bituminous and lignitic reserves comprise brown coal in Victoria (40,000 million tons).

3. *Production in Principal Countries.*—The following table shows the production of the principal countries in 1953 as published by the Mineral Resources Division of the Colonial Geological Surveys.

#### COAL : PRODUCTION IN PRINCIPAL COUNTRIES, 1953.

('000 Tons.) (a).

Country.	Black Coal.	Brown Coal, Lignite.
United States of America .. .. .	430,495	2,496
U.S.S.R. .. .. .	(b) 316,000	..
United Kingdom .. .. .	224,195	..
Germany, Federal Republic .. .. .	124,163	83,219
Poland .. .. .	87,197	5,200
France .. .. .	51,757	1,917
China .. .. .	(b) 50,000	..
Japan .. .. .	45,789	1,462
India .. .. .	35,979	..
Belgium .. .. .	29,586	..
Union of South Africa .. .. .	28,010	..
Czechoslovakia .. .. .	20,020	32,250
Australia .. .. .	18,411	8,257
Saar .. .. .	16,160	..
Canada .. .. .	12,388	1,805
Netherlands .. .. .	12,103	..
Spain .. .. .	11,964	1,760
East Germany .. .. .	3,500	173,500
Hungary .. .. .	(c) 2,100	(c) 18,897
Yugoslavia .. .. .	910	10,158
Bulgaria .. .. .	(d)	(c) 8,563

(a) Long tons.  
available.

(b) Estimated.

(c) Source : United Nations Statistical Office.

(d) Not

4. *Exports.*—(i) *General.* The quantity of coal of Australian production exported to other countries in 1954-55 was 291,226 tons, valued at £1,147,441, shipped mainly from New South Wales. These figures of overseas exports exclude bunker coal supplied to overseas vessels, which in 1954-55 amounted to 25,363 tons, valued at £111,625. The quantities and values of the overseas exports of Australian coal and of bunker coal for overseas vessels for a series of years are shown in the following table.

## COAL : OVERSEA EXPORTS AND BUNKERS, AUSTRALIA.

Year.	Oversea Exports.(a)		Bunker Coal for Oversea Vessels.	
	Quantity.	Value.	Quantity.	Value.
	Tons.	£	Tons.	£
1938-39 .. .. .	382,085	347,054	549,453	561,063
1950-51 .. .. .	72,283	242,649	69,299	284,824
1951-52 .. .. .	139,140	608,045	54,207	246,258
1952-53 .. .. .	255,832	1,178,466	42,623	215,776
1953-54 .. .. .	385,812	1,528,788	31,718	129,977
1954-55 .. .. .	291,226	1,147,441	25,363	111,625

(a) Excludes bunker coal.

(ii) *New South Wales.* New South Wales is the principal Australian coal-producing State and in addition to meeting requirements within the State, supplies considerable quantities of coal to other States and for export overseas as well as bunker coal for vessels calling at New South Wales ports. Of the total New South Wales coal production in 1954-55 (14,661,061 tons), 11,820,199 tons (81 per cent.) were available for consumption in the State, 2,520,673 tons (17 per cent.) were exported interstate and 320,189 tons (2 per cent.) were exported overseas or supplied as bunker coal for interstate and overseas vessels.

5. *Consumption in Australia.*—Details of the production of black coal and its disposal in Australia are given in the following table for the years 1949-50 to 1953-54, compared with 1938-39.

## BLACK COAL : PRODUCTION AND DISPOSAL.

('000 Tons.)

Particulars.	1938-39.	1949-50.	1950-51.	1951-52.	1952-53.	1953-54.
Production(a) .. ..	12,198	14,918	16,418	19,170	18,545	19,424
Imports .. .. .	87	494	598	285	146	2
Total .. .. .	12,285	15,412	17,016	19,455	18,691	19,426
Disposals—						
Consumption as fuel—						
Electricity Generation ..	1,927	3,828	4,672	5,042	5,071	5,836
Factories .. .. .	2,227	2,635	2,967	3,090	3,097	3,367
Railway Locomotives (c)	2,403	3,099	3,183	3,291	3,110	3,208
Bunker Coal—						
Oversea Vessels .. ..	550	135	69	54	43	32
Interstate Vessels .. ..	411	231	225	227	229	211
Total .. .. .	7,518	9,928	11,116	11,704	11,550	12,654
Consumption as raw material—						
Gas works .. .. .	1,177	1,865	1,964	2,097	2,081	2,047
Coke works .. .. .	1,708	1,973	2,618	2,835	3,071	3,252
Total .. .. .	2,885	3,838	4,582	4,932	5,152	5,299
Exports (Oversea) .. ..	382	68	72	139	256	386
Balance—Unrecorded consumption, other purposes(d) .. .. .	1,500	1,578	1,246	2,680	1,733	1,087
Grand Total .. .. .	12,285	15,412	17,016	19,455	18,691	19,426

(a) Includes miners' and colliery coal.

(b) Estimated.

(c) Government railways only.

(d) 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 since then has declined as in recent years production has expanded considerably. Since 1952-53 exports have exceeded imports by a wide margin; in 1954 exports of black coal were 391,226 tons and imports were 4,994 tons.

6. Coal Value at the Mine in New South Wales.—Particulars of the average values at the mine (or at screens where these are at a distance from the mine) of saleable coal for each district and for New South Wales as a whole are shown in the following table for the years 1938 and 1950 to 1954. Saleable coal is taken to exclude miners' coal, coal consumed at the mines and other producer-consumed coal. For the years 1951 to 1954 stocks of coal held at grass by the Commonwealth Government are also excluded. No deduction has been made in respect of excise duty operative from 1st November, 1949.

**AVERAGE SELLING VALUE AT THE MINE PER TON OF SALEABLE COAL : NEW SOUTH WALES.**

(s. d.)

Year.				Northern District.	Southern District.	Western District.	Average for State.
1938	..	..	..	12 0	14 0	9 6	12 0
1950	..	..	..	36 5	39 1	29 4	35 10
1951	..	..	..	51 5	50 8	42 10	49 8
1952	..	..	..	62 3	60 3	56 7	61 2
1953	..	..	..	62 1	61 0	56 9	61 1
1954	..	..	..	59 11	59 0	57 1	59 3

7. Values in New South Wales, Great Britain and the United States of America.—The following table shows, for the years 1938 and 1950 to 1954, 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.

The series of average values for the United States of America replaces the series of prices shown for this country in earlier Year Books.

**PRODUCTION VALUES OF COAL PER TON : NEW SOUTH WALES, GREAT BRITAIN AND UNITED STATES OF AMERICA.**

Country.	1938.	1950	1951.	1952.	1953.	1954.
	s. d.	s. d.	s. d.	s. d.	s. d.	s. d.
New South Wales—Bituminous(a)	12 0	35 10	49 8	61 2	61 1	59 3
Great Britain—Deep mined(b)	16 8	47 9½	51 2½	57 3	61 1½	63 6
United States of America—Bituminous and lignite (c)	\$ 1.95	\$ 4.84	\$ 4.92	\$ 4.90	\$ 4.92	\$ 4.82

(a) Average selling value at the mine per ton of 2,240 lb.: the figures relate to saleable coal and include excise duty from November, 1949. (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.

8. Employment in Coal-mines.—The number of persons employed, both above and below ground, in coal-mines in each State for 1939 and each of the years 1950 to 1954 is shown in the following table.

## COAL-MINES : PERSONS EMPLOYED.

Year.	New South Wales.	Victoria.		Queens-land.	South Australia.	Western Australia.	Tasmania.	Australia
		Black.	Brown. (a)					
1939 .. ..	16,581	1,376	449	2,615	..	752	238	22,011
1950 .. ..	18,540	777	889	3,495	408	1,099	334	25,542
1951 .. ..	18,747	773	808	3,503	434	1,125	329	25,809
1952 .. ..	20,151	851	1,697	3,715	220	1,326	349	28,415
1953 .. ..	19,961	900	1,598	3,701	250	1,478	345	28,233
1954 .. ..	19,979	786	1,598	3,743	270	1,583	358	28,317

(a) Prior to 1952, persons engaged in removing overburden were not included.

The year of maximum employment was 1926 when 31,774 persons were engaged in the coal-mines of Australia. Shortly after that year the industrial depression and a prolonged stoppage of work on one of the principal fields of New South Wales during 1929 and 1930 seriously affected the figures of employment. Since 1933 there has been a gradual increase, but the numbers employed in 1953 were only 86 per cent. of the maximum figure already quoted. In New South Wales in 1954, 7,973,737 tons of coal, or 53 per cent. of the total output of underground coal, were cut by machinery, compared with 3,594,000 tons or 32 per cent. in 1939. Similar details for other States are not available.

9. 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 1950 to 1954. 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 open-cut mining.

PRODUCTION OF BLACK COAL PER MAN-SHIFT : UNDERGROUND MINES.(a)  
(Tons.)

Year.	N.S.W.	Vic.	Q'land.	W. Aust.	Tas.	Australia.
PRODUCTION PER MAN-SHIFT WORKED AT COAL FACE.						
1950 .. ..	10.28	2.41	6.18	8.80	5.40	9.01
1951 .. ..	10.82	2.43	6.40	8.22	6.01	9.39
1952 .. ..	10.06	2.24	6.36	6.82	6.03	8.88
1953 .. ..	9.72	2.11	6.37	4.86	6.15	8.50
1954 .. ..	10.16	2.03	6.54	4.82	5.95	8.81
PRODUCTION PER MAN-SHIFT WORKED BY ALL EMPLOYEES.						
1950 .. ..	2.95	0.91	2.52	2.17	2.76	2.78
1951 .. ..	2.96	0.93	2.55	1.85	3.03	2.78
1952 .. ..	3.00	0.83	2.55	1.64	3.01	2.81
1953 .. ..	3.08	0.81	2.53	1.67	3.00	2.84
1954 .. ..	3.25	0.82	2.61	1.92	3.07	3.00

(a) As calculated by Joint Coal Board. (b) In April, 1952, persons working "at coal face" were re-defined resulting in a considerable increase in persons in this category in New South Wales.

(ii) *Open-cut Mines.* In the next table, the Joint Coal Board's estimates of production of black coal per man-shift worked by all employees in open-cut mines are shown for the years 1950 to 1954. There are no open-cuts producing black coal in Victoria.

**PRODUCTION OF BLACK COAL PER MAN-SHIFT : OPEN-CUT MINES.(a)**  
(Tons.)

Year.	N.S.W.	Q'land.	S. Aust.	W. Aust.	Tas.	Australia
1950 .. ..	8.33	10.16	2.17	7.17	5.74	6.57
1951 .. ..	8.02	11.80	3.05	6.73	5.28	7.03
1952 .. ..	7.92	11.78	3.22	6.13	4.63	7.07
1953 .. ..	8.51	10.97	3.57	5.37	..	6.92
1954 .. ..	8.97	12.27	(b) 4.52	4.74	7.91	7.31

(a) Production per man-shift worked by all employees, as calculated by Joint Coal Board.

(b) Figures prior to July, 1954 include manshifts on other than mine work.

10. Joint Coal Board.—After the 1939-45 War, the Governments of the Commonwealth and New South Wales mutually agreed to create jointly an authority with powers similar to and in some respects wider than those possessed under Commonwealth war-time legislation. Following this agreement, the Joint Coal Board was created and has functioned as from 1st March, 1947. Briefly, it is the responsibility of the Board to ensure that the coal of the State is conserved, developed, worked, distributed and used to the best advantage in the public interest, and to promote the welfare of the workers in the industry. Further details of the powers and functions of the Board are contained in previous issues of the Official Year Book.

### § 9. Coke and Other By-products from Coal.

1. Coke.—The production of metallurgical coke in Australia was limited to about 250,000 tons per annum prior to the 1914-18 War. This was below local requirements and necessitated an annual import of about 27,000 tons. By 1920, production had risen to more than 500,000 tons, by 1938-39 to 1,164,873 tons and in 1953-54 reached the record level of 2,010,404 tons. Until recent years, imports have exceeded exports but in 1953-54 exports amounted to 28,223 tons (27,439 tons to New Caledonia) while 10,981 tons were imported.

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 1953-54 was 839,793 tons compared with 757,046 tons in 1938-39.

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 1938-39 and 1949-50 to 1953-54. The figures exclude output of coke breeze, which in 1953-54 amounted to 366,041 tons.

#### COKE PRODUCTION(a) : AUSTRALIA.

(Tons.)

Industry.	1938-39.	1949-50.	1950-51.	1951-52.	1952-53.	1953-54.
Coke Works ..	1,164,873	1,182,773	1,515,782	1,636,982	1,858,428	2,010,404
Gas Works ..	757,046	1,094,982	1,111,854	1,203,602	1,071,106	839,793
Total ..	1,921,919	2,277,755	2,627,636	2,840,584	2,929,534	2,850,197

(a) Excludes coke breeze; see letterpress above.

2. Other By-products from Coal.—In addition to coke, other products are obtained from the treatment of coal by coke and gas works. Details of some of these are given in the following table.

#### OTHER BY-PRODUCTS FROM COAL : AUSTRALIA.

Commodity.	1938-39.	1949-50.	1950-51.	1951-52.	1952-53.	1953-54.
Tar—Crude (a) .. '000 gals.	34,614	38,178	41,239	42,586	44,402	46,517
Refined (a) .. ..	3,752	12,324	12,449	12,514	15,699	17,725
Tar Oils (crude) .. ..	1,254	3,758	3,960	4,101	3,674	3,799
Ammoniacal Liquor .. ..	5,388	18,120	24,210	23,449	21,956	22,763
Ammonium Sulphate (a) .. tons	24,251	48,736	57,893	63,814	70,174	70,811

(a) Includes production in works other than coke and gas works.

### § 10. Mineral Oils.

1. **Australia.**—Natural oil has been proved to exist in Queensland, Victoria and Western Australia, and in the latter State in 1953, potential oil production was found at Rough Range. Many of the conditions favourable to the accumulation of oil in commercial quantities have been shown to be present in Queensland, Western Australia and New South Wales, but in the latter State no strong positive evidence of its existence has been recorded.

Reference is made in § 15 page 1023, to the assistance afforded by the Commonwealth Government in the search for oil.

Structure control drilling has been carried out following the Rough Range discovery and field exploration increased enormously. The drilling of a number of wells has commenced at various places throughout the Commonwealth. These include all the States with the exception of Tasmania and the Northern Territory.

2. **New South Wales.**—During 1955 Australian Oil and Gas Corp. commenced drilling at Kurrajong and Clarence River Basin Oil Exploration Co. N.L. started drilling at Grafton.

3. **Victoria.**—Drilling for oil commenced in 1955 in the Gippsland area of Victoria when Frome Lakes Pty. Ltd. drilled Darriman No. 1 to 4,730 feet. The well was abandoned without testing. Woodside (Lakes Entrance) Oil Co. N.L. also commenced drilling near Woodside.

4. **Queensland.**—At Roma, Queensland, Associated Australian Oilfields N.L. after testing uneconomical sands in the Roma Blocks area north of Roma in mid-1955, moved to Hospital Hill. One gas well with a potential of 1,195 m.c. ft. and two unsuccessful wells were drilled. Operations in this area have been temporarily suspended.

Two wells were drilled at Reid's Dome near Springsure, one at Wellington Point, two near Maryborough and seven in the Longreach area. None of these succeeded in finding commercial oil or gas production during 1955.

5. **South Australia.**—Under prescribed conditions, the South Australian Government offers a bonus of £5,000 to the person or body corporate which first obtains from a local bore or well 100,000 gallons of crude petroleum containing not less than 90 per cent. of products obtainable by distillation. Geophysical surveys were undertaken by private interests during 1947, and continued into 1948, in the north-east corner of the State and extending over the border into New South Wales and Queensland, but with little success. Assistance given by the Commonwealth included equipment and a geophysical survey party.

Airborne geophysical surveys over the Eucla Basin in the south-western part of the State were made and extended into Western Australia.

6. **Western Australia.**—Systematic geological mapping and stratigraphic and structural studies have been continued in the Carnarvon area during 1955 by the Commonwealth Bureau of Mineral Resources, Geology and Geophysics. Western Australian Petroleum Pty. Ltd. (an exploration Company formed by Caltex in partnership with Ampol Petroleum Company) have proved commercial oil production at about 3,600 feet in one well on the Rough Range anticline at Exmouth Gulf. Subsequent wells drilled to exploit this reservoir showed that subsurface conditions did not reflect those shown at the surface, and further detailed geophysical work is in progress. One dry hole has been drilled on the Cape Range structure and a second well is now being drilled. Drilling has also been done at Giralda, Waroora and drilling for geological information was done at Grierson and Point Cuvier.

In the Fitzroy basin, South Kimberley area, geological surface and geophysical surveys have been continued by the Bureau of Mineral Resources, Geology and Geophysics. Associated Freney Oilfields N.L. drilled one well to 9,072 feet, which was abandoned after testing had shown that a number of oil shows were uneconomical. West Australian Petroleum Pty. Ltd. ceased drilling at Grant Range in October, 1955 and moved to a new site on the Fraser River.

7. **Papua.**—Australasian Petroleum Co. Pty. Ltd. and Island Exploration Company continued extensive geological and geophysical surveys over the western areas of Papua. During 1955, Island Exploration Co.'s Omati No. 2 was abandoned at 10,880 feet, and Aramia No. 1 was abandoned after having been drilled to 6,628 feet. The drilling rigs were then moved to Kuru and Barikewa.

8. **General.**—During 1939 efforts were made to secure greater uniformity in State legislation governing the search for oil. A draft Bill based on modern legislation in other countries was prepared by the Commonwealth and submitted to the State Governments. As a result, amending legislation was passed in Victoria, Queensland, South Australia and Western Australia. There was immediate response to this in Queensland, where an agreement has been reached between the State Government and one of the major oil companies, whereby the company has undertaken to spend up to £400,000 in the search for oil in that State.

Further details of action taken by the Commonwealth Government in connexion with the search for oil will be found in § 15. Government Aid to Mining, and Mineral Control (page 1023).

## § 11. Sulphur.

Sulphur, although produced in Australia as a content of certain metallic minerals, is itself non-metallic in character. Sulphides such as zinc concentrate and pyrite, which contain sulphur, are produced in appreciable quantities. There is no production of elemental sulphur (brimstone) in Australia. A large proportion of zinc concentrate produced is exported and therefore lost to Australia for utilization of the sulphur content. The sulphur recovered in Australia is in the form of acid, most of which is used in the manufacture of fertilizers, mainly superphosphate. As this recovery does not at present satisfy local requirements, it is necessary to import elemental sulphur to meet the balance.

Production of pyrite concentrate at Nairne in South Australia commenced early in 1955. The output from this mine is supplied to the new sulphuric acid plant which was opened at Port Adelaide in August, 1955. This new plant has an annual capacity of 100,000 tons of sulphuric acid and will require 70,000 tons of pyrite concentrate from Nairne annually.

The following table shows for the years 1939 and 1950 to 1954, the sulphur content of sulphur-bearing minerals produced, quantities of sulphur recoverable therefrom, production of monohydrate acid (100 per cent. sulphuric acid), and sulphur content of monohydrate acid produced. Particulars regarding spent oxide roasted have been included to complete the statistics relating to recovery of sulphur and monohydrate acid production.

SULPHUR PRODUCTION: AUSTRALIA.  
(Tons.)

Item.	1939.	1950.	1951.	1952.	1953.	1954.
Sulphur contained in—						
Zinc concentrate ..	123,968	119,736	113,964	119,515	141,954	152,074
Pyrite ..	27,040	57,177	65,962	93,516	77,811	97,649
Spent Oxide Roasted (a)	(b)	2,930	3,200	4,211	5,432	4,680
Total Sulphur Content ..	151,008	179,843	183,126	217,242	225,197	254,403
Recoverable Sulphur (a)	129,709	156,095	159,050	189,436	195,471	221,265
Monohydrate Acid Produced	484,493	639,600	652,125	628,302	671,471	778,008
Quantity of Sulphur in Mono- hydrate Acid produced from—						
Sulphur (Elemental) (d) ..	a 114,500	134,000	135,683	112,225	123,469	154,337
Zinc concentrate ..	25,300	32,000	32,850	33,115	31,270	33,564
Pyrite ..	27,040	45,000	50,300	57,891	60,811	62,533
Spent Oxide ..	(b)	2,050	2,230	3,231	3,973	3,973
Total ..	166,840	213,050	221,063	206,462	219,523	254,407

(a) Estimated.

(b) Not available.

(c) Year ended 30th June, 1939.

(d) All imported.

## § 12. Non-Metallic Minerals.

1. **Asbestos.**—The production of asbestos in Australia at present is only sufficient to meet about one-sixth of domestic requirements. Production of asbestos in Australia in recent years has been of two types, chrysotile and crocidolite, the former being the most important type economically, but deposits of chrysotile in Australia are relatively

small and widely scattered. The principal deposits of asbestos are of crocidolite, and they occur in the Hammersley Ranges in Western Australia, about 200 miles south-east of Roebourne. Large scale operations were commenced there in 1943 at Wittenoom Gorge by Australian Blue Asbestos Ltd. and reserves in seams over which the Company holds leases are estimated at two million tons. However, high costs of production due to heavy freight charges and the difficulty of retaining labour in an isolated community have prevented greater development of the project.

The production of chrysotile and crocidolite in Australia during the five years 1950 to 1954 is shown in the following table:—

PRODUCTION OF ASBESTOS : STATES.  
(Tons.)

Year.	Chrysotile.			Crocidolite.		
	New South Wales.	Western Australia.	Australia.	South Australia.	Western Australia.	Australia.
1950 ..	374	211	585	13	1,018	1,031
1951 ..	432	727	1,159	6	1,393	1,399
1952 ..	466	652	1,118	..	2,940	2,940
1953 ..	569	606	1,175	..	3,795	3,795
1954 ..	616	303	919	..	3,794	3,794

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 the following table, the recorded production of the main types of clays produced in each State of Australia is shown for the year 1954.

PRODUCTION OF CLAYS : STATES, 1954.  
(Tons.)

Type.	New South Wales.	Victoria.	Queensland	South Australia.	Western Australia.	Tasmania.	Total.
Bentonite ..	63	..	126	..	1,122	..	1,311
Brick Clay and Shale ..	1,604,409	(a) 845,000	277,468	302,942	(a) 420,000	(a) 69,000	3,518,819
Cement Clay and Shale ..	114,254	..	..	20,548	11,901	..	146,703
Damourite ..	..	..	..	514	..	..	514
Fireclay ..	60,038	27,035	8,459	24,861	6,738	..	127,131
Fuller's Earth ..	73	..	..	..	..	..	73
Knolin ..	23,159	2,575	226	3,325	4,020	7,948	41,253
Stoneware Clay ..	109,974	..	878	..	..	..	110,852
Tile Clay ..	150,184	..	..	..	..	..	150,184
Other Clays ..	10,047	(a) 85,854	..	42,190	..	..	138,091

(a) Estimated.

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) 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 Gulf St. Vincent 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 about two-thirds of the total Australian production of gypsum to 1954 have come from this area, where the main centres of production are Stenhouse Bay on Yorke Peninsula and Lake MacDonnell.

The building industry is the main user of the gypsum produced in Australia, principally in the manufacture of plaster and 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, and to New Caledonia for use in nickel smelting operations.

The production of gypsum in Australia is set out in the following table for the five years 1950 to 1954 compared with the year 1939.

### PRODUCTION OF GYPSUM : STATES.

(Tons.)

Year.	New South Wales.	Victoria.	South Australia.	Western Australia.	Australia.
1939 .. ..	7,032	11,777	144,940	14,340	178,089
1950 .. ..	102,910	39,945	156,031	36,598	335,484
1951 .. ..	104,697	41,126	147,701	70,823	364,347
1952 .. ..	89,226	47,295	164,825	50,332	351,678
1953 .. ..	71,819	36,286	181,640	40,247	329,992
1954 .. ..	128,790	75,012	194,772	41,142	439,716

4. Limestone.—Limestone is quarried in all States, but statistics of limestone production are incomplete, none being collected in Western Australia, and in Queensland figures do not include limestone quarried for cement manufacture. Limestone is used mainly for the manufacture of cement, other uses being 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 during 1954 are shown in the following table :—

### PRODUCTION OF LIMESTONE (a) : STATES, 1954.

(Tons.)

New South Wales.	Victoria.	Queensland.	South Australia.	Western Australia.	Tasmania.	Northern Territory.	Total.
1,544,217	694,684	(b)73,701	950,202	(c)	196,485	65	(b)3,459,354

(a) Includes shell and coral.

(b) Incomplete.

(c) Not available.

5. Magnesite.—The major sources of magnesite at present are deposits at Fifield and Thuddungra in central New South Wales. Most of the output of magnesite in Australia is used for refractory purposes, particularly 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 1939, and 1950 to 1954, are set out in the table below.

### PRODUCTION OF MAGNESITE : STATES.

(Tons.)

Year.	New South Wales.	Victoria.	Queensland.	South Australia.	Western Australia.	Australia.
1939.. ..	25,189	118	..	376	..	25,683
1950.. ..	32,386	..	..	1,177	1,829	35,392
1951.. ..	35,963	398	13	998	762	38,134
1952.. ..	40,333	164	13	572	1,055	42,137
1953.. ..	45,769	572	..	36	20	46,397
1954.. ..	42,825	..	..	235	92	43,152

6. Mica.—Almost all Australian production of muscovite mica has come from the Northern Territory, though small quantities of inferior grades have been obtained from most of the States. The centre of mica production in the Northern Territory is the Harts Range area about 130 miles north-east of Alice Springs, where mining has been carried on intermittently since 1892, and the Plenty River field, 50 miles north-east of Harts Range.

The Commonwealth Mica Pool—details of which are given in § 15, Government Aid to Mining, on page 1025—purchases all mica which is in accordance with certain specifications. The following table shows the quantity of muscovite mica produced in Australia during the five years 1950 to 1954.

#### MUSCOVITE MICA PRODUCTION.

(lbs.)

Particulars.	1950.	1951.	1952.	1953.	1954.
New South Wales—					
Scrap .. ..	..	..	..	..	15,680
Northern Territory—					
Trimmed .. ..	67,769	48,034	71,929	70,684	84,619
Crude and Film .. ..	..	2,034		1,542	..
Scrap .. ..	51,184	82,880		..	65,184

7. **Salt.**—Salt is obtained in Australia from evaporation of saline lakes and clay pans. Production satisfies local requirements and provides a considerable surplus for export. Recorded production in South Australia (the chief producing State) is shown in the following table for the years 1939 and 1950 to 1954. Available estimates of total Australian production are also shown.

#### SALT PRODUCTION.

('000 Tons.)

Particulars.	1939.	1950.	1951.	1952.	1953.	1954.
South Australia .. ..	79	191	219	203	239	304
Estimated Australian Total ..	(a)	273	300	277	310	380

(a) Not available.

8. **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 producing centre of barite is at Oraparinna in the north Flinders Range in South Australia where the deposits are of first-grade quality. The production of barite in Australia during 1954 was 6,872 tons, of which 3,828 tons came from South Australia.

(iii) *Cupreous Ore and Concentrate.* Cupreous ore is mined in Western Australia for mixing with superphosphate fertilizer. The quantity produced in 1954 was 4,748 tons and 18 tons were also produced in the Northern Territory giving a total of 4,766 tons production for Australia.

(iv) *Diatomite.* Production of diatomite is carried on mainly in the eastern States of Australia, only a small quantity coming from Western Australia. In 1954, 5,439 tons were produced in Australia, and of this total, New South Wales produced 3,708 tons.

(v) *Dolomite.* Up to 1950 New South Wales was the main producer of dolomite, but in that year the Broken Hill Pty. Co. Ltd. opened up a large deposit of dolomite at Ardrossan in South Australia which now produces over 90 per cent. of total output. In 1954 New South Wales produced 3,855 tons; Queensland, 2,680 tons; South Australia, 118,612 tons; and Tasmania, 2,847 tons, making an Australian total of 127,994 tons.

(vi) *Felspar.* The main demand for felspar comes from the glass and ceramic industries. About half the Australian production of felspar comes from New South Wales which produced 9,538 tons of the Australian total of 16,384 tons in 1954.

(vii) *Gemstones.* (a) *Diamonds.* Gem quality diamonds are not produced in Australia, but 1,564 carats of industrial diamonds worth £12,673 were recovered in gold dredging operations on the Macquarie River in New South Wales.



(b) *Opals*. Most of the opals won in recent years came from the Coober Peedy and Andamooka fields in South Australia which produced opals worth £44,815 in 1954 compared with £76,460 in 1953. Other production in 1954 was from the Quilpie district in Queensland valued at £950, and £661 from Lightning Ridge in New South Wales.

(c) *Sapphires*. The Anakie field in Central Queensland is the only Australian producer of sapphires. Output in 1954 was valued at £636.

(d) *Other Gemstones*. The only other recorded production of gemstones in Australia during 1954 was in Western Australia, where emeralds valued at £3·3 were won.

(viii) *Silica*. The production of silica is not recorded in Victoria and Queensland. The output of silica, which includes glass sand, quartz, quartzite, sand, sandstone, and siliceous abrasives, was 102,044 tons in New South Wales; 17,942 tons in South Australia; 7,803 tons in Western Australia; and 6,169 tons in Tasmania, giving a total of 133,958 tons for those States during 1954.

(ix) *Sillimanite*. In 1954, 2,337 tons of sillimanite were produced in Australia. New South Wales contributed 1,370 tons and the remaining 967 tons came from South Australia.

(x) *Talc*. The Australian output of talc (including steatite), 12,940 tons, in 1954 was the highest yet recorded, New South Wales produced 932 tons, South Australia 9,088 tons and Western Australia 2,920 tons.

(xi) *Other*. Other non-metallic minerals produced in Australia in small quantities during 1954 were fluorite, graphite, glauconite, mineral pigments, pebbles for grinding, phosphate rock, pyrophyllite, petalite, serpentine and slate.

### § 13. Persons Engaged, Wages Paid and Accidents in Mining.

1. *Total Employment in Mining*.—The number of persons engaged in the mining industry in Australia fluctuates according to economic conditions generally, the price of industrial metals, the state of the labour market, and according to the permanence of new finds and the development of the established mines. The following table shows the numbers engaged in the various mining industries in each State and Australia as a whole in 1953. Attention is drawn to § 1, para. 3, Standardization of Mineral Statistics, (pp. 983-4) which outlines the nature of changes adopted in 1950 and 1952 in the reporting of mineral statistics.

EMPLOYMENT IN MINING, 1953. (a)

Industry.	N.S.W.	Vic.	Q'land.	S. Aust.	W. Aust.	Tas.	N. Terr.	Aust.
<b>Metal Mining—</b>								
Gold Mining ..	125	549	166	22	6,049	..	139	7,050
Silver-Lead-Zinc Mining ..	6,932	..	1,450	2	128	746	..	9,258
Copper-Gold Mining ..	25	..	1,138	2	10	(b)	(b)	2,025
Tin Mining ..	195	..	267	..	69	502	30	1,063
Other Metal Mining ..	459	20	481	311	383	(b)	(b)	2,198
<b>Total, Metal Mining</b>	<b>7,736</b>	<b>569</b>	<b>3,502</b>	<b>337</b>	<b>6,639</b>	<b>2,401</b>	<b>41</b>	<b>21,594</b>
<b>Fuel Mining—</b>								
Black Coal Mining—								
Underground ..	19,084	900	3,301	..	1,189	344	..	24,818
Open-cut ..	877	..	372	250	289	..	..	1,788
<b>Total Black Coal Mining ..</b>	<b>19,061</b>	<b>900</b>	<b>3,673</b>	<b>250</b>	<b>1,478</b>	<b>344</b>	<b>..</b>	<b>26,606</b>
Brown Coal Mining ..	..	1,598	..	..	..	..	..	1,598
Other Fuel Mining ..	..	..	(c)	..	..	..	..	(c)
<b>Total, Fuel Mining</b>	<b>19,061</b>	<b>2,498</b>	<b>(d) 3,673</b>	<b>250</b>	<b>1,478</b>	<b>344</b>	<b>..</b>	<b>(d) 28,204</b>
<b>Non-metal (excluding Fuel) Mining ..</b>	<b>1,077</b>	<b>256</b>	<b>(d)(e) 284</b>	<b>778</b>	<b>(d) 370</b>	<b>160</b>	<b>6</b>	<b>(e) 3,016</b>
<b>Total, All Mining ..</b>	<b>28,774</b>	<b>3,323</b>	<b>(d) 7,459</b>	<b>1,365</b>	<b>(d) 8,437</b>	<b>2,914</b>	<b>472</b>	<b>(f) 53,744</b>
<b>Construction Material</b>								
Quarrying ..	1,024	(f) 1,403	(d) 180	700	(g) 285	70	..	(h) 3,803
<b>Total, All Mining and Quarrying ..</b>	<b>29,798</b>	<b>4,816</b>	<b>(d) 7,638</b>	<b>2,065</b>	<b>(d) 8,722</b>	<b>2,984</b>	<b>472</b>	<b>(h) 56,547</b>

(a) Average employment during whole year. (b) Not available for publication. (c) Not available for publication; included with 'Non-metal (excluding Fuel) Mining'. (d) Incomplete. (e) Includes particulars of "Other Fuel Mining". (f) Year ended 30th June, 1953. (g) Year ended 30th June, 1954. (h) Includes 42 for the Australian Capital Territory.

The particulars in the foregoing table exclude the following estimated numbers of fossickers :—Gold mining, 222 ; Tin mining, 409 ; Other mining, 1,633.

The following table shows particulars of mining employment in Australia for the years 1938 and 1949 to 1953. Complete particulars of employment in construction material quarrying are not available prior to 1952. The details for 1951 and earlier years include estimates by State Mines Departments of numbers of fossickers which are excluded for 1952 and 1953. Changes in the bases of collecting and compiling the statistics introduced in 1950, 1951 and 1952 have resulted in some lack of comparability of the data in other respects, particularly in the case of metal mining. The employment figures for 1952 are for the period worked by individual mines or quarries, and for 1953 the figures show the average number employed during the whole year.

#### EMPLOYMENT IN MINING : AUSTRALIA.

Industry.	1939.	1949.	1950.	1951.	1952.	1953.
<b>Metal Mining—</b>						
Gold Mining ..	28,840	10,395	9,478	8,647	6,583	7,050
Silver-Lead-Zinc Mining ..	6,095	8,126	8,807	9,536	9,497	9,258
Copper-Gold Mining ..	1,291	999	2,184	2,047	2,112	2,025
Tin Mining ..	4,113	1,745	1,644	1,577	990	1,063
Other Metal Mining ..	(a) 353	(a) 368	1,279	2,028	2,220	2,198
Total, Metal Mining ..	40,692	21,633	23,392	23,835	21,411	21,594
<b>Fuel Mining—</b>						
Black Coal Mining ..	21,562	24,269	24,451	24,861	26,612	26,606
Brown Coal Mining (b) ..	449	811	889	898	1,691	1,598
Other Fuel Mining ..	71	(c)	183	147	112	(c)
Total, Fuel Mining ..	22,082	25,080	25,523	25,906	28,415	28,304
<b>Non-metal (excluding Fuel)</b>						
Mining ..	(d) 3,015	d e 3,825	3,117	3,035	3,070	(e) 2,946
Total, All Mining ..	65,789	50,538	52,032	52,776	52,896	55,744
<b>Construction Material Quarrying ..</b>	(f)	(f)	(f)	(f)	4,167	3,803
Total, All Mining and Quarrying ..	(f)	(f)	(f)	(f)	57,058	56,547

(a) Incomplete ; some metal mining included with " Total Non-metal (excluding Fuel) Mining ".  
 (b) Prior to 1952, persons engaged in removing overburden were not included. (c) Not available separately ; included with " Non-metal (excluding Fuel) Mining ". (d) Includes some Metal Mining ;  
 (e) Includes " Other Fuel Mining ". (f) Not available.

2. **Wages Paid in Mining.**—Information regarding rates of wages paid in the mining industry is shown in the *Labour Report* issued by this Bureau and in Chapter VI.—Labour, Wages and Prices (page 168).

3. **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 from State to State as varying criteria are used in determining what constitutes injury for the purpose of these records. In 1953, 58 persons were recorded as having been killed and 1,546 as having been injured in mining accidents (excluding accidents in construction material quarrying). Of the total of 58 persons killed, 23 were in black coal mines, 12 in gold mines and 23 in other mines. Reported injuries were highest in gold mines (493), black coal mines (463) and silver-lead-zinc mines (332).

### § 14. Oversea Trade in Minerals and Metals.

Particulars of the quantity and value of imports and exports of the principal minerals and metals for Australia are shown in the following table for the years 1952–53, 1953–54 and 1954–55. In addition to the unfabricated metals shown, considerable quantities of partly fabricated metals (bars, rods, wire, etc.) enter into Australia's overseas trade.

## IMPORTS AND EXPORTS OF PRINCIPAL MINERALS AND METALS: AUSTRALIA.

Item.	Unit of Quantity.	1952-53.		1953-54.		1954-55.	
		Quantity.	Value.	Quantity.	Value.	Quantity.	Value.
IMPORTS.							
Minerals—			£A. f.o.b.		£A. f.o.b.		£A. f.o.b.
Antimony ore and concentrate .. ..	cwt.	5,401	39,763	13,119	69,419	27,091	142,821
Asbestos .. ..	"	575,757	1,888,651	528,899	1,988,691	853,811	3,246,480
Chromium ore and concentrate .. ..	"	125,273	89,856	83,517	67,419	99,242	59,296
Coal .. ..	ton	145,634	483,093	2,051	9,816	4,991	26,185
Coke .. ..	"	685	8,363	10,981	144,566	5,900	71,114
Diatomite .. ..	cwt.	30,541	43,467	38,113	54,628	78,873	123,182
Industrial Diamonds ..	carat	249,556	395,275	102,577	325,015	265,144	471,681
Mica .. ..	lb.	117,917	19,564	377,277	64,800	1,029,900	93,528
Sulphur .. ..	cwt.	2,644,058	2,550,325	3,836,254	2,644,015	3,851,674	2,720,089
Metals—							
Aluminium (pigs, ingots, etc.) .. ..	"	135,919	1,384,631	241,980	1,900,542	255,250	2,748,466
Copper—							
Blister .. ..	"	(a)	(a)	2,000	30,086	19,000	150,597
Pigs, ingots, etc. ..	"	357,205	4,733,878	57,791	897,133	561,382	9,521,463
Gold bullion (ingots, bar, etc.) .. ..	fine oz.	228,387	3,595,656	180,628	2,955,517	175,166	2,720,834
Iron and Steel—							
Bar and Rod .. ..	cwt.	457,665	2,703,401	133,198	1,166,863	1,198,833	3,935,534
Ingots, blooms, slabs, etc. .. ..	"	18,691	99,096	4,405	35,609	10,319	56,140
Nickel (pigs, ingots, etc.) ..	"	11,659	316,817	11,705	359,970	10,197	312,899
Tin (ingots) .. ..	"	3,659	205,904	14,868	608,500	7,682	341,786
EXPORTS.							
Minerals—							
Asbestos .. ..	cwt.	32,694	277,677	46,743	376,315	66,013	380,483
Coal .. ..	ton	255,837	1,178,466	385,812	1,528,788	391,226	1,147,441
Coke .. ..	"	17,069	145,616	28,223	240,138	21,885	180,321
Copper—							
Ore and concentrate ..	cwt.	313	2,900	2,530	5,911	110,924	352,068
Copper-lead dross, etc. ..	"	(a)	(a)	65,088	290,049	163,349	902,594
Rutile and Zircon concentrates .. ..	"	1,369,519	2,269,576	1,195,236	1,644,989	2,055,471	2,895,624
Silver-lead and Zinc Ores and concentrates—							
Silver-lead ore and concentrate .. ..	"	824,429	2,722,707	1,447,803	4,086,927	1,181,261	3,840,616
Zinc concentrate .. ..	"	4,896,311	11,054,881	5,327,894	3,337,401	4,013,406	2,686,832
Other .. ..	"	3,133	12,597	90,995	256,580	99,031	244,104
Tungsten (scheelite and wolfram concentrates) ..	"	44,101	3,444,003	43,524	2,952,684	41,776	3,168,416
Metals—							
Copper, blister .. ..	"	(a)	(a)	253,290	3,537,583	102,463	1,513,844
Gold bullion (ingot, bar, dust, sheet, etc.) ..	fine oz.	1,250,162	20,397,933	873,321	13,769,222	864,391	13,716,622
Iron and Steel—							
Bar and rod .. ..	cwt.	289,691	576,501	507,333	906,930	266,182	567,727
Ingots, blooms, slabs, etc. .. ..	"	1,568,914	2,393,406	2,121,216	2,099,038	156,131	228,149
Pig iron .. ..	"	3,236,626	3,210,414	2,326,220	2,053,886	1,205,561	1,021,107
Lead—							
Pig .. ..	"	2,810,756	17,171,800	3,104,226	18,550,238	2,805,126	17,182,339
Bullion .. ..	"	977,767	7,955,453	682,485	4,392,514	816,369	6,133,236
Zinc, ingots .. ..	"	899,293	6,086,392	749,966	3,504,174	654,180	3,408,244

(a) Not available.

## § 15. Government Aid to Mining, and Mineral Control.

1. Aid to Mining.—(i) *Commonwealth.* (a) *Assistance to marginal and sub-marginal gold mines.* Under the terms of the Gold-Mining Industry Assistance Act 1954, a large producer may receive a subsidy of up to three-quarters of that portion of the cost of production in excess of £13 10s. od. per fine oz.; the subsidy will not exceed £2 os. od. per fine oz. A person producing less than 500 fine oz. per year receives a flat rate

subsidy of £1 10s. od. per fine oz. regardless of the cost of production. The Act will remain in force for two years from 1st July, 1954. The operation of the Act has since been extended for a further three years.

(b) *Rewards for Discovery of Uranium Ore.* To encourage the search for and discovery of deposits of uranium ore, the Commonwealth Government has approved the granting of monetary rewards up to a maximum of £25,000 for any one deposit.

(c) *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 conducts all surveys required in Commonwealth Territories, 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. The Bureau has carried out extensive scout boring in New South Wales to prove deposits of coal suitable for working by open-cut methods.

(d) *Diamond Drills.* The drilling plant operated by the Bureau of Mineral Resources consists of two heavy, two medium and five light prospecting drills. These drills are used mainly in connexion with the Bureau's comprehensive programme of prospecting by aerial, geological, geophysical and geochemical methods. Some of the drills are available for hire to private companies.

(e) *Search for Oil.* No variation has been made in the policy described in Official Year Book No. 37, page 850, regarding the search for petroleum throughout Australia and its Territories. In addition to its activities set out in that Year Book, the Bureau of Mineral Resources, Geology and Geophysics furnishes field laboratories and trained personnel to assist small companies in recording scientific information obtained while drilling for oil.

The Commonwealth Government has encouraged the search for oil in Australia, Papua and New Guinea; details of the efforts made are outlined in earlier issues of the Official Year Book and in § 10. Mineral Oils (p. 1016). A considerable amount of geological and geophysical work and test drilling has been conducted under the provisions of the Petroleum Oil Search Act 1936.

(f) *Survey of North Australia.* Reference to this survey which was completed at the end of 1940 appears in Official Year Book No. 35, page 744.

(g) *Ore-dressing and mineragraphic investigations.* These investigations are conducted by the Commonwealth Scientific and Industrial Research Organization as required by the industry. Ore-dressing investigations are carried out conjointly with appropriate State institutions, the three laboratory centres being the School of Mines, Kalgoorlie, the School of Mines and Industries, Adelaide, and the University of Melbourne.

Since 1947, funds for these investigations have been included in the investigational vote approved annually for the Commonwealth Scientific and Industrial Research Organization; in 1955 the Commonwealth Government expended approximately £18,000 on ore-dressing and £10,500 on mineragraphic investigations.

(h) *Petroleum Legislation.* The petroleum ordinances of Papua and New Guinea have been amended and combined in a single ordinance entitled Petroleum (Prospecting and Mining) Ordinance 1951. Further minor amendments were passed early in 1954. A new Petroleum Ordinance for the Northern Territory was brought into force on 27th

May, 1954. New legislation covering petroleum was brought down in New South Wales under the Petroleum Act, 1955, and several amendments to the Petroleum Act, 1951, were passed in Western Australia.

(ii) *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 consisted 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.

(c) *Victoria.* Loans may be made to assist prospecting and development or the purchase of machinery. The Mines Department has 28 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.

(d) *Queensland.* The Mines Department 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 Mill at Charters Towers is available for the treatment of gold-bearing ores. In addition, many departmental compressor plants, pumping plants and other mining equipment are provided and made available on hire on the principal mining fields.

(e) *South Australia.* During 1940 the Premier announced that assistance would be given to copper-mining in the form of financial help towards such development work as was absolutely necessary for a mine to enter upon reasonably continuous production. The State maintains batteries and cyanide works at Mount Torrens, Peterborough, Mongolata, Tarcoola and Glenloth and assays for public purposes are made at the School of Mines.

(f) *Western Australia.* The Mines Department has about twenty batteries throughout the mining fields where prospectors and others can have their ore treated.

(g) *Tasmania.* The Department of Mines provides financial assistance to mining lessees for the purchase of plant and machinery, for sinking, repairing or dewatering 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.

Other assistance is rendered to the industry by geological and engineering advice and through ore-dressing research into metallurgical recoveries and the selection and design of treatment plant.

(h) *Northern Territory.* In order to encourage the development of the mining industry, the Northern Territory Administration operates Government batteries at Tennant Creek, Hatches Creek, and Maranboy for the treatment of miners' ores. The crushing charges are subsidized by Government grants. In addition, the Administration provides cartage subsidies and financial advances to encourage miners to carry out development work. Roads and water supply services are provided and maintained for all mines under active development throughout the Territory.

2. *Control of Minerals.*—(i) *Mica Production.* The Commonwealth Mica Pool purchases mica won in the Harts Range, Northern Territory, thus ensuring the miners a ready market for their output at fixed prices and also permitting an orderly distribution of mica to the trade. The Pool is controlled by a Committee of Management consisting of representatives of the Commonwealth Government, producers and consumers.

(ii) *Control of Exports of Metals and Minerals.* Certain metals and minerals produced in Australia are subject to export control for one or more of the following reasons :—

- (a) the necessity to conserve resources (e.g., iron ore and manganese) ;
- (b) inadequacy of local production to fulfil domestic demand (e.g., mica, manganese ore, copper, iron and steel) ;
- (c) the strategic importance of the minerals (e.g., beryllium ores, concentrates and metal ; monazite ; tantalite and tantalum products ; uranium ore, concentrates, residues and metal ; mica).

Mixed concentrates of beach sand minerals are prohibited exports, but rutile, zircon and ilmenite may be exported. Some non-ferrous scrap is also subject to control.

(iii) *Radio-active Minerals.* Since the discovery of the possibility of using atomic energy considerable attention has been paid to the occurrence of uranium in Australia. To encourage the search for and discovery of deposits of uranium ore, the Commonwealth Government has approved the granting of monetary rewards for such discoveries.

Up to the end of 1949 important deposits had been found only in the northern part of South Australia where the Mt. Painter and Radium Hill fields had been investigated, largely by the South Australian Government, but in that year the presence of uranium was discovered in the Rum Jungle district of the Northern Territory, and investigations carried out by the Commonwealth Bureau of Mineral Resources, Geology and Geophysics in the years 1949–1952 proved that these deposits are of substantial importance.

Towards the end of 1952 the Commonwealth Government placed the Rum Jungle deposits, together with other deposits which are known to occur, but which have not yet been adequately investigated, under the control of Territory Enterprises Pty. Ltd., a subsidiary of Consolidated Zinc Corporation Limited, to carry on the investigations on its behalf and to mine and treat the ore. The treatment plant at Rum Jungle was officially opened by the Prime Minister on 17th September, 1954. Investigation of an area adjacent to Rum Jungle was carried out by the Bureau, using an airborne scintillometer. This survey indicated the presence of many radio-active anomalies, and demonstrated the effectiveness of this method of search. During 1952, arrangements were completed between the Governments of the United States of America, South Australia and the Australian Commonwealth, for the purchase of ores by the United States.

In South Australia, the South Australian Government extensively explored the Radium Hill deposit by underground development and diamond drilling. A primary treatment plant was erected at the mine and went into operation in November, 1954 ; the concentrate is transported to a plant at Port Pirie, completed in mid-1955, where it is further reduced.

The Bureau of Mineral Resources is carrying out further airborne scintillometer surveys and extensive geological, geophysical and geochemical surveys and diamond drilling operations, with a view to discovering further deposits and to assessing the value of known deposits.

During 1953 Commonwealth Legislation was enacted to set up an Atomic Energy Commission which is responsible, in an overall sense, for the production and utilization of uranium in Australia. This Act, the Atomic Energy Act of 1953, supersedes the Atomic Energy (Control of Materials) Act of 1946, but contains a provision of that Act which provides for control of substances which could be used for production or use of atomic energy. It gives the Commonwealth power to acquire such substances in their natural state and in waste materials from mining operations, to carry on mining and other operations necessary for the recovery of such substances, and to pay compensation for such acquisition. It also gives the Commonwealth power to obtain possession of such substances held by any person.

Further reference to the Atomic Energy Commission appears in Chapter XXVII.—Defence.

## CHAPTER XXVII.

## DEFENCE.

## § 1. Department of Defence.

1. *Introduction.*—At the outbreak of the 1939–45 War, the Department of Defence comprised the three Fighting Services and a Central Secretariat. In November, 1939 separate Departments, each with its own Minister, were created for the control and administration of the Navy, Army and Air Force. The Defence Department as then reconstituted retained responsibility for over-all defence policy and for the conduct during the war of the business of the War Cabinet, set up in September, 1939, and the Advisory War Council, set up in October, 1940. These bodies ceased to function after the war.

2. *Functions and Organization.*—(i) *Functions.* Subject to the authority of Cabinet, the Minister and Department of Defence are responsible for:—

- (1) The formulation and general application of a unified defence policy relating to the Defence Forces and their requirements, including:—(a) co-operation in British Commonwealth and regional defence and the defence aspect of the Charter of the United Nations; (b) the supply aspect of defence policy, including the review of production programmes and capacity; (c) the scientific aspect of defence policy; and (d) the financial requirements of defence policy, and the allocation of funds made available.
- (2) The defence aspect of Armistice and Peace Terms, Control Commissions, and Forces of Occupation.
- (3) Matters of policy or principle and important questions having a joint Service or inter-Departmental defence aspect.
- (4) The defence aspect of questions relating to the organization and machinery for:—(a) co-operation in British Commonwealth defence; (b) co-operation in regional security, including obligations under the United Nations Charter; (c) higher direction in war; and (d) higher direction of the Services.
- (5) The Commonwealth War Book, which is a summary of national plans for an emergency as developed in Departmental War Books.
- (6) The administration of inter-Service organizations, such as the joint intelligence machinery.
- (7) The defence aspect of:—the strength and organization of the Forces, higher appointments in the Services, honours and awards.
- (8) Advice on the military aspect of civil defence.

(ii) *Organization, higher defence machinery, the control of the joint Service machinery and the Secretariat of the Council of Defence.* 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 and the Joint War Production Committee. The Defence Committee is a statutory body consisting of the Secretary, Department of Defence, who is Chairman, and the Chiefs of Staff of the three Services. In general, its function is to advise on defence policy as a whole, and on matters of policy or principle and important questions having a joint Service or inter-Departmental defence aspect. The main responsibility of the Chiefs of Staff Committee in peace is the preparation of strategic appreciations and military plans. The function of the Joint War Production Committee is, briefly, to examine the relation between strategical 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.

(iii) *Board of Business Administration.* In view of the heavy defence expenditure, the Government, in July, 1953, established the Board of Business Administration in the Department of Defence. The Board deals with joint Service matters of common interest to the three Services, or important subjects on which the collective advice of the Board

is desired. 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.

3. **Basis of Current Defence Policy.**—The aim of Australian Defence Policy is to co-operate in repelling aggression.

The basis of Defence Policy has been transformed from preparedness by a critical date, to the capacity to maintain it at a level that can reasonably be sustained for a long haul having regard to the essential demands of other sectors of the national economy, including national development.

The size of the Defence effort having been determined by the amount of the Defence Vote, the relative strengths of the Navy, Army and Air Force are governed by the probable form and scale of attack. Strategically, Defence falls into two divisions:—

(i) Local defence of Australian territories and waters, which is the absolute responsibility of the Australian Government. This is the first priority for the Services.

(ii) Oversea defence based on global strategy to defend vital interests and to bring about the defeat of the enemy. Australia is committed as a member of the British Commonwealth, and in accordance with the provisions of the Anzus Treaty, the South East Asia Collective Defence Treaty, and the Charter of the United Nations, to co-operate in collective security.

4. **The Defence Programme.**—(i) *Programme.* The Government's current Defence Programme is based on a vote of £190 million. It provides for the maintenance of an efficient Service organization including fighting forces together with command, training and maintenance elements capable of rapid expansion in time of war. Adjustments have been made to improve the balance between equipment and manpower to enable increased provision to be made for modern equipment.

In the field of research and development, Australia is making its principal contribution through the Long Range Weapons Establishment which is a joint United Kingdom—Australian effort, for the testing of guided weapons. The executive authority for this project is the Department of Supply which is also responsible for design and inspection services and for the provision of the material requirements of the forces other than munitions.

The Department of Defence Production is responsible for manufacture and supply of munitions and aircraft. Provision is being made for further progress with the Defence Production Capital Programme, for the expansion of production capacity and the replacement and modernization of existing facilities to meet the material requirements of the Services. This includes the establishment of a munitions factory at St. Mary's in New South Wales.

(ii) *Financial.* Details of Defence Expenditure for 1954–55 and the allocation of the Defence Vote for 1955–56 are set out in the two tables which follow:—

**ALLOCATION OF DEFENCE VOTE OF £190,000,000 FOR 1955–56.**  
(£'000.)

Service or Department.	Mainten- ance.	Capital Material Requirements, Machinery, Plant and Equipment.	Capital Buildings, Works and Acquisi- tions.	Miscel- laneous.	Total Expenditure.
Defence .. .. .	709	13	28	..	750
Navy .. .. .	31,395	16,024	1,415	..	48,834
Army .. .. .	48,553	11,275	3,300	..	63,128
Air .. .. .	35,674	12,352	2,900	..	50,926
Defence Production .. .. .	2,788	1,750	6,715	..	11,253
Supply .. .. .	10,919	999	2,190	26	14,134
Civil Defence .. .. .	119	50	65	..	234
Marine Salvage Organiza- tion .. .. .	135	..	..	..	135
Recruiting Organization .. .. .	384	..	..	..	384
Labour and National Ser- vice (administering National Service Act) .. .. .	222	..	..	..	222
<b>Total .. .. .</b>	<b>130,898</b>	<b>42,463</b>	<b>16,613</b>	<b>26</b>	<b>190,000</b>



**DEFENCE EXPENDITURE, 1954-55.**  
(£'000.)

Service or Department.	Mainten- ance.	Capital Material Requirements, Machinery, Plant and Equipment.	Capital Buildings, Works and Acquisi- tions.	Mil- itaries.	Total Expenditure.
Defence .. ..	611	11	21	..	643
Navy .. ..	30,561	15,435	1,217	..	47,213
Army .. ..	47,472	(a) 19,096	2,937	..	(a) 69,505
Air .. ..	33,137	13,524	2,587	..	49,248
Defence Production .. ..	2,634	1,811	783	..	5,228
Supply .. ..	11,034	907	1,684	38	13,663
Civil Defence .. ..	34	..	..	..	34
<b>Total .. ..</b>	<b>125,483</b>	<b>50,784</b>	<b>9,229</b>	<b>38</b>	<b>185,534</b>

(a) Includes £8,000,000 paid to the Defence Equipment Trust Account.

(iii) *Personnel Strengths.* The personnel strengths of the Services at 31st December, 1955 were :—

Category.	Navy.	Army.	Air Force.	Total.
Permanent Forces .. ..	(a) 13,143	22,726	15,411	51,280
Citizen Forces—				
Volunteers .. ..	5,276	14,630	1,929	21,835
National Service Personnel .. ..	4,476	(b) 114,842	(b) 16,196	(b) 135,514
Total Citizen Forces .. ..	9,752	129,472	18,125	157,349
Total Permanent and Citizen Forces .. ..	22,895	152,198	33,536	208,629

(a) Excludes midshipmen not on pay—99. (b) Includes 44,470 Army and 15,416 Air Force National Service personnel who have completed training and are on the reserve.

5. **Australian Forces in Malaya and Korea-Japan.** (i) *Malaya.* The Prime Minister announced on 1st April, 1955—“Australia will participate in the establishment in Malaya, a very important portion of the Manila Treaty area, a contribution to the defence of the treaty area, of a strategic reserve in which the United Kingdom and New Zealand will participate”.

The Australian contribution comprises the following forces—

*Navy*—Two destroyers and two frigates. An aircraft carrier will also pay an annual visit, and additional ships will be provided in an emergency.

*Army*—An infantry battalion with supporting arms, and reinforcements in Australia.

*Air Force*—A bomber wing of one squadron and an airfield construction squadron. In addition, a fighter wing of 2 squadrons is to be provided.

On 15th June, 1955 the Prime Minister announced the decision of the Australian Government that the Australian forces sent to Malaya could, like the United Kingdom and New Zealand components of the Strategic Reserve, be available for use against the Communist terrorists.

(ii) *Korea-Japan; Australian Contribution—*

*Navy*—From June, 1950 to December, 1954, a Royal Australian Navy Force of two ships operated under the U.N. Command with the aircraft carrier H.M.A.S. *Sydney* relieving a United Kingdom aircraft carrier for brief intervals. During 1955 one destroyer or frigate operated under this Command until September, when it was decided that the R.A.N. contribution would in future be drawn from Australian ships of the Far Eastern Fleet. The Australian ships are allocated for duty by the Commander-in-Chief (F.E.S.) in rotation with other ships in the Fleet.

*Army*—At 1st February, 1956 the Armed Forces in Korea totalled 760 (all ranks) comprising—

- (i) 1st Battalion, The Royal Australian Regiment.
- (ii) A proportion of the Headquarters of 1st Commonwealth Division.
- (iii) An element of the British Commonwealth Communications Zone.

At the same date the forces in Japan totalled 770 (all ranks) comprising—

- (i) Australian units in the Kure Base.
- (ii) A proportion of Headquarters, B.C.F.K. and other base units.

The periods of service in Korea of the respective battalions have been as follows—

3rd Battalion—September, 1950 to November, 1954.

1st Battalion—March, 1952 to March, 1953.

2nd Battalion—March, 1953 to March, 1954.

1st Battalion—relieved 2nd Battalion, March, 1954.

Commencing in March, 1956, the 1st Commonwealth Division in Korea will be reduced from brigade group strength to an infantry battalion drawn from the United Kingdom with Canada, Australia and New Zealand providing detachments. The force will be known as the Commonwealth Contingent, Korea. Australian Forces will comprise a signal squadron and a small proportion of Headquarters and Administrative units (total strength 90).

This reduction in strength will permit the transfer of the base from Japan to Korea, and as from July, 1956 the base in Japan will begin to close down.

*Air Force*—No. 77 Fighter Squadron served in Korea from June, 1950, and later (1953) was joined with No. 36 Transport Squadron and Administrative and Maintenance units to form No. 91 Composite Wing. This Wing was disbanded by early 1955 and the R.A.A.F. Transport Flight, Japan, was formed, comprising 3 transport aircraft and small administrative and maintenance elements. With the closing of the base in Japan the Flight will return to Australia.

6. *National Service Training.*—(i) *Liability.* The National Service Act 1951-1953 requires every male ordinarily resident in Australia, other than certain officials in the service of international bodies, diplomatic personnel, men already serving in the Permanent Forces and aboriginal natives of Australia, who on and after 1st November, 1950 attains the age of 18 years to register when called upon to do so by notice published in the *Gazette*.

Every registrant is liable to be called up for service unless he is exempt on the grounds of being subject to prescribed physical or mental disabilities, a theological student, a minister of religion, a member of a religious order, or a person who has established a conscientious objection to all forms of military service. Persons who establish a conscientious objection to combatant service only are called up for non-combatant duties.

Provision is made for deferment of call-up for limited periods of students and apprentices and of individuals who can establish before a court that their call-up would result in exceptional hardship to themselves, their parents or dependants. In September, 1954 the Government announced that, for the time being, the training of those who do not live within reasonable distances of C.M.F. training centres and those engaged full-time as rural workers in the production of foods and raw materials would be deferred. The total number of National Servicemen to be trained will continue at the present figure of 33,750 annually.

(ii) *Conditions of Service.* Service under the National Service Scheme is with the Citizen Naval Forces, the Citizen Military Forces or the Citizen Air Force but no person is called up for service with the Citizen Naval Forces or the Citizen Air Force unless he has volunteered for service beyond the limits of Australia.

In the Navy and Air Force, National Servicemen are required to serve a total period of 154 days training which is performed in one continuous period except in the case of students who may complete their service in two periods of 77 days in successive years. In the case of the Army, the total period of training is 140 days, consisting of 98 days continuous training and 21 days training in camps or week-end bivouacs in each of the

following two years. In all cases the Act requires a further term of service as reservists until five years from the date of call up. (*See also* sections dealing with the respective Services.)

(iii) *Strength.* To 31st December, 1955, 147,050 persons had been called up for training.

## § 2. Naval Defence.

1. *State Systems.*—Information regarding naval defence systems prior to 1901 will be found in *Official Year Book No. 2*, p. 1084.

2. *The Present System.*—(i) *General.* (a) *Royal Australian Navy up to end of 1939–45 War.* An outline of the development of Australian Naval policy was given in *Official Year Book No. 3*, p. 1060 and *No. 12*, p. 1012. Some account of the building of the Australian Navy, the proposed and modified cost thereof, the compact with the Imperial Government, etc., appears in *Official Year Book No. 15*, pp. 921–23. An account of the growth and activities of the Royal Australian Navy during the 1939–45 War is given in *Official Year Book No. 36*, pp. 1023–27.

(b) *Post-war Programme.* The following is a summary of the Naval Programme:—

(1) *Ships in Commission.*—The Fleet consists of:—

Carrier Force : 1 Light Fleet Carrier, 3 Destroyers.

Escort Forces : 3 Frigates.

Surveying Duties : 1 Survey Ship and its tender:

Training Ships : 1 Frigate, 5 Ocean Minesweepers, 1 Light Fleet Carrier.

Auxiliary Vessels : 3 Boom Defence Vessels, 1 Ocean-going Tug, 1

Armament Store Carrier, 3 Patrol Vessels, 2 General Purpose Vessels,

4 Search and Rescue Vessels.

(2) In addition to the ships in Commission, a substantial reserve fleet will be maintained in good condition against any future emergency.

(3) *Personnel.*—The strength of the Royal Australian Navy has been pegged at 14,400, comprising 1,584 Officers and 12,816 ratings.

(4) *Reserve and National Service Training.*—Reserve training was resumed as from 1st January, 1950 for members of the Royal Australian Naval Reserve. Training consists of 45 two-hour drill attendances at night or on Saturdays in naval training establishments in each of the capital cities, plus 13 days continuous training each year in H.M.A. ships or training establishments, including special schools. In addition, payment is made for further voluntary home training up to a maximum of 12 days. Selected members may undergo special courses up to a limit of six months during the whole of their service in the Reserve, whilst up to 12 months training or service may be performed in H.M.A. ships or establishments with similar qualifications. Engagements are for three years. Rates of pay have been aligned (with minor modifications) with those applicable to the Permanent Naval Forces. The training for members of the Royal Australian Naval Reserve (Sea-going) is normally 28 days every two years whilst members of the Royal Australian Naval Volunteer Reserve are under no training obligations.

Naval National Service personnel commenced training on 30th July, 1951. On completion of their 154 days initial training in naval establishments and H.M.A. ships, personnel will be attached to the Naval Reserve Training Establishment in their State until completion of their five-year liability for mobilization in war or emergency. The present annual intake of National Servicemen is 1,200.

Revised post-war conditions of service in the Royal Australian Fleet Reserve were introduced as from 13th December, 1950. This Reserve is comprised of two classes:—(a) former ratings who receive full benefits under the Defence Forces Benefits Act and are required to serve five years in the Royal Australian Fleet Reserve as a consideration for receipt of these benefits, and (b) former ratings who have previously served in the Permanent Naval Forces of the Royal Australian Navy, Royal Navy, or a Dominion Navy subject to a minimum period of three

years' service and an absence of not more than five years. No retainer is payable to members under (a) and no obligatory training is carried out but 14 days paid voluntary training can be undertaken. Members under (b) receive an annual retainer of £24 subject to completing annual training; if enrolled within 12 months of discharge from Permanent Naval Forces—7 days; if enrolled after a lapse of 12 months since discharge from Permanent Naval Forces—14 days; additional paid voluntary training up to 14 days may be carried out. Ratings receive pay applicable to Royal Australian Navy personnel whilst under training.

- (5) **Fleet Air Arm**—The Fleet Air Arm of the Royal Australian Navy consists of five front line squadrons, one operational carrier, H.M.A.S. *Melbourne*, and one Naval Air Station, H.M.A.S. *Albatross* at Nowra, New South Wales. The training ship, H.M.A.S. *Sydney*, is used periodically for deck landing training. The new aircraft carrier H.M.A.S. *Melbourne*, fitted with an angled deck and steam catapult, arrived in Australia in mid 1956. She carries two squadrons of Gannet turbo-prop anti-submarine aircraft, and one squadron of jet Sea Venom all weather fighters.

- (6) **Ship Construction and Repair**—Provision is made for the maintenance in Australia of a nucleus ship construction and repair industry capable of rapid expansion in war. The present approved programme provides for the construction of three destroyers, four anti-submarine frigates, one boom-working vessel and two inshore minesweepers (work not yet commenced); and the conversion of four "Q" class destroyers to fast anti-submarine frigates (three have been completed and work on one is in progress).

(c) *The Relation of New Weapons.* Careful consideration has been given to the implications of new weapons, and the decisions in regard to the Navy are based on the broad conclusions of great naval powers that these weapons should be introduced by the normal process of evolution, first into existing ships, and later perhaps into an entirely new form of fighting ship. The same authority supports the view that there will be no rapid development which will render vessels such as carriers, cruisers and destroyers obsolete in the near future.

(ii) *Naval Board.* The Australian Navy is administered by a Board consisting of the Minister for the Navy with four Naval Members, and the Secretary, Department of the Navy; the seat of administration is at Melbourne.

(iii) *Naval College.* Nineteen cadet midshipmen (including four from the Royal New Zealand Navy) entered the Naval College for training in the year commenced January, 1956. At that date there were 118 cadet midshipmen undergoing training at the College.

(iv) *Training Establishments.* Flinders Naval Depot, Victoria, remains the principal training establishment for ratings in the permanent forces, while several advanced training schools are established in Port Jackson, New South Wales. Air training is carried out at Nowra, New South Wales.

(v) *The Australia Naval Station.* 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 to 11° 30' South, thence west to 11° 30' South, 95° 15' East.

Western—

From 11° 30' South, 95° 15' East, south along this meridian to 30° South, thence west along this parallel to 80° East, thence south along this meridian.

(vi) *Foreign Service.* The R.A.N. is represented in Japan by H.M.A.S. *Commonwealth* base establishment in Kure. During the year ended June, 1955 H.M.A. Ships *Shoalhaven*

and *Condamine* served in Korean waters. H.M.A. Ships *Arunta* and *Warramunga* served in the Malayan area of the Strategic Reserve.

(vii) *Papua and New Guinea Division of the Royal Australian Navy.* A Papua and New Guinea Division of the Royal Australian Navy, consisting of native ratings, was inaugurated in July, 1951 as a separate part of the Permanent Naval Forces for employment in Papua and New Guinea and waters adjacent thereto.

3. Ships of the Royal Australian Navy.—The following ships were in commission or in reserve in June, 1956 :—

## SHIPS OF THE ROYAL AUSTRALIAN NAVY. JUNE, 1956.

Vessel.	Description.	Displacement.
<b>In Commission—</b>		<b>Tons.</b>
<i>Melbourne</i> .. .. .	Aircraft Carrier Operational	14,000
<i>Sydney</i> .. .. .	Aircraft Carrier Training ..	14,000
<i>Anzac</i> .. .. .	Destroyer .. .. .	2,325
<i>Tobruk</i> .. .. .	" .. .. .	2,436
<i>Warramunga</i> .. .. .	" .. .. .	1,870
<i>Quadrant</i> .. .. .	Frigate .. .. .	1,760
<i>Queenborough</i> .. .. .	" .. .. .	1,760
<i>Quickmatch</i> .. .. .	" .. .. .	1,760
<i>Swan</i> (Training Ship)	" .. .. .	1,060
<i>Warrego</i> (Surveying Ship)	" .. .. .	1,060
<i>Cootamundra</i> .. .. .	Ocean Minesweeper ..	650
<i>Fremantle</i> .. .. .	" .. .. .	650
<i>Gladstone</i> .. .. .	" .. .. .	650
<i>Junea</i> .. .. .	" .. .. .	650
<i>Wagga</i> .. .. .	" .. .. .	650
<i>Lachlan</i> (Surveying Ship), on loan to the Royal New Zealand Navy .. .. .	Frigate .. .. .	1,420
<b>In Reserve—</b>		
<i>Arunta</i> .. .. .	Destroyer .. .. .	1,870
<i>Bataan</i> .. .. .	" .. .. .	1,870
<i>Barcoo</i> (Surveying Ship)	Frigate .. .. .	1,544
<i>Barwon</i> .. .. .	" .. .. .	1,420
<i>Burdekin</i> .. .. .	" .. .. .	1,420
<i>Condamine</i> .. .. .	" .. .. .	1,420
<i>Culgoa</i> .. .. .	" .. .. .	1,420
<i>Diamantina</i> .. .. .	" .. .. .	1,420
<i>Gascoyne</i> .. .. .	" .. .. .	1,420
<i>Hawkesbury</i> .. .. .	" .. .. .	1,420
<i>Macquarie</i> .. .. .	" .. .. .	1,420
<i>Murchison</i> .. .. .	" .. .. .	1,544
<i>Shoalhaven</i> .. .. .	" .. .. .	1,544
<i>Ararat</i> .. .. .	Ocean Minesweeper ..	650
<i>Benalla</i> .. .. .	" .. .. .	650
<i>Bunbury</i> .. .. .	" .. .. .	650
<i>Bundaberg</i> .. .. .	" .. .. .	650
<i>Castlemaine</i> .. .. .	" .. .. .	650
<i>Colac</i> .. .. .	" .. .. .	650
<i>Dubbo</i> .. .. .	" .. .. .	650
<i>Gympie</i> .. .. .	" .. .. .	650
<i>Horsham</i> .. .. .	" .. .. .	650
<i>Kapunda</i> .. .. .	" .. .. .	650
<i>Mildura</i> .. .. .	" .. .. .	650

SHIPS OF THE ROYAL AUSTRALIAN NAVY, JUNE, 1956—*continued*.

Vessel.	Description.	Displacement.
<b>In Reserve—<i>continued</i>.</b>		<b>Tons.</b>
<i>Rockhampton</i> .. .. .	Ocean Minesweeper ..	650
<i>Shepparton</i> .. .. .	" " ..	650
<i>Sirahan</i> .. .. .	" " ..	650
<i>Platypus</i> .. .. .	Depot Ship ..	3,455
<b>Under Dockyard Control—</b>		
<i>Hobart</i> .. .. .	Cruiser ..	7,100
<i>Quiberon</i> .. .. .	Destroyer ..	1,760
<i>Voyager</i> .. .. .	" (Daring Class) (Building) ..	2,610
<i>Cowra</i> .. .. .	Ocean Minesweeper ..	650
<b>Demilitarized—held for disposal—</b>		
<i>Quality</i> .. .. .	Destroyer ..	1,760
<i>Bowen</i> .. .. .	Ocean Minesweeper ..	650
<i>Deloraine</i> .. .. .	" " ..	650
<i>Glenelg</i> .. .. .	" " ..	650
<i>Horsham</i> .. .. .	" " ..	650
<i>Katoomba</i> .. .. .	" " ..	650
<i>Latrobe</i> .. .. .	" " ..	650
<i>Lithgow</i> .. .. .	" " ..	650
<i>Parkes</i> .. .. .	" " ..	650
<i>Townsville</i> .. .. .	" " ..	650
<b>Miscellaneous vessels in commission and in reserve—sixty</b>		

4. **Strength of Royal Australian Navy.**—The serving strength of the Royal Australian Naval Forces, both permanent and reserves, at 30th December, 1955 was 1,232 officers and 11,620 ratings including 59 native ratings of the Papua and New Guinea Division of the Royal Australian Navy. In addition, 10 officers and 210 ratings of the Women's Royal Australian Naval Service were serving and 170 cadet midshipmen were undergoing training, including 118 at the Naval College. Reserve strength comprised 1,469 officers and 7,913 ratings.

### § 3. Military Defence.

1. **State Systems.**—A detailed historical account of the Australian defence forces prior to Federation will be found in Official Year Book No. 2, pp. 1075–1080. *See also* Official Year Book No. 12, p. 999.

The strength of the military forces of the States on 31st December, 1900 (the eve of Federation) 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. This total is exclusive of cadets, reservists and rifle club members.

2. **Commonwealth Systems.**—(i) *General.* Under the terms of the Constitution Act 1900, 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 sixteen 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 decision to increase the training strength of the militia to 70,000 in the year before the 1939–45 War (phases 1–7), *see* Official Year Book No. 36 and earlier issues.

Phases 8–10, covering the period immediately prior to, and just following, the outbreak of the 1939–45 War, relate to the initial steps necessary to put the Australian Military Forces on a war-time basis, and to its organization into commands.

The eleventh phase, in January, 1942, was the division of Northern, Eastern and Southern Commands into separate commands and base headquarters to handle operational and administrative matters respectively, and the twelfth phase was the revision of the machinery for command administration of lines of communication areas. The thirteenth phase was the appointment of Lieutenant-General Sir Iven Mackay as G.O.C.-in-C. Home Forces commanding the forces in Northern, Eastern and Southern Commands. The fourteenth phase covered the period following the outbreak of war with Japan and the entry of United States of America Forces into the South-West Pacific Area, and related to the appointment of General Sir Thomas Blamey as Commander-in-Chief, Australian Military Forces, the cessation of the Military Board, and the replacement of the system of commands and bases by the field army and lines of communication areas. In March, 1943, First and Second Armies took over from Queensland, New South Wales and Victoria Lines of Communication Areas the command of all coast and static anti-aircraft artillery defences and training establishments. On 16th June, 1944 Western Command was re-established and took over the combined responsibilities of Third Australian Corps and Western Australia Line of Communication Area.

The fifteenth phase was the re-introduction in March, 1946, of the Military Board and the organization of commands and military districts, and the sixteenth phase was the commencement of the National Service Training Scheme in August, 1951 (*see* § 1, para. 6 above and sub-para. (iv) (c) following)

For greater detail on phases 8–14 *see* Official Year Book No. 38 and earlier issues.

(ii) *Population of Military Age, 30th June, 1954.* The following particulars show the numbers of males of military age in the population of Australia at the Census of 30th June, 1954. The total number of cadet age, 14 and under 18, was 250,184; of citizen soldier age, 18 and under 26, 497,742; and 26 and under 35, 663,074; making a total of 1,410,916, 18 and under 35, which is considered the best period for military service. In addition to the above-mentioned there were 1,375,100 males 35 and under 60, in Australia at 30th June, 1954.

(iii) *Allotment of Units.* Under the Command Organization (*see* above) units are raised on a territorial basis, each State supplying its proportion of the personnel required for the fighting services, the organization at 30th June, 1955 being as follows:—

#### COMMAND ORGANIZATION.

##### Army Headquarters.

Northern Command	Eastern Command	Southern Command	Central Command	Western Command	Tasmania Command	Northern Territory Command
All formations and units in 1st Military District and New Guinea.	All formations and units in 2nd Military District.	All formations and units in 3rd Military District.	All formations and units in 4th Military District.	All formations and units in 5th Military District.	All formations and units in 6th Military District.	All formations and units in 7th Military District.

Commands conform generally to State boundaries as follows:—Northern Command, Queensland; Eastern Command, New South Wales; Southern Command, Victoria; Central Command, South Australia; Western Command, Western Australia; Tasmania Command and Northern Territory Command. New Guinea is the responsibility of Northern Command.

(iv) *Military Training Systems.* (a) *General.* Particulars of the military training systems in operation prior to the 1939–45 War, first on a compulsory basis and later voluntary, will be found in Official Year Book No. 38 and earlier issues.

The current plan (1955–56) for the Australian Regular Army is based on an average strength of 28,000 full time duty personnel (including 4,600 civilians) and a Citizen Military Force of 80,000 including National Servicemen.

(b) *The Australian Cadet Corps.* The Australian Cadet Corps is a voluntary organization comprised of School Cadet units and Regimental Cadet units. 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 an important position in the scheme of national defence. School Cadet units are raised at educational establishments in all States of the Commonwealth. 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, warrant and non-commissioned officers on an authorized establishment scale from within school units. School cadet units are not affiliated with Citizen Military Force Units.

Regimental Cadet units have been raised in close affiliation with Citizen Military Force units, whose uniform they wear with the addition of the word "Cadets" directly under the title of the parent unit. These units are manned by boys who either have left school or are students at schools where no School Cadet unit has been raised. Regimental Cadet units are now being disbanded.

The establishment of the whole Corps is 35,000 all ranks, and by September, 1955, comprised 265 School Cadet units with a posted strength of 30,500 all ranks and 382 Regimental Cadets posted to Citizen Military Force units.

(c) *National Service Training Scheme.* Under the National Service Scheme (*see* § 1, para. 6 above) the Army is required to train 29,250 trainees per year, effected by three intakes each of 9,750 trainees in January, April and August each year. The first intake commenced training in August, 1951.

(v) *Women's Services.* In November, 1950 approval was given for the enlistment of women into the Australian Regular Army, on a limited scale. Enlistment commenced immediately into the Australian Women's Army Corps. During June, 1951, the Australian Women's Army Corps was re-designated the Women's Royal Australian Army Corps (W.R.A.A.C.). Members are employed in establishments in direct substitution for male soldiers. The Women's Services in the Australian Regular Army now comprise two Corps only:—(a) Royal Australian Army Nursing Corps; (b) Women's Royal Australian Army Corps.

Women's Services have been incorporated in the Citizen Military Forces; it is proposed to raise sixteen companies of the Women's Royal Australian Army Corps and twelve companies of the Royal Australian Army Nursing Corps, a total of 3,900 all ranks, within the C.M.F.

At December, 1955 seven companies of the Women's Royal Australian Army Corps and nine companies of the Royal Australian Army Nursing Corps, a total of 2,250 all ranks, had been raised within the C.M.F.

(vi) *Korea.* On 2nd August, 1950 the Commonwealth Government announced its decision to raise and dispatch to Korea one infantry battalion as part of Australia's contribution of military assistance to the United Nations. 3rd Battalion, The Royal Australian Regiment, stationed in Japan, brought up to strength by special enlistments flown to Japan from Australia, became the Special Korean Force, and on 27th September, 1950 sailed from Japan for Korea where it joined 27th British Brigade. For its gallantry on 24th and 25th April, 1951, 3rd Battalion was awarded the United States Presidential Citation by the United States of America. On 4th October, 1951 the Commonwealth Government announced that a second infantry battalion would be sent to Korea to join 3rd Battalion. On 3rd March, 1952, 1st Battalion, The Royal Australian Regiment, which had been brought up to strength at Ingleburn, New South Wales, embarked for Japan where it was equipped before moving to Korea. 1st Battalion joined 3rd Battalion, under operational control of 28th British Brigade, 1st Commonwealth Division, on 1st June, 1952. 2nd Battalion, The Royal Australian Regiment, after training at Puckapunyal, Victoria, relieved 1st Battalion in Korea on 21st March, 1953, the latter battalion returning to Australia. 2nd Battalion was relieved by 1st Battalion and returned to Australia in April, 1954, while 3rd Battalion returned to Australia in November, 1954.



(vii) *Malaya.* On 1st April, 1955 the Commonwealth Government announced its decision to dispatch troops to Malaya as an Australian component of the British Commonwealth Far East Strategic Reserve. 2nd Battalion, The Royal Australian Regiment and 105th Field Battery, Royal Australian Artillery and other minor units embarked from Australia on 6th October, 1955 and disembarked at Penang on 20th October, 1955.

(vii) *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 in Victoria and re-designated the Staff College in conformity with other Empire training establishments for training officers for command and staff appointments. The College was later moved to Queenscliffe, Victoria, where it is at present situated. The courses are of ten months' duration and are held from January to November each year. The normal intake is 30 students and, on successfully completing the course, an officer is awarded the symbol "psc". The course is designed to train selected officers for war, and in so doing to fit them for Command or Grade II. staff appointments. Each course includes, among the students, Army representatives of the United Kingdom and other Dominions and countries. Included in the 1953 course were students from the United Kingdom, Canada, New Zealand, India, Pakistan, the United States of America and Burma. 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 Empire, liaison is maintained with other Staff Colleges; and to this end there is also a reciprocal exchange of instructors. To this extent it may be said that the Staff College is imperial in character.

(viii) *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 and provide for admission by "normal", "service" and "special" entries. The length of the normal course is four years; "service" entry cadets attend for three years; and "special" entries for one year.

While at the College, cadets receive pay and allowance of 14s. 1d. per day in their first year, rising to 22s. 9d. per day in their fourth. Uniform maintenance allowance of 1s. 9d. per day is additional, and a further 6d. per day is paid to cadets on attaining the age of 18 years. 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 under an agreement made with the Government of that Dominion.

(ix) *The Officer Cadet School.* The Officer Cadet School was established in 1951 at Portsea, Victoria, for the purpose of speeding up the supply of junior regimental officers for the Australian Regular Army. Serving members of the Australian Regular Army, the Citizen Military Forces, National Servicemen, and civilians between the ages of 18 and 23 years, are eligible to apply for entrance. The course is of eleven months' duration, and on graduation, cadets are appointed second-lieutenants in the Australian Regular Army. They then normally proceed to further training at the Army School of the Arm or Service to which they have been allotted before being posted to regimental duties.

(x) *The Women's Royal Australian Army Corps School.* The W.R.A.A.C. School was established in 1952 at Mildura, Victoria. It has two wings, one whose primary task is the training of Officer Cadets for the W.R.A.A.C., the other being for the training of non-commissioned officers at all levels and for other special courses. 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.

(xi) *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 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.

(xii) *Army 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. In addition, a School of Tactics and Administration which has been established at Seymour, Victoria, provides qualifying and instructional courses in current tactical and administrative doctrine for members of all Arms and Services. 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 :—School of Tactics and Administration ; Jungle Training Centre ; Armoured School ; School of Artillery ; School of Military Engineering ; School of Survey ; School of Signals ; School of Military Intelligence ; School of Infantry ; Royal Australian Army Medical Corps School of Army Health ; Royal Australian Army Service Corps School ; Royal Australian Army Ordnance Corps School ; Royal Australian Electrical and Mechanical Engineers Training Centre ; Transportation Training Centre ; School of Music ; Central Instructors School ; Women's Royal Australian Army Corps School.

(xiii) *Rifle Clubs.* The Australian Rifle Club movement, which had its origin in 1888, is provided for in the Defence Act and comprises an Australian Council of State Rifle Associations (which functions in an advisory capacity to the Minister and in the promotion of intra-empire and interstate rifle competitions), State Rifle Associations, District Rifle Club Unions and Rifle Clubs. When placed in recess, the efficient strength of the rifle club movement was 1,018 clubs and 36,478 members. Approximately 20 per cent. of this number served overseas and a further 60 per cent. performed home service duties during the 1939-45 War. Rifle shooting activities were resumed in 1946 and the strength of the movement as at 31st December, 1955 was 1,034 clubs and 44,312 members.

(xiv) *The Australian Battles Nomenclature Committee.* The Minister for the Army gave approval on 25th July, 1947 for the formation of the Australian Battles Nomenclature Committee to tabulate and classify the operations fought in the Pacific Zones in the 1939-45 War which involved the Australian Military Forces, to define their geographical and chronological limits and to advise the United Kingdom Battles Nomenclature Committee regarding operations in zones other than the Pacific Zone in which the Australian Military Forces participated. Sub-committees were later appointed to study the various campaigns in order to classify the operations into battles, actions and engagements.

3. *Strength of Australian Military Forces.*—The effective strength of the Australian Military Forces at 31st December, 1955 was as follows :—Australian Regular Army, 20,004 ; Regular Army Special Reserve, 2,722 ; Citizen Military Force (including National Service Trainees), 85,002 ; Australian Cadet Corps, 31,798.

## § 4. Air Defence.

1. *General.*—A statement respecting the preliminary steps taken in connexion with the development of air defence will be found in Official Year Book No. 18, p. 610, and one on the expansion and development and zones and operations of the Royal Australian Air Force during the 1939-45 War appears in Official Year Book No. 36, p. 1027.

2. *Operations in Korea and Malaya.*—Reference to R.A.A.F. participation in operations in Korea is contained in Official Year Book No. 40, pp. 1112-13.

Australian assistance in the form of one transport squadron provided to the Malayan authorities is detailed in Official Year Book No. 40, page 1113.

One bomber squadron was also provided for operations in Malaya. The *Lincolns* of No. 1 Squadron arrived in July, 1950 and were soon in action. Up till 1st November, 1955 No. 1 Squadron had dropped about 28,000,000 lb. of bombs during operations against communist bandits. This bombing, which calls for extreme accuracy, was mainly on jungle hideouts frequented by the insurgents and was carried out in close co-operation with the ground forces.

3. *Administration and Organization.*—The Department of Air is responsible for policy for organization and control of the Royal Australian Air Force. The Air Board is responsible, subject to approved policy, for the control and administration of the Royal Australian Air Force, and is constituted as follows :—Chief of the Air Staff, Air Member for Personnel, Air Member for Technical Services, Air Member for Supply and Equipment, Citizen Air Force Member and the Secretary, Department of Air.

Headquarters of the Royal Australian Air Force is located at Melbourne. An Oversea Headquarters is located at London and an Air Attaché at Washington.

The units of the Royal Australian Air Force are organized in three functional Commands throughout Australia and its Territories.

The Commands are :—

*Home Command.*—Home Command is responsible for the command of operational units and the conduct of their operations within Australia and its Territories.

*Training Command.*—Training Command is responsible for the command of training units, recruitment and individual training in the R.A.A.F.

*Maintenance Command.*—Maintenance Command is responsible for the command of supply and servicing units, and supply and servicing, including technical services, of the R.A.A.F. in Australia.

The organization of the Royal Australian Air Force includes the following types of formations and units :—

- (a) *Area Headquarters.* There are three Area Headquarters (North Eastern, North Western and Western) responsible to Home Command for the command of units within their geographical areas.
- (b) *Sub-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.
- (c) *Flying Squadrons.* These bomber, fighter, transport, target-towing and maritime reconnaissance squadrons undertake the operational and operational training flying commitments of the R.A.A.F.
- (d) *Aircraft Depots.* These units specialize in major overhauls, etc., of aircraft and equipment and relieve flying unit ground staff of these commitments.
- (e) *Stores Depots.* Stores and equipment ordered by the R.A.A.F. are delivered to these centrally located depots for distribution to units.
- (f) *Flying Training, Ground Training, Navigation, Radio and Air Armament Training Units,* which specialize in the aircrew and ground training required by the R.A.A.F.
- (g) *Airfield Construction Squadrons.* These units specialize in the construction of R.A.A.F. aerodromes and associated buildings and works services.

- (h) Royal Australian Air Force College. This unit is the training college for officer cadet entrants to the R.A.A.F.
- (i) Telecommunications Units. These units are responsible for the communications services of the R.A.A.F.
- (j) R.A.A.F. Staff College. This college trains specially selected R.A.A.F. officers for higher staff and command posts.

4. National Service Training Scheme.—Under the National Service Training Scheme, 3,330 personnel undergo training each year (*see also* § 1, para. 6, page 1030):

5. Aircraft.—Some of the aircraft which are at present being used in the Royal Australian Air Force are: bomber squadrons—Lincoln and Canberra; fighter squadrons—Mustang, Vampire, Meteor and Avon Sabre; transport squadrons—Dakota; maritime reconnaissance squadrons—Lincoln and Neptune; air observation post—Auster; training—Tiger Moth, Wirraway, Mustang, Dakota, Lincoln, Winjeel, Vampire and Meteor.

6. Establishment.—The Royal Australian Air Force establishment, as proposed, comprises—(a) a Home Defence Organization, (b) Task Force elements and (c) a Training Organization, consisting in all of approximately 17,190 personnel.

7. Strength of Royal Australian Air Force.—At 1st November, 1955 the strength of the Royal Australian Air Force was as follows:—Permanent Air Force, 15,407; Active Citizen Air Force, 745; Active Reserve, 1,359 and General Reserve, 23,288. In addition 3,330 National Service Trainees undergo 154 days' training each year and are then transferred to the Reserve.

8. Women's Royal Australian Air Force.—At 1st November, 1955 the Women's Royal Australian Air Force had an establishment of 832, with an enlisted strength of 786. There are 27 musterings, excluding W.R.A.A.F.'s in training. The entry age is 18 to 34 years inclusive. Parental consent must also accompany applications for those between the ages of 18 and 21 years. A good education is necessary. Applicants must be of British nationality, single, or a widow without dependants, and must be physically fit. Engagement period is four years with the option of re-enlistment for further periods of four years.

All trainee W.R.A.A.F.'s undergo a month's initial training course at Point Cook, Victoria. On graduating they are posted for duty to R.A.A.F. units anywhere in Australia. Wherever possible, the Air Force endeavours to post W.R.A.A.F.'s to R.A.A.F. units within their home State. This rule applies for those who wish to serve in their home State, but for W.R.A.A.F.'s desirous of travel, they may indicate their preference and be posted to whichever State they desire.

## § 5. War Gratuities.

Reference is made in earlier issues of the Official Year Book to the payments made under the provisions of the *War Gratuity Acts of 1920* (*see* No. 15, p. 930) and the *War Gratuity Act 1945–1947* (*see* No. 41, p. 999).

## § 6. Department of Defence Production.

1. General.—On 11th May, 1951 a Department of Defence Production and a Department of Supply were established by a decision of the Government. These Departments took over the functions previously undertaken by a joint Supply Department. The Department of Defence Production is responsible broadly for the production of munitions (including aircraft) required by the Services in government-operated factories and in industry under contract to the Government. It is also responsible for all those matters incidental to production, including the planning of production capacity to meet expected future Service requirements. References to previous operations of the various sections and establishments of the Department are given in Official Year Book No. 38, pp. 1200–9.

2. **Functions of the Department and Act Administered.**—The functions of the Department of Defence Production, as defined in the Administrative Arrangements approved by the Governor-General, are :—

- (i) Manufacture, acquisition, provision and supply of munitions for the defence forces, that is to say, armaments, aircraft, arms, ammunition, weapons, machine tools, war chemicals, radar (and such other items as may be mutually agreed with the Department of Supply as falling within the definition of munitions), including the materials and plant necessary for the production of those things and all matters incidental thereto, including :—

The receipt from the Service Departments and other authorities or Departments of orders and forecasts of requirements of munitions ; appropriate liaison with the Higher Defence Machinery, Service Departments and the Department of Supply to deal with Service munitions programmes ; operation and management of factories, workshops and undertakings concerned in the production of munitions ; arrangements and all action necessary to secure the manufacture, processing and delivery of munitions ; investigations and development of Australian sources of munitions production, including the establishment of annexes or special capacity in industry for that purpose ; acquisition by the Commonwealth and the establishment of factories and workshops for the purpose of producing munitions ; provision and maintenance of stocks of materials and goods for the purpose of producing munitions.

- (ii) Employment and training of technicians, workmen and others for the purpose of producing munitions.
- (iii) Formation of Industry Advisory Committees to advise the Minister for Defence Production regarding :—

The allocation to industry of production programmes of munitions ; the establishing of additional munitions production facilities, including annexes and undertakings ; the obtaining of appropriate details of Australian industrial capacity required by the Department of Defence Production in allocating munitions production to industry ; any other matters associated with munitions production as specified by the Minister.

- (iv) Provision and control of stores, magazine and similar undertakings required in connexion with production of munitions and for other purposes as required.
- (v) Arrangements for ascertaining costs and the control and limitation of profits in connexion with the production of munitions.
- (vi) Development of inventions originating in Government factories in the interests of defence production.

The Act administered by the Department is the Supply and Development Act 1939-1948.

3. **Production.**—(i) *Munitions.* The Department is responsible for the production in Australia of the munitions (other than specialized Navy requirements) for the Armed Services. The production is undertaken in Government-operated factories and industry. Broadly their roles are :—

- (a) Some processes are entirely undertaken by the Government factories in peace and war because of special requirements.
- (b) Some classes of equipment and components are produced entirely by industry in peace and war.
- (c) Production techniques of advanced equipment and components are developed in the Government factories in peace, of which industry may undertake mass production in war.
- (d) Limited requirements of standard equipment and components produced in peace by the Government factories are in war produced on a mass production basis in industry.

The following factories are currently in operation:—Ammunition—Footscray, Victoria; Explosives and Filling—Albion and Maribyrnong, Victoria; Mulwala and St. Mary's, New South Wales; Ordnance—Maribyrnong, Bendigo, Echuca, Port Melbourne, all in Victoria; Small Arms, Lithgow, New South Wales; and certain annexes established in industry. Other Government-owned factories and annexes are held on a care and maintenance basis against an emergency.

These factories are complementary to each other in the manufacture of a range of basic munitions. The Ammunition Factory makes the brass and non-ferrous components of gun ammunition, including melting and rolling and these components are then passed to the Explosives Factory for filling with explosives. In the case of small arms ammunition, however, the factory makes the complete round, receiving the propellant from the Explosives Factory. The Ordnance Factories principally make guns, and in addition make the steel shell bodies which are passed to the Explosives Factory to be filled with explosives and assembled with the brass and other components received from the Ammunition Factory. The Explosives Factories make the propellant and high explosives for the brass components made at the Ammunition Factory and the steel components made at the Ordnance Factory. The Explosives Factory also assembles the gun ammunition. The Small Arms Factory is equipped to make the rifles and other small arms for which the Ammunition Factory makes the ammunition.

Production of munitions is also a joint effort between the Government factories and private contractors in industry. In peace, industry produces many components for ammunition and other stores plus complete equipments such as electronics and motor vehicles for the Services. In war, industry would provide the major capacity not only for mass production of these and many other new items, but also for the mass production of equipment and components using engineering techniques developed in peacetime in the Government factories.

(ii) *Aircraft. (a) General.* Matters relating to the production in Australia of military types of aircraft and aero engines and of other aircraft components required by the Royal Australian Air Force and the Royal Australian Navy are administered by the Division of Aircraft Production of the Department of Defence Production. Aircraft repair and overhaul activities carried out for those Services in civilian establishments, as distinct from Service workshops, are also the function of the Department, together with the responsibility of supplying aircraft and engine spare parts and airborne equipment generally.

(b) *Aircraft, Engine and Other Production.* The approved production programmes for the major aircraft manufacturing organizations in Australia comprised Canberra jet-engined bombers and Jindivik radio-controlled jet-propelled target aircraft at the Government Aircraft Factory, Melbourne; Avon Sabre jet-engined fighters, Winjeel basic trainers and Rolls Royce Avon turbo-jet engines at Commonwealth Aircraft Corporation Pty. Ltd., Melbourne, and Vampire jet-trainers at De Havilland Aircraft Pty. Ltd., Sydney.

Associated concurrent activities included the production of maintenance parts of aero engines and of undercarriage parts at the Aircraft Engine Factory, Sydney, the repair and overhaul of propellers at the Propeller Annexe, Sydney, production of heavy forgings at the Heavy Forge Annexe, Sydney, and the manufacture of aircraft pressed metal parts at Chrysler Australia Ltd., Adelaide.

(c) *Repair and Overhaul.* During the year the broad policy was continued by the R.A.A.F. of returning to the factories in which they were produced all Australian-made aircraft and aero engines requiring major overhaul and the incorporation of modifications. Repair and overhaul of R.A.A.F. aircraft of other types and of carrier-based aircraft operated by the R.A.N. were undertaken by civilian personnel in the aircraft factories or in the works of contractors specially equipped to handle this type of work.

Lincoln and Canberra bomber aircraft were repaired and extensively modified at the Government Aircraft Factory, together with Jindivik target aircraft. Avon Sabre fighter aircraft were overhauled, repaired and modified and Rolls Royce Nene and Avon turbo-jet engines were overhauled by Commonwealth Aircraft Corporation Pty. Ltd., Melbourne. Rolls Royce Merlin and Pratt and Whitney Twin Row Wasp engines from the R.A.A.F., Rolls Royce Griffon and Bristol Centaurus engines from the R.A.N. and Rover Meteor engines from the Department of Army for Centurian tanks were overhauled at the Aircraft Engine Factory, Sydney. Wright turbo-compound engines from R.A.A.F. Neptune aircraft were overhauled by Qantas Empire Airways Ltd., Sydney.

Vampire fighters and trainers and Tiger Moth trainers together with Goblin turbo-jet engines from Vampire trainers and Gipsy Major piston engines were repaired and overhauled at De Havilland Aircraft Pty. Ltd. Dakota transport and other miscellaneous aircraft were serviced at the Government workshops at Parafield, South Australia.

The repair and overhaul of carrier-based Fairey "Firefly" and Hawker "Sea Fury" aircraft operated by the R.A.N. were handled by the Fairey-Aviation Company of Australasia Ltd. Sydney.

Sycamore helicopter aircraft built by the Bristol Aeroplane Company and Bristol freighter aircraft and Alvis Leonides and Bristol Hercules engines from those aircraft were repaired and overhauled by Bristol Aviation Services, also in Sydney.

(d) *Avalon Test Field.* During the year, the new aircraft flight test field constructed at Avalon, near Geelong (Victoria), was further developed for the final assembly, fitting out and testing in flight of the Canberra bomber and Avon Sabre fighter aircraft built at the aircraft factories near Melbourne.

4. *Defence Production Planning.*—A Defence Supply Planning Branch was established in July, 1950 within the Department of Supply to co-ordinate the planning of expansion of production capacity in government-owned factories and in industry. When the Department of Defence Production was created, the Branch was transferred to that Department as the Defence Production Planning Branch.

Broadly, the functions of the Branch are :—(i) to plan for and to undertake the development of additional production capacity to meet Service munition requirements for mobilization and war ; (ii) to arrange production in industry of current munitions requirements for the Defence Services ; (iii) to develop production techniques and, where necessary, capacity to produce such requirements.

The following production and related sections exist within the Branch :—(a) Ammunition ; (b) Telecommunications ; (c) Ordnance and Engineering Equipment (including equipment involving optics, production plant, mobile equipment, electrical and small craft) ; (d) Materials and Chemical Engineering ; (e) Special Projects ; (f) Planning.

The Defence Production Planning Branch is the executive instrument of a Committee of the same name. The three Defence Services, the Departments of Defence, Defence Production, Supply and National Development are represented on the Committee. This enables a close liaison to be maintained with the Departments concerned directly and indirectly with defence in the formation of defence production planning policy.

To advise the Department in the development of industrial mobilization plans to meet the requirements of war relating to particular industries, the following Industry Advisory Committees have been created :—Ammunition Industry, Electrical Industry, Explosives and Chemicals Industry, Materials Industry, Military Vehicles Industry, Machine Tools and Gauges Industry, Radar and Telecommunications Industry and Weapons and their Equipment.

The Department has undertaken a survey of industrial facilities to determine the ability of industry to meet the assessed war and mobilization requirements of the Armed Services.

5. Finance and Accounts.—The expenditure on munitions, munitions factories, aircraft production, etc., during 1953-54 and 1954-55 is shown in the following table:—

## DEFENCE PRODUCTION : TOTAL EXPENDITURE.

(£'000.)

Particulars.	Expenditure.	
	1953-54.	1954-55.
Parliamentary Appropriations .. .. .	(a) 7,307	(a) 5,280
Trust Fund Accounts—		
Government Factories and Establishments .. ..	13,422	14,564
Manufacture of Munitions .. .. .	11,054	12,007
Munition Materials .. .. .	34	129
Defence Production Materials .. .. .	233	570
Aircraft .. .. .	12,663	15,944
 Total Trust Fund Accounts .. .. .	 37,406	 43,214
 Total Expenditure .. .. .	 44,713	 48,494

(a) Includes contribution under Superannuation Act and Audit.

## § 8. Department of Supply.

1. General.—Reference to the creation of the Department of Supply is contained in Official Year Book No. 39, p. 1257.

2. Functions of the Department.—The functions of the Department include (a) the manufacture, acquisition, provision and supply of services and goods other than “munitions” (that is to say foodstuffs, textiles, clothing, fibres, canvas goods, woodwork, hardware, boots, leatherware and other like supplies) required by Services and other authorities; (b) research and scientific development in relation to war *matériel*, including the operation of the Joint United Kingdom-Australia Long Range Weapons Project, and Australian research and development through the Weapons Research Establishment, the Aeronautical Research Laboratories, Defence Standards Laboratories and associated establishments; (c) design and associated technical development and inspection of war *matériel*; (d) Planning for and procurement of strategic materials; (e) planning and establishment of manufacturing facilities for the production of goods other than munitions; (f) formation of industry advisory committees in respect of production and procurement matters; (g) arranging contracts for supply of goods and performance of services; (h) operation and management of Government Clothing Factories; (i) acquisition, maintenance and disposal of stocks; (j) sale or disposal of surplus or unserviceable Commonwealth property (except buildings or land); (k) provision of Commonwealth transport facilities; (l) security service for Supply and Defence Production Departments; (m) arrangements for ascertaining costs and control and limitation of profits on production contracts; (n) co-ordinating estimates, allocation and commitment of resources for Defence Supply needs (including munitions) and liaison with the National Security Resources Board; (o) provision and control of stores required for or in connexion with matters administered by the Department of Supply; general storage for other Departments as required.



3. *Acts Administered.*—Acts administered by the Minister for Supply are the Aluminium Industry Act 1944–1954, Atomic Energy Act 1953 and Supply and Development Act 1939–1948.

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 Long Range Weapons Organization. The Chief Scientist is also the Chairman of the Board of Management for Research and Development, which is responsible for the efficient and economical conduct of research and development undertakings. The headquarters of the Branch is situated at 339 Swanston Street, Melbourne, and the following establishments are included in the Branch :—Weapons Research Establishment, Salisbury, South Australia; Defence Standards Laboratories, Maribyrnong, Victoria; Aeronautical Research Laboratories, Fishermen's Bend, Victoria.

(ii) *Weapons Research Establishment, South Australia.* The Long Range Weapons Establishment, the Chemical and Physical Research Laboratories, the Electronic Research Laboratories and the Propulsion Research Laboratories have recently been amalgamated into one organization with the title of the Weapons Research Establishment.

The Establishment has two main sections, namely, the Trials and Instrumentation Wing and the Weapons Research and Development Wing.

The Trials and Instrumentation Wing is concerned with the Joint United Kingdom-Australia Long Range Weapons Project and is responsible for the testing of guided missiles developed in the United Kingdom. The Weapons Research and Development Wing is engaged chiefly on Australian-initiated research but also provides a supporting research service for the Joint Project.

The headquarters of Weapons Research Establishment consisting of the main laboratory, workshop and administrative Services, is located at Salisbury.

Accommodation has been provided in the area for a number of United Kingdom firms which are developing guided weapons under contract to the British Ministry of Supply.

A modern airfield (Edinburgh Field) has been established adjacent to the Headquarters at Salisbury to meet the flying requirements of the establishment, the flying effort being provided by the R.A.A.F.

Testing ranges have been provided at Woomera, which is approximately 280 miles north-west of Salisbury and 9 miles north of Pimba, which is on the trans-continental railway line. A number of these testing ranges are now in operation. A modern township of 500 houses and extensive barracks accommodation has been built complete with Community Store, Hospital, School and all amenities usually found in an Australian country town.

(iii) *Aeronautical Research Laboratories.* The Aeronautical Research Laboratories at Fishermen's Bend have continued investigations in aerodynamics, structures, aircraft materials and general aeronautical engineering according to their approved programme with particular attention to defence problems. These laboratories also collaborate with the United Kingdom on aeronautical matters of mutual interest.

(iv) *Defence Standards Laboratories.* The Defence Standards Laboratories at Maribyrnong continue to give comprehensive service to industry, the Armed Services and to other Commonwealth and State Departments.

The broad function of these laboratories is the application of scientific knowledge and research to the problems arising in design, development, manufacture, inspection, storage, and use of war *matériel*. Research is also carried out in connexion with the development of new and improved materials, methods and equipment of known or potential interest.

5. *Design and Inspection Branch.*—(a) *General.* The function of the Branch to design and test equipment to meet the Army's special requirements, and to inspect war matériel for adherence to standards before acceptance on behalf of the Army.

The word "design" is used here in the wider sense of a design authority. For example, armament production in Australia is based on British designs, but it is necessary to have in Australia a design authority to which the production agencies can refer problems arising out of differences in British and Australian manufacturing practices, techniques, skills, materials and tooling. A high percentage of Army stores is of a commercial or near-commercial pattern. Examples of these are trucks, earth-moving equipment, electrical and general engineering equipment, and general stores. In many of these items the amount of design may be small or may be carried out by manufacturers, but selection of types, makes and models, and their variation if necessary, calls for the existence of a design authority with facilities for testing, reporting and making recommendations to guide selection. In each field different problems arise for the design authority. For example, radio development for the Army is carried out by the trade, but a design authority is required as an executive link between the users and the designers and manufacturers.

(b) *Design.* The Design Establishment has been set up with the following elements :—

Four design sections to deal with design problems relating to the selection and the manufacture of armaments, vehicles, signal equipment, and general engineering plant and equipment.

Common facilities for dealing with defects, standards, rationalization and standardization, production drawings, specifications, publications, testing of components and complete electrical and mechanical units, and the construction of mock-ups and models.

(c) *Inspection.* The Inspection Service whilst primarily intended for the inspection of supplies for the Army, also undertakes inspection on behalf of other Departments, and all proof of armament stores on behalf of the three Services.

The Inspection Service is divided into three main Groups—Engineering, Ammunition and Small Arms, and General Stores and Clothing. The last group, in addition to the inspection function, is responsible for the design element associated with the items comprising general stores and clothing. A Proof and Experimental Group and an Equipment Information Section are included. The Equipment Information Section holds and issues a complete range of Army drawings and specifications including United Kingdom and Australian Joint Service Specifications. It provides the data on which production is based.

6. *Contract Board.*—(i) *General.* Under the Supply and Development Act 1939-1948 the Contract Board is the authority responsible for purchasing supplies and arranging services for the Military, Naval and Air Forces of the Commonwealth, as well as for the Departments of Supply and Defence Production. Under this Act and Regulations it is also charged with the responsibility of arranging for the sale or disposal on behalf of Commonwealth Departments of all surplus or unserviceable war matériel, goods and services approved for disposal.

(ii) *The Board and its Administrative Organization.* The Contract Board meets in Melbourne, and comprises representatives of the Departments of Supply, Defence Production, 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 1953-54 and 1954-55.

## CONTRACT BOARD ORGANIZATION: PURCHASES AND REALIZATIONS FROM DISPOSALS.

(£.)

State.	Purchases.		Realizations from Disposals.	
	1953-54.	1954-55.	1953-54.	1954-55.
Contract Board, Victoria .. ..	30,032,564	22,992,424	1,327,420	1,273,584
District Contract Board—				
New South Wales .. ..	6,161,285	6,824,197	785,378	1,324,574
Queensland .. ..	1,177,587	1,454,911	336,660	496,618
South Australia .. ..	924,090	909,723	180,367	355,185
Western Australia .. ..	518,556	485,597	228,992	143,134
Tasmania .. ..	147,507	162,494	21,005	23,463
Total .. ..	38,961,589	32,829,346	2,880,722	3,616,558

7. **Tinplate.**—During the year 1955, tinplate continued to be in free supply from the United Kingdom and the United States of America, the main sources of supply for Australia.

Tinplate usage continued to increase in most branches of industry, the consumption for 1955 reaching a record level at 127,465 tons. The average consumption over the ten years ended 30th June, 1955 was 114,000 tons per annum.

8. **Mica.** The Commonwealth Mica Pool is now administered by a Committee of Management which includes representatives of the producers and the consumers. The Committee has issued new specifications based on the latest draft International Standards Specification and, by this means, aims to buy and sell only mica which compares with world standards.

9. **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 authority for meeting the storage and transport requirements of Commonwealth Departments and authorities. It is the authority for the arrangement of furniture removals, at Departmental expense, in all States with the exception of the Australian Capital Territory and the Northern Territory. It has agents in Canberra and Darwin.

At 30th June, 1955 it had under its control, land, buildings, plant and machinery valued at over £5,959,000 and 2,524,000 square feet of storage space, of which 2,034,000 square feet was Government-owned and the balance held under tenancy.

10. **Finance Branch.**—The expenditure for Department of Supply activities during the years 1953-54 and 1954-55 are shown in the following table.

## SUPPLY: TOTAL EXPENDITURE.

(£'000.)

Particulars.	Expenditure.	
	1953-54.	1954-55.
Parliamentary Appropriations .. ..	(a) 11,846	(a) 13,745
Special Appropriation—Aluminium Industry .. ..	2,451	..
Total Appropriations .. ..	14,297	13,745
Trust Fund Accounts—		
Mica .. ..	..	444
Minerals Production .. ..	155	154
Government Factory (Clothing) .. ..	2,275	2,089
Stores and Transport .. ..	4,467	3,969
Strategic Stores and Equipment Reserve .. ..	2	Cr. 7
Total Trust Fund Accounts .. ..	6,899	6,649
Total Expenditure .. ..	21,196	20,394

(a) Includes amount appropriated for audit and superannuation charges.

11. **Australian Aluminium Production Commission.**—Basic plans for the manufacture of aluminium ingot in Australia were approved by the Commonwealth Government in April, 1941 as a defence measure designed to make this country independent of oversea supplies. In April, 1944 an agreement was made between the Commonwealth and Tasmanian Governments for the establishment of the industry in Tasmania. The Australian Aluminium Production Commission, consisting of representatives of each of the two Governments, was constituted on 1st May, 1945. By legislation passed in 1952 and 1954, the original fund of £3,000,000 to finance the undertaking was increased to £10,500,000 of which the Commonwealth Government will contribute £9,000,000 and the Tasmanian Government £1,500,000. At the same time the Commission was re-constituted to consist of five members, of whom four represent the Commonwealth and one the State of Tasmania.

Workable deposits of bauxite (aluminium ore) have been proved in Tasmania, Victoria, New South Wales and the Northern Territory. The largest deposits are located in the Wessel Islands, Northern Territory, where nearly 10,000,000 tons of good grade ore have been proved, and also in the Inverell district of Northern New South Wales, where reserves exceeding 8,000,000 tons have been brought under the Commission's control. In the Wessel deposits alone, there is a sufficient supply to maintain aluminium production in Australia for over 100 years, based on the present planned production of 13,000 tons of aluminium ingot annually.

The combined Bayer-Hall alumina and reduction plant erected at Bell Bay, Northern Tasmania, is now in production of aluminium ingot and output was expected to reach the rate of 10,000 tons per annum by March, 1956.

## CHAPTER XXVIII.

### REPATRIATION.

#### § 1. General.

An outline of the activities leading up to the formation of the Commonwealth Repatriation Commission was given in Official Year Book No. 15, p. 931, also in the Official Year Book referred to, and in subsequent issues, some account was given of the policy and general activities of the Department, while detailed information was incorporated in regard to such matters as sustenance rates and pensions to members of the Forces and dependants. (*See* Official Year Book No. 17, pp. 598-601.) In 1943 the Australian Soldiers' Repatriation Act was amended by the incorporation of the recommendations of the Parliamentary Committee appointed to inquire into pensions and repatriation benefits. A general increase was made of approximately 20 per cent. in the rates of war pensions and increases were also made in other repatriation benefits.

Under the Australian Soldiers' Repatriation Act 1950, rates of pension and medical sustenance were increased, and pensions and benefits under the Act were extended to those members of the Forces (and their dependants) engaged in operations in Korea and Malaya. Provision was also made for payment to a war widow, on re-marriage, of a gratuity equal to one year's war pension. In addition, an important amendment was a change in the basis of war pensioning. Previously, the basis was the daily rate of service pay, but under this legislation the rank, not the pay, of the service man or woman became the basis. This change was brought about as the result of the increased rates of pay of members of the Forces under the new pay code from 1st July, 1947, and the further increases since then. The constantly rising rates of pay made it evident that the basis of pensioning on the daily rate of pay would be unworkable; for example, the rates of pay of more or less senior officers of the 1914-18 War, and of the 1939-45 War discharged before 1st July, 1947, were less than the new rates of pay for present day lower ranks, with a consequent disparity in the rates of pension. To avoid this disparity, the daily rate of pay basis—which had been in operation since the original war pension legislation of 1914—was abandoned in favour of the basis of pensioning according to the rank of the member, the basis adopted by other countries.

Amendments to the Act in 1951-52, 1953-54 and 1954-55 made provision for general increases in the rate of certain types of war pension. Other payments were accordingly affected, and additional benefits were provided.

The main activities of the Repatriation Commission at 30th June, 1955 were confined to the grant, review and assessment of war and service pensions, the provision of medical treatment, vocational training, the renewal and repair of artificial replacements and surgical appliances, the grant and review of sustenance and living allowances, and the administration of the Soldiers' Children Education Scheme.

## § 2. War Pensions.

1. *General.*—The first provision for the payment of war pensions to members of the Forces and their dependants was made by the Commonwealth Parliament in the War Pensions Act 1914, which came into operation on 21st December, 1914. This Act was repealed in 1920 by the Australian Soldiers' Repatriation Act (amended from 31st December, 1950 to the Repatriation Act). Owing to limitations of space, only some of the main features relating to war pensions under the Repatriation Act 1920–1955 are shown in the following paragraphs:—

(i) *Eligibility for Pension.* There has been a considerable widening of the provision in this respect, to the benefit, mainly, of members of the Citizen Military Forces who have not served outside Australia. These provisions are summarized as follows:—

- (a) 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 actual 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.
- (b) In other cases where a member served only in Australia, incapacity or death to be pensionable must have been attributable to service.
- (c) There is a third ground applicable to all in (a) and (b) who have had at least six months' camp service. This provides that, where a condition pre-existed enlistment, a pension may accrue if it is considered that such condition was aggravated by service.

(ii) *Pensions for Incapacity.* From 7th October, 1954 the 100 per cent. pension rate for a member's incapacity was increased from £8 5s. to £9 per fortnight (higher rates were payable in respect of certain commissioned ranks). The rates for wives and children of such members are £3 11s. and £1 7s. 6d. per fortnight respectively. From 20th October, 1955, the member's 100 per cent. incapacity rate was increased from £9 to £9 10s. per fortnight.

(iii) *Supplementation of Pension.* Where a member in receipt of a pension at the maximum rate is, because of his war disability, temporarily (for at least three months) precluded from earning, an additional pension may be granted to bring the total pension to the member up to £19 10s. per fortnight from 20th October, 1955.

(iv) *Women's Nursing and Auxiliary Services.* Members of Women's Services are entitled to pensions and other benefits as prescribed in the Act on the same basis as male members of the Forces.

(v) *Tuberculosis.* In the case of a member of the Forces who served in a theatre of war, and, at any time after discharge became or becomes incapacitated, or died or dies, from pulmonary tuberculosis, war pension is payable, and medical treatment is provided on application as if the incapacity or death resulted from an occurrence on service. (*See also* § 3. Service Pensions.)

(vi) *Special Rates.* Those who have been totally blinded as the result of war service and those who are permanently totally incapacitated receive as from 5th November, 1953, special pensions of £18 10s. per fortnight. The rate for Tuberculars, Class "B" (fit for light employment) was increased from £12 to £13 per fortnight. The rates were further increased to £19 10s. and to £14 per fortnight respectively, from 20th October, 1955. In addition to the special pension, an attendant's allowance of £3 10s. per fortnight is granted to the war-blinded and to certain others who are deemed to be in need of an attendant.

A war-blinded member who is also affected with total loss of speech or total deafness was entitled from 2nd October, 1952 to an attendant's allowance of £7 per fortnight in lieu of that referred to above. Attendant's allowance rates were further increased from 20th October, 1955 to £5 10s. and to £9 per fortnight respectively. The wife and any children under 16 years of age receive the same rates as shown in sub-para. (ii).

(vii) *Specified Disabilities.* Where the disability is amputation of a limb or limbs or total loss of vision in one eye, amounts ranging from 17s. to £10 per fortnight in addition to the statutory rate of pension are payable as from 20th October, 1955. In addition, allowances of either £5 10s. or £9 per fortnight are payable in certain double amputation cases.

(viii) *Time Limit for Wives and Children Removed.* Prior to the 1950 amending Act, wives who were married and children who were born after 1st July, 1938 were ineligible to receive a war pension. This time limit was removed as from 2nd November, 1950.

(ix) *Rates of Pensions for Death.* (a) *Widows.* As already indicated, rates of pension, which were previously based on the daily rate of pay of the member, are now based on the rank of the member. From 20th October, 1955 the rates were increased by £1 per fortnight, the minimum rate being increased from £8 to £9 per fortnight. In addition to the pension, the widow, if she has dependent children, receives an allowance if she is permanently unemployable, or if she is over 50 years of age; this allowance is £3 9s. per fortnight. The allowance may also be paid to a widow under 50 years of age, in certain cases, so long as the child (or one of the children if more than one child) over the age of sixteen, is undergoing education or training but has not qualified for (or is not receiving) the adult wage in the trade, occupation or calling for which the child is training.

(b) *Children.* From 2nd October, 1952, the rate of pension for the eldest child (under 16 years of age) was increased to £2 13s. per fortnight, and that of each younger child to £1 17s. Additional pension of 12s. per fortnight may be paid in certain circumstances. Where both parents are dead each child is pensioned at the rate of £4 16s. per fortnight.

(c) *Widowed Mother on Death of Member.* A pension ranging from £4 10s. to £8 6s. per fortnight, according to the rank of the member, may be granted to a widowed mother of a deceased unmarried son, provided widowhood occurred either prior to or within three years after the death of the member. The pension may be supplemented by payment to a prescribed person, of an additional amount not exceeding £8 per fortnight according to the extent of other income of the pensioner; this operated from 20th October, 1955. The value of property possessed does not affect the issue.

2. *Appeals Tribunals.*—The principal Act was amended as from 1st June, 1929 to create tribunals to hear appeals in regard to war pensions. The War Pensions Entitlement Appeal Tribunal is empowered to hear and decide any appeal by or on behalf of ex-members of the Forces or their dependants against a decision of the Repatriation Commission that an incapacity or the death of an ex-member 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 an incapacity of an ex-member of the Forces 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 for service pensions.

3. *Summary of War Pensions, 1954-55.*—At 30th June, 1955, the number of war pensions for the 1914-18 War was 138,641, for the 1939-45 War, 442,862, and for the Korea and Malaya Operations 2,034, making a total of 583,537 with a liability of £40,223,720 per annum. The amount paid in war and service pensions during the year 1954-55 was £44,516,287. The outstanding features for 1954-55 for each war were as follows.

## WAR PENSIONS : SUMMARY, AUSTRALIA, 1954-55.

Particulars.	1914-18 War.	1939-45 War.	Korea and Malaya Operations.	Total.
New claims granted .. ..	2,758	33,748	642	37,148
Restorations .. ..	541	1,495	17	2,053
Claims rejected (gross) .. ..	2,031	18,380	507	20,918
Pensions reviewed .. ..	14,326	62,119	246	76,691
Pensions cancelled or discontinued ..	1,590	11,745	28	13,363
Deaths of pensioners .. ..	4,072	1,887	8	5,967
Number of pensions in force at 30th June, 1955 .. ..	138,641	442,862	2,034	583,537
Annual pension liability at 30th June, 1955 .. .. £	17,673,142	22,424,840	125,738	40,223,720
Amount paid in pensions during the year 1954-55 .. .. £	(a)	(a)	(a)	644,516,287

(a) Not available.

(b) Includes payments in respect of service pensions.

4. Classes of War Pensions, Australia, 1954-55.—(a) *New Claims Granted.* The following is an analysis of the total number of new claims granted during 1954-55 :—

## WAR PENSIONS : NEW CLAIMS GRANTED, AUSTRALIA, 1954-55.

Class.	1914-18 War.	1939-45 War.	Korea and Malaya Operations.	Total.
Members .. ..	926	6,718	237	7,881
Wives of members .. ..	1,287	7,204	169	8,660
Children .. ..	466	19,435	221	20,122
Other dependants .. ..	79	391	15	485
Total .. ..	2,758	33,748	642	37,148

(b) *Pensions in Force.* The following table shows the number of pensions in force at 30th June, 1955 for each war and for each class of pensioner :—

## WAR PENSIONS IN FORCE, AUSTRALIA, 30th JUNE, 1955.

Class.	Number of Pensioners at 30th June, 1955.			
	1914-18 War.	1939-45 War.	Korea and Malaya Operations.	Total.
Orphan children—				
Children of deceased members ..	671	9,219	79	9,969
Double orphans .. ..	44	161	..	205
War widows .. ..	18,294	9,942	56	28,292
Members .. ..	60,398	134,979	878	196,255
Children .. ..	4,992	172,177	524	177,693
Wives .. ..	51,566	109,553	424	161,543
Parents .. ..	2,390	6,636	66	9,092
Brothers and sisters .. ..	81	107	7	195
Others .. ..	205	88	..	293
Total .. ..	138,641	442,862	2,034	583,537

(c) *Special Rate Pensions.* At 30th June, 1955 special rate pensions of £18 10s. per fortnight were being paid to the following classes of members of the Forces :—

## WAR PENSIONS : MEMBERS ON SPECIAL RATES, AUSTRALIA, 30th JUNE, 1955.

Class.	1914-18 War.	1939-45 War.	Korea and Malaya Operations.	Total.
Blinded members .. ..	208	192	2	402
Tubercular members .. ..	760	1,050	5	1,815
Totally and permanently incapacitated members .. ..	9,730	3,194	4	12,928
Tuberculars, Class "B" (a) .. ..	176	342	..	518

(a) Rate £13 per fortnight.



5. Number of War Pensioners and Annual Liability, States, etc., 30th June, 1955.—The following table shows the number of pensions in force and annual liability for each war at 30th June, 1955 according to place of payment. (The amount paid is shown on page 1055).

**WAR PENSIONS : NUMBER OF PENSIONERS AND ANNUAL LIABILITY, 30th JUNE, 1955.**

Number of War Pensions in Force at 30th June, 1955.					
Where Paid.	Incapacitated Members of the Forces.	Dependants of Incapacitated Members.	Dependants of Deceased Members.	Total.	Annual Pension Liability (£.)
1914-18 WAR.					
New South Wales(a)	19,635	18,386	7,196	45,217	5,821,492
Victoria..	20,275	18,587	7,043	45,905	5,737,635
Queensland	7,134	6,637	1,876	15,647	2,062,808
South Australia(b)	4,444	4,353	1,722	10,519	1,456,587
Western Australia	4,926	4,962	1,545	11,433	1,281,942
Tasmania	2,685	2,768	841	6,294	894,462
Total, Australia	59,099	55,693	20,223	135,015	17,254,926
London Office	1,086	1,185	883	3,154	366,110
Other Oversea Countries	213	167	92	472	52,106
Total	60,398	57,045	21,198	138,641	17,673,142
1939-45 WAR.					
New South Wales(a)	48,011	94,546	9,619	152,176	7,788,272
Victoria..	35,501	73,507	6,914	115,922	5,914,971
Queensland	17,806	39,294	3,293	60,393	3,132,308
South Australia(b)	14,823	33,854	2,267	50,944	2,470,732
Western Australia	12,965	27,272	2,261	42,498	1,993,988
Tasmania	5,393	13,164	793	19,350	1,001,833
Total, Australia	134,499	281,637	25,147	441,283	22,302,104
London Office	318	498	317	1,133	93,392
Other Oversea Countries	162	232	52	446	29,344
Total	134,979	282,367	25,516	442,862	22,424,840
KOREA AND MALAYA OPERATIONS.					
New South Wales(a)	329	350	87	766	48,030
Victoria..	235	250	41	526	27,985
Queensland	123	132	28	283	17,917
South Australia(b)	58	81	4	143	9,760
Western Australia	82	88	16	186	11,832
Tasmania	34	42	11	87	4,930
Total, Australia	861	943	187	1,991	120,454
London Office	11	2	16	29	3,852
Other Oversea Countries	6	4	4	14	1,432
Total	878	949	207	2,034	125,738

(a) Includes Australian Capital Territory.

(b) Includes Northern Territory.

6. Summary of War Pensions, 1930-31, 1938-39 and 1946-47 to 1954-55.—  
 (i) *Australia.* The following table shows, for each war, the number of pensions granted, claims rejected, pensions in force, and the annual liability for pensions in each of the years ended 30th June, 1947 to 1955, and the total annual liability for war pensions for each of the years ended 30th June, 1931, 1939 and 1947 to 1955 :—

## WAR PENSIONS : SUMMARY, AUSTRALIA.

Year ended 30th June—	Pensions Granted.	Claims Rejected.	Number of War Pensions in Force at 30th June.				Annual Pension Liability at 30th June (£.)
			Incapaci- tated Members of the Forces.	Depend- ants of Incapaci- tated Members.	Depend- ants of Deceased Members.	Total.	

## 1914-18 WAR.

1947	..	811	572	63,375	73,825	19,759	161,959	8,163,025
1948	..	1,378	717	67,116	68,323	19,863	155,302	8,475,915
1949	..	1,902	768	66,264	63,937	20,137	150,338	9,656,071
1950	..	2,547	1,201	65,622	60,141	20,509	146,272	10,103,752
1951	..	5,567	1,480	64,889	62,918	20,709	148,516	13,271,144
1952	..	4,090	1,386	63,800	61,775	20,684	146,259	14,447,983
1953	..	3,090	1,136	62,703	60,000	20,793	143,496	15,674,373
1954	..	3,063	1,559	61,634	58,390	20,980	141,004	16,574,442
1955	..	2,758	2,031	60,398	57,045	21,198	138,641	17,673,142

## 1939-45 WAR.

1947	..	51,019	31,266	83,995	122,205	26,478	232,678	6,841,567
1948	..	39,188	13,614	91,657	142,112	26,530	260,299	7,759,793
1949	..	39,016	8,192	99,852	163,504	26,421	289,777	9,522,250
1950	..	44,392	7,312	108,922	189,413	26,649	324,984	10,638,011
1951	..	39,866	8,387	115,942	211,735	26,434	354,111	14,483,436
1952	..	36,259	8,864	120,889	231,068	26,232	378,189	15,862,473
1953	..	33,944	8,034	125,366	243,483	25,885	399,734	18,502,675
1954	..	33,370	13,733	129,926	265,552	25,773	421,251	20,211,273
1955	..	33,748	18,380	134,979	282,367	25,516	442,862	22,424,840

## KOREA AND MALAYA OPERATIONS.

1951	..	48	..	5	1	42	48	6,265
1952	..	312	153	159	109	99	367	30,873
1953	..	399	241	326	274	144	744	53,519
1954	..	608	450	611	572	196	1,411	92,652
1955	..	642	507	878	949	207	2,034	125,738

## TOTAL.

1931	..	11,555	920	75,316	172,389	35,617	283,322	7,774,806
1939	..	6,794	7,541	77,151	144,571	27,571	249,293	7,681,095
1947	..	51,830	31,838	152,370	196,030	46,237	394,637	15,004,592
1948	..	40,566	11,331	158,773	210,435	46,393	415,601	16,235,708
1949	..	40,918	8,960	166,116	227,441	46,558	440,115	19,176,261
1950	..	46,939	8,513	174,544	249,554	47,158	471,256	20,741,763
1951	..	48,481	9,867	180,836	274,654	47,185	502,675	27,760,845
1952	..	40,661	13,403	184,848	292,952	47,015	524,815	30,341,329
1953	..	37,433	9,411	188,395	308,757	46,822	543,974	34,230,567
1954	..	37,131	15,742	192,203	324,514	46,949	563,666	36,878,337
1955	..	37,148	20,918	196,255	340,361	46,921	583,537	40,223,720

(ii) *Amount Paid and Place of Payment.* The following table shows for the years 1949-50 to 1954-55 the amounts paid in pensions and place where paid :—

## WAR PENSIONS : AMOUNT PAID.

(£.)

Place of Payment.	1949-50.	1950-51.	1951-52.	1952-53.	1953-54.	1954-55.
New South Wales(a) ..	7,392,793	9,446,734	11,046,938	11,769,571	12,578,067	15,150,898
Victoria ..	5,857,536	7,303,282	9,184,196	9,918,742	10,600,721	12,059,661
Queensland ..	2,381,093	3,016,499	3,777,019	4,109,763	4,591,219	5,913,787
South Australia(b) ..	1,947,536	2,452,245	3,046,575	3,349,467	3,583,510	4,389,248
Western Australia ..	1,887,885	2,272,533	2,714,606	2,921,367	3,086,783	3,799,811
Tasmania ..	1,017,889	1,297,490	1,560,560	1,714,600	1,820,440	2,032,492
Overseas ..	379,447	402,935	515,119	572,276	536,304	570,390
<b>Total</b> ..	<b>20,864,179</b>	<b>26,191,718</b>	<b>31,845,013</b>	<b>34,355,795</b>	<b>36,797,044</b>	<b>44,516,287</b>

(c)

(a) Includes Australian Capital Territory.  
amount paid in respect of Service pensions.

(b) Includes Northern Territory

(c) Includes

## § 3. Service Pensions.

1. **General.** The payment of service pensions is provided for in the Repatriation Act 1920-1955 and has operated since 1st January, 1936.

Originally fixed on a lower scale, the maximum rate of service pension for a member of the Forces now conforms to the rate of the age or invalid pension, which was increased from £7 to £8 per fortnight from 20th October, 1955. The maximum rate for the wife of a member is £3 10s. per fortnight; the rate for the first child under 16 years of age is 23s. per fortnight and 5s. per fortnight is payable for each of the younger children up to three in number. The actual rate payable in any case is determined after taking into consideration all other income, "except income derived from property" and property (apart from the home and certain other exemptions) owned by the pensioner, and no service pension can be paid where the other income and/or property exceeds certain specified limits. From 7th October, 1954 the "allowed income" was £364 per annum for a single man and £728 per annum in the case of a member and wife. The amounts were raised to £390 and £780 operative from 20th October, 1955 in conformity with the member's rate increase. If a member has property (apart from the home and certain other exemptions) exceeding in value £1,750 (£3,500 for a member and wife), that alone precludes payment of a pension. Pension is assessed according to the amount of income; if the income is less than the amount shown above, service pension is assessed at such rate as will, with that other income, bring the total income (including service pension) of the pensioner up to the "allowed income" provided that the pension cannot exceed the maximum rate specified for the particular class of case. If assessable property is held, then a deduction is made from the pension assessed according to income only, the deductions being made at 9d. per fortnight for each complete £10 of property in excess of £200 (or £400 in the case of member and wife). Half the combined income received and property possessed by man and wife is deemed to be income received and property possessed by each for Service pension purposes.

In 1936 female members of the forces were made eligible for consideration for service pensions if they embarked for service abroad; previously they must have served in a theatre of war. In the same year an institutional rate of service pension not exceeding 12s. per fortnight was made available. This pension rate, which benefits particularly inmates of mental hospitals, was £2 9s. per fortnight from 5th November, 1953, but was increased to £2 16s. per fortnight from 20th October, 1955.

Eligibility for service pensions may be established on the following grounds :—

- (a) Sixty years of age or more, provided the member served in a theatre of war, but eligibility on this ground applies only to the member and not to his wife or children. In the case of a female member of the forces, the qualifying age is 55 years, and service abroad, not necessarily in a theatre of war, is sufficient.
- (b) Permanently unemployable, provided the member served in a theatre of war (or, in the case of a female member, served abroad). Under this class pensions may be paid to the member, his wife and children up to four in number.
- (c) Pulmonary tuberculosis, whether the member served in a theatre of war or not. Under this class, also, pensions are payable to the wife and children up to four in number.

Only those members who qualify under Class (c) are entitled to receive both service and invalid pensions at the same time

From 1st November, 1941, service pensions were extended to veterans of the South African War 1899–1902, and in 1943 to members of the Forces of the 1939–45 War, and now also apply to members who served in the Korea and Malaya operations.

2. Operations, 1954–55.—The following table gives a summary relating to service pensions during 1954–55 :—

Claims granted during year—

Members of the Forces	..	..	..	..	2,891
Wives	..	..	..	..	845
Children	..	..	..	..	326
Total	..	..	..	..	4,062

Claims rejected during year—

Members of the Forces	..	..	..	..	737
Wives	..	..	..	..	415
Children	..	..	..	..	240
Total	..	..	..	..	1,392

Service pensions cancelled or discontinued during year	..	1,892
Deaths of pensioners during year	..	1,187
Pensions in force at 30th June, 1955	..	22,316
Annual pension liability on 30th June, 1955	..	£3,126,321

3. Number of Service Pensioners and Amount Paid.—(i) *Summary, Australia, 1945-46 to 1954-55.* The following table shows the number of service pensions in force and the amount paid in pensions for the ten years 1945-46 to 1954-55 :—

## SERVICE PENSIONS : SUMMARY, AUSTRALIA.

Year ended 30th June—	Number of Service Pensions in Force at 30th June—						Amount Paid in Pensions.
	Age.	Permanently Unemployable.		Suffering from Pulmonary Tuberculosis.		Total.	
	Members of Forces.	Members of Forces.	Depen- dants.	Members of Forces.	Depen- dants.		
1946 ..	4,971	3,896	3,633	244	345	13,089	£ 804,880
1947 ..	5,894	4,312	3,657	254	358	14,475	904,120
1948 ..	6,610	4,660	3,791	271	358	15,690	1,238,112
1949 ..	7,070	4,613	3,699	271	365	16,018	1,328,955
1950 ..	7,448	4,608	3,598	299	385	16,338	1,431,687
1951 ..	7,456	4,492	3,911	279	374	16,512	1,507,258
1952 ..	7,587	4,561	4,270	269	389	17,076	1,778,380
1953 ..	8,703	4,971	4,780	291	432	19,177	2,225,044
1954 ..	9,648	5,294	5,092	321	451	20,806	2,694,522
1955 ..	10,566	5,555	5,286	379	530	22,316	(a)

(a) Included with War pensions—see page 1055.

(ii) *Amount Paid and State where Paid.* Details of the amounts paid in each State in respect of service pensions are no longer available. Particulars for the years 1949-50 to 1953-54 may be found on page 1017 of Official Year Book No. 41.

#### § 4. Medical Treatment of Returned Soldiers Suffering from War Service Disabilities.

At 30th June, 1955 there were 4,663 in-patients in Repatriation medical institutions and State mental hospitals, including a number whose care was undertaken by the Repatriation Commission on behalf of other countries or Commonwealth Departments. There were 380,624 out-patient attendances for treatment during the year, excluding approximately 850,000 treatments by the 3,545 local medical officers resident in metropolitan and country areas and New Guinea. The expenditure to 30th June, 1955 was £72,091,315.

### § 5. General Benefits and Miscellaneous.

1. *Other Departmental Activities.*—(i) *General.* During the 1939-45 War, the ordinary activities of the Department in the way of general benefits for the welfare of members and dependants were carried on without interruption. They were mainly education and training of children under the Soldiers' Children Education Scheme, medical benefits for widows and children of deceased members and for widowed mothers of deceased unmarried members, funeral expenses for certain classes of members and dependants, and allowances to certain classes of dependants in lieu of pension.

By legislation passed in June, 1940, these benefits were extended to members engaged in the 1939-45 War and in November, 1950 to those engaged in the Korea and Malaya Operations and new benefits designed for the re-establishment of members after discharge from the Forces were made available. The re-establishment benefits administered by the Repatriation Commission are :—payments of re-employment allowance while awaiting employment ; provision of tools of trade and equipment where such are necessary to the member's employment ; transportation expenses to meet the cost of fares and removal of household belongings, where a member, or member and family, takes up training, employment, or a business, or settles on the land ; supplementation of wages of apprentices whose apprenticeships were interrupted by war service ; re-establishment loans to enable members and widows to establish themselves in businesses, practices or other 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 members who are blinded 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 members who married abroad (and passages outward from Australia in certain cases of members and dependants).

In 1949 the Commission took over the functions of the Re-establishment Division of the former Department of Post-war Reconstruction, and is responsible for the co-ordination of all matters relating to training under the Commonwealth Reconstruction Training Scheme. Re-establishment of the more seriously disabled where ordinary training is not sufficient continues to be a function of the Commission, and special means have to be found to overcome each problem.

(ii) *Review of General Benefits.* The following paragraph gives particulars of the more important general benefits for each war (those for Korea and Malaya Operations are included under the 1939-45 War) for the period from 8th April, 1918 to 30th June, 1955.

#### (a) *Employment*—

1914-18 War : Number of applications, 251,200 ; Expenditure—sustenance while awaiting employment, £1,768,000 ; tools of trade and fares, etc. (gift), £554,000 ; tools of trade (loan), £21,800.

1939-45 *War* : The placing of members in employment was carried out by the Commission for only a short period prior to the inauguration of the Department of Labour and National Service, but the Commission has the responsibility of payment of re-employment allowance, provision of tools of trade and payment of fares and removal expenses. Number of cases and expenditure to 30th June, 1955 were as follows :—Re-employment allowances—67,275, £1,027,488 ; tools of trade (gift)—261,836, £1,896,987 ; (loan)—19,485, £293,406 ; fares and removal expenses, 16,741, £244,495.

(b) *Vocational Training*—

1914-18 *War* : Number of members completed training in full-time courses, 27,696 ; expenditure, £4,849,600.

1939-45 *War* : Number of members completed training in full-time re-establishment courses 57,239 ; number still in training, 806 ; expenditure, £50,257,064. An additional sum of £3,874,927 was expended on supplementation of apprentices wages.

(c) *Business Loans*—

1914-18 *War* : 6,130, £421,800.

1939-45 *War* : 28,213, £7,626,067. Allowances pending productivity of business—1,451, £90,033. Fares and removal expenses to member proceeding to a business, £495.

(d) *Furniture Grants*—

1914-18 *War* : Expenditure—gift (to members blinded or totally and permanently incapacitated and to widows), £75,190 ; loan (to other classes of members), £1,031,570 ; total number of cases, 35,400.

1939-45 *War* : Gift (no loan cases)—widows, 5,718, £397,586 ; members, 378, £23,405.

(e) *Free Passages*—

1914-18 *War* : £509,120.

1939-45 *War* : To Australia—4,750, £310,893 ; from Australia—70, £10,466.

(f) *Soldiers' Children Education Scheme*—

*Main Scheme* : Full-time training as from 12 years of age.

Particulars.					1914-18 War.	1939-45 War.
Applications	..	..	..	..	33,109	16,409
Approved	..	..	..	..	31,441	16,231
Completed training	..	..	..	..	25,784	8,155
Withdrawn during training	..	..	..	..	4,101	691
Awaiting next stage of training	..	..	..	..	48	200
In training	..	..	..	..	1,509	7,184
Expenditure	..	..	..	..	£4,757,448	

*Minor benefits prior to entrance to main scheme* : For all Wars, £98,345.

(iii) *Total Expenditure on General Benefits*. The total expenditure on general benefits, apart from war and service pensions, from 8th April, 1918 to 30th June, 1955, for all wars since 1914 was £111,891,074 (including loan £9,605,692). Of this total the largest amounts were absorbed by medical treatment with £72,091,315, vocational training with £8,800,780, and expenses in providing employment, £5,878,683.

2. **Expenditure of Repatriation Commission, 1954-55.**—The expenditure of the Commission for the year ended 30th June, 1955 was £59,625,416, distributed as follows :—

Repatriation benefits—						£
Loans to members	..	..	..	..	..	178,181
Grants to members and general expenditure (including main- tenance of training schools, medical institutions, etc.)	..	..	..	..	..	11,539,931
Assistance to members in necessitous circumstances	..	..	..	..	..	805
Total .. .. .						11,718,917
Soldiers' Children Education Scheme	..	..	..	..	..	368,876
War and Service Pensions	..	..	..	..	..	444,548,113
Administrative costs—						£
Salaries	..	..	..	..	..	2,480,984
Contingencies	..	..	..	..	..	508,526
						2,989,510
Grand total .. .. .						59,625,416

(a) Includes Trust Fund adjustments.

3. **Settlement of Returned Service Personnel on the Land.**—Reference to the settlement on the land of returned service personnel will be found in Chapter IV.—Land Tenure and Settlement.



## CHAPTER XXIX.

### MISCELLANEOUS.

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. New Building ; 4. Consumption of Foodstuffs and Beverages ; 5. Patents, Trade Marks and Designs ; 6. Copyright ; 7. Australian Ship-building Board ; 8. War Service Homes Division ; 9. Commonwealth Scientific and Industrial Research Organization ; 10. Commonwealth Observatory ; 11. Standards Association of Australia ; 12. Film Censorship Board ; 13. Australian National Film Board and the Film Division ; 14. National Safety Council of Australia ; 15. Australian Road Safety Council ; 16. Atomic Energy Commission ; 17. The United Nations ; 18. Diplomatic and other Representatives Overseas and in Australia ; 19. Retail Trade ; 20. The Snowy Mountains Scheme.

#### § 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 below have been compiled by the State Statisticians from the best data available, and relate to 1953-54. The adoption of substantially uniform methods of valuing production and of estimating elements of costs of production and marketing renders the results comparable as between States.

Attention is directed to the fact that the values shown in the tables herein refer only to 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 in 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. the gross production valued at the place of production) is ascertained by deducting marketing costs from the gross value. (Marketing costs include freight, costs 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, 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.

Power costs (power, power kerosene, petrol and other oils) have not been deducted in New South Wales since 1940-41 when they amounted to £1,892,000 and in Tasmania since 1941-42, when they amounted to £86,510. Consequently net values of production for later years in these two States are overstated. Costs of materials used in the process of production are not available for all States in respect of Bee-farming, Trapping, Forestry and Fisheries, and local values have been used for these industries with consequent overstatement in net values.

2. Value of Production, Australia, 1953-54.—The following table shows particulars of the gross, local and net values of production in Australia by industries during the year 1953-54 :—

**GROSS, LOCAL AND NET VALUE OF PRODUCTION OF PRIMARY INDUSTRIES AND FACTORIES : AUSTRALIA, 1953-54.**

(£'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 .. ..	371,962	314,162	268,460
Pastoral .. ..	557,653	518,212	491,716
Dairying .. ..	173,547	163,111	136,956
Poultry .. ..	54,965	49,838	34,782
Bee-farming .. ..	1,593	1,426	(a) 1,426
Total, Rural .. ..	1,159,720	1,046,749	933,340
Trapping .. ..	5,763	5,074	(a) 5,074
Forestry .. ..	45,055	41,720	(a) 41,720
Fishing and whaling .. ..	8,865	7,741	(a) 7,741
Mines and Quarries .. ..	(a) 134,542	134,542	104,875
Total, Non-rural .. ..	194,225	189,077	159,410
Total, All Primary .. ..	1,353,945	1,235,826	1,092,750
Factories .. ..	(b) 1,227,045	(b) 1,227,045	1,227,045
Total, All Industries .. ..	2,580,990	2,462,871	2,319,795

(a) Local value.

(b) Net value.

3. Net Value of Production, States, 1953-54.—The following tables show the total net value of production, and the net value per head of population, for each industry and State during the year 1953-54 :—

**NET(a) VALUE OF PRODUCTION OF PRIMARY INDUSTRIES AND FACTORIES.**

1953-54.

(£'000.)

Industry.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas.	Austral'a.
Agriculture .. ..	68,342	65,624	55,471	41,700	28,119	9,204	268,460
Pastoral .. ..	202,439	108,930	81,989	47,423	43,784	7,151	491,716
Dairying .. ..	43,598	46,202	28,444	10,257	3,695	4,760	136,956
Poultry .. ..	14,923	13,991	1,176	2,079	1,634	979	34,782
Bee-farming(b) .. ..	464	402	138	189	211	22	1,426
Total, Rural .. ..	329,766	235,149	167,218	101,648	77,443	22,116	933,340
Trapping(b) .. ..	1,798	2,047	296	411	304	218	5,074
Forestry(b) .. ..	12,905	9,475	7,797	4,373	3,615	3,555	41,720
Fishing and whaling b	2,642	834	951	1,015	1,867	432	7,741
Mines and Quarries	58,042	7,277	12,906	5,051	13,998	6,392	(c) 104,875
Total, Non-rural .. ..	75,387	19,633	21,950	10,850	19,784	10,597	(c) 159,410
Total, All Primary .. ..	405,153	254,782	189,168	112,498	97,227	32,713	(c) 1,092,750
Factories .. ..	520,043	408,314	110,255	100,221	55,147	33,065	1,227,045
Total, All Industries	925,196	663,096	299,423	212,719	152,374	65,778	(c) 2,319,795

(a) See letterpress on page 1061. (b) Local value.

(c) Includes Mines and Quarries for the Australian Capital Territory and the Northern Territory.

**NET(a) VALUE OF PRODUCTION OF PRIMARY INDUSTRIES AND FACTORIES PER  
HEAD OF POPULATION, 1953-54.**  
(£ s. d.)

Industry.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas.	Australia
Agriculture ..	20 1 4	27 1 8	42 13 1	53 1 1	44 11 8	29 14 11	30 6 4
Pastoral ..	59 8 11	44 19 2	63 0 11	60 6 9	69 8 5	23 2 2	55 10 7
Dairying ..	12 16 1	19 1 5	21 17 5	13 1 0	5 17 2	15 7 8	15 9 4
Poultry ..	4 7 8	5 15 6	0 18 1	2 12 11	2 11 10	3 3 4	3 18 7
Bee-farming(b) ..	0 2 8	0 3 4	0 2 2	0 4 9	0 6 8	0 1 5	0 3 2
Total, Rural ..	96 16 8	97 1 1	128 11 8	129 6 6	122 15 9	71 9 6	105 8 0
Trapping(b) ..	0 10 7	0 16 11	0 4 7	0 10 6	0 9 8	0 14 1	0 11 6
Forestry(b) ..	3 15 10	3 18 3	5 19 11	5 11 3	3 14 7	11 9 10	4 14 3
Fishing and Whaling(b) ..	0 15 6	0 6 10	0 14 7	1 5 10	2 19 2	1 7 11	0 17 6
Mines and Quarries ..	17 0 10	3 0 1	9 18 6	6 8 6	22 3 11	20 13 2	6 11 16 10
Total, Non-rural ..	22 2 9	8 2 1	16 17 7	13 16 1	31 7 4	34 5 0	6 18 0 1
Total, All Primary Factories ..	118 19 5	105 3 2	145 9 3	143 2 7	154 3 1	105 14 6	123 8 1
Total, All Industries ..	152 14 3	168 10 7	84 15 8	127 10 3	87 8 8	106 17 3	138 11 5
	271 13 8	273 13 9	230 4 11	270 12 10	241 11 9	212 11 9	261 19 6

(a) See letterpress on page 1061. (b) Local value. (c) Includes Mines and Quarries in the Australian Capital Territory and the Northern Territory.

4. Net Value of Production, Australia, 1938-39 and 1949-50 to 1953-54.—The following table shows the net value of production for Australia during the years 1949-50 to 1953-54 compared with 1938-39.

**NET(a) VALUE OF PRODUCTION OF PRIMARY INDUSTRIES AND  
FACTORIES: AUSTRALIA.**  
(£'000.)

Industry.	1938-39.	1949-50.	1950-51.	1951-52.	1952-53.	1953-54.
Agriculture ..	41,679	218,703	208,130	246,685	276,398	268,466
Pastoral ..	63,820	337,121	704,809	400,493	493,745	491,716
Dairying ..	33,782	81,102	89,352	103,776	135,745	136,956
Poultry ..	7,302	22,228	24,614	31,554	35,213	34,782
Bee-farming(b) ..	123	713	831	771	1,066	1,426
Total, Rural ..	146,706	659,897	1,027,736	783,282	942,167	933,340
Trapping(b) ..	1,422	5,716	6,629	6,713	5,595	5,074
Forestry(b) ..	7,811	23,195	28,428	37,005	41,864	41,720
Fishing and Whaling(b) ..	1,654	4,234	4,869	5,729	6,897	7,741
Mines and Quarries ..	27,375	52,327	71,150	97,199	109,671	104,875
Total, Non-rural ..	38,262	85,472	111,076	117,516	164,027	160,110
Total, All Primary Factories ..	184,968	745,369	1,138,812	930,828	1,106,194	1,092,750
Total, All Industries ..	203,417	661,532	843,872	1,024,867	1,082,862	1,227,045
	388,385	1,406,901	1,982,684	1,955,695	2,189,056	2,319,795

(a) See letterpress on page 1061. (b) Local value.

In the chapters dealing with the respective industries (except trapping and mines and quarries) tables will be found showing the total and per head values of production for the industry by States for a series of years up to 1953-54.

## § 2. Indexes of Production.

In the first two tables below, indexes of price and quantum of production are given for the following industrial groups, namely:—Agriculture, Pastoral, Farmyard and Dairying, and All Farming combined (including separate indexes for Wool and Products other than Wool). In the third table, indexes of quantum of production, exports and consumption of farm products for food use are shown. Indexes previously published in respect of Gold and Other Minerals, and All Mining combined, are under review and pending completion of investigations the publication of these results has been temporarily discontinued.

1. Farm Production Price Indexes.—The Farm Production Price Indexes shown in the following table relate to average "prices" of agriculture, pastoral, farmyard and dairying products realized in 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 has been retained for years up to 1935-36, but re-computed to the base, average 1936-37 to 1938-39 = 100. 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 are 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.	Farm- yard and Dairying.	All Farming.	Wool (Shorn and Dead).	Products other than Wool.
1911-12 .. .. .	92	66	70	76	..	..
1912-13 .. .. .	86	77	78	81	..	..
1913-14 .. .. .	85	76	74	79	..	..
1914-15 .. .. .	143	85	80	105	..	..
1915-16 .. .. .	100	113	98	106	..	..
1916-17 .. .. .	96	127	103	112	..	..
1917-18 .. .. .	112	139	101	123	..	..
1918-19 .. .. .	133	139	111	132	..	..
1919-20 .. .. .	197	146	134	161	..	..
1920-21 .. .. .	170	137	170	155	..	..
1921-22 .. .. .	130	96	118	112	..	..
1922-23 .. .. .	136	127	125	130	..	..
1923-24 .. .. .	119	161	120	139	..	..
1924-25 .. .. .	139	159	105	142	(a) 206	..
1925-26 .. .. .	145	130	120	133	126	..
1926-27 .. .. .	129	125	120	125	129	..
1927-28 .. .. .	129	146	120	136	148	..
1928-29 .. .. .	117	129	122	123	125	..
1929-30 .. .. .	110	104	116	108	78	..
1930-31 .. .. .	76	82	93	82	65	..
1931-32 .. .. .	84	71	83	78	64	..
1932-33 .. .. .	79	69	74	74	66	..
1933-34 .. .. .	79	103	73	89	120	..
1934-35 .. .. .	88	77	79	81	74	..
1935-36(b) .. .. .	94	99	87	95	107	..
1936-37 .. .. .	114	115	93	109	126	(a) 104
1937-38 .. .. .	98	98	102	99	95	100
1938-39 .. .. .	88	87	105	92	79	96
1939-40 .. .. .	100	105	105	104	102	105
1940-41 .. .. .	106	107	105	107	102	108
1941-42 .. .. .	111	108	107	110	102	113
1942-43 .. .. .	131	123	130	128	118	132
1943-44 .. .. .	149	128	147	139	118	146
1944-45 .. .. .	151	128	152	142	118	150
1945-46 .. .. .	174	133	159	157	118	169
1946-47 .. .. .	194	182	157	185	187	185
1947-48 .. .. .	267	263	183	247	301	230
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(c) .. .. .	323	534	395	428	621	364
1954-55(d) .. .. .	325	495	371	406	540	362

(a) Not available for previous years.  
(d) Subject to revision.

(b) See letterpress preceding table.

(c) Revised

2. **Indexes of Quantum of Farm Production.**—The indexes shown in the following table relate to gross output of farm products. They have been calculated by the fixed-base weighted aggregative method, the weights used being weighted average unit values obtained by dividing total gross value by total quantity produced for each commodity for the base period.

In the original published series, the period 1923-24 to 1927-28 was adopted as the base for weighting purposes. This series has been retained for years up to 1935-36, but the index-numbers have been re-computed to the base, average 1936-37 to 1938-39 = 100. 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 are used as fixed weights. 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 live-stock in Australia.

### INDEXES OF QUANTUM OF FARM PRODUCTION, AUSTRALIA.

(Base : Average 1936-37 to 1938-39 = 100.)

Year.	Agri- culture.	Pastoral.	Farm- yard and Dairying.	All Farming.	Wool (Shorn and Dead).	Products other than Wool.
1911-12 .. .. .	51	76	52	63	71	..
1912-13 .. .. .	64	70	64	62	62	..
1913-14 .. .. .	67	79	52	70	68	..
1914-15 .. .. .	30	77	50	57	62	..
1915-16 .. .. .	99	63	40	71	53	..
1916-17 .. .. .	80	61	49	65	54	..
1917-18 .. .. .	67	61	57	62	58	..
1918-19 .. .. .	53	60	56	61	73	..
1919-20 .. .. .	44	77	52	61	73	..
1920-21 .. .. .	87	62	57	69	62	..
1921-22 .. .. .	78	72	67	73	71	..
1922-23 .. .. .	74	76	61	73	71	..
1923-24 .. .. .	80	68	62	71	67	..
1924-25 .. .. .	95	80	76	84	81	..
1925-26 .. .. .	73	84	71	78	86	..
1926-27 .. .. .	90	89	68	86	95	..
1927-28 .. .. .	75	86	73	80	90	..
1928-29 .. .. .	91	92	75	89	99	..
1929-30 .. .. .	79	87	75	82	95	..
1930-31 .. .. .	111	84	82	93	92	..
1931-32 .. .. .	100	92	89	94	102	..
1932-33 .. .. .	110	99	94	102	106	..
1933-34 .. .. .	102	95	100	98	98	..
1934-35 .. .. .	88	98	104	96	102	..
1935-36(a) .. ..	91	95	99	94	98	..
1936-37 .. .. .	97	98	97	97	99	(b) 96
1937-38 .. .. .	107	103	101	104	103	105
1938-39 .. .. .	96	99	102	99	98	99
1939-40 .. .. .	120	107	108	107	115	105
1940-41 .. .. .	74	109	107	97	115	91
1941-42 .. .. .	104	112	104	104	118	99
1942-43 .. .. .	97	114	103	102	116	98
1943-44 .. .. .	86	115	100	100	119	94
1944-45 .. .. .	68	107	99	88	107	84
1945-46 .. .. .	100	86	103	92	92	02
1946-47 .. .. .	84	92	103	91	95	90
1947-48 .. .. .	122	98	107	109	101	111
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(c) .. ..	129	124	107	122	128	120
1954-55(d) .. ..	120	126	116	122	132	119

(a) See letterpress preceding table.  
(d) Subject to revision.

(b) Not available for previous years.

(c) Revised.

3. **Farm Products for Food Use : Indexes of Quantum of Production, Exports and Consumption.** The indexes shown in the following table have been calculated by the fixed-base weighted aggregative method, the weights used being constant unit gross values of each farm 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. Particulars are not available prior to 1946-47 except for the base years.

**FARM PRODUCTS FOR FOOD USE : INDEXES OF QUANTUM 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.
1946-47 ..	90	82	73	66	107	98
1947-48 ..	113	102	113	102	110	99
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(a) ..	121	91	117	89	126	95
1955-56(b) ..	127	94	118	87	128	94

(a) Subject to revision.

(b) Estimated.

### § 3. New Building.

1. **General.**—The statistics in this section relate to the operations of private contractors, Government authorities and owner-builders, with the exception of those relating to employment, which exclude the numbers of persons working on owner-built houses. In general, they relate to *new* building only, and data on alterations, additions, renovations and repairs to buildings are excluded, because of the difficulty in obtaining complete lists of persons who engage in these operations. Figures for houses exclude converted military huts, flats and shop dwellings. Some houses built on farms are excluded but these do not affect the figures materially.

These statistics are available for each quarter from the September quarter, 1945.

More detailed information on building activity may be found in the Quarterly Bulletin of Building Statistics.

The following definitions of terms used in this section are necessary for interpretation of the data presented :—

*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, it is probable that interpretations placed upon it by informants are not entirely uniform.

*Completed.* A building is regarded as having been completed when the builder has fulfilled the terms of the contract. As with commencements, the interpretations placed upon this definition may vary.

*Under Construction.* A building remaining uncompleted at the end of a period is regarded as being under construction, regardless of whether construction was actively proceeding on that particular date.

*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 engaged on alterations, additions, repairs and maintenance when these jobs are undertaken by such contractors and instrumentalities. The figures include working principals and their employees, men working as or for sub-contractors, and men temporarily laid off on account of weather.

Contractors are asked to give details of the persons employed on a specified day, but because of frequent movement between jobs and because some persons (such as electricians, etc.) may work on several jobs which are under construction simultaneously, some duplication may occur.

The figures exclude persons working on owner-built houses, and employees of builders who undertake only alterations, additions, repairs and maintenance.

*Values.* All values shown exclude the value of land and represent the estimated value of buildings on completion.

2. Value of New Buildings.—(i) *Completed, 1954-55.* The following table shows the value of all new buildings completed in each State during 1954-55, according to the kind of building. It should be remembered that all values shown exclude the value of land and represent the estimated value of buildings on completion.

#### NEW BUILDINGS COMPLETED : VALUE, 1954-55.

(Including Estimated Value of Owner-built Houses.)

(£'000.)

Kind of Building.	N.S.W.	Vic.	Q'land.	S. Aust.	W. Aust.	Tas.	A.C.T.	Aust.
<b>Houses—</b>								
Brick, Brick Veneer, Concrete and Stone..	24,812	25,527	2,267	16,211	10,854	1,726	1,370	82,767
Wood (Weatherboard, etc.) ..	19,848	37,903	13,010	2,309	535	4,592	389	78,381
Fibro Cement ..	33,278	3,058	2,103	1,986	12,819	94	4	53,347
Other ..	149	480	187	150	3	..	..	959
<b>Total Houses ..</b>	<b>78,087</b>	<b>66,968</b>	<b>17,567</b>	<b>20,656</b>	<b>24,211</b>	<b>6,412</b>	<b>1,763</b>	<b>215,664</b>
<b>Flats ..</b>	<b>1,552</b>	<b>1,744</b>	<b>581</b>	<b>222</b>	<b>588</b>	<b>134</b>	<b>35</b>	<b>4,856</b>
Shops with Dwellings ..	1,004	1,057	1,078	719	159 947	198	121	10,671
Shops without Dwellings ..	2,552	2,587						
Hotels, Guest Houses, Boarding Houses, etc.	2,334	513	232	287	198	59	52	3,675
Factories ..	7,719	9,894	878	1,167	3,125	562	179	23,524
Other New Buildings ..	17,446	14,453	7,982	4,030	4,868	3,084	793	52,651
<b>Total Other Buildings ..</b>	<b>32,607</b>	<b>30,248</b>	<b>10,751</b>	<b>6,425</b>	<b>9,885</b>	<b>4,237</b>	<b>1,180</b>	<b>95,333</b>
<b>Total New Buildings ..</b>	<b>110,694</b>	<b>97,216</b>	<b>28,318</b>	<b>27,081</b>	<b>34,096</b>	<b>10,649</b>	<b>2,943</b>	<b>310,997</b>

(ii) *Completed, 1947-48 to 1954-55.* The following table shows the value of all new buildings completed in Australia for the years 1947-48 to 1954-55.

### NEW BUILDINGS COMPLETED : VALUE.

(Including Estimated Value of Owner-built Houses.)

(£'000.)

Kind of Building.	1947-48.	1948-49.	1949-50.	1950-51.	1951-52.	1952-53.	1953-54.	1954-55.
Houses—								
Brick, Brick Veneer, Concrete and Stone..	(a)25,833	(a)35,523	(a)40,480	(a)50,050	66,084	75,093	73,264	82,767
Wood (Weatherboard, etc.) ..	(a)13,492	(a)19,918	(a)28,609	(a)47,785	69,979	73,038	74,849	78,586
Fibro Cement ..	(a)13,360	(a)17,234	(a)19,687	(a)26,104	34,895	39,765	44,694	53,342
Other ..	(a)542	(a)649	(a)1,006	(a)947	1,483	2,159	1,014	969
Total Houses ..	(a)53,227	(a)73,324	(a)89,787	a 124,886	172,441	190,055	193,821	215,664
Flats ..	1,057	2,102	2,588	2,849	4,297	6,636	4,791	4,856
Shops with Dwellings ..	373	584	1,023	1,395	1,735	2,349	3,007	3,007
Shops without Dwellings ..	253	372	434	650	1,233	2,057	5,290	10,622
Hotels, Guest Houses, Boarding Houses, etc.	134	472	961	561	678	1,213	1,989	3,675
Factories ..	3,497	5,098	6,444	6,444	9,813	19,788	22,018	23,524
Other New Buildings ..	4,241	7,098	9,555	13,135	25,747	40,631	46,752	52,656
Total Other Buildings ..	9,555	15,726	21,005	25,034	43,503	72,674	83,817	95,333
Total New Buildings ..	(a)62,782	(a)89,050	a 110,797	a 149,920	215,944	262,729	277,668	310,997

(a) Partly estimated.

(iii) *Commenced, Completed and Under Construction, 1947-48 to 1954-55.* The following table summarizes the values of all new buildings commenced, completed and under construction for each State for the years 1947-48 to 1954-55.

### NEW BUILDINGS : VALUE.

(Including Estimated Value of Owner-built Houses.)

(£'000.)

Year.	N.S.W.	Vic.	Q'land.	S. Aust.	W. Aust.	Tas.	A.C.T.	Aust.
COMMENCED.								
1947-48 ..	a 36,196	27,891	12,093	5,341	4,420	3,607	2,606	a 92,154
1948-49 ..	a 45,154	37,935	13,192	7,599	5,825	5,371	1,792	a 116,868
1949-50 ..	a 51,277	44,218	16,994	11,301	8,459	8,379	1,492	a 142,120
1950-51 ..	a 79,750	74,750	21,082	17,827	14,186	10,336	2,439	a 220,370
1951-52 ..	83,400	78,740	27,605	22,606	18,724	11,004	2,559	244,698
1952-53 ..	71,005	60,244	25,680	25,810	20,919	6,611	2,788	213,066
1953-54 ..	111,097	87,733	27,839	25,649	26,369	9,224	2,856	290,767
1954-55 ..	124,420	101,995	32,073	29,946	35,458	10,836	5,932	340,660
COMPLETED.								
1947-48 ..	a 24,305	17,891	10,390	4,080	3,328	2,279	509	a 62,782
1948-49 ..	a 33,737	27,357	12,199	6,483	4,707	3,810	757	a 80,050
1949-50 ..	a 40,920	34,684	13,953	9,074	5,352	5,342	1,462	a 110,787
1950-51 ..	a 49,466	52,058	17,286	12,042	8,948	8,403	1,717	a 149,920
1951-52 ..	76,207	68,615	25,339	18,123	14,426	10,511	2,723	215,944
1952-53 ..	98,049	76,107	26,233	25,882	22,918	10,665	2,875	262,729
1953-54 ..	101,545	84,747	25,913	26,108	25,785	9,692	3,878	277,668
1954-55 ..	110,694	97,216	28,318	27,081	34,096	10,649	2,943	310,997
UNDER CONSTRUCTION AT END OF YEAR.								
1947-48 ..	a 44,461	30,623	7,232	6,170	4,452	4,146	3,013	a 100,097
1948-49 ..	a 59,172	44,267	8,479	7,735	6,416	5,872	4,026	a 135,967
1949-50 ..	a 75,006	56,096	11,805	10,519	10,022	8,989	4,396	a 176,833
1950-51 ..	a 102,708	85,058	15,653	17,272	15,942	12,178	5,302	a 254,113
1951-52 ..	a 125,674	102,670	18,728	23,813	22,302	13,770	6,208	a 313,165
1952-53 ..	a 105,261	94,017	17,838	25,253	23,189	10,494	7,161	a 283,213
1953-54 ..	a 120,460	100,753	19,699	23,730	25,701	11,782	7,249	a 309,373
1954-55 ..	a 136,522	108,247	23,446	26,854	29,102	12,399	10,643	a 347,214

(a) Partly estimated.



3. Numbers of New Houses.—(i) *Completed, 1954-55.* The following table shows the numbers of new houses completed in each State during 1954-55, classified according to the material of their outer walls.

## NEW HOUSES COMPLETED : NUMBER, 1954-55.

(Including Owner-built Houses.)

Material of Outer Walls.	N.S.W.	Vic.	Q'land.	S. Aust.	W. Aust.	Tas.	A.C.T.	Aust.
Brick, Brick Veneer, Concrete and Stone ..	6,306	7,221	741	5,661	3,106	515	302	23,852
Wood (Weatherboard, etc.) ..	7,479	14,612	5,822	734	209	1,898	94	30,848
Fibro Cement ..	15,050	1,554	1,277	860	5,474	67	2	24,284
Other ..	47	173	85	68	3	..	..	376
Total ..	28,882	23,560	7,925	7,323	8,792	2,480	398	79,360

(ii) *Completed, 1947-48 to 1954-55.* The following table shows the number of new houses completed in each State for the years 1947-48 to 1954-55, by Contractors and Owner-Builders separately.

## NEW HOUSES COMPLETED : NUMBER.

Year.	N.S.W.	Vic.	Q'land.	S. Aust.	W. Aust.	Tas.	A.C.T.	Aust.
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## CONTRACT-BUILT(a).

1947-48 ..	(b)	9,946	6,296	2,659	2,465	1,143	268	(b)
1948-49 ..	(b)	11,379	6,713	3,402	2,534	1,563	313	(b)
1949-50 ..	(b)	12,326	6,807	4,190	2,591	1,919	402	(b)
1950-51 ..	(b)	15,210	7,423	5,656	3,461	2,501	560	(b)
1951-52 ..	14,987	15,849	8,056	6,117	4,208	2,342	566	52,125
1952-53 ..	13,151	12,619	7,763	7,179	4,932	1,829	568	48,041
1953-54 ..	14,296	12,062	7,149	5,802	4,569	1,536	530	45,944
1954-55 ..	16,658	14,450	6,419	5,672	5,766	1,504	369	50,838

## OWNER-BUILT.

1947-48 ..	(b)	1,900	2,908	350	306	401	3	(b)
1948-49 ..	(b)	2,899	2,641	587	710	724	10	(b)
1949-50 ..	(b)	3,285	2,640	714	918	933	2	(b)
1950-51 ..	(b)	5,951	2,852	1,069	1,699	1,413	14	(b)
1951-52 ..	8,364	8,102	3,747	1,594	2,369	1,657	18	25,851
1952-53 ..	11,739	8,414	2,835	1,761	3,033	1,485	22	29,289
1953-54 ..	12,217	9,323	1,812	1,720	3,058	1,094	22	29,246
1954-55 ..	12,774	9,110	1,506	1,651	3,026	976	20	28,522

## TOTAL.

1947-48 ..	(c) 14,858	11,846	9,204	3,009	2,771	1,544	271	(c) 43,503
1948-49 ..	(c) 17,864	14,278	9,354	3,989	3,244	2,287	323	(c) 51,339
1949-50 ..	(c) 18,766	15,611	9,447	4,904	3,509	2,852	404	(c) 55,493
1950-51 ..	(c) 19,771	21,101	10,275	6,725	5,160	3,914	574	(c) 67,580
1951-52 ..	23,351	23,951	11,803	7,711	6,577	3,999	584	77,976
1952-53 ..	24,890	21,033	10,598	8,940	7,965	3,314	590	77,330
1953-54 ..	26,513	21,385	8,961	7,522	7,627	2,630	552	75,190
1954-55 ..	28,882	23,560	7,925	7,323	8,792	2,480	398	79,360

(a) Includes operations of Government Authorities.

(b) Not available.

(c) Partly estimated.

(iii) *Commenced, Completed and Under Construction, 1947-48 to 1954-55.* The next table provides a summary, by States, of the numbers of new houses commenced, completed and under construction for the years 1947-48 to 1954-55.

**NEW HOUSES : NUMBER.**  
(Including Owner-built Houses.)

Year.	N.S.W.	Vic.	Q'land.	S. Aust.	W. Aust.	Tas.	A.C.T.	Aust.
COMMENCED.								
1947-48	a 19,807	15,478	9,528	3,580	3,075	2,062	393	a 53,923
1948-49	a 21,291	16,487	9,361	4,561	3,843	2,849	534	a 58,926
1949-50	a 22,055	19,643	10,009	6,109	5,031	3,664	389	a 66,900
1950-51	a 25,162	26,949	10,698	7,966	6,970	4,122	877	a 82,744
1951-52	a 24,364	23,506	11,995	8,510	7,730	3,584	312	80,001
1952-53	21,030	16,254	9,381	7,967	7,012	2,285	528	64,457
1953-54	28,395	20,915	8,513	6,792	7,608	2,665	355	75,243
1954-55	25,502	22,674	7,784	7,190	8,575	2,867	640	75,232
COMPLETED.								
1947-48	a 14,858	11,846	9,204	3,099	2,771	1,544	271	a 43,503
1948-49	a 17,864	14,278	9,354	3,980	3,244	2,287	323	a 51,339
1949-50	a 18,766	15,611	9,447	4,904	3,509	2,852	404	a 55,493
1950-51	a 19,771	21,161	10,275	6,725	5,160	3,914	574	a 67,586
1951-52	23,351	23,951	11,803	7,711	6,577	3,999	584	77,976
1952-53	24,890	21,033	10,598	8,940	7,905	3,314	590	77,330
1953-54	26,513	21,385	8,961	7,522	7,627	2,630	552	75,190
1954-55	28,582	23,560	7,925	7,373	8,792	2,480	398	79,366
UNDER CONSTRUCTION AT END OF YEAR.								
1947-48	a 19,686	15,312	3,951	3,203	1,811	2,065	491	a 40,549
1948-49	a 23,113	17,321	3,958	3,940	2,439	2,575	696	a 54,242
1949-50	a 26,402	21,553	4,520	5,241	3,957	3,357	678	a 65,708
1950-51	a 31,793	27,341	4,943	6,529	5,764	3,558	981	a 80,909
1951-52	a 32,806	26,896	5,135	7,395	6,917	3,143	708	a 83,009
1952-53	a 28,946	22,053	3,918	6,464	5,951	2,114	646	a 70,092
1953-54	a 30,328	21,531	3,470	5,759	5,932	2,149	449	a 70,159
1954-55	a 27,448	20,602	3,320	5,632	5,715	2,536	601	a 66,013

(a) Partly estimated.

4. **Numbers of New Flats.**—The figures in the foregoing two tables do not include particulars of new flats. The summary below shows the numbers of new flats commenced, completed and under construction in Australia for the years 1948-49 to 1954-55, together with State details for 1954-55. It should be noted : (i) that the figures are additional to the numbers of houses shown in other tables, (ii) that each flat is counted as a separate unit, and the numbers shown therefore relate to individual flats, and (iii) that new flats only are included, i.e., the conversions of old buildings into flats are omitted.

**NEW FLATS : NUMBER.**  
(Individual Flats.)

State or Territory.	Commenced during Period.	Completed during Period.	Under Construction at end of Period
1954-55—			
New South Wales	782	701	739
Victoria	1,183	781	1,173
Queensland	278	309	92
South Australia	72	105	82
Western Australia	380	316	538
Tasmania	85	48	85
Australian Capital Territory	130	12	146
Total	2,910	2,272	2,855
Total, 1953-54	2,446	2,180	2,235
„ 1952-53	1,055	2,627	1,979
„ 1951-52	1,811	2,006	3,426
„ 1950-51	2,096	1,684	3,621
„ 1949-50	2,292	1,494	3,210
„ 1948-49	2,021	1,345	2,416

5. **Persons engaged in New Building.**—The following table shows, by States, the number of persons (including contractors and sub-contractors actually working on jobs) engaged on jobs carried out by builders of new buildings at 30th June of the years 1949 to 1955. Particulars for 30th June, 1955 show the numbers of tradesmen, contractors, sub-contractors and wage earners engaged. For an explanation of the field of employment covered see para. 1 of this section.

## PERSONS ENGAGED ON JOBS CARRIED OUT BY BUILDERS ON NEW BUILDINGS.

(Excluding Persons working on Owner-built Houses.)

Particulars.	N.S.W.	Vic.	Q'land.	S. Aust.	W. Aust.	Tas.	A.C.T.	Aust.
30th June, 1955—								
Carpenters ..	14,582	14,075	8,958	3,251	3,903	2,719	670	48,158
Bricklayers ..	3,652	2,695	928	1,724	942	343	199	10,483
Painters ..	3,165	2,604	1,699	942	848	461	176	9,895
Electricians ..	2,043	1,118	898	424	357	212	78	5,130
Plumbers ..	3,446	2,154	1,319	774	746	318	116	8,873
Builders' Labourers ..	6,498	6,124	3,156	1,965	2,103	1,220	396	21,462
Other ..	4,823	3,626	1,697	1,796	1,538	631	278	14,389
Contractors(a) ..	3,818	2,519	2,322	767	808	499	72	10,805
Sub-contractors(a) ..	5,633	4,124	1,607	1,673	1,324	630	138	15,129
Wage earners ..	28,758	25,753	14,726	8,436	8,305	4,775	1,703	92,456
Total ..	38,209	32,396	18,655	10,876	10,437	5,904	1,913	118,390
Total 30th June, 1954 ..	36,600	28,476	17,269	10,038	9,245	4,826	1,341	107,795
" " " 1953 ..	31,790	26,564	16,074	9,371	8,820	5,180	1,812	99,611
" " " 1952 ..	39,779	31,653	17,037	10,371	8,654	5,267	2,229	114,990
" " " 1951 ..	45,470	34,420	16,623	10,168	7,985	6,700	2,075	123,441
" " " 1950 ..	42,393	31,684	15,643	8,743	6,908	5,700	2,022	113,093
" " " 1949 ..	41,982	28,442	14,030	7,727	6,220	4,920	1,389	104,710

(a) Actually working on jobs.

## § 4. Consumption of Foodstuffs and Beverages.

1. Quantities Consumed.—Previous issues of the Official Year Book up to No. 36 included a statistical survey of the movement in the consumption in Australia, in total and per head of population, of a selected number of commodities over a period of years up to 1940-41 (*see* Official Year Book No. 36, pp. 1098-1100). In issue No. 37 these long-term comparisons were replaced by more detailed information covering consumption of the principal foodstuffs and beverages in annual periods since 1944 in comparison with average annual consumption during the three years ended 1938-39. In this issue the annual periods extend from 1950-51 to 1954-55.

The estimates of total consumption and consumption per head of population in Australia in the two tables following have been compiled by deducting net exports from production and allowing for recorded movements in stocks of the respective commodities. While the estimates may generally be accepted as 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 visible oils and other 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 of stocks for 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, and except in a few special cases no adjustment has been made for changes in stocks held by wholesalers and retailers. In recent years, wastage of foodstuffs has possibly been less than hitherto because of more efficient distribution and storage methods. In addition, it is likely that the quantities of foodstuffs shown in the following pages as available for consumption have been supplemented by increased "back-yard" production. Neither of these factors has been taken into account, and it is possible that, as a result, some understatement has occurred in the following consumption estimates. Estimates have been made in certain cases to allow for changes in wholesalers' and retailers' stocks. 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 table following have been checked, wherever possible, with data from other sources which confirm the reliability of the methods used. The data were obtained principally from the Food Consumption Survey conducted in 1944 by the Nutrition Committee of the National Health and Medical Research Council.

More detailed information on the consumption of foodstuffs and beverages is contained in the Statistical Bulletin: *Food Production and the Consumption of Foodstuffs and Nutrients in Australia*, issued by this Bureau.

### ESTIMATED QUANTITY OF FOODSTUFFS AND BEVERAGES AVAILABLE FOR CONSUMPTION ANNUALLY: AUSTRALIA.

Commodity.	Unit of Quantity.	Average 1936-37 to 1938-39.	1950-51.	1951-52.	1952-53.	1953-54.	1954-55. (a)
<b>Milk and Milk Products—</b>							
Fluid Whole Milk .. ..	Mil. gals.	161	236	240	243	253	255
Fresh Cream .. ..	'000 tons	19.7	8.9	7.6	7.8	8.0	8.1
Condensed Milk (Sweetened and Unsweetened) .. ..	"	9.9	15.8	21.4	13.1	15.7	16.6
Concentrated Whole Milk ..	"	3.4	18.3	16.8	14.5	19.5	11.0
Powdered Milk—							
Full Cream .. ..	"	8.1	{ 9.9	10.8	9.7	10.4	9.4
Skim .. ..	"						
Infants' and Invalids' Foods (including Malted Milk) ..	"	3.0	6.8	6.6	5.7	7.6	6.0
Cheese .. ..	"	13.4	24.2	22.8	23.0	26.2	23.8
Total (in terms of Milk Solids) .. ..	"	120.5	176.7	179.8	177.0	189.5	184.9
<b>Meat—</b>							
Beef (bone-in weight) .. ..	"	442.0	488.2	452.8	466.7	455.2	466.2
Mutton (bone-in weight) ..	"	183.4	142.5	155.6	193.0	204.4	204.5
Lamb (bone-in weight) .. ..	"	46.1	91.2	91.6	112.4	106.8	104.7
Pork (bone-in weight) .. ..	"	31.8	25.2	27.6	22.7	30.5	39.6
Offal .. ..	"	25.7	32.5	34.7	40.4	41.9	43.3
Canned Meat (canned weight)	"	(b)	11.8	9.5	7.8	7.9	9.9
Bacon and Ham (cured weight)	"	31.4	30.8	27.5	28.3	28.5	32.0
Total (in terms of carcass weight) .. ..	"	776.1	840.8	817.9	888.3	887.8	912.2
<b>Poultry, Game and Fish—</b>							
Poultry and Rabbits (carcass weight) .. ..	"	29.8	56.2	57.7	59.1	60.2	61.4
Fish(c)—							
Fresh .. ..	"	19.7	18.6	21.0	20.2	22.5	22.0
Cured (including Smoked and Salted) .. ..	"	(d)	3.7	3.5	3.3	3.2	4.0
Crustaceans and Molluscs ..	"	2.1	3.1	2.5	2.6	3.3	4.3
Canned — Australian origin ..	"	12.4	{ 2.9	2.7	2.7	3.1	2.5
Imported .. ..	"						
Total(c) .. ..	"	51.5	70.6	73.0	65.4	73.7	77.0
<b>Eggs and Egg Products—</b>							
Shell Eggs .. ..	"	78.7	84.7	82.4	80.4	82.8	85.9
Liquid Whole Egg(e) .. ..	"	2.9	7.9	8.2	6.4	5.4	6.5
Egg Powder(e) .. ..	"	..	0.2	0.3	0.2	0.2	0.1
Total (Shell Egg equivalent) .. ..	"	81.6	92.8	90.9	87.0	88.4	92.5
Fats and Oils—							
Butter .. ..	'000 tons	101.0	114.6	118.9	114.5	121.6	122.8
Margarine—							
Table .. ..	"	2.8	1.7	4.7	6.2	8.5	9.6
Other .. ..	"	12.2	22.5	24.9	21.8	22.3	22.2
Lard .. ..	"	5.2	3.8	3.9	3.9	3.9	3.0
Vegetable Oils and Other Fats	"	14.4	14.8	15.2	15.6	15.9	16.2
Total (Fat Content) .. ..	"	115.5	133.7	142.4	137.8	146.3	149.6

See next page for notes.

## ESTIMATED QUANTITY OF FOODSTUFFS AND BEVERAGES AVAILABLE FOR CONSUMPTION ANNUALLY: AUSTRALIA—continued.

Commodity.	Unit of Quantity.	Average 1936-37 to 1938-39.	1950-51.	1951-52.	1952-53.	1953-54.	1954-55. (a)
<b>Sugar and Syrups—</b>							
Refined Sugar—							
As Sugar .. .. .	'ooo tons	216.5	251.9	244.4	250.9	257.9	251.2
In manufactured products ..	"	110.1	194.1	203.2	174.2	187.9	205.9
Honey, Glucose and Syrups ..	"	21.9	28.9	21.4	21.7	25.1	21.4
<b>Total (Sugar Content) ..</b>	"	343.9	468.9	464.5	442.4	474.9	474.2
<b>Potatoes—</b>							
White .. .. .	"	318.5	341.7	412.9	376.1	485.4	417.1
Sweet .. .. .	"	7.4	5.2	5.3	5.5	5.6	5.7
<b>Total .. .. .</b>	"	325.9	346.9	418.2	381.6	491.0	422.8
<b>Pulse and Nuts—</b>							
Dried Pulse .. .. .	"	4.5	11.8	12.4	8.9	14.9	12.3
Peanuts (weight without shell) ..	"	2.8	5.8	5.5	5.3	7.5	12.0
Edible Tree Nuts (weight without shell) ..	"	2.6	8.6	5.1	5.6	6.8	7.2
Cocoa (Raw Beans) .. .. .	"	6.3	12.3	11.2	9.6	11.3	11.9
<b>Total .. .. .</b>	"	16.2	38.5	34.2	29.4	40.5	43.4
<b>Tomatoes and Fruit—</b>							
Tomatoes (f) .. .. .	"	(g) 48.0	83.5	82.7	84.1	73.1	87.4
Citrus Fruit (f) .. .. .	"	97.8	149.3	117.5	113.7	150.7	143.6
Other Fresh Fruit .. .. .	"	288.2	281.9	286.8	253.5	316.3	303.8
Jams .. .. .	"	35.1	41.7	37.8	33.7	36.1	36.2
Dried Fruit .. .. .	"	24.8	35.1	30.6	28.0	29.3	30.1
Canned Fruit .. .. .	"	31.9	44.7	54.6	47.9	48.3	55.8
<b>Total (Fresh Fruit equivalent) .. .. .</b>	"	580.3	724.9	687.0	630.6	730.5	741.0
<b>Vegetables—</b>							
Leafy, Green and Yellow Vegetables .. .. .	"	(h)	182.6	175.4	173.0	166.5	164.3
Other Fresh Vegetables .. .. .	"	(h)	260.4	273.5	249.5	245.9	238.4
Canned Vegetables .. .. .	"	(h)	18.3	20.3	13.1	18.2	18.9
<b>Total .. .. .</b>	"	(h)	461.3	469.2	435.6	430.6	421.6
<b>Grain Products—</b>							
Flour—							
White .. .. .	"	574.0	692.0	719.2	720.4	721.2	721.8
Sharps .. .. .	"		1.9	2.8	1.5	2.1	1.6
Wheatmeal for baking .. .. .	"		34.0	32.7	31.4	31.4	29.4
Breakfast Foods (i) .. .. .	"	32.5	42.6	46.2	51.3	51.7	50.8
Rice (Milled) .. .. .	"	12.2	14.7	17.9	15.2	14.7	14.2
Tapioca, Sago, etc. .. .. .	"	3.7	2.9	2.3	1.9	1.6	1.4
Pearl Barley .. .. .	"	3.0	2.3	2.4	2.2	2.1	2.2
Burley Meal and Polished Wheat (Rice substitute) .. .. .	"	..	1.1	0.8	0.8	0.8	0.8
Edible Starch (Cornflour) .. .. .	"	4.3	5.7	3.5	3.0	3.9	3.6
<b>Total .. .. .</b>	"	629.7	797.2	827.8	827.7	829.5	825.8
<b>Beverages—</b>							
Tea .. .. .	"	21.1	27.8	24.8	25.3	27.0	21.3
Coffee .. .. .	"	2.0	2.7	3.2	2.6	4.3	4.5
Beer .. .. .	Mill. gals.	80.1	169.5	181.0	190.7	205.2	220.5
Wine .. .. .	"	4.2	13.4	15.3	11.9	12.4	11.1

(a) Subject to revision. (b) Included with fresh meat at its carcass weight. (c) Edible weight. (d) Included with fresh. (e) In terms of weight of shell eggs. (f) Includes fresh equivalent of manufactured products. (g) Probably understated owing to lack of complete data. (h) Not available. (i) Excludes invalid and health foods, semolina and wheat germ prior to 1951-52.

## ESTIMATED QUANTITY OF FOODSTUFFS AND BEVERAGES AVAILABLE FOR CONSUMPTION ANNUALLY PER HEAD OF POPULATION : AUSTRALIA.

Commodity.	Unit of Quantity.	Average 1936-37 to 1938-39.	1950-51.	1951-52.	1952-53.	1953-54.	1954-55. (a)
<b>Milk and Milk Products—</b>							
Fluid Whole Milk .. ..	Gallon	23.4	28.4	28.1	27.8	28.4	28.0
Fresh Cream .. ..	lb.	6.4	2.4	2.0	2.0	2.0	2.0
Condensed Milk (Sweetened and Unsweetened) .. ..	"	3.2	4.2	5.6	3.4	3.9	4.1
Concentrated Whole Milk .. ..	"	1.1	4.9	4.4	3.7	4.9	2.9
Powdered Milk—							
Full Cream .. ..	"	2.6	2.7	2.8	2.5	2.6	2.3
Skim .. ..	"			0.8	0.6	1.0	0.7
Infants' and Invalids' Foods (including Malted Milk) .. ..	"	1.0	1.8	1.7	1.4	1.9	1.5
Cheese .. ..	"	4.4	6.5	6.0	5.9	6.6	5.9
Total (in terms of Milk Solids) .. ..	"	39.3	47.8	47.2	45.3	47.8	45.5
<b>Meat—</b>							
Beef (bone-in weight) .. ..	"	144.1	131.6	118.9	119.7	114.6	114.9
Mutton (bone-in weight) .. ..	"	59.8	38.4	40.9	49.5	51.4	50.4
Lamb (bone-in weight) .. ..	"	15.0	24.6	24.0	28.8	26.9	25.8
Pork (bone-in weight) .. ..	"	10.4	6.8	7.3	5.8	7.7	9.8
Offal .. ..	"	8.4	8.8	9.1	10.3	10.6	10.7
Canned Meat (canned weight) .. ..	"	(b)	3.2	2.5	2.0	2.0	2.4
Bacon and Ham (cured weight) .. ..	"	10.2	8.3	7.2	7.3	7.2	7.9
Total (in terms of carcass weight) .. ..	"	253.0	226.6	214.8	227.7	223.5	224.8
<b>Poultry, Game and Fish—</b>							
Poultry and Rabbits (carcass weight) .. ..	"	9.7	15.1	15.1	15.1	15.1	15.1
<b>Fish (c)—</b>							
Fresh .. ..	"	6.4	5.0	5.5	5.2	5.7	5.4
Cured (including Smoked and Salted) .. ..	"	(d)	1.0	0.9	0.9	0.8	1.0
Crustaceans and Molluscs .. ..	"	0.7	0.9	0.7	0.7	0.8	1.1
Canned—							
Australian origin .. ..	"	4.1	0.8	0.7	0.7	0.8	0.6
Imported .. ..	"			2.6	0.6	1.7	2.2
Total (c) .. ..	"	16.8	19.1	19.1	16.8	18.5	19.0
<b>Eggs and Egg Products—</b>							
Shell Eggs .. ..	"	25.7	22.9	21.6	20.6	20.8	21.2
Liquid Whole Egg (e) .. ..	"	0.9	2.1	2.2	1.6	1.4	1.6
Egg Powder (e) .. ..	"	..	0.1	0.1	0.1	0.1	0.0
Total (Shell Egg equivalent) .. ..	{ No.	26.6	25.1	23.9	22.3	22.3	22.8
		243	229	219	204	204	209
<b>Fats and Oils—</b>							
Butter .. ..	lb.	32.9	30.9	31.2	29.4	30.6	30.3
<b>Margarine—</b>							
Table .. ..	"	0.9	0.5	1.2	1.6	2.1	2.4
Other .. ..	"	4.0	6.1	6.5	5.6	5.6	5.5
Lard .. ..	"	1.7	1.0	1.0	1.0	1.0	1.2
Vegetable Oils and other Fats .. ..	"	4.7	4.0	4.0	4.0	4.0	4.0
Total (Fat Content) .. ..	"	37.6	36.0	37.3	35.4	36.8	36.9
<b>Sugar and Syrups—</b>							
Refined Sugar—							
As Sugar .. ..	"	70.6	67.9	64.2	64.3	64.9	61.9
In manufactured products .. ..	"	35.9	52.3	53.4	44.7	47.3	50.7
Honey, Glucose and Syrups .. ..	"	7.1	7.7	5.6	5.6	6.3	5.3
Total (Sugar Content) .. ..	"	112.0	126.2	122.0	113.5	117.2	116.8

See next page for notes.

ESTIMATED QUANTITY OF FOODSTUFFS AND BEVERAGES AVAILABLE  
FOR CONSUMPTION ANNUALLY PER HEAD OF POPULATION:  
AUSTRALIA—continued.

Commodity.	Unit of Quantity.	Average 1936-37 to 1938-39.	1950-51.	1951-52.	1952-53.	1953-54.	1954-55. (a)
Potatoes—							
White .. .. .	lb.	103.8	92.1	108.3	96.4	122.2	102.8
Sweet .. .. .	"	2.4	1.4	1.4	1.4	1.4	1.4
Total .. .. .	"	106.2	93.5	109.7	97.8	123.6	104.2
Pulse and Nuts—							
Dried Pulse .. .. .	"	1.5	3.2	3.3	2.3	3.7	3.0
Peanuts (weight without shell) .. .. .	"	0.9	1.6	1.4	1.3	1.9	3.0
Edible Tree Nuts (weight without shell) .. .. .	"	0.8	2.3	1.3	1.4	1.7	1.8
Cocoa (Raw Beans) .. .. .	"	2.1	3.3	2.9	2.5	2.8	2.9
Total .. .. .	"	5.3	10.4	8.9	7.5	10.1	10.7
Tomatoes and Fruit—							
Tomatoes (f) .. .. .	"	(g) 15.7	22.5	21.7	21.6	18.4	21.5
Citrus Fruit (f) .. .. .	"	31.9	40.2	30.8	29.2	37.9	35.4
Other Fresh Fruit .. .. .	"	94.0	76.0	75.3	65.0	79.6	74.9
Jams .. .. .	"	11.4	11.2	9.9	8.6	9.1	8.9
Dried Fruit .. .. .	"	8.1	9.5	8.0	7.1	7.3	7.4
Canned Fruit .. .. .	"	10.7	12.1	14.4	12.3	12.2	13.8
Total (Fresh Fruit equivalent) .. .. .	"	189.2	195.6	180.0	161.7	183.8	182.6
Vegetables—							
Leafy, Green and Yellow Vegetables .. .. .	"	(h)	49.2	46.1	44.3	42.0	40.5
Other Fresh Vegetables .. .. .	"	(h)	70.1	71.8	63.9	61.9	58.8
Canned Vegetables .. .. .	"	(h)	4.9	5.3	3.4	4.6	4.7
Total .. .. .	"	(h)	124.2	123.2	111.6	108.5	104.0
Grain Products—							
Flour—							
White .. .. .	"	187.1	186.7	188.9	184.8	181.5	177.9
Sharps .. .. .	"		0.5	0.7	0.4	0.5	0.4
Wheatmeal for baking .. .. .	"		9.2	8.6	8.0	7.9	7.2
Breakfast Foods (i) .. .. .	"	10.6	11.4	12.1	13.2	13.0	12.4
Rice (milled) .. .. .	"	4.0	4.0	4.7	3.9	3.7	3.5
Tapioca, Sago, etc. .. .. .	"	1.2	0.8	0.6	0.5	0.4	0.3
Pearl Barley .. .. .	"	1.0	0.6	0.6	0.6	0.5	0.5
Barley Mica and Polished .. .. .	"						
Wheat (Rice substitute) .. .. .	"		0.3	0.2	0.2	0.2	0.2
Edible Starch (Cornflour) .. .. .	"	1.4	1.5	0.9	0.8	1.0	0.9
Total .. .. .	"	205.3	215.0	217.3	212.4	208.7	203.3
Beverages—							
Tea .. .. .	"	6.9	7.5	6.5	6.5	6.8	6.0
Coffee .. .. .	"	0.6	0.7	0.8	0.7	1.1	1.1
Beer .. .. .	Gallon	11.7	20.4	21.2	21.8	23.1	24.3
Wine .. .. .	"	0.6	1.6	1.8	1.4	1.4	1.2

(a) Subject to revision. (b) Included with fresh meat at its carcass weight. (c) Edible weight. (d) Included with fresh. (e) In terms of weight of shell eggs. (f) Includes fresh equivalent of manufactured products. (g) Probably understated owing to lack of complete data. (h) Not available. (i) Excludes invalid and health foods, semolina and wheat germ prior to 1951-52.

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 1950-51 in comparison with the annual average for the three years 1936-37 to 1938-39. 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 consumed per head of population shown in the preceding table.

ESTIMATED SUPPLIES OF NUTRIENTS AVAILABLE FOR CONSUMPTION :  
AUSTRALIA.

(Per Head per Day.)

Nutrient.	Unit.	Average 1936-37 to 1938-39.	1950-51.	1951-52.	1952-53.	1953-54.	1954-55. (a)
Calories ..	No.	3,117	3,269	3,240	3,261	3,338	3,296
Protein—							
Animal ..	gm.	58.7	59.9	57.6	56.5	57.3	56.8
Vegetable ..	"	30.9	33.5	34.2	33.0	33.8	33.1
Total ..	"	89.6	93.4	91.8	89.5	91.1	89.9
Fat ..	"	133.5	128.0	125.6	129.5	132.5	133.1
Carbohydrate ..	"	377.4	411.6	414.5	421.1	426.8	416.1
Calcium ..	mgm.	642	790	784	758	800	758
Iron ..	"	15.4	15.3	14.9	14.0	14.2	13.9
Vitamin A ..	I.U.	8,457	8,161	8,083	7,200	7,254	7,084
Ascorbic Acid ..	mgm.	86	87	83	80	90	83
Thiamin ..	"	1.4	1.4	1.4	1.3	1.3	1.3
Riboflavin ..	"	1.7	1.9	2.0	1.7	1.8	1.7
Niacin ..	"	18.7	18.0	19.9	18.1	18.6	18.5

(a) Subject to revision.

NOTE.—For the years 1952-53 to 1954-55, new conversion factors have been used based on factors contained in the "*Table of Composition of Australian Foods*" (Anita Osmond and Winifred Wilson, Canberra, 1954), but the comparison with previous years has not been significantly affected. Vitamin A is on a revised basis for all years shown.

## § 5. Patents, Trade Marks and Designs.

1. *Patents.*—(i) *General.* Patents for inventions are granted under the Patents Act 1952-1955, 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 £17 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. Patents granted under the repealed Acts (Patents Act 1903-1950) are subject to the renewal fees under those Acts.

(ii) *Summary.* The number of separate inventions in respect of which applications were filed and the number of letters patent sealed during the years 1939 and 1951 to 1955 are shown in the following table.

## PATENTS : AUSTRALIA.

Particulars.	1939.	1951.	1952.	1953.	1954.	1955.
Applications .. ..	5,740	7,135	8,073	8,917	9,073	8,869
Applications accompanied by provisional specifications ..	3,161	2,894	3,406	3,973	3,590	3,220
Letters patent sealed ..	3,141	4,291	5,248	5,181	5,464	5,931



2. Trade Marks and Designs.—(i) *Trade Marks*. Under the Trade Marks Act 1905–1948 the Commissioner of Patents is also Registrar of Trade Marks. This Act has been amended from time to time, the last amendment having been made in 1948. Special provisions for the registration of a “Commonwealth Trade Mark” are contained in the Act of 1905, and are applicable to all goods included in or specified by a resolution passed by both Houses of Parliament that the conditions as to remuneration of labour in connexion with the manufacture of such goods are fair and reasonable. The Act of 1948 provides for the registration of users of trade marks, and also for assignment of trade marks with or without the goodwill of the business concerned.

(ii) *Designs*. Under the Designs Act 1906–1950 the Commissioner of Patents is also Registrar of Designs.

(iii) *Summary*. The following table shows the applications for trade marks and designs received and registered during the years 1939 and 1951 to 1955.

#### TRADE MARKS AND DESIGNS : AUSTRALIA.

Particulars.	1939.	1951.	1952.	1953.	1954.	1955.
<b>Trade Marks—</b>						
Received .. ..	1,992	3,583	3,988	4,305	4,730	4,630
Registered .. ..	1,580	2,649	4,044	1,469	1,400	1,848
<b>Designs—</b>						
Received .. ..	865	773	1,186	1,504	1,373	1,330
Registered .. ..	736	579	1,388	802	900	819

3. Revenue.—The following table shows the revenue of the Commonwealth Patent Office, Trade Marks and Designs Office, and revenue obtained from Copyright for the years 1939 and 1951 to 1955. From 1st July, 1954 a system of payment of fees by “fee stamps” was introduced and fees have since been collected under one head of revenue. Consequently separate figures are not available for the years 1954 and 1955.

#### PATENTS, TRADE MARKS AND DESIGNS AND COPYRIGHT, REVENUE : AUSTRALIA.

(£.)

Particulars.	1939.	1951.	1952.	1953.	1954.	1955.
Patents .. ..	47,409	109,788	126,288	130,292	} 202,290	234,125
Trade Marks and Designs .. ..	17,052	29,480	49,538	45,113		
Copyright .. ..	411	368	577	1,156		
<b>Total .. ..</b>	<b>64,872</b>	<b>139,636</b>	<b>176,403</b>	<b>176,561</b>	<b>202,290</b>	<b>234,125</b>

### § 6. 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.

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 received and registered for the years 1939 and 1951 to 1955.

**COPYRIGHT : AUSTRALIA.**

Particulars.	1939.	1951.	1952.	1953.	1954.	1955.
<b>Applications received—</b>						
Literary .. ..	1,438	1,399	1,434	1,134	1,044	1,005
Artistic .. ..	53	38	34	21	25	17
International .. ..	3	..	..	..	..	..
<b>Applications registered—</b>						
Literary .. ..	1,359	766	1,337	1,411	943	869
Artistic .. ..	38	..	36	15	20	12
International .. ..	1	..	..	..	..	..

**3. Revenue.**—Revenue obtained from copyright during the years 1939 and 1951 to 1955 is shown in §5, para. 3 above.

### § 7. Australian Shipbuilding Board.

**1. Constitution.**—Previous reference to the constitution of the Australian Shipbuilding Board appeared in Official Year Book No. 37, page 1170. 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 Supply and Development Act. At present it operates under the control of the Minister for Shipping and Transport. In order to link the activities of the Board more closely with the Department of Shipping and Transport, the constitution of the Board was altered in April, 1952, to provide for representation by senior departmental officers. The present 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 and one the Australian Shipping Board.

**2. Functions.**—The functions of the Board in relation to merchant shipbuilding are—(i) to report on the capacity of the industry ; (ii) to control building, repair and maintenance of ships and shipyards, etc ; (iii) to arrange construction of vessels and yards, etc. ; (iv) to order and direct repair and docking of vessels ; and (v) to arrange supply of engines and other equipment for ships.

The first actions of the Board were to survey existing shipbuilding potentials and decide upon a construction programme. (*See* Official Year Book No. 37, p. 1170).

The Board also established facilities for the manufacture of marine engines at Rocklea in Queensland, and at Port Melbourne. The Rocklea plant, which produced engines for "A", "B" and "D" class freighters, was closed in 1949, but the Port Melbourne works are still in operation and to December, 1955 had constructed eleven steam and six Doxford diesel propelling engines, and also numerous steering and auxiliary engines and winches. At 31st December, 1955 five Doxford diesel propelling engines were under construction.

To bring the cost to purchasers of Australian tonnage more into line with the cost of comparable vessels built in the United Kingdom the Board is empowered to sell new Australian-built tonnage to private owners at prices up to 25 per cent. below their total construction cost. In order to take advantage of this, private shipowners are required to place their orders for vessels through the Board, which has thus become the ordering authority for all vessels built in Australian yards on which a subsidy is paid.

The Board has also undertaken the preparation of plans and drawings for the various yards, as the level of ship construction in Australia does not warrant each yard employing specialists in naval architecture. In this way the Board has assisted in raising the efficiency of the industry as a whole and also in the development of individual yards.

In the exercise of its functions the Board is responsible for—(i) the design of vessels; (ii) calling of tenders and placements of orders; (iii) co-ordination of the Board's supplies to shipbuilders, e.g., machinery and certain equipment; (iv) supervision of construction; (v) acceptance of vessels after sea trials; and (vi) administration associated with ship repairs, marine engines, spare parts, etc.

In September, 1954, the Tariff Board commenced an inquiry into the level and method of assistance which should be given to the Australian Shipbuilding Industry, with evidence being heard in Melbourne, Sydney and Brisbane. The findings of the Board are not expected to be made public until some time in 1956.

**3. Construction Programme.**—At 31st December, 1955 the Board had 17 vessels under construction or on order in Australian shipbuilding yards. These comprised: 5 "M.B.C." class, 10,000 tons d.w. motor bulk carriers; 3 "S.B.C." class, 10,000 tons d.w. steam bulk carriers; 3 "B.H.T." class, 10,000 tons d.w. steam iron-ore carriers; 2 "M.C." class, 7,000 tons d.w. motor colliers; 1 "B" class, 6,500 tons d.w. freighter; 1 "P.C.V." class, 3,000 tons d.w. passenger/cargo vessel; and 2 "M.G.C." class, 2,000 tons d.w. motor bulk grain carriers. At the same date, 47 vessels exceeding 300 gross tons had been built to the order of the Board, as follows:—1 "B.H.T." class, 10,000 tons d.w. steam iron-ore carrier; 13 "A" class, 9,000 tons d.w. freighters; 1 "M.C." class, 7,000 tons d.w. motor collier; 10 "B" class, 6,000 tons d.w. freighters; 2 "S.C.O." class, 4,000 tons d.w. steam colliers; 9 "D" class, 3,000 tons d.w. freighters; 2 "U/S" class, 3,000 tons d.w. freighters; 2 "D/A" class, 3,000 tons d.w. freighters; 1 passenger/cargo vessel of 3,000 tons d.w.; 1 "M/M" class, 2,000 tons d.w. motor collier; and 5 "E" class, 700 tons d.w. freighters.

Since its inception, the Board has been responsible also for the construction of 24 wooden vessels of 300 tons gross, together with a 1,000 ton floating dock. It was also responsible for the foundation of the small craft construction during the 1939-45 War. This function was, however, later transferred to the Small Craft Construction Directorate, Department of Supply.

## § 8. War Service Homes Division.

The provision of War Service Homes is a function of the War Service Homes Division of the Department of National Development, and the administration of the War Service Homes Act is under the control of the Director of War Service Homes.

The War Service Homes Act 1918-1954 is a measure for the provision of homes for Australian ex-servicemen who served during the 1914-18 War or during any war in which His Majesty became engaged on or after 3rd September, 1939, including, subject to the statutory provision of the Act, service in Korea or Malaya. Provision is also made 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 the case may be, as joint tenants.

The maximum amount of loan or advance which may be granted under the Act is £2,750. The period of repayment may be approved 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 War Service Homes Division does not provide homes for occupation on a purely tenancy basis.

Since the inception of operations under the War Service Homes Act (figures in parentheses indicate cases where eligibility has been established as a result of service during the 1939-45 War or in Korea or Malaya) 147,860 (97,985) applications have been approved; 54,998 (32,299) homes have been built, or assistance to build them has been given; 58,015 (42,871) homes have been purchased; and 15,502 (12,025) mortgages have been discharged. The total number of homes provided under the War Service Homes Act to 30th June, 1955 was 128,515, including 87,195 to persons who served during the 1939-45 War or in Korea or Malaya.

In addition, the Division had approved 11,958 transfers and resales, of which 3,614 were in respect of persons whose eligibility had been established as a result of service during the 1939-45 War or in Korea or Malaya.

During 1954-55, 15,007 (14,230) applications were approved; 5,628 (5,424) homes were built or assistance to build them was given; 5,665 (5,341) homes were purchased; and 1,498 (1,418) mortgages were discharged. The total number of homes provided during the financial year 1954-55 was 12,791 (12,183). Transfers and resales approved numbered 1,070 (939).

At 30th June, 1955, 3,547 homes, including 417 group projects, were in course of construction; 1,221 contracts, of which 124 were for group homes, had been let but work had not started; and 1,288 tenders, including 116 for group homes, had been called but not finally dealt with. The majority of these homes are being provided for persons who served during the 1939-45 War.

The total capital expenditure from inception to 30th June, 1955, was £199,419,769, including £30,086,585 for 1954-55. Receipts from inception to 30th June, 1955 amounted to £82,993,472, including £10,778,768 during 1954-55. Of the total receipts, £43,203,015 has been paid to the National Debt Sinking Fund, including £5,734,270 for 1954-55.

At 30th June, 1955 the total amount of insurances in force, including cover notes, amounted to £236,062,281. From 1st July, 1954 to 30th June, 1955 the premium income amounted to £145,933, and expenditure from the War Service Homes Insurance Trust Account to £394,229.

At 30th June, 1955 arrears of instalments outstanding amounted to £318,776, or 0.40 per cent. of the total instalments due.

## **§ 9. 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 reorganized 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.**—This Act provides for—

- (a) an Executive of the Organization consisting of five members to be appointed by the Governor-General, at least three of whom shall be persons possessing scientific qualifications; and
- (b) 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 researches 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 (a) to persons engaged in scientific research ; and (b) 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. In accordance with the Act, arrangements have been made to send a number of qualified graduates abroad for training in special fields of work.

4. **Work of the Organization.**—The activities of the Commonwealth Scientific and Industrial Research Organization have necessitated a widespread and adaptable arrangement of its research laboratories. Undesirable centralization has been avoided mainly in two ways. In the first place, the policy has been followed of establishing laboratories in different places in the Commonwealth wherever the necessary facilities, contacts and other suitable conditions could best be found. Secondly, the Act provides for 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 can 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. However, in 1937, the Commonwealth Government decided to extend the activities of the C.S.I.R. so as to provide assistance to secondary industries, and several laboratories have been established for work in that field ; it was thus in the fortunate position of being able to render to these industries assistance of vital importance almost immediately after the outbreak of war. In fact, the remarkable technological advances and developments in secondary industrial production during the war would to a large extent have been impossible had it not been for the assistance rendered by scientific research, and this may well serve as a forceful illustration of what may be accomplished in times of peace.

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 seventeen, 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 on a Commonwealth-wide basis 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.

The Divisions which have been established are as follows :—

- (1) Plant Industry, with main laboratories at Canberra and Brisbane and field stations.
- (2) Entomology, with main laboratories at Canberra and field stations.
- (3) Animal Health and Production, with main laboratories in Melbourne, Sydney and Brisbane and field stations.

- (4) Biochemistry and General Nutrition, with main laboratories at Adelaide and field stations.
- (5) Soils, with main laboratories at Adelaide and extensive operations in the field.
- (6) Forest Products, with main laboratories in Melbourne and field experiments.
- (7) Food Preservation and Transport, with main laboratories at Homebush, New South Wales, and a subsidiary laboratory in Brisbane.
- (8) Fisheries and Oceanography, with main laboratories at Cronulla, New South Wales, subsidiary laboratories in Perth, Western Australia, Dunwich, Queensland, and Thursday Island, and experimental work in coastal waters of Australia.
- (9), (10), (11) Metrology, Physics and Electrotechnology, comprising the National Standards Laboratory at Sydney.
- (12) Radiophysics, with main laboratory at Sydney.
- (13) Industrial Chemistry, with main laboratories in Melbourne.
- (14) Tribophysics, with laboratories in Melbourne.
- (15) Building Research, with laboratories in Melbourne.
- (16) Mathematical Statistics, with main laboratory in Adelaide.
- (17) Meteorological Physics, with main laboratory in Melbourne and field station.

The following are the Sections :—

- (1) Commonwealth Research Station, Murray Irrigation Area, Merbein, Victoria.
- (2) Irrigation Research Station, Griffith, New South Wales.
- (3) Radio Research Board, Sydney.
- (4) Dairy Research, Melbourne.
- (5) Mineragraphic Investigations, Melbourne.
- (6) Ore-dressing Investigations, Melbourne and Kalgoorlie.
- (7) Plant Fibre, Melbourne.
- (8) Physical Metallurgy, Melbourne.
- (9) Wool Textile Research Laboratories, Geelong, Melbourne and Sydney.
- (10) Coal Research, Sydney.
- (11) Mathematical Instruments, Sydney.
- (12) Wildlife Survey, with main laboratory in Canberra, subsidiary laboratory at Albury, and field experiments.
- (13) Land Research and Regional Survey, with headquarters in Canberra, and field stations at Ayr (Queensland), Katherine (Northern Territory) and Ivanhoe (Kimberley, Western Australia).
- (14) Animal Genetics, Sydney.

In addition to its investigational work, the Organization deals with inquiries covering a wide range of scientific and technical subjects and maintains Scientific Research Liaison Offices in London and Washington.

An Agricultural Research Liaison Section established at the Organization's Head Office assists in making results in agricultural research speedily available to State Departments of Agriculture for use in their extension work.

Recently 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 and Central Experimental Workshops. 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. The fact that contributions and grants account for over one-eighth of the total annual expenditure indicates that the C.S.I.R.O. has succeeded in a very large measure in gaining the confidence of the public.

The activities of the C.S.I.R.O. are now so comprehensive in their scope and so widely distributed that it is not an easy matter to present an adequate picture of them in a concise form. For details of the investigations in progress, reference should be made to the Annual Report of the Organization.

### § 10. Commonwealth Observatory.

1. **Foundation of Observatory.**—The Observatory was founded primarily to prosecute astrophysical research, including the study of the relations between solar and terrestrial phenomena. A short history of the foundation of the Observatory appears in Official Year Book No. 19, p. 979.

2. **Site of Observatory.**—The Observatory is situated on Mount Stromlo, which forms part of a ridge of hills about seven miles west of Canberra. The highest point in the ridge is 2,560 feet above sea level, that is about 700 feet above the general level of the surrounding country.

3. **Equipment.**—The major items of equipment at Mount Stromlo comprise a 74-inch reflector, a 50-inch reflector, which is the re-built Melbourne 48-inch telescope, a 30-inch reflector donated by the late J. H. Reynolds, Esq., a 20-inch reflector once the property of the late J. H. Catts, M.P., as well as a 9-inch refractor, a solar tower telescope of 45 feet focal length and other smaller telescopes. A photographic refractor of 26-inch aperture belonging to the Universities of Yale and Columbia is now installed in a dome provided by the Commonwealth Government.

4. **Functions of Observatory.**—Investigations in the fields of stellar spectroscopy, stellar photometry and variable stars are being carried out. In addition to covering the type of astrophysical research for which the Observatory was founded, the field of work has been extended to include experimental and theoretical investigations of the ionosphere, and the determination of time. The observatory is now responsible for the accuracy of the Australian Time Service. Considerable attention is being given to the development of this work, and a highly accurate quartz clock system has been installed. A photographic zenith tube has been acquired for time determination.

5. **International Co-operation.**—The Commonwealth Observatory works in close liaison with oversea observatories and major equipment has been or is being installed at Mt. Stromlo in co-operation with the University Observatories of Yale and Columbia (U.S.A.), Uppsala (Sweden), and Munich (Germany).

### § 11. 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.

The 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, chemical industry, timber industry, transportation, aircraft materials, ferrous and non-ferrous metallurgy, textiles, mining, ceramics, medical and dental materials, household and domestic economy, miscellaneous and general.

These committees are comprised 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 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 (I.S.O.). The Association also administers the Australian National Committees of the International Electrotechnical Commission, the World Power Conference and the International Commission on Large Dams.

The Association is also the representative of the British Standards Institution, and all British standards may be purchased from headquarters and branch offices in the various States.

The headquarters of the Association are at Science House, Gloucester Street, Sydney, and branches of the Association are situated at Temple Court, 422 Collins Street, Melbourne ; School of Arts Building, 162 Ann Street, Brisbane ; Alliance Building, Grenfell Street, Adelaide ; Gledden Building, Hay Street, Perth ; c/o Engineering Department, Hobart Technical College, Hobart ; Department of Works, Canberra ; and Howard Smith Chambers, Watt Street, Newcastle.

## § 12. Film Censorship Board.

1. **Legislation.**—The Censorship of imported films derives its authority from Section 52 (g) of the Customs Act which gives power to prohibit the importation of goods. Under this section, regulations have been issued prohibiting the importation of films except under certain conditions and with the consent of the Minister. The regulations provide, *inter alia*, that no film shall be registered which in the opinion of the Censor is (a) blasphemous, indecent or obscene ; (b) likely to be injurious to morality, or to encourage or incite to crime ; (c) likely to be offensive to the people of any friendly nation ; (d) likely to be offensive to the people of the British Empire ; or (e) depicts any matter the exhibition of which is undesirable in the public interest.

The regulations governing the exportation of Australian-made films are similar with the addition that no film may be exported which in the opinion of the Censorship is likely to prove detrimental or prejudicial to the Commonwealth of Australia.

The Censorship consists of a Censorship Board of three persons and an Appeal Censor, the headquarters being in Sydney. There is also a right of appeal to the Minister.

In addition to the censorship of moving pictures, the Censorship may refuse to admit into Australia any advertising matter proposed to be used in connexion with the exhibition of any film. In regard to films and advertising matter produced in Australia, legislation of a uniform nature is now operative in all States except South Australia. Under the State legislation the Commonwealth Film Censorship Organization acts as censor for the States concerned by virtue of agreements entered into between the Commonwealth and the respective State Governments.

2. **Import of Films.**—Imported standard size (35-millimetre) films dealt with by the Censorship for the year 1955 were as follows :—1,148 films of 3,178,017 feet passed without elimination, 120 films of 945,286 feet passed after eliminations and 4 films of 30,485 feet rejected, making a total of 1,272 films of 4,153,788 feet. Appeals were lodged against the rejection of two films, one of which was upheld, whilst the other was disallowed



The countries of origin were as follows :—United States of America, 687 films of 2,249,702 feet ; United Kingdom, 275 films of 960,493 feet ; and other countries, 310 films of 943,593 feet.

The films which chiefly concern the Censorship are the feature or dramatic films. Of these, 412—3,391,605 feet were imported during 1955 (223—1,866,087 feet from the United States of America and 104—787,533 feet from the United Kingdom). Two hundred and ninety-four—2,441,743 feet were passed without eliminations, 114—919,377 feet were passed with eliminations and four films of 30,485 feet were rejected in the first instance. In two instances an appeal was lodged, one of which was upheld, whilst the other was disallowed. During 1953, 401 feature films were dealt with, 278 being passed without eliminations and 122 passed with eliminations, while one film rejected in the first instance was subsequently passed for public exhibition.

There were also imported, during 1955, 5,661 miniature films (16 millimetres) of 3,963,628 feet and 4,413 miniature films (9.5 and 8 millimetres) of 1,637,612 feet. Six 8-millimetre films and three 16-millimetre films were rejected. No appeals were lodged against rejection of the films.

3. *Export of Films.*—The number of films exported for the year 1955 was 2,505 of 1,721,034 feet, of which 1,988 films of 1,335,072 feet were sent to British countries, including Trust Territories and 293 films of 209,044 feet were sent to the United States of America.

### § 13. Australian National Film Board and the Film Division.

1. *The Australian National Film Board.*—The Australian National Film Board was inaugurated in April, 1945, on the recommendations of a Commonwealth Government inter-departmental committee which considered the suggestions of a conference of interested individuals and Commonwealth and State officials, including Directors of Education, called in November, 1944 by the Ministers for Information and Post-war Reconstruction. It was attached, for administrative purposes, to the Department of Information.

With the abolition of the Department of Information 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, distribution and acquisition of films required by Commonwealth departments for the following purposes :—

- (a) 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 ;
- (b) for dissemination abroad to expand trade and commerce with other countries, encourage tourist traffic with Australia, improve Australia's relations with other countries and, where necessary, to explain Australia's national policies, and to encourage immigration.

The constitution provides for a membership of ten, with the Secretary of the Department of the Interior, Chairman, the Director of the News and Information Bureau, Deputy 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.

2. *The Film Division of the News and Information Bureau.*—Production and distribution of all films required by Commonwealth Departments is 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 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 overseas representatives. Non-theatrical distribution in Australia is organized through the National Library, Canberra, in co-operation with State film distribution agencies.

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.

Since 1946 the Film Division has produced 239 films for general exhibition, as well as training and special purpose films. Prints are dispatched to 40 overseas 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. French versions, prepared in Paris under the supervision of the Australian Embassy, circulate through France and French-speaking countries. Selected films have also been recorded in Dutch, German, Italian, Japanese, Hindustani, Tamil and other Indian dialects.

In addition to films made on the initiative of the News and Information Bureau, the Film Division has produced, or is producing, films under the sponsorship or with the co-operation of Commonwealth Departments and many other bodies such as the Commonwealth Bank of Australia, the Road Safety Council, Overseas Telecommunications Commission, Snowy Mountains Hydro-electric Authority, Australian Wine Board, the Australian National University and the Australian Broadcasting Commission.

The co-operation of the Australian motion picture industry with the Commonwealth spontaneously offered at the outset of the 1939-45 War, continues. Special films for urgent national appeals are planned, produced and distributed with the assistance of the National Films Council of the motion picture industry and its Film Production Advisory Committee.

#### § 14. National Safety Council of Australia.

The National Safety Council of Australia was founded in Melbourne in 1927 for the purposes of developing, mainly by means of education, safety on the road, at work and in the home, and its activities have developed in other directions wherever the need for reducing the toll of accidents has been shown. To this end it conducts continuous propaganda through the press and in other ways. It also forms Junior Safety Councils in the schools for developing a safety conscience among children. The children themselves are officers of these Councils and patrol the roads in the neighbourhood of the schools and conduct the scholars across in safety. Posters are available to schools in connexion with Health and Safety lessons. Films specially taken are available for children's and road safety instruction.

A "Safe Driving" campaign for individual motor drivers is conducted as well as a "Freedom from Accidents" competition among employee drivers, those completing a year free from any accident for which they were responsible being given a certificate to that effect. An industrial service of four posters per month, together with slips for pay envelopes, constitutes a regular service for the dissemination of safety advice, and was supplied to over 100,000 workers in factories in 1954-55. Committees deal with specific problems regarding traffic, films, safety in industry, air safety and home dangers. The Air Safety Committee has issued a 32-page booklet "Air Sense" for distribution with pilots' private licences through the Civil Aviation Department, and has a plan for assistance to aircraft in distress which is being implemented throughout Australia.

The Council is supported by Government grants, public subscriptions and sales of service, and is a non-profit organization. Its work is carried on by a small staff controlled by committees and governed by an executive. The following committees, whose work is of an entirely honorary nature, are in operation, namely, Executive, Traffic, Industrial Safety, Home, Air Safety and Publicity.

## § 15. Australian Road Safety Council.

1. **Origin and Organization.**—The Australian Road Safety Council was formed in June, 1947, through the instrumentality of the Australian Transport Advisory Council.

The prime movers for the establishment of the Council were the Australian Automobile Association, which submitted a comprehensive plan: the New South Wales Minister for Transport, who advocated expansion, on a nation-wide basis, of road safety activities on lines similar to those of the Road Safety Council of New South Wales; and the National Safety Council of South Australia, which conveyed recommendations from a Special Safety Convention held in Adelaide in 1946.

At that time, in addition to the above-mentioned organizations in New South Wales and South Australia, there was a road safety organization in Victoria. Steps were immediately taken to form Councils in Queensland, Western Australia and Tasmania, and subsequently for the internal Territories.

The Australian Road Safety Council is the composite body of Road Safety Councils of the following States and Territories of Australia:—

*Governmental.*—New South Wales, Road Safety Council of New South Wales; Queensland, Road Safety Council of Queensland; Tasmania, Road Safety Council of Tasmania; the Australian Capital Territory and the Northern Territory, Road Safety Councils of the Australian Capital Territory and the Northern Territory respectively.

*Non-Governmental.*—Victoria, Victorian Road Safety Division, National Safety Council of Australia; South Australia, Road Safety Division, National Safety Council of South Australia; Western Australia, Road Safety Division, National Safety Council of Western Australia.

The Council is representative, geographically and technically, of the whole Commonwealth, and comprises nominees of practically all classes of road users, together with representatives of road transport, the Department of Defence and police administrations from each State. National organizations represented on the Council are:—The Federal Chamber of Automotive Industries, Council of Fire and Accident Underwriters, Australian Road Transport Federation, Australian Automobile Association, Transport Workers' Union of Australia, Federation of Motor Cycle Importers and Distributors of Australia, and Auto Cycle Council of Australia.

The Council meets annually, and an Executive Committee operates between conferences. The principal effort of the Council is directed through educational, advertising and public relations media.

An annual grant is made available by the Commonwealth Government under the Commonwealth Aid Roads Act for the promotion of road safety. Hitherto £100,000 annually, it has been increased to £150,000 for the five years commencing 1st July, 1955. Of this, £90,000 is allocated to State Road Safety Councils for local activities in the following proportions:—New South Wales, £22,500; Victoria, £18,000; Queensland, £16,650; Western Australia, £14,850; South Australia, £11,250; and Tasmania, £6,750. The remaining £60,000 is applied to the National Campaign, spread equitably over the entire Commonwealth.

2. *Mode of Operation.*—The role of the Australian Road Safety Council is primarily in the field of education and public relations. Its task is to inculcate the habit of safe use of the roads by all who travel on them and to promote the cause of road safety as a humanitarian and community ideal of the highest importance. To this end it constantly strives to increase public awareness of the road accident problem, which for the year ended 30th June, 1955 resulted in 97,758 accidents involving casualties or damage in excess of £10 to property, the deaths of 2,042 persons and injuries to 46,465 persons. (For further information on the subject of Traffic Accidents see pp. 249-251 of this Year Book.)

The Council works in close collaboration with two other committees also established by the Australian Transport Advisory Council, namely, the Australian Motor Vehicle Standards and the Australian Road Traffic Code Committees. All three committees are administered by the Commonwealth Department of Shipping and Transport, which is the executive department for the Australian Transport Advisory Council.

The Australian Motor Vehicle Standards Committee develops and promulgates essential basic motor vehicle standards, such as maximum lengths, weights, height, carrying capacity of vehicles, and minimum lighting, braking and other mechanical efficiencies. In addition to ensuring a greater safety factor, these standards have helped to eliminate many conflicting State requirements which had an adverse effect on design and production costs.

The Australian Road Traffic Code Committee is charged with the responsibility of progressively preparing a "blue print" uniform national traffic code for incorporation in State legislation. Speed limits, right hand turns, rules governing approaches to intersections, qualifications of drivers, and pedestrian behaviour, are a few of the numerous aspects which come within its purview, and a high degree of uniformity has been achieved.

The campaign for road accident prevention resolves broadly into three main elements relating to (i) the Road User, (ii) the Road, and (iii) the Vehicle. Similarly, the attack falls into three main divisions—(i) Education, (ii) Enforcement, and (iii) Engineering. The link between the components is, broadly :—

The Road User	{	Education (public relations media, instruction in schools, homes, etc.).
		Enforcement (of correct road usage—through the police and the courts, uniform traffic laws, etc.).
The Road ..	{	Engineering (technical improvements of all kinds, safer roads and vehicles, improved illumination, uniform vehicle standards, etc.).
The Vehicle ..		

In addition to the foregoing activities, the Council convenes special national conferences, as required by the Australian Transport Advisory Council, to consider specific road safety problems. Typical of these have been the special committee appointed in 1951 to discuss level crossing accidents which recommended, among other measures, the appointment in each State of a committee to investigate level crossings and report on safety provisions, the elimination of some railway level crossings and the closure of others where practicable and desirable; a special meeting held in June, 1953 to discuss methods of reducing the high incidence of motor cycle accidents, at which various measures to offset the greater vulnerability of both the machine and its rider were recommended; and special meetings held in May, 1954 and April, 1955 to consider the problems of "Youth and Road Safety" and "Pedestrian Behaviour" respectively. Through the Road Safety Council of New South Wales, the Australian Road Safety Council has pioneered the advocacy of voluntary blood tests for intoxication in cases of suspected driving under the influence of drugs or alcohol.

## § 16. Australian Atomic Energy 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. The Commission is a corporate and autonomous body, controlling its own service. It functions under the direction of the Minister for Supply.

Commonwealth arrangements for securing collective advice on atomic energy matters date from 1949, when the Industrial Atomic Energy Policy Committee was established to study possible industrial applications of atomic energy, and to recommend a programme of development. This committee functioned until 1952, when it was disbanded at its own suggestion and succeeded by the Atomic Energy Policy Committee, a re-constituted body with enlarged terms of reference. In the light of recommendations by the 1952 Committee, and of scientific and organizational developments overseas in relation to atomic energy, the Government decided on the establishment of the Commission, and legislation was enacted in 1953 to give effect to this decision.

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. These powers and functions are set out in detail in Part II. of the 1953 Act. In general, and subject to the Commonwealth's defence powers and particular provisions of the Act, they are exercisable only in or in relation to the Territories of the Commonwealth.

The search for and mining of uranium 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. For the assistance of private prospectors, and with the object of ascertaining the uranium resources of the Territories, aerial and geological surveys are carried out to identify areas favourable to uranium occurrences. These surveys are undertaken for the Commission by the Bureau of Mineral Resources of the Department of National Development, and the results are published from time to time in map form for general information. As incentives to private enterprise to engage in the search for uranium, rewards have been paid for discoveries. Taxation concessions are allowed in respect of income derived from uranium mining. In addition, the Atomic Energy Commission, the Bureau of Mineral Resources and other Commonwealth agencies make available to prospectors and mining companies a wide range of technical and advisory services.

The development of the uranium resources of the States is a State matter, governed by the legislation and policies of the States. Commonwealth aerial survey facilities are made available to the States for the radiometric examination of areas within the States, and work is undertaken by the State Mines Departments for the Commonwealth on the testing of uranium ores and research on ore treatment problems. At the request of the State Governments, aerial radiometric surveys of approximately 43,000 square miles of selected country within the States had been carried out by the Bureau of Mineral Resources to 30th June, 1955. Prospectors and mining companies in the States have available to them technical and advisory services provided by the State Mines Departments.

Uranium oxide is being produced in Australia from large ore deposits at Rum Jungle, in the Northern Territory, and Radium Hill, in South Australia. The Rum Jungle deposits are being developed under arrangements between the Commonwealth and the Combined Development Agency, a joint procurement organization of the United States and United Kingdom Governments. The actual mining and treatment operations are being conducted for the Commonwealth by an Australian mining company. A treatment plant was brought into operation on the field in September, 1954, the substantial production from which is being sold to the Agency for defence purposes. The Radium Hill deposits are being developed by the South Australian Government, which has established an ore concentration plant on the field and a plant for the treatment of the concentrates at Port Pirie. Like the Rum Jungle project, the operations at Radium Hill and Port Pirie are carried out under arrangements with the combined Development Agency, and the output from the operations is sold to the Agency.

Uranium ores have also been found elsewhere in the Commonwealth, most notably at the Mary Kathleen lease in the Mt. Isa-Cloncurry district in Queensland. The Mary Kathleen lease, containing a large body of ore, is being developed by commercial interests, which are proceeding with the erection of a treatment plant in the area at a cost of several million pounds. Production from the plant will be sold to the United Kingdom Atomic Energy Authority, under arrangements approved by the Commonwealth Government. Amongst other known ore occurrences, some in the Northern Territory are of considerable interest. These are being examined by the mining companies which discovered them, and may prove to justify commercial development.

Arrangements for an extensive programme of research in Australia on the development of the industrial and other peaceful uses of atomic energy are at an advanced stage. A specialized research establishment, which will include a high-flux nuclear reactor of the latest type, is under construction at Lucas Heights, near Sydney, and is expected to be completed in 1957. Meanwhile the Atomic Energy Commission is maintaining a group of about fifty research officers at the United Kingdom Atomic Energy Research Establishment at Harwell, where some Australian scientific workers have been participating in the United Kingdom research and development programme since 1947. Most of the officers at Harwell will return to Australia when facilities for their work are available at Lucas Heights. Within Australia, in addition to its programme at Lucas Heights, the Commission is supporting atomic energy research on a considerable scale in the various universities, and it has established a wide range of post-graduate research studentships and undergraduate scholarships in the universities to train scientists for future work in atomic energy fields.

The broad objects of the Commission's research programme are to develop the production of electric power from nuclear fuels, and to investigate and promote the application of atomic energy and radioactive isotopes in industry, agriculture, medicine and biological research and other fields. In these endeavours the Atomic Energy Commission is working in close co-operation with the United Kingdom Atomic Energy Authority, under arrangements which give Australia access to the results of the very large United Kingdom programme of research on peaceful atomic energy uses. The results of research in Australia will in like manner be made available to the United Kingdom. Work in Australia, while constituting a self-contained programme, will be co-ordinated with the United Kingdom programme, to avoid overlapping of research objectives and duplication of investigations.

In the light of the vast amount of research now going forward overseas, and the programmes of many nations for the establishment of full-scale power producing reactors, it seems clear that nuclear power is rapidly approaching the stage of being economically

practicable. When that stage is reached, the implications for industry will be of great importance. The planned Australian research effort will enable Australia to make a full contribution to the advancement of atomic energy technology, both in power production and in other fields, and will at the same time place the country in a position to take advantage of the practical uses of atomic energy as they are developed.

## § 17. The United Nations.

1. *General.*—The Moscow Declaration of 1943 concerning a new international organization for the maintenance of international peace and security marked the end of the League of Nations. The dissolution of the League, and the transfer of certain of its functions to the new body, the United Nations, took place over subsequent years. Information concerning the League of Nations was given in issue No. 35 and earlier issues of the Official Year Book.

The Charter of the United Nations was drawn up by the delegates of fifty nations at the United Nations Conference on International Organization at San Francisco from 25th April to 26th June, 1945. Australia's ratification was deposited on 1st November, 1945. Following the admission in December, 1955 of 16 new countries there are now\* 76 member States:—Afghanistan, Albania, Argentina, Australia, Austria, Belgium, Bolivia, Brazil, Bulgaria, Burma, Byelorussia, Cambodia, Canada, Ceylon, Chile, China, Colombia, Costa Rica, Cuba, Czechoslovakia, Denmark, the Dominican Republic, Ecuador, Egypt, El Salvador, Ethiopia, Finland, France, Greece, Guatemala, Haiti, Honduras, Hungary, Iceland, India, Indonesia, Iran, Iraq, the Republic of Ireland, Israel, Italy, Jordan, Laos, Lebanon, Liberia, Libya, Luxemburg, Mexico, Nepal, the Netherlands, New Zealand, Nicaragua, Norway, Pakistan, Panama, Paraguay, Peru, the Philippines, Poland, Portugal, Romania, Saudi Arabia, Spain, Sweden, Syria, Thailand, Turkey, the Ukraine, the Union of South Africa, the Union of Soviet Socialist Republics, the United Kingdom, the United States of America, Uruguay, Venezuela, Yemen, Yugoslavia.

The full record of the Conference is contained in the Report by the Australian Delegates on the United Nations Conference on International Organization held at San Francisco, from 25th April to 26th June, 1945.

At San Francisco an Executive Committee and a Preparatory Commission were established, and when these bodies had completed their work of preparation for the first meeting of the United Nations, the General Assembly met in London on 10th January, 1946.

The principal organs of the United Nations are the General Assembly, the Security Council, the Economic and Social Council, the Trusteeship Council, the International Court of Justice, and the Secretariat.

2. *General Assembly.*—This is the forum of the United Nations. In it each member state is represented and has one vote. It meets in regular annual sessions and has provision for special sessions. With the exception of disputes which are before the Security Council and matters essentially within the domestic jurisdiction of any State, it has power to discuss any matter within the scope of the Charter and to make recommendations upon it. The Assembly elects the non-permanent members of the other major organs and considers annual reports from them. Upon the recommendation of the Security Council, it may expel a member which has persistently violated the principles of the Charter.

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\* June, 1956.

3. **The Security Council.**—This has the primary responsibility for the maintenance of international peace and security. It is composed of five permanent members, namely China, France, the United Kingdom, the Union of Soviet Socialist Republics and the United States of America, and six non-permanent members with two-year periods of office, of whom three retire at the end of each year. At the initial election three countries, including Australia, were elected for a term of two years and three others for a term of one year only. The following are the non-permanent members of the Security Council at present\*: Belgium, Iran and Peru (whose terms commenced on 1st January, 1955) and Australia, Cuba and Yugoslavia (whose terms commenced on 1st January, 1956). On procedural matters, decisions are taken by an affirmative vote of any seven members. But on all other matters decisions can only be made on the affirmative vote of seven members, including the concurring votes of all the permanent members. However, the powers which are parties to a dispute for peaceful settlement do not vote.

The Security Council is assisted by a Military Staff Committee consisting of the Chiefs of Staff of the permanent members of the Council or their representatives.

4. **The Economic and Social Council.**—This body consists of eighteen members, each elected for a period of three years. Its main functions are to make, or initiate, studies and reports, and to make recommendations to the General Assembly or to members of the United Nations, upon international, economic, social, cultural, educational, health and related matters. It may make recommendations for the purpose of promoting respect for, and observance of, human rights and fundamental freedoms for all.

The present\* members of the Economic and Social Council are: the United Kingdom, the Union of Soviet Socialist Republics, Ecuador, Pakistan, Czechoslovakia and Norway (retiring 1956), France, China, Egypt, Argentina, the Dominican Republic and the Netherlands (retiring 1957) and Brazil, Canada, Greece, Indonesia, the United States of America and Yugoslavia (retiring 1958).

5. **The Trusteeship Council.**—The Charter declares the political, social, cultural and economic advancement of the Trusteeship Territories to be a sacred trust. A Trusteeship Council has been set up composed of those members of the United Nations who are administering trust territories and an equal number of members who are not administering trust territories (including any permanent members of the Security Council who are not administering trust territories). Territories which may be placed under trusteeship in accord with individual trusteeship agreements are those previously held under mandate, those detached from enemy states as a result of the second World War and those dependent territories placed under the system by the states responsible for their administration. Australia is automatically a member of the Trusteeship Council, as the Power administering the Trust Territories of New Guinea and Nauru. The present\* members of the Trusteeship Council are: Australia, Belgium, France, Italy, New Zealand, the United Kingdom, the United States of America (administering States), and Burma, China, Guatemala, Haiti, India, Syria and the Union of Soviet Socialist Republics. China and the Union of Soviet Socialist Republics are eligible for permanent membership of the Trusteeship Council by virtue of their permanent membership of the Security Council.

The Council has among its duties the consideration of annual reports submitted by the trustee state, the carrying out of periodic inspections by agreement with it, and the formulation of questionnaires on the welfare and advancement of the dependent peoples.

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\* June, 1956.



6. **The International Court of Justice.**—This consists of fifteen judges, no two of whom may be nationals of the same state. Its jurisdiction comprises all cases which the parties refer to it, and all matters especially provided for in the Charter or in treaties and conventions in force. Provision exists in the Statute of the Court whereby States parties to the Statute may accept the jurisdiction of the Court as compulsory, either conditionally, or unconditionally in certain international disputes.

The present\* members of the Court are : Judges Badawa (Egypt), Hsu Mo (China), Read (Canada), Winiarski (Poland), Zoricic (Yugoslavia)—all retiring in 1958 ; Judges Hackworth (United States of America), Sir Zafrullah Khan (Pakistan), Klaested (Norway), Kozhevnikov (U.S.S.R.), and Ugon (Uruguay)—all retiring in 1961 ; and Judges Lauterpacht (United Kingdom), Basdevant (France), Guerrero (El Salvador), Cordova (Mexico), and Quintana (Argentina)—all retiring in 1964.

Sir Zafrullah Khan was elected to replace Sir Benegal Rau (India), who died in 1953.

7. **The Secretariat.**—The Secretary-General is the head of the Secretariat of the organization. He is appointed by the General Assembly upon the recommendation of the Security Council, and he appoints his staff in accordance with the rules approved by the General Assembly. Mr. Trygve Lie (Norway) was appointed first Secretary-General, and at the Sixth Session of the General Assembly in 1950 was re-appointed for three further years as from 1st February, 1951. In November, 1952 Mr. Lie announced his intention of retiring and in April, 1953, Mr. Dag Hammarskjöld (Sweden) was appointed in his place.

8. **Specialized Agencies.**—In addition to these organs of the United Nations there are specialized agencies which co-operate closely with the United Nations in many fields on economic and social questions.

Those now\* in operation are : The International Labour Organization ; Food and Agriculture Organization ; United Nations Educational, Scientific and Cultural Organization ; International Civil Aviation Organization ; International Bank for Reconstruction and Development ; International Monetary Fund ; Universal Postal Union ; World Health Organization ; International Telecommunication Union ; World Meteorological Organization.

To enable co-ordination of the work of the specialized agencies, arrangements have been made for them to submit reports on their activities and budgets to the United Nations where they are discussed by the Economic and Social Council and the General Assembly.

## § 18. Diplomatic and other Representatives Overseas and in Australia

1 **General.**—The following statements show particulars of the various diplomatic and other representatives overseas and in Australia at 30th June, 1956. Full details of British and foreign representation in Australia—diplomatic and consular—and of permanent Australian missions overseas may be obtained from publications issued by the Department of External Affairs, Canberra. A statement is issued each quarter by the Department of Trade, showing the latest particulars of the Australian Trade Commissioner Service overseas.

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\* June, 1956.

## 2. Australian Representation Overseas.—

## AUSTRALIAN DIPLOMATIC AND OTHER REPRESENTATIVES OVERSEAS.

## Her Majesty's Australian Ambassador Extraordinary and Plenipotentiary to—

- Burma* (Rangoon)—C. T. Moodie.  
*France* (Paris)—A. Stirling, C.B.E.  
*Germany, Federal Republic of* (Bonn)—P. Shaw.  
*Indonesia* (Djakarta)—W. R. Crocker, C.B.E.  
*Ireland* (Dublin)—(Vacant); S. Jamieson (Chargé d'Affaires *ad interim*).  
*Japan* (Tokyo)—Sir Alan Watt, C.B.E.  
*The Netherlands* (The Hague)—H. A. McClure-Smith.  
*The Phillipines* (Manila)—K. C. O. Shann.  
*Thailand* (Bangkok)—D. O. Hay, D.S.O., M.B.E.  
*United States of America* (Washington, D.C.)—The Hon. Sir Percy Spender, K.B.E., Q.C.

## Her Majesty's Australian Envoy Extraordinary and Minister Plenipotentiary to—

- Brazil* (Rio de Janeiro)—C. V. Kellway.  
*Cambodia* (Phnom Penh)—D. W. McNicol.  
*Egypt* (Cairo)—A. R. Cutler, V.C.  
*Israel* (Tel Aviv)—B. C. Baillard.  
*Italy* (Rome)—D. P. McGuire, C.B.E.  
*Laos* (Vientiane)—D. W. McNicol.  
*Vietnam* (Saigon)—D. W. McNicol.

## High Commissioners for Australia in—

- Canada* (Ottawa)—T. A. Pyman (acting).  
*Ceylon* (Colombo)—A. J. Eastman.  
*India* (New Delhi)—P. R. Heydon.  
*New Zealand* (Wellington)—Vice-Admiral Sir John Collins, K.B.E., C.B.  
*Pakistan* (Karachi)—Major-General W. J. Cawthorn, C.B., C.I.E., C.B.E.  
*Union of South Africa* (Pretoria and Cape Town)—Lt.-Col. W. R. Hodgson, C.M.G., O.B.E.  
*United Kingdom of Great Britain and Northern Ireland* (London)—The Rt. Hon. Sir Eric Harrison, K.C.V.O.

## Australian Military Mission—

- Germany, Federal Republic of* (Berlin) Head—P. Shaw.

## Australian Mission—

- United Nations* (New York)—Ambassador, Dr. E. R. Walker, C.B.E.  
*United Nations* (Geneva)—Permanent Delegate, G. A. Jockel.

## Australian Commissioner in—

- Malaya, Federation of* (Kuala Lumpur)—T. K. Critchley.  
*Singapore, Brunei, Sarawak and North Borneo* (Singapore)—R. L. Harry.

## Consuls-General—

- Greece* (Athens)—H. G. Brooks (acting).  
*Switzerland* (Geneva)—G. A. Jockel.  
*United States of America* (New York)—The Hon. J. Francis.  
*United States of America* (San Francisco)—M. H. Marshall.

## Consuls—

- Denmark* (Copenhagen)—G. T. Pretymann.  
*New Caledonia* (Noumea)—Dr. J. S. Cumpston, E.D.  
*Portuguese Timor* (Dili)—F. J. A. Whittaker.

**Trade Commissioner Service of the Commonwealth of Australia—***British West Indies*—B. T. Connolly (Port of Spain).*Burma*—L. C. Holmes, Commercial Secretary and Acting Trade Commissioner (Rangoon).*Canada*—C. L. Steele (Montreal); H. Wrigley (Vancouver).*Central African Federation*—W. S. Lowe (Salisbury).*Ceylon*—H. W. Goodger (Colombo).*Egypt*—S. D. Shubart, Commercial Counsellor and Trade Commissioner (Cairo).*France*—C. J. Carne, O.B.E., Commercial Counsellor and Trade Commissioner (Paris).*Germany, Federal Republic of*—R. R. Ellen, Commercial Counsellor and Trade Commissioner (Bonn).*Hong Kong*—K. T. Ridley (Hong Kong).*India*—P. R. Searcy (Calcutta); D. L. Crawford (Bombay).*Indonesia*—D. R. McPhee, Commercial Counsellor and Trade Commissioner (Djakarta).*Italy*—S. F. Lynch, Commercial Counsellor and Trade Commissioner (Rome).*Japan*—N. F. Stuart, Commercial Counsellor and Trade Commissioner (Tokyo).*Malaya*—H. M. Le Marchand, Commercial Counsellor and Trade Commissioner (Singapore).*New Zealand*—W. R. Hudspeth (Wellington).*Pakistan*—R. K. Scott, Commercial Counsellor and Trade Commissioner (Karachi).*Philippines, The*—E. E. Jarvis (Manila).*Union of South Africa*—A. J. S. Day, Commercial Counsellor and Trade Commissioner (Johannesburg).*United Kingdom of Great Britain and Northern Ireland*—G. R. B. Patterson, Senior Trade Commissioner; E. B. Gilbert (London).*United States of America*—J. B. Todd, Commercial Secretary and Trade acting Commissioner (Washington); F. R. Gullick (New York); W. D. Hardy (San Francisco).

3. **Oversea Representation in Australia.**—Consular representatives are not included in the following statement. 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 150 such representatives in Australia, and 40 countries are represented.

**DIPLOMATIC REPRESENTATIVES IN AUSTRALIA.****Ambassador Extraordinary and Plenipotentiary of—***Burma*—(Vacant); U Sain Bwa (Minister, *Chargé d'Affaires ad interim*) (Canberra U 1451).*China*—(Vacant); Dr. Chen Tai Chu (*Chargé d'Affaires ad interim*) (Canberra U 2368).*France*—His Excellency Monsieur Renaud Sivan (Canberra X 2925).*Federal Republic of Germany*—His Excellency Dr. Walther Hess (Canberra X 3575).*Indonesia*—His Excellency Dr. A. Y. Helmi (Canberra U 1221).*Ireland*—(Vacant); Mr. M. L. Skentelbery (*Chargé d'Affaires ad interim*) (Canberra J 3251).*Japan*—His Excellency Mr. Tadakatsu Suzuki (Canberra U 1251).*The Netherlands*—His Excellency Mr. A. M. L. Winkelman (Canberra U 1256).*The Philippines*—His Excellency Dr. Roberto Regala (Sydney FA 1938).*Thailand*—His Excellency Nai Konthi Suphamongkhon (Canberra, U 8101).*United States of America*—His Excellency Mr. D. M. Moffat (Canberra U 1351).**Envoy Extraordinary and Minister Plenipotentiary of—***Austria*—Dr. J. Manz (*Chargé d'Affaires*) (Canberra U 8167).*Belgium*—His Excellency Monsieur Jean Querton (Sydney FB 1325).

- Brazil*—(Vacant) ; His Excellency Senhor Q. S. de Seta (Chargé d'Affaires *ad interim*) (Canberra X 2680).  
*Chile*—Senor Don Juan Domeyko (Chargé d'Affaires) (Sydney FU 3353).  
*Denmark*—(Vacant) ; Mr. F. Henning Hergel, O.B.E. (Chargé d'Affaires *ad interim*) (Sydney BW 3547).  
*Finland*—(Vacant) ; Mr. P. I. Simelius (Chargé d'Affaires) (Sydney FM 3116).  
*Greece*—His Excellency Monsieur Dimitri N. Lambros (Canberra J 3159).  
*Israel*—His Excellency Mr. Mordekhai Nurock (Sydney BW 2082).  
*Italy*—His Excellency Signor Silvio Daneo (Canberra J 3263).  
*Sweden*—His Excellency Mr. J. Martin Kastengren (Canberra U 1421).

#### High Commissioner for—

- Canada*—His Excellency Mr. W. Arthur Irwin (Canberra U 1304).  
*Ceylon*—His Excellency Mr. P. R. Gunasekara (Canberra X 1021).  
*India*—Shri P. A. Menon (High Commissioner) (Canberra J 3209).  
*New Zealand*—His Excellency Mr. G. E. L. Alderton, C.M.G. (Canberra U 1030).  
*Pakistan*—(Vacant) ; Mr. M. A. Alvie (Acting High Commissioner) (Sydney BL 3395).  
*Union of South Africa*—His Excellency Mr. J. K. Uys (Canberra U 2370).  
*United Kingdom of Great Britain and Northern Ireland*—His Excellency Sir Stephen Holmes, K.C.M.G., M.C. (Canberra U 2211).

#### Commissioner for—

- Malta*—Captain George F. L. Stivala, O.B.E. (Melbourne MU 1291).

#### TRADE COMMISSIONERS OF OVERSEA GOVERNMENTS IN AUSTRALIA.

- Canada*—Senior Canadian Government Trade Commissioner—Mr. J. C. Britton (Sydney BW 5696-7).  
 Canadian Government Trade Commissioner—Mr. R. W. Blake (Melbourne MU 4716).  
*India*—Indian Trade Commissioner—Mr. S. V. Patel (Sydney BW 9518).  
*New Zealand*—Senior New Zealand Government Trade Commissioner—Mr. J. A. Malcolm (Sydney BL 3941).  
 New Zealand Government Trade Commissioners—Mr. R. J. Inglis (Melbourne MU 8111) ; Mr. E. J. Sutch (Sydney BL 3941).  
*United Kingdom of Great Britain and Northern Ireland*—United Kingdom Senior Trade Commissioner—Mr. H. J. Gray, C.M.G. (Canberra U 2211).  
 United Kingdom Trade Commissioners—Messrs. J. N. McKelvie and N. L. Hibbs (Canberra U 2211) ; Messrs. A. R. Bruce, O.B.E., A. Hartland, O.B.E., and L. F. Hope (Sydney BW 8086) ; Messrs. A. R. Starck, O.B.E. and K. R. Allen (Melbourne MU 5556) ; Mr. R. Fell (Brisbane B 8588) ; Mr. J. D. Leithead (Perth BA 2042).

## § 19. Retail Trade.

1. **General.**—The statistics in this section relate to the number of retail establishments throughout Australia and the turnover of 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, and a third Census was taken for the year ended 30th June, 1953. In this latest Census, 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 the business and credit sales.

In general terms, the Censuses covered those establishments which normally sell goods by retail in shops, rooms, kiosks and yards. Certain types of establishments which sell services by retail (including repairs and materials therein) were also included, e.g., boot repairers, hairdressers, motor garages and service stations and cafés. The Censuses included the retail sales of those factories or wholesalers who conducted a regular retail business, but excluded those who only occasionally sold goods by retail. Both new and second-hand goods were included in sales recorded by relevant retail establishments.

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 and some of the results of the 1952-53 Census are contained in this section.

2. Value of Retail Sales in Each Commodity Group, 1948-49 to 1954-55, Australia.—The following table shows the value of retail sales of goods in each of the commodity groups specified in the years 1948-49 to 1954-55 on a comparable basis throughout. The figures for the years 1948-49 and 1952-53 were obtained from Censuses taken in respect of those years, whereas figures for the other years shown are estimates based on sample surveys.

VALUE OF RETAIL SALES : COMMODITY GROUPS, AUSTRALIA.  
(£ million.)

Commodity Group.	Year ended 30th June—						
	1949.(a)	1950.(b)	1951.(b)	1952.(b)	1953.(a)	1954.(c)	1955.(b)
Groceries .. ..	143.4	161.1	186.1	232.9	261.5	275.1	308.7
Butchers' Meat .. ..	65.3	75.4	92.3	118.7	127.8	133.9	147.5
Other Food(d) .. ..	116.6	131.7	155.5	187.8	206.8	223.7	246.6
Total Foodstuffs .. ..	325.3	368.2	433.9	539.4	596.1	632.7	702.8
Beer, Wine and Spirits .. ..	95.3	105.0	123.2	153.9	173.0	186.7	202.0
Clothing, Drapery, Piece-goods and Footwear .. ..	237.8	263.8	328.5	351.6	355.1	387.4	419.5
Hardware(e) .. ..	55.7	66.4	91.2	109.6	113.8	124.7	141.7
Electrical Goods .. ..	33.8	43.3	64.7	77.5	75.8	91.2	102.0
Furniture .. ..	46.4	54.5	76.9	76.1	72.8	81.0	86.6
Other Goods(f) .. ..	167.0	204.2	252.4	307.5	315.5	336.0	365.9
Total (excluding Motor Vehicles, etc.) .. ..	962.2	1,105.4	1,370.8	1,615.6	1,702.1	1,840.6	2,020.5
Motor Vehicles, Parts, Petrol, etc.(g) .. ..	166.1	273.3	382.0	433.3	417.3	492.3	581.4
Total .. ..	1,128.3	1,378.7	1,752.8	2,048.9	2,119.4	2,332.9	2,601.9

(a) Census figures.

(b) Survey figures.

(c) Survey figures revised since previous issue.

(d) Includes fresh fruit and vegetables, confectionery, soft drinks, ice cream, cakes, pastry, cocked provisions, fish, etc., but excludes some delivered milk and bread.

(e) Excludes basic building materials (e.g., timber, roofing tiles, bricks, etc.).

(f) Includes tobacco, cigarettes, etc., newspapers, books and stationery, chemists' goods, grain and produce, jewellery, office equipment, etc.

(g) Excludes farm machinery and implements, earth-moving equipment, etc.

In the foregoing table, figures for the years ended 30th June, 1949 to 1952 relate to establishments with total retail sales of £50 or more; for the years ended 30th June, 1953 to 1955 they relate to establishments with total retail sales of £500 or more. The total amount of retail sales of establishments so excluded in 1952-53 was not significant (less than 0.1 per cent. of total), and their omission does not affect the validity of the comparisons shown.

3. Takings for Certain Services, Australia.—The following table shows the amounts of "Other takings" recorded for the services specified in respect of establishments covered by the Retail Censuses of 1948-49 and 1952-53. The figures for the year ended 30th June, 1949 relate to establishments with "Other takings" of £50 or more recorded for the services specified; for the year ended 30th June, 1953 they relate to establishments

with retail sales or "Other takings" of £500 or more. The amount of "Other takings" of establishments so excluded in 1952-53 was less than one per cent. of total takings shown for Repair Work Done and Meals in Cafés, Restaurants, etc., and less than three per cent. of total takings shown for Hairdressing.

**TAKINGS FOR CERTAIN SERVICES, AUSTRALIA.**  
(£'000.)

Service.	1948-49.	1952-53.
<b>Repair, Servicing and Maintenance Work Done(a)—</b>		
Motor .. .. .	25,273	56,864
Other .. .. .	9,365	16,044
<b>Total .. .. .</b>	<b>34,638</b>	<b>72,908</b>
<b>Meals in Cafés, Restaurants, etc. .. .. .</b>	<b>21,256</b>	<b>32,765</b>
<b>Meals and Accommodation in Hotels .. .. .</b>	<b>11,263</b>	<b>24,936</b>
<b>Hairdressing .. .. .</b>	<b>6,684</b>	<b>9,874</b>

(a) Includes value of materials used and cost of labour.

4. Number of Establishments with Sales in each Commodity Group, 1952-53, States.—The following table shows the number of establishments with sales in each of the commodity groups specified during the year ended 30th June, 1953 for each State. Many establishments recorded sales in more than one commodity group. Thus the aggregate of the number of establishments by commodity group is greater than the total number of individual establishments.

**NUMBER OF RETAIL ESTABLISHMENTS WHICH SOLD GOODS IN EACH COMMODITY GROUP: STATES, 1952-53.(a)**

Commodity Group.	N.S.W.	Vic.	Qld.	S.A.	W.A.	Tas.	N.T.	A.C.T.	Aust.
<b>Foodstuffs—</b>									
Groceries (Including Bacon, Butter, etc.) .. .. .	11,650	7,181	4,447	2,700	2,320	1,227	50	36	29,611
Butchers' Meat .. .. .	2,833	2,120	1,150	826	606	346	10	12	7,903
Fresh Fruit and Vegetables .. .. .	6,124	3,113	3,132	1,356	1,587	889	25	18	16,244
Bread, Cakes and Pastry .. .. .	8,160	4,665	3,552	1,830	1,587	657	18	26	20,495
Confectionery, Ice Cream, Soft Drinks (including Milk Drinks) .. .. .	12,226	7,246	4,860	2,798	2,617	1,284	44	33	31,108
Other Food (Fish, Poultry, Cooked Meats, Wrapped Lunches, etc.) .. .. .	5,496	2,689	1,923	1,264	1,160	288	9	20	12,849
<b>Beer, Tobacco, etc.—</b>									
Beer, Wine and Spirits .. .. .	3,004	2,101	1,400	709	734	318	35	25	8,416
Tobacco, Cigars and Cigarettes .. .. .	17,013	10,080	6,543	3,714	3,539	1,689	60	58	42,696
<b>Clothing, Drapery, etc.—</b>									
Clothing—									
Men's and Boys' Wear .. .. .	2,861	2,188	1,384	999	957	412	41	18	8,860
Women's, Girls' and Infants' Wear (including Hand Bags) .. .. .	4,297	3,484	1,417	1,092	925	459	35	22	11,731
Drapery, Piece-goods, Manchester and Soft Furnishings .. .. .	2,343	1,699	1,099	847	786	295	31	14	7,114
<b>Footwear—</b>									
Men's and Boys' .. .. .	1,878	1,399	1,030	721	614	347	31	12	6,032
Women's, Girls' and Infants' .. .. .	1,761	1,258	851	654	557	305	24	12	5,422
<b>Hardware, Electrical Goods, Furniture—</b>									
Builders' Hardware and Supplies (including Tools of Trade)(b) .. .. .	1,715	1,472	806	661	692	172	14	13	5,548
Domestic Hardware, Kitchenware, China and Glassware .. .. .	3,235	2,428	1,464	1,278	1,120	415	32	15	10,017
Domestic Refrigerators, Electrical Goods and Accessories, Radios and Musical Instruments .. .. .	2,530	1,929	1,167	872	914	301	19	15	7,747
Furniture (including Bedding) .. .. .	1,113	962	518	394	419	147	13	9	3,575
Floor Coverings .. .. .	820	666	310	311	261	135	(c)	(c)	2,511
Business Machines and Equipment .. .. .	120	80	77	28	52	22	(c)	(c)	306

For footnotes see next page.

**NUMBER OF RETAIL ESTABLISHMENTS WHICH SOLD GOODS IN EACH  
COMMODITY GROUP: STATES, 1952-53(a)—continued.**

Commodity Group.	N.S.W.	Vic.	Qld.	S.A.	W.A.	Tas.	N.T.	A.C.T.	Aust.
<i>Other Goods—</i>									
Newspapers, Periodicals, Books and Stationery ..	3,510	2,667	2,014	1,209	1,021	484	23	14	10,911
Chemists' Goods (including Toilettries, Cosmetics and Dispensing) ..	4,052	2,394	1,814	1,088	1,315	432	36	15	11,146
Sporting and Travel Goods ..	1,494	1,062	686	448	461	157	15	10	4,333
Jewellery, Watches, Clocks, Silverware, etc. ..	1,551	1,130	675	520	519	192	19	9	4,615
Grain, Feed, Fertilizers ..	1,527	1,066	1,029	539	604	248	(c)	(c)	5,026
Other Goods (not specified) ..	2,691	2,876	956	776	732	308	20	22	8,391
Total (excluding Motor Vehicles, etc.) ..	(d)	(d)	(d)	(d)	(d)	(d)	(d)	(d)	(d)
<i>Motor Vehicles, etc.(e)—</i>									
Tractors (including parts) ..	575	389	356	230	196	44	(c)	(c)	1,791
New Motor Vehicles (including Motor Cycles, etc.) ..	1,273	848	563	456	241	77	9	11	3,475
Used Motor Vehicles (including Motor Cycles, etc.) ..	1,267	824	612	466	293	33	(c)	(c)	3,561
Motor Parts, Accessories, Tyres, Tubes, etc. ..	2,960	2,252	1,440	1,031	947	291	27	14	8,962
Petrol, Oil, Motor Lubricants, etc.	3,899	2,891	1,043	1,252	1,010	429	31	15	11,509
Grand Total ..	(f)	(f)	(f)	(f)	(f)	(f)	(f)	(f)	(f)

(a) All figures refer to establishments with total retail sales in 1952-53 of £500 or more. The number of establishments in each State with retail sales in 1952-53 of less than £500 but more than £100 was as follows:—New South Wales, 1,126; Victoria, 989; Queensland, 449; South Australia, 279; Western Australia, 294; Tasmania, 100; Northern Territory and Australian Capital Territory, 5; Total, 3,242.

(b) Excludes basic building materials (e.g., timber, roofing tiles, etc.). (c) Not available for publication. (d) Not available. (e) Excludes farm machinery and implements, earth-moving equipment, etc. (f) 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 which is as follows:—New South Wales, 40,523; Victoria, 32,864; Queensland, 15,051; South Australia, 9,673; Western Australia, 7,911; Tasmania, 3,637; Northern Territory, 146; Australian Capital Territory, 180; Total, 109,985.

5. Value of Retail Sales of Goods in each Commodity Group, 1952-53, States.—The following table shows the value of retail sales of goods in each of the commodity groups specified during the year ended 30th June, 1953.

**VALUE OF RETAIL SALES IN EACH COMMODITY GROUP: STATES, 1952-53.(a)  
(£'000.)**

Commodity Group.	N.S.W.	Vic.	Qld.	S.A.	W.A.	Tas.	N.T.	A.C.T.	Aust.
<i>Foodstuffs—</i>									
Groceries (including Bacon, Butter, etc.) ..	104,479	61,727	42,357	20,549	20,670	8,687	709	827	263,005
Butchers' Meat ..	50,858	36,663	17,006	10,443	8,150	4,607	231	382	128,340
Fresh Fruit and Vegetables ..	22,157	15,854	7,104	4,437	4,420	1,582	76	99	55,729
Bread, Cakes and Pastry ..	22,529	16,940	7,607	4,789	3,563	1,999	71	149	57,647
Confectionery, Ice Cream, Soft Drinks (including Milk Drinks) ..	24,918	20,289	7,710	5,293	3,751	1,936	89	148	64,114
Other Food (Fish, Poultry, Cooked Meats, Wrapped Lunches, etc.) ..	12,593	8,912	3,570	2,301	1,918	555	35	128	30,012
<i>Beer, Tobacco, etc.—</i>									
Beer, Wine and Spirits ..	70,623	45,612	22,233	14,827	14,445	5,357	664	641	173,407
Tobacco, Cigars and Cigarettes ..	28,200	19,967	8,830	5,851	5,233	2,405	182	251	70,917
<i>Clothing, Drapery, etc.—</i>									
Clothing—									
Men's and Boys' Wear ..	36,486	25,964	12,107	8,634	6,336	3,328	135	250	93,441
Women's, Girls' and Infants' Wear (including Hand Bags) ..	56,515	41,914	16,780	13,589	9,403	5,761	124	386	144,472
Drapery, Piece-goods, Manchester and Soft Furnishings ..	27,587	18,501	10,144	6,269	4,793	2,039	94	132	69,559
Footwear—									
Men's and Boys' ..	6,678	4,779	2,257	1,593	1,319	659	41	51	17,377
Women's, Girls' and Infants' ..	12,846	9,058	3,621	2,805	2,282	1,117	24	87	31,840

For footnotes see next page.

**VALUE OF RETAIL SALES IN EACH COMMODITY GROUP :  
STATES, 1952-53(a)—continued.  
(£'000.)**

Commodity Group.	N.S.W.	Vic.	Qld.	S.A.	W.A.	Tas.	N.T.	A.C.T.	Aust.
<b>Hardware, Electrical Goods, Furniture—</b>									
Builders' Hardware and Supplies (including Tools of Trade)(b) . . .	28,069	16,317	8,577	4,433	5,164	1,588	117	212	64,477
Domestic Hardware, Kitchenware, China and Glassware . . .	18,372	14,172	6,000	5,325	4,127	1,580	98	166	49,840
Domestic Refrigerators, Electrical Goods and Accessories, Radios and Musical Instruments . .	28,821	20,837	10,795	7,000	6,104	2,277	99	208	76,141
Furniture (including Bedding) . . .	18,090	15,081	6,040	4,972	3,348	1,555	16	155	49,257
Floor Coverings . . .	8,610	7,734	2,007	2,680	1,867	882	(c)	(c)	23,859
Business Machines and Equipment . . .	4,739	3,751	1,684	948	795	298	(c)	(c)	12,218
<b>Other Goods—</b>									
Newspapers, Periodicals, Books and Stationery . .	22,221	16,497	6,292	3,310	3,277	1,539	21	191	53,348
Chemists' Goods (including Toiletries, Cosmetics and Dispensing) . . .	21,278	14,374	6,422	4,068	3,247	1,458	35	177	51,059
Sporting and Travel Goods	4,756	3,049	1,441	781	839	381	9	65	11,321
Jewellery, Watches, Clocks, Silverware, etc. . .	9,751	6,292	3,055	2,026	1,818	649	37	86	23,714
Grain, Feed, Fertilizers . .	17,754	11,263	6,045	2,526	6,553	1,152	(c)	(c)	45,351
Other Goods (not specified above) . . .	15,801	17,776	5,285	4,314	3,852	1,756	69	84	48,937
Total (excluding Motor Vehicles, etc.) . . .	674,731	476,323	224,969	143,763	127,274	55,147	2,995	5,002	1,710,204
<b>Motor Vehicles, etc.(d)—</b>									
Tractors (including parts)	5,837	5,560	6,587	3,099	3,379	820	(c)	(c)	25,306
New Motor Vehicles (including Motor Cycles, etc.)	58,830	44,635	26,049	19,339	14,950	5,840	253	249	170,145
Used Motor Vehicles (including Motor Cycles, etc.)	31,846	18,112	11,358	10,785	8,579	2,691	(c)	(c)	83,547
Motor Parts, Accessories, Tyres, Tubes, etc. . .	20,909	15,731	8,823	5,340	4,629	1,874	161	91	57,563
Petrol, Oil, Motor Lubricants, etc. . .	32,541	24,020	10,046	6,690	5,812	2,479	147	195	81,939
<b>Grand Total</b> . . .	824,604	584,381	287,837	180,015	161,623	68,851	3,611	5,682	2,128,704

(a) All figures refer to establishments with total retail sales in 1952-53 of £500 or more. The total retail sales of the establishments with retail sales in 1952-53 of less than £500 but more than £100 were as follows:—New South Wales, £312,000; Victoria, £283,000; Queensland, £128,000; South Australia, £88,000; Western Australia, £85,000; Tasmania, £27,000; Northern Territory and Australian Capital Territory, £1,000; Total, £924,000. (b) Excludes basic building materials (e.g. timber, roofing tiles, etc.). (c) Not available for publication. (d) Excludes farm machinery and implements, earth-moving equipment, etc.

6. Number of Retail Establishments and Value of Retail Sales Classified According to Main Type of Business, 1952-53, States.—The following tables show the number of establishments and the value of retail sales made in 1952-53 in each State classified according to the main type of business. In classifying establishments by type of business, the description given by the proprietor was used as a guide but the classification was based mainly on the commodity group for which the largest item of turnover was recorded.

**NUMBER OF RETAIL ESTABLISHMENTS CLASSIFIED ACCORDING TO MAIN TYPE OF BUSINESS : STATES, 1952-53.(a)**

Main Type of Business.	N.S.W.	Vic.	Qld.	S.A.	W.A.	Tas.	N.T.	A.C.T.	Aust.
<b>Food Stores—</b>									
Grocers . . .	9,698	5,284	3,756	1,889	1,837	1,042	40	23	23,569
Butchers . . .	2,474	1,938	1,026	724	523	247	8	11	6,953
Fruiters . . .	2,130	1,845	458	574	295	112			5,424
Bakers . . .	1,815	1,503	693	395	337	163	9	21	4,946
Confectioners and Milk Bars . .	2,053	2,802	580	578	300	203			6,526
Cafés . . .	728	345	366	79	138	21			1,688
Fishmongers and Poulterers . .	548	421	190	93	79	21	8	8	1,354
Other Food Stores . . .	511	521	80	146	76	19			1,356
<b>Hotels, Tobacconists, etc.—</b>									
Hotels, Wine Saloons . . .	2,303	1,855	1,261	633	529	306	18	7	6,912
Tobacconists . . .	536	490	206	108	143	36	(b)	(b)	1,523
Tobacconists and Hairdressers . .	1,058	1,126	188	284	201	71	(b)	(b)	2,931

For footnotes see next page.



**NUMBER OF RETAIL ESTABLISHMENTS CLASSIFIED ACCORDING TO  
MAIN TYPE OF BUSINESS: STATES, 1952-53(a)—continued.**

Main Type of Business.	N.S.W.	Vic.	Qld.	S.A.	W.A.	Tas.	N.T.	A.C.T.	Aust.
<i>Clothing, Drapers, etc.—</i>									
Clothing	4,106	3,502	1,175	793	657	302	13	22	10,570
Drapers, Haberdashers, etc.	544	465	250	138	112	16			1,531
Footwear Stores	589	621	162	158	81	55	7	20	1,674
<i>Hardware, Electrical Goods, Furniture, etc., Stores—</i>									
Domestic and Builders' Hardware Stores	1,005	1,209	433	357	314	67	6	10	3,401
Electrical Goods, Radios and Musical Instruments Stores	1,088	854	528	265	248	123	7	7	3,120
Furniture and Floor Coverings Stores	626	681	281	163	176	64	(b)	(b)	1,998
Business Machines Stores	66	47	38	24	21	17			213
<i>Other Goods Stores—</i>									
Newsagents and Booksellers	1,024	877	418	197	271	77			2,872
Chemists	1,308	1,025	406	302	201	90			3,341
Sports Goods Stores	199	140	78	26	18	15			480
Watchmakers and Jewellers	667	509	217	133	96	47	10	40	1,679
Grain and Produce Merchants	389	267	116	94	94	18			979
Cycle Stores	181	232	93	67	47	13			633
Florists and Nurserymen	396	371	67	68	65	38			1,007
Other Types of Business	839	1,218	323	254	210	114			2,974
Total (excluding Motor Vehicle Dealers, etc.)	36,911	30,148	13,389	8,542	7,071	3,297	131	165	99,654
<i>Motor Vehicle Dealers, etc.—</i>									
Tractor Dealers	107	57	46	30	28	11			279
New Motor Vehicle (including Motor Cycle) Dealers	250	174	129	93	86	27	(b)	(b)	763
Garages and Service Stations	2,600	2,094	1,268	821	587	243	10	11	7,634
Motor Parts and Tyre Dealers	396	219	137	98	80	47	(b)	(b)	979
Used Motor Vehicle Dealers	259	172	82	89	59	12	(b)	(b)	676
Total	40,523	32,864	15,051	9,673	7,911	3,637	146	180	109,985

(a) All figures refer to establishments with total retail sales in 1952-53 of £500 or more.  
available for publication.

(b) Not

**VALUE OF RETAIL SALES OF GOODS CLASSIFIED ACCORDING TO MAIN TYPE  
OF BUSINESS: STATES, 1952-53.(a)**  
(£'000.)

Main Type of Business.	N.S.W.	Vic.	Qld.	S.A.	W.A.	Tas.	N.T.	A.C.T.	Aust.
<i>Food Stores—</i>									
Grocers	143,876	79,717	60,269	27,877	31,795	13,367	1,487	928	359,316
Butchers	50,557	36,728	16,923	10,460	7,994	4,562	235	382	127,856
Fruiters	20,548	16,266	4,814	4,647	3,191	1,115			50,716
Bakers	18,316	14,444	5,874	4,116	2,860	1,667	91	401	47,478
Confectioners and Milk Bars	16,247	20,065	3,930	4,278	1,874	1,293			47,845
Cafés	3,982	1,222	1,775	518	371	53			7,974
Fishmongers and Poulterers	3,663	2,537	1,151	531	612	181	53	75	8,710
Other Food Stores	5,630	5,023	556	1,292	598	184			13,344
<i>Hotels, Tobacconists, etc.—</i>									
Hotels, Wine Saloons	69,922	46,050	22,772	15,269	14,573	5,716	603	584	175,489
Tobacconists	5,825	4,490	1,906	1,592	1,089	435	(b)	(b)	15,421
Tobacconists and Hairdressers	3,827	5,368	369	1,213	614	179	(b)	(b)	11,577
<i>Clothing, Drapers, etc.—</i>									
Clothing	137,517	103,876	39,681	34,807	21,682	12,482	165	1,227	351,437
Drapers, Haberdashers, etc.	21,933	10,340	9,466	2,572	6,930	576	86	119	51,892
Footwear Stores	10,979	9,679	3,116	2,657	2,759	1,235			30,055
<i>Hardware, Electrical Goods, Furniture, etc., Stores—</i>									
Domestic and Builders' Hardware Stores	35,506	24,924	11,227	7,985	5,552	2,466	200	211	88,071
Electrical Goods, Radios and Musical Instruments Stores	20,587	16,273	8,592	4,797	4,704	1,838	71	156	57,018
Furniture and Floor Coverings Stores	25,368	19,625	7,887	5,663	3,523	1,904	(b)	(b)	64,228
Business Machines Stores	4,626	3,616	1,716	999	669	317			11,973

For footnotes see next page.

VALUE OF RETAIL SALES OF GOODS CLASSIFIED ACCORDING TO MAIN  
TYPE OF BUSINESS: STATES, 1952-53(a)—continued.

(£'000.)

Main Type of Business.	N.S.W.	Vic.	Qld.	S.A.	W.A.	Tas.	N.T.	A.C.T.	Aust.
<i>Other Goods Stores—</i>									
Newsagents and Book-sellers .. ..	21,080	14,421	5,206	2,236	2,950	1,300	50	606	47,406
Chemists .. ..	18,150	11,911	5,377	3,159	2,354	1,115			42,239
Sports Goods Stores ..	2,376	1,883	700	258	224	315			5,820
Watchmakers and Jewellers .. ..	8,790	5,130	2,609	1,569	1,584	697			20,509
Grain and Produce Merchants .. ..	17,208	11,543	5,012	2,656	6,621	987			44,046
Cycle Stores .. ..	1,177	946	543	360	262	69			3,357
Florists and Nurserymen ..	1,941	1,979	401	395	333	260			5,312
Other Types of Business ..	7,198	8,960	2,888	1,794	2,361	824			24,079
<b>Total (excluding Motor Vehicle Dealers, etc.)</b>	<b>(c) 676,829</b>	<b>(c) 477,046</b>	<b>(c) 224,760</b>	<b>(c) 143,709</b>	<b>(c) 127,609</b>	<b>(c) 55,437</b>	<b>(c) 3,075</b>	<b>(c) 5,004</b>	<b>(c) 1,713,169</b>
<i>Motor Vehicle Dealers, etc.—</i>									
Tractor Dealers .. ..	3,454	2,617	3,470	1,990	1,987	666	..	..	14,184
New Motor Vehicle (Including Motor Cycle) Dealers ..	41,366	34,835	19,115	18,110	15,099	4,554	(b)	(b)	133,463
Garages and Service Stations .. ..	75,811	53,290	32,547	17,678	13,987	7,382	219	491	201,405
Motor Parts and Tyre Dealers .. ..	6,851	5,675	2,375	2,018	1,257	522	(b)	(b)	18,738
Used Motor Vehicle Dealers .. ..	20,383	10,918	5,570	5,520	4,684	590	(b)	(b)	47,745
<b>Total</b> .. ..	<b>824,694</b>	<b>584,381</b>	<b>287,837</b>	<b>189,025</b>	<b>164,623</b>	<b>68,851</b>	<b>3,611</b>	<b>5,682</b>	<b>2,128,704</b>

(a) All figures refer to establishments with total retail sales in 1952-53 of £500 or more, and are the total value of all commodities sold by the types of business shown. (b) Not available for publication. (c) These figures differ from their counterparts in the table on page 1100 because they include retail sales of motor vehicles, etc., made by establishments whose main type of business is other than motor vehicles, and exclude retail sales of goods other than motor vehicles, etc., made by establishments whose main type of business is motor vehicles.

7. Takings for Certain Services: States, 1952-53.—The following table shows the amounts of "Other takings" recorded for the services specified for each State in respect of the establishments covered by the Census of Retail Establishments, 1952-53. The figures relate to establishments with retail sales or "Other takings" of £500 or more.

TAKINGS FOR CERTAIN SERVICES, STATES, 1952-53.

(£'000.)

Service.	N.S.W.	Vic.	Qld.	S.A.	W.A.	Tas.	N.T.	A.C.T.	Aust.
<i>Repair, Servicing and Maintenance Work Done(a)—</i>									
Motor .. ..	19,916	15,394	9,373	5,290	4,755	1,905	89	142	56,864
Other .. ..	5,565	4,125	2,406	1,654	1,507	657	17	113	16,044
<b>Total</b> .. ..	<b>25,481</b>	<b>19,519</b>	<b>11,779</b>	<b>6,944</b>	<b>6,262</b>	<b>2,562</b>	<b>106</b>	<b>255</b>	<b>72,908</b>
<i>Meals in Cafés, Restaurants, etc. ..</i>	<i>14,739</i>	<i>8,468</i>	<i>4,507</i>	<i>1,910</i>	<i>2,427</i>	<i>584</i>	<i>63</i>	<i>67</i>	<i>32,765</i>
<i>Meals and Accommodation in Hotels ..</i>	<i>9,053</i>	<i>6,696</i>	<i>3,708</i>	<i>1,949</i>	<i>1,937</i>	<i>1,160</i>	<i>109</i>	<i>315</i>	<i>24,936</i>
<i>Hairstressing .. ..</i>	<i>3,974</i>	<i>3,024</i>	<i>1,023</i>	<i>862</i>	<i>719</i>	<i>244</i>	<i>7</i>	<i>21</i>	<i>9,874</i>

(a) Includes value of materials used and cost of labour.

## § 20. The Snowy Mountains Scheme.

The following article covering the history and development of the Snowy Mountains Scheme has been contributed by the Commissioner of the Snowy Mountains Hydro-electric Authority—Sir William Hudson, K.B.E., and deals with the various phases of the Scheme under the following headings :—

1. Introduction.
2. The Snowy Mountains Scheme in relation to Australian Power and Water Resources.
3. Historical.
4. Joint Commonwealth-State action on the Utilization of the Snowy River.
5. The Snowy Mountains Act.
6. Relationships between Commonwealth and States in regard to the Scheme.
7. The Essential Features of the Scheme.
8. The Catchments and Principal Rivers of the Snowy Mountains Area.
9. Conservation of the Catchment.
10. The Hydrology of the Area.
11. The Geology of the Area.
12. Description of the Scheme—
  - A. THE SNOWY-TUMUT DEVELOPMENT—
    - (i) Adaminaby Dam.
    - (ii) The Eucumbene-Tumut Diversion.
    - (iii) Tumut Pond Dam and T1 Pressure Tunnel.
    - (iv) T1 Power Station.
    - (v) T2 Power Station.
    - (vi) Developments on the lower reaches of the Tumut River.
    - (vii) The Tooma-Tumut Diversion.
    - (viii) The Murrumbidgee-Eucumbene Diversion.
  - B. THE SNOWY-MURRAY DEVELOPMENT—
    - (i) Jindabyne Dam.
    - (ii) The Snowy-Murray Tunnel (Jindabyne to Geehi).
    - (iii) The Snowy-Murray Tunnel (Geehi to Swampy Plains).
13. Operation of the Scheme and its relationship to the Thermal System—
  - (i) The Load Factor of the Hydro Stations.
  - (ii) Regulation of energy output by storage reservoirs.
  - (iii) Transmission of energy from the Scheme.
14. Irrigation Features of the Scheme.
15. Defence Aspects of the Scheme.
16. Progress already achieved on the Scheme.
17. The Programme for the Immediate Future.
18. Summary.

Explanatory Plans and Diagrams.

Table of Principal Features.

1. Introduction.—In south-eastern New South Wales and the adjacent areas of Victoria, the Great Dividing Range rises to its highest elevation to form the central section of the Australian Alps. Snow-clad for five or six months each year, this area is the source of the westward flowing Murray and Murrumbidgee Rivers which cross dry but otherwise fertile plains stretching for hundreds of miles to the coast of South Australia. Irrigation farming on these plains is already a well-established and prosperous industry, with food and other primary production greater than in any other region in Australia, but further substantial expansion of production depends on augmenting the flow of the Murray and Murrumbidgee Rivers. The Snowy River, which receives the greatest share of the run-off from the winter snow-fields, flows in the opposite direction from the Murray and the Murrumbidgee to the near-by south-east coast, traversing an area of reliable and adequate rainfall where water is not required for irrigation.

The Snowy Mountains Scheme, begun in August, 1949, provides for the diversion of the Snowy waters through two trans-mountain tunnels to the western river systems

These diversions will give large quantities of additional water so urgently needed for irrigation. In addition, large quantities of electric power will be generated by utilizing the fall of the waters as they pass through the diversion tunnels and shafts. The additional regulated flow of irrigation water supplied by the Scheme will be nearly twice the amount diverted for irrigation from the Murrumbidgee and Murray Rivers in New South Wales during the year 1953-54. The capacity of the proposed power stations will be about 3,000,000 kW which is more than the total generating capacity installed in the whole of Australia to-day, or about one-third of the total generating capacity which will be installed in New South Wales and Victoria by the time the Scheme is completed. The location of the Scheme and its relationship to the Murray and Murrumbidgee Irrigation Areas are shown on pages 1107-8.

**2. The Snowy Mountains Scheme in relation to Australian Power and Water Resources.**—The generally dry nature of the Australian continent limits the water resources of the mainland for hydro-electric power and irrigation. There are possible sites for development on some of the coastal streams on the north-eastern perimeter of the continent and in the far north but the principal power potential lies in the central section of the Australian Alps now being developed by the Snowy Mountains Scheme. It is estimated that the total quantity of hydro-electric energy which can be developed economically on the mainland is in the vicinity of 8,500 million kWh per annum, of which nearly 6,000 million kWh will come from the Snowy Scheme.

The relatively limited extent of Australia's hydro-electric resources is of significance in determining the way in which these resources should be developed. Thermal stations are generally better suited to base load than peak load operation. Conversely, there is considerable advantage in using hydro-electric stations to take peak load, particularly in a predominantly thermal system. The stations of the Snowy Mountains Scheme are being planned on this basis. They will play a very important part in meeting the peak load of the growing New South Wales and Victorian power systems.

The principal sources of irrigation water in the States of New South Wales, Victoria, and South Australia are the Murray and Murrumbidgee River systems. The total present diversion from the Murray and Murrumbidgee Rivers and their tributary streams in New South Wales and Victoria is approximately 2,500,000 acre feet per annum, measured at the main diversion points. To this total the Snowy Scheme, with re-regulation at Hume Reservoir and at the future Blowering Reservoir, will add by diversion and regulation some 1,800,000 acre feet per annum. The contribution of the Scheme to the development of this prosperous irrigation area is therefore very significant, particularly as much of the additional water will be available within the next ten years.

**3. Historical.**—Proposals for development of the Snowy River date back to 1884. In that year, following heavy stock losses through drought in New South Wales a proposal was put forward for a limited diversion of Snowy water into the Upper Murrumbidgee. No action was taken to implement the proposal and the matter was left in abeyance until 1915 when the New South Wales Department of Public Works examined another proposal for using the Snowy River, on this occasion for the development of hydro-electric power. From the Public Works Department's investigations it was concluded that a dam at Jindabyne and an aqueduct leading to a power station on Biddi Point further downstream could provide a power capacity of 150,000 kW. Again, nothing was done and in the 1920's other schemes were put forward, one being for supplying water to Sydney.

In 1937, the Department of Public Works, assisted by oversea consultants, reviewed the possible power development which had been examined in 1915. On this occasion a more extensive scheme with an installed capacity of 250,000 kW was suggested. But, like the 1915 proposal, there was no provision for diversion of the Snowy water to the Murray or Murrumbidgee Rivers for irrigation.

All these early proposals were local developments. Most of them were for a single purpose only, either for power production or for the diversion of water.

In 1944 a dual-purpose development was proposed to the New South Wales Government, involving the diversion of the Snowy River from a reservoir near Jindabyne through a 22½ mile tunnel north-eastwards to the Upper Murrumbidgee River near Cooma. A power station of 21,000 kW capacity was planned at the downstream end of the tunnel, discharging into a storage reservoir on the Murrumbidgee formed by a dam at Billilunga. A capacity of 1,100,000 acre feet was proposed for this storage and a second power station of 25,000 kW was to be located immediately downstream of the Billilunga Dam.

4. Joint Commonwealth-State action on the Utilization of the Snowy River.—In the immediate post-war years there was urgent need for both increased electric power and increased food production. The development of the Snowy River became a matter of national importance and in 1946 the Commonwealth Government and the Governments of New South Wales and Victoria jointly initiated a further technical study of the Snowy River. This study indicated that the diversion from the Upper Snowy to the River Murray was both practicable and attractive from the viewpoint of power production. On the other hand, diversion of the Snowy to the Murrumbidgee River also possessed considerable advantages from the irrigation viewpoint.

At a Premier's Conference in August, 1947, reports on power and irrigation proposals were considered and further investigations recommended. A Technical Committee, with representatives from the Commonwealth, New South Wales and Victoria, was set up under the chairmanship of Dr. L. F. Loder, Director-General of the Commonwealth Department of Works and Housing. The Committee's main function was to obtain information necessary to make a decision on which of the alternative schemes, namely diversion to the Murray or diversion to the Murrumbidgee, should be adopted.

In its first report of November, 1948, the Committee established that the potential value of the waters of the Snowy Mountains was much greater than previously assumed. It recommended that neither of the alternative schemes mentioned in the preceding paragraph should be adopted, but that another proposal providing for the diversion of a substantial quantity of water from the Snowy, the Murray and the Murrumbidgee catchments to the Tumut River should be commenced as soon as possible. The Committee also recommended that further investigations be carried out before a decision was made on the use of the remainder of the Snowy flow. These recommendations were approved by Ministers representing the Commonwealth and the States of New South Wales and Victoria in February, 1949.

A few months later, in June, 1949, the Technical Committee presented a second report recommending that the balance of the Snowy River waters should be diverted to the Murray. This report covered the full range of the Committee's investigations, which extended far beyond the specific comparison of the original proposals and included an examination of the water resources of the whole Snowy Mountains area. The examination brought out the great significance of the Scheme and lifted it to the level of one of major national importance for both irrigation and power development. It established that, in addition to the diversion of water from the Snowy and Tooma Rivers, storages should be constructed to regulate the Tumut and Murrumbidgee Rivers so that an increased proportion of their flows would become available for irrigation in the Murrumbidgee Irrigation Area.

Ministers of the Commonwealth, New South Wales and Victorian Governments met in Canberra in July, 1949 and approved the Committee's recommendations.

5. The Snowy Mountains Act.—Since increased power production and irrigation were regarded as matters directly connected with national defence, it was decided that the construction of the Scheme should be carried out with Commonwealth resources. The urgent need to make a start on the Scheme caused the Commonwealth Government to pass the Snowy Mountains Hydro-electric Power Act in July, 1949. This Act established the Snowy Mountains Authority and cleared the way for work to begin.

The functions and powers of the Authority as defined in the Act are :—

- (a) to generate electricity by means of hydro-electric works in the Snowy Mountains Area.
- (b) to supply electricity generated to the Commonwealth :—
  - (i) for defence purposes
  - (ii) for consumption in the Australian Capital Territory.

The Authority is also empowered to sell to a State, or to a State Authority, electricity not immediately required for defence purposes or for consumption in the Australian Capital Territory.

To enable it to perform its functions, the Authority is given power 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 electricity generated by the Authority ;
- (d) incidental or related to the construction, maintenance, operation, protection, management or control of any works otherwise specified in the Act.

The Authority is constituted by a Commissioner appointed by the Governor-General. He is assisted by two Associate Commissioners, each of whom is also appointed by the Governor-General.

6. Relationships between Commonwealth and States in regard to the Scheme.—The constitutional rights of the Commonwealth to engage in the construction of the Snowy Mountains Scheme stem largely from the defence powers of the Commonwealth and from the Seat of Government Acceptance Act. This Act gives the Commonwealth the right to use electrical energy generated from the waters of the Snowy River and to construct works for that purpose. The defence powers of the Commonwealth are wide in their application and empower the Commonwealth Government to carry out at any time works necessary to national defence.

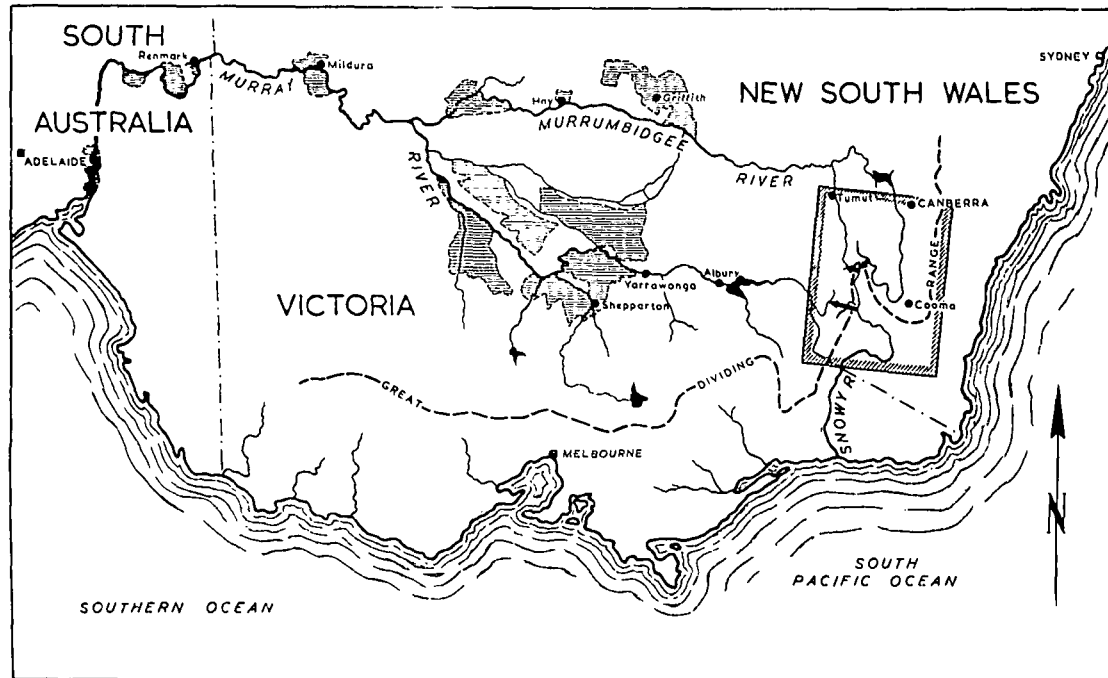
The Snowy Mountains Act will be supported by a detailed agreement between the States of New South Wales and Victoria and the Commonwealth in regard to the construction and operation of the Scheme, the distribution of power and water and other such matters. Negotiations on this agreement have reached their final stage.

The interests of the States are at present expressed through meetings of the Interim Snowy Mountains Advisory Council, on which Electricity Commissions and Irrigation Authorities of the two States are represented, together with the Commonwealth and the Authority. The Commonwealth-States agreement will provide for the continued operation of such a Council which will have power to direct the operation of completed portions of the Scheme.


The cost of constructing the Scheme is being met initially by Commonwealth funds, repayment being effected through the sale of electric power to the State Electricity Commissions. This reflects a most unusual financial arrangement determined at the Premier's Conference in 1949, namely that the cost of supplying irrigation water will be met by increasing the charges for the supply of power.

7. The Essential Features of the Scheme.—The essential features of the Scheme are the diversion of the Snowy River to the Murray and Murrumbidgee valleys for irrigation and the use of its waters, together with the regulated flow of the Tooma, Tumut and Upper Murrumbidgee Rivers, for power production.

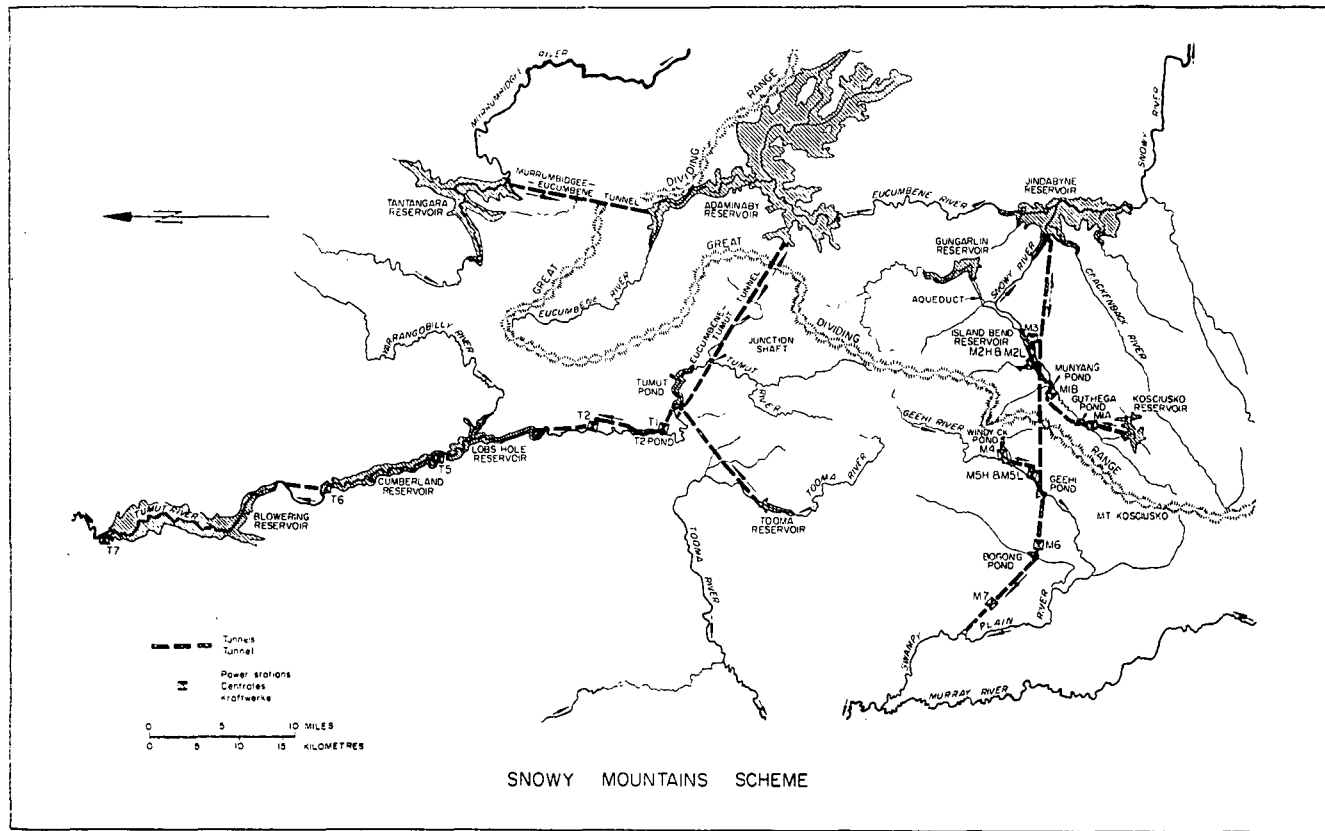
The main stream of the Snowy River will be collected in the proposed Jindabyne Reservoir and diverted through the mountains to Swampy Plains River, a tributary of the Upper Murray River. The Snowy's tributary, the Eucumbene, will be diverted from Adaminaby Reservoir to the Upper Tumut River, a tributary of the Murrumbidgee.



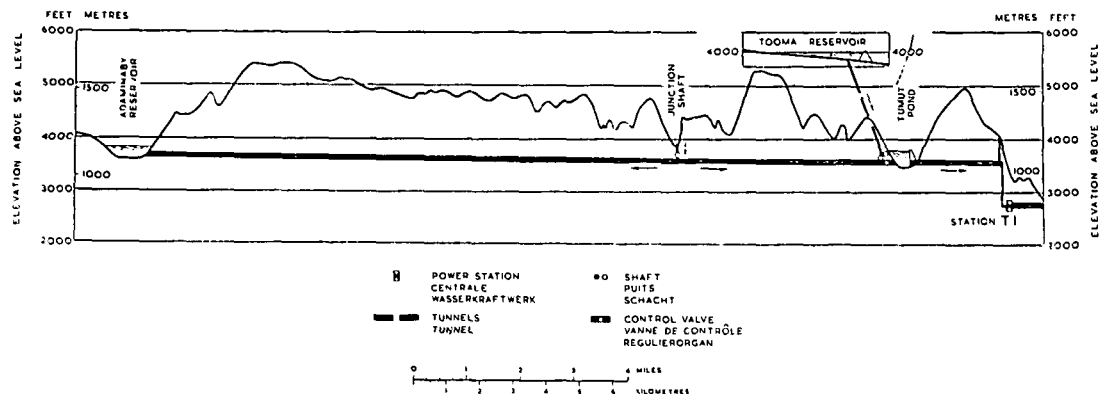
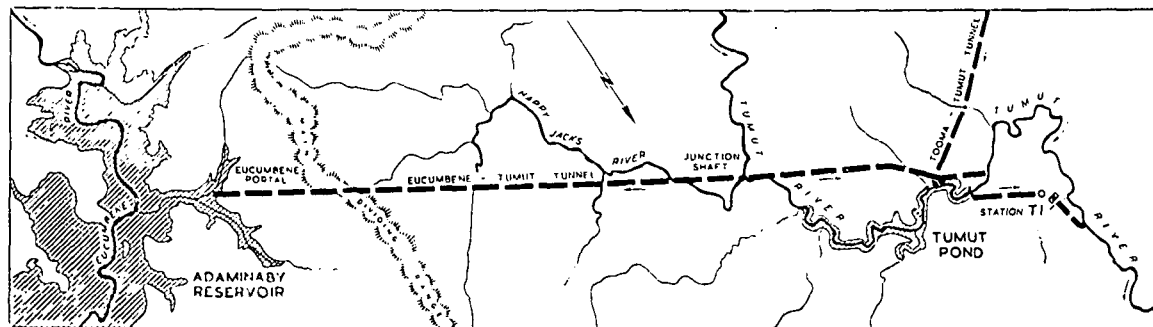
 SNOWY MOUNTAINS AREA  
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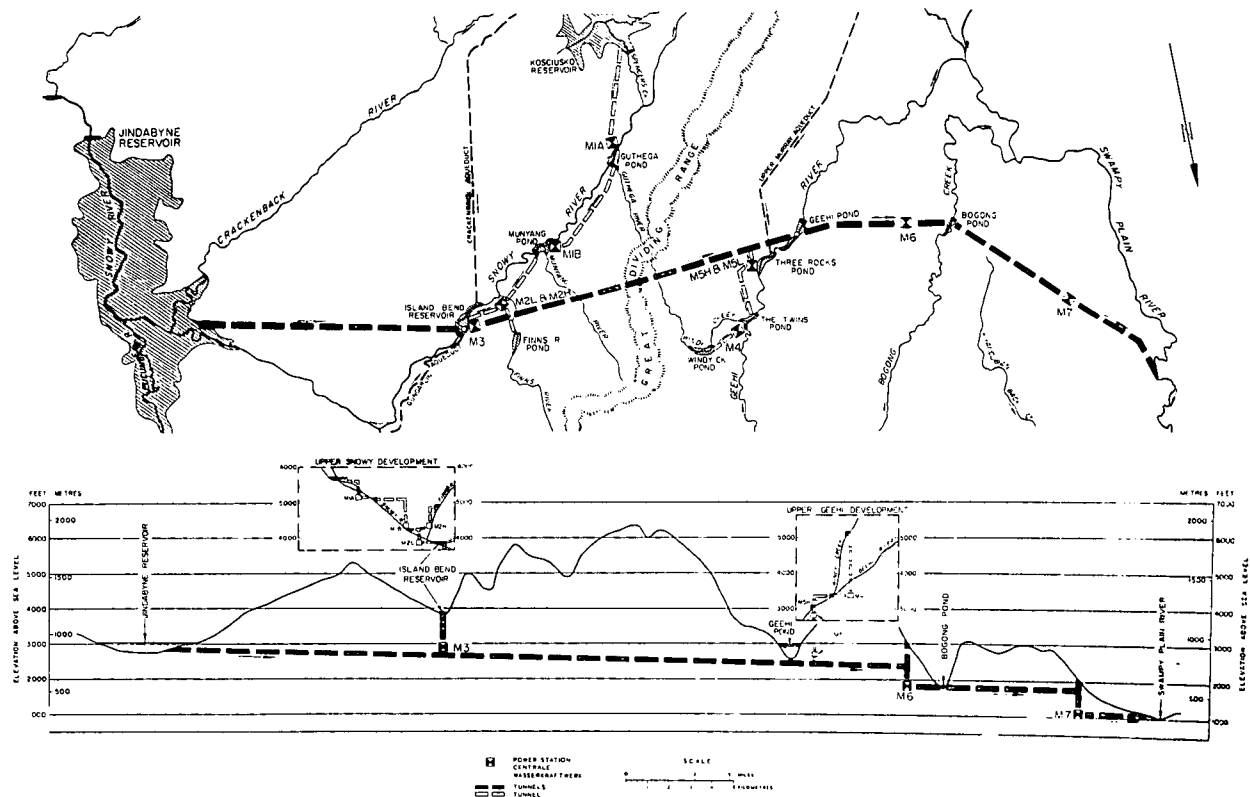
SOUTH - EASTERN AUSTRALIA







SNOWY MOUNTAINS SCHEME  
 SNOWY - TUMUT DEVELOPMENT  
 EUCUMBENE - TUMUT TUNNEL

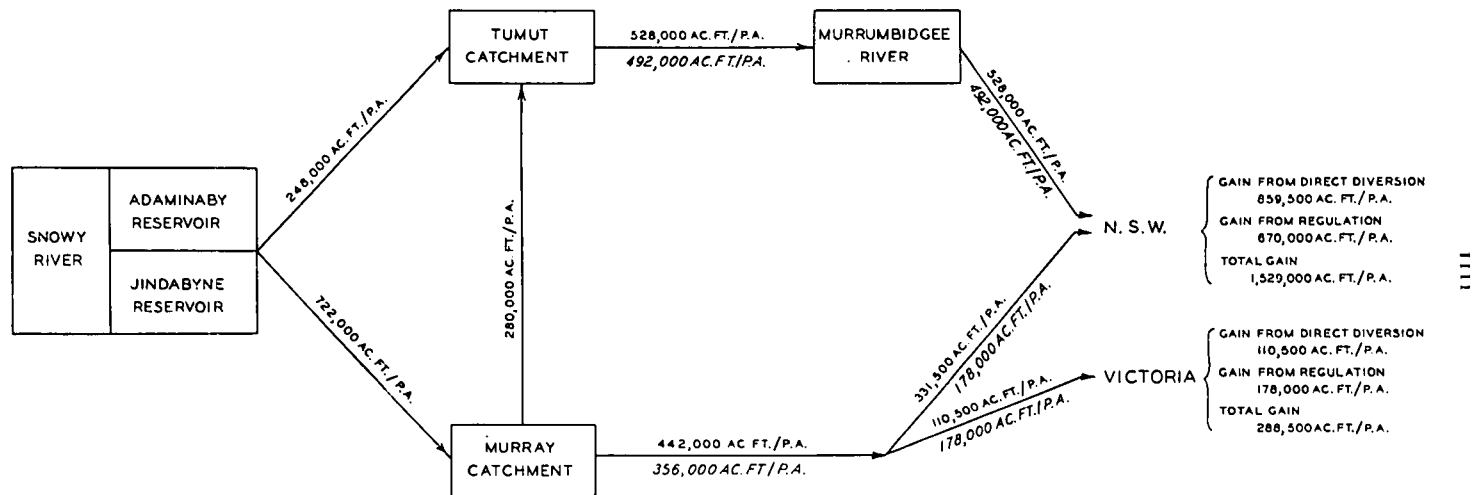


SNOWY MOUNTAINS SCHEME  
SNOWY-MURRAY DEVELOPMENT

Orin

# SNOWY MOUNTAINS SCHEME

## DISTRIBUTION OF WATER



- NOTES :
- (1) DIVERSION QUANTITIES 442,000 AC. FT./P.A.  
GAIN FROM REGULATION 356,000 AC. FT./P.A.
  - (2) NET GAIN TO MURRAY FROM DIVERSION (442,000 AC. FT./P.A.) IS TO BE DIVIDED BETWEEN N.S.W AND VICTORIA RESPECTIVELY IN THE PROPORTION 3:1.  
GAIN TO MURRAY FROM REGULATION (356,000 AC. FT./P.A.) IS TO BE DIVIDED BETWEEN N.S.W AND VICTORIA RESPECTIVELY IN THE PROPORTION 1:1.



To give increased power production and achieve the desired division of irrigation waters between the Murray and Murrumbidgee Valleys, the Upper Tooma River, a tributary of the Murray, will be diverted to the Tumut River and thence to the Murrumbidgee. A further increase in power production will be obtained by diverting the Upper Murrumbidgee River to Adaminaby Reservoir on the Eucumbene River, thence to the Upper Tumut River. The general arrangement of the works is shown in plans and sections on pages 1108, 1109 and 1110.

Storage and regulation of the waters of the Snowy, Tumut, Upper Tooma and Upper Murrumbidgee Rivers in three large reservoirs (Jindabyne, Adaminaby and Tantangara) is an important feature of the proposals. These reservoirs will assure an almost uniform total output of electrical energy from the Scheme, and will also have a considerable influence on the continuity of supply of irrigation water during drought conditions.

On the Snowy-Murray section of the Scheme the principal power stations will be M6 and M7 on the western end of the Snowy-Murray diversion tunnel. An additional four-stage development is planned, extending down the length of the Upper Snowy River and into the Snowy-Murray tunnel. The Guthega Project, completed early in 1955, is one of these developments on the Upper Snowy. On the western side of the Alps a further supplementary development is proposed leading from the upper catchment of the Gechi River down to the level of the main diversion tunnel.

The principal power stations of the Snowy-Tumut section of the Scheme will be the Upper Tumut Stations, T.1 and T.2. These will later be supplemented by the Lower Tumut Stations T.5, T.6 and T.7.

The separate features of the Scheme are described in further detail in later sections.

**8. The Catchments and Principal Rivers of the Snowy Mountains Area.**—The works of the Snowy Mountains Scheme lie in a mountainous area intersected by a series of ranges which form the boundaries between the headwaters of three main river systems, the Upper Murray, the Upper Murrumbidgee, and the Snowy. The ranges rise to an altitude of 7,313 feet at Mount Kosciusko, the higher portion of the area forming a central belt 15 to 20 miles wide, trending in a north-north-easterly direction. The western side of the area is bounded by steeply sloping fault escarpments; on the eastern side the descent is much more gradual.

On the Snowy-Murray section of the Scheme water-power will be developed from an elevation of over 5,700 feet on the upper reaches of the Snowy down to an elevation of 1,000 feet at Swampy Plains River, a tributary stream of the Murray. The Snowy-Tumut development will extend from an elevation of 3,800 feet on the Upper Tumut down to an elevation of less than 1,000 feet on the lower reaches of that river.

Much of the catchment on the northern and eastern sections of the Scheme consists of sub-alpine basins at an elevation of between 4,000 and 5,000 feet. These are partly under a cover of snow grass and native shrubs and partly in woodland. The flood plains and valley bottoms contain extensive swamp areas which contribute to the natural regulation of the snow-melt. The rivers in this area often flow for considerable distances over elevated tablelands before becoming entrenched in steep walled valleys up to 2,500 feet in depth.

A total area of 550 square miles of the catchment lies at an elevation above 4,750 feet, and an area of 750 square miles is snow covered during the winter.

**9. Conservation of the Catchment.**—The preservation of the catchment of the Snowy Mountains Area is essential not only to the operation of the Scheme but also to the continued supply of irrigation water in the Murray and Murrumbidgee valleys.

Prior to the commencement of work on the Scheme, a number of State and Commonwealth agencies were already devoting a considerable amount of study to this vital catchment area. Although disturbance of the general surface by the Authority's construction operations affects only a very small proportion of the catchment, the Authority nevertheless recognizes its interest in the conservation of soil throughout the area as a

whole. Accordingly, although the soil conservation activities of the Authority are directed particularly towards the prevention of damage from its construction operations, a good deal of attention is given to the area as a whole.

Work in this field is closely co-ordinated with that of existing agencies with responsibilities in the area, including the Soil Conservation Service of New South Wales, the Lands Department of New South Wales, the Kosciuszko State Park Trust, and the Division of Plant Industry of the Commonwealth Scientific and Industrial Research Organization.

10. **The Hydrology of the Area.**—Compared with Australian conditions generally, the most unusual feature of the precipitation in the area is the occurrence of a considerable depth of snow over much of the catchment during winter months. Summer and winter precipitation is profoundly affected by the relative altitude of the Alps and the lower areas to the west and south-east. This results in comparatively heavy snow or rainfall from moisture-laden air moving across the ranges from either of these directions. The heavy winter precipitation occurring at high altitudes on the western side of the Great Dividing Range is due to moist air from the Indian Ocean being lifted sharply in crossing the main divide. Precipitation on the eastern side of the range originates mainly from the Tasman and Coral Seas and is much more evenly distributed than the precipitation from the west. As the Snowy Mountains area benefits from both of these sources of moisture, it is less affected by the failure of either than are the adjacent areas of lower altitude.

The nature of the run-off experienced in the Snowy Mountains Area is strongly influenced by the retention of precipitation both within the snow cover which normally remains until late November and as ground water stored in the peaty areas of the higher tablelands. On the other hand, the reverse effect is apparent in certain other sections of the area where the very steep valley slopes lead to extremely rapid run-off and marked local seasonal variations in flows.

The hydrographic data on which much of the earlier study of the Scheme was based was obtained from the following river flow gauges:—

River.	Flow Gauge Location.	Period of Records.	
		From.	To.
Crackenback ..	The Creel ..	June, 1944 ..	To date
Eucumbene ..	Eastbourne ..	June, 1944 ..	To date
Indi (Upper Murray)	Bringenbrong ..	September, 1905 ..	December, 1920
Mowamba ..	Upper Bridge ..	February, 1908 ..	November, 1909
Murray ..	Bringenbrong ..	September, 1905 ..	December, 1920
Murrumbidgee ..	Yaouk ..	February, 1939 ..	December, 1945
Murrumbidgee ..	Mittagang Crossing	April, 1926 ..	To date
Snowy ..	Jindabyne ..	May, 1902 ..	To date
Swampy Plains ..	Khancoban ..	December, 1926 ..	To date
Swampy Plains ..	Bringenbrong ..	September, 1905 ..	December, 1913
Tooma ..	Possum Point ..	January, 1927 ..	December, 1945
Tooma ..	Warbrook ..	August, 1909 ..	December, 1920
Murray ..	Jingellic ..	1891 ..	To date

To obtain more detailed hydrographic information, the Authority has carried out an intensive programme of installation of gauges, a total of 75 having been established since the Scheme began. Records are also obtained from a further 40 gauging stations for purposes of correlation with the shorter-term readings from the gauging stations established by the Authority in the Snowy Mountains Area. Average flows to the power stations of the Scheme are set out in the appended Table of Principal Features of the Scheme (*see* page 1130).

11. **The Geology of the Area.**—The Snowy Mountains Area includes the highest and most deeply dissected parts of the Australian South-Eastern Highlands. The Area has been formed from an earlier extensive peneplain by faulting, flexuring and up-doming of the earth's crust, in a later series of movements. The final period of disturbance causing the greatest uplift occurred during the Kosciusko epoch, at the end of the Tertiary period about 1,000,000 years ago, when the mountains were raised to their present elevations.

Parts of the original land-form are still evident as plateau remnants, lying at different elevations and often abruptly separated by distinct scarps. A very marked fault-scarp descends from an elevation of over 7,300 feet in the Mount Kosciusko area to an elevation of about 1,000 feet immediately to the west. To the east the descent from the high plateau to the lower tablelands occurs more gradually, in part along the broad warped zone, and in part along a series of step-like fault escarpments. The valleys of the Crackenback River and the Upper Snowy River on the eastern side of the Main Range, and of the Geehi River and Bogong Creek on the western side, have generally straight, almost parallel, courses following along major fault zones.

The greater part of the area is composed of granitic rocks, consisting of several distinct masses of intrusive granite, and also granitic gneisses. The remainder is mainly highly folded sedimentary and metamorphosed sedimentary rocks.

A belt 4,000 feet wide and 6 miles long of highly cavernous limestone occurs in the vicinity of the Upper Yarrangobilly Valley. Limestone also occurs in the Pocket Creek area of the Tantangara Reservoir basin on the Upper Murrumbidgee River.

Scattered areas of almost horizontal flows of basalt lava of early Tertiary age, up to 120 feet in thickness, occur in the vicinity of Cabramurra, capping some of the highest ground. The basalt often overlies and protects beds of unconsolidated sand, clay, lignite and gravel, up to 300 feet in thickness. These sediments are the remnants of former extensive river valley bottom and lake deposits, over which the basalt lavas flowed.

Deposits of alluvium along the present-day streams are quite limited in extent. Within the main mountain block, where the streams are chiefly in narrow steep-sided valleys, alluvium is either absent or consists of poorly sorted boulder gravels. Fairly extensive flats containing gravel deposits occur along the more open valleys at lower levels.

The only region on the mainland of Australia in which evidence remains of glaciation is in the highest part of the Kosciusko tableland, where the Upper Spencers Creek and its tributaries occupy broad flat-bottomed valleys shaped by valley glaciers of the second stage of Pleistocene glaciation. The proposed Kosciusko Dam on Spencers Creek will be situated partly on a residual glacial moraine.

Much of the undulating plateau country, the broad mature valleys, and even most of the higher slopes of the steep-walled valleys below the plateau surface, are covered with a mantle of residual soil often of great thickness, formed by *in situ* weathering of the bed-rock. Only along the beds of actively degrading streams, and the lower 100 feet or so of the major valleys, is it common to find fresh rock exposed on the surface. This considerable depth of weathering has a marked effect on the nature and location of most of the engineering structures of the Scheme.

The Authority's team of geologists is carrying out detailed mapping, trenching, diamond drilling and seismic refraction studies. Much attention is being paid to the correlation of the geological evidence obtained by such means with actual conditions encountered during the construction of tunnels and underground works.

12. **Description of the Scheme.**—The Snowy Mountains Scheme is a complex one, both in regard to the types of engineering structures involved and the nature of the river diversions. Particular features of the Scheme are the large amount of tunnelling required, the underground location of many of the power stations and the use of very high voltage transmission lines to convey the energy produced to the load centres in

New South Wales and Victoria. This 330,000 volt transmission system will be the first of its kind in the southern hemisphere and it will form an important link between the power distribution systems of the two States.

An essential feature of the Scheme is the provision of a number of large regulating storages. While, as already pointed out, the annual snow-cover affords some retention and regulation of run-off, the flow in the rivers in the Snowy Mountains Area is nevertheless quite seasonal and it also varies considerably from year to year. For purposes of both power production and irrigation it is necessary to provide a considerable degree of regulation of run-off. The most notable storage basin available at a suitable elevation is on the Eucumbene River near the town of Adaminaby. A second large reservoir is also proposed on the Snowy River near Jindabyne, and a third major storage is planned on the Upper Murrumbidgee at the Tantangara dam site. Of these three storages, Adaminaby Reservoir is considerably the largest. The use of this reservoir to regulate the inflows from the Eucumbene, Tumut, Upper Murrumbidgee and Tooma Rivers and its use virtually to regulate the energy output from the whole Snowy development are central features of the proposals.

As previously noted, the Scheme involves two main diversions, the diversion of the main stream of the Snowy River at Jindabyne to the Upper Murray River and the diversion of the Snowy's tributary, the Eucumbene, to the Upper Tumut River. These two diversions divide the Scheme geographically into two sections, the Snowy-Tumut Development and the Snowy-Murray Development.

#### A. THE SNOWY-TUMUT DEVELOPMENT (*see plans on pages 1103-9*).

These works comprise the diversion and regulation of the Eucumbene, Upper Tooma, Upper Murrumbidgee and Upper Tumut Rivers and their combined development through a series of power stations down the length of the Tumut Valley. All four rivers have their origin in the northern section of the catchment of the Snowy Mountains Area.

To the west of the group the Tooma River, on the western side of the Dividing Range, has its origin on the slopes of the Strumbo Range, roughly 20 miles north of Mount Kosciusko. It flows generally northward for a distance of some 26 river miles before turning westwards towards its confluence with the Murray, 20 miles further downstream.

The catchment of the Upper Tumut River lies parallel to, and to the east of, the Upper Tooma catchment, being separated from it by the Toolong Range. It is drained by the Tumut River and its tributaries, the Doubtful and Happy Jacks Rivers, which combine to flow northwards, descending through a steeply sloping valley for a distance of some 20 miles before entering the more gently graded lower reaches. The Tumut River joins the Murrumbidgee River further downstream near the town of Gundagai.

The catchment of the Eucumbene River lies to the north-east of the catchment of the Upper Tumut, the boundary between the two being the Great Dividing Range. The river flows generally southwards from this area for a distance of approximately 60 miles to join the Snowy about one mile upstream from the town of Jindabyne.

Further to the north-east and across a continuation of the Dividing Range is the source of the Upper Murrumbidgee. From this area the river flows south-eastwards for some 75 miles to a point near Cooma, before turning northwards towards Burrinjuck Reservoir 120 miles further downstream.

(i) *Adaminaby Dam.* The site chosen for Adaminaby Dam, which will form the principal storage reservoir of the Scheme, is at Eaglehawk, 8 miles to the south of Adaminaby township and 20 miles upstream from the junction of the Eucumbene River with the Snowy. At this point the Eucumbene flows through a steep-sided valley ideally suited to the construction of a high earth and rock fill dam. The storage area itself is the broad basin of Buckanderra Creek which drains into the Eucumbene River near the present site of Adaminaby township. On completion of the dam, which is now under construction, a net storage capacity of 3,500,000 acre feet, which is eight times the volume of Sydney



Harbour, will be available for regulation of the Eucumbene and the diverted Tooma, Tumut and Murrumbidgee waters. The dam will be 390 feet in height and one of the highest of this type yet to be built. Its construction will involve the placing of 9,500,000 cubic yards of earth and rock fill.

Although under most circumstances the capacity of Adaminaby Reservoir is sufficient to hold the flood waters from the Eucumbene catchment, provision is being made in the case of floods of exceptional volume for water to be discharged through a low saddle on the north-eastern perimeter of the reservoir basin, into the adjacent Murrumbidgee catchment.

The reservoir will be operated initially with maximum storage level at Elevation 3810 feet, providing a net capacity of 3,000,000 acre feet during the early stages of the Scheme. At a later stage this level can be raised to Elevation 3822 feet, giving a net storage capacity of 3,500,000 acre feet. Some protective works on the emergency spillway will be constructed at that stage.

(ii) *The Eucumbene-Tumut Diversion.* The Eucumbene-Tumut tunnel, which will be approximately 14 miles in length and 21 feet in diameter, will convey Eucumbene, Tumut, Tooma and Upper Murrumbidgee waters, stored in Adaminaby Reservoir, north-westward through the Great Dividing Range to Tumut Pond. From this point they will flow down the Tumut gorge, passing through Stations T1 and T2, and later through Stations T5, T6 and T7. The tunnel will also divert surplus waters from the Tumut and the diverted Tooma Rivers in the reverse direction to Adaminaby Reservoir for storage when they are not required for immediate use.

After passing through the Eucumbene-Tumut tunnel, water drawn from Adaminaby Reservoir will discharge into a balancing reservoir at Tumut Pond which in turn will supply the heavy draw-off required for operating Stations T1 and T2 during peak load periods. The pondage will be replenished by inflow from the Eucumbene-Tumut tunnel during off-peak hours.

It has not been found practicable to carry Tumut Pond Dam up to a sufficient height to cause, under all circumstances, a reversal of flow back to Adaminaby Reservoir for storage. Provision has therefore been made for closing the north-western end of the Eucumbene-Tumut tunnel by means of a valve to divert the Tooma and Tumut waters directly into the tunnel from higher levels. When this is necessary, water from the Tumut river will enter the tunnel by a 300 feet shaft constructed at the confluence of the Upper Tumut and Happy Jacks Rivers. This shaft is also a point of access for the construction of the Eucumbene-Tumut tunnel.

Approximately 40 per cent. of the length of the tunnel will be driven through granite, and 40 per cent. through metamorphosed sedimentary rocks. The remaining 20 per cent. will pass through varied cherts, andesites, slates, etc.

(iii) *Tumut Pond Dam and T1 Pressure Tunnel.* Tumut Pond Dam at the north-western end of the Eucumbene-Tumut tunnel will be a concrete arch structure 290 feet in height and 650 feet in crest length, providing a gross storage of 43,000 acre feet. Full supply level will be at Elevation 3800 feet. The dam site is in a V-shaped gorge with relatively sound granite outcropping on both abutments. The spillway, located on the right abutment of the dam, will be controlled by two radial gates with a total discharge capacity of 68,000 cusecs. River outlets of 7,000 cusecs capacity will also be provided in the dam.

Immediately downstream from Tumut Pond Dam the river enters a steep-sided rocky valley looping westwards and then eastwards, and descending a vertical distance of 954 feet in a total of 7.6 river miles to the site of the outlet of the tailrace tunnel from Power Station T1. Water from Tumut Pond storage will flow through a pressure tunnel 8,000 feet long by 21 feet in diameter, to a surge chamber immediately above T1 Power Station.

(iv) *T<sub>1</sub> Power Station.* Station T<sub>1</sub> will be located in an underground chamber excavated in granite 1,200 feet below ground level, immediately downstream of the underground surge chamber at the end of the T<sub>1</sub> pressure tunnel. The extremely rugged nature of the Tumut Valley in this area and the relative instability of the weathered material on the valley slopes above, made it impossible to locate the power station on the surface.

Twin vertical pressure shafts 12 feet in diameter will lead down from the surge chamber for a vertical distance of 800 feet to the turbo-generators in the power station gallery. From the turbines the water will enter a 4,000 feet tailrace tunnel leading back into the Tumut River further downstream. This underground station is typical of a number of similar stations proposed for the Scheme. It closely follows present day European and Scandinavian practice for underground power stations in country of this nature.

The power station machine hall will be a chamber 305 feet long by 59 feet wide with a maximum height of 105 feet. Access will be through a 1,340 feet long vehicular tunnel on a 1 in 8 grade, or alternatively by a 1,200 feet personnel access lift.

The four turbo-generators to be installed in T<sub>1</sub> Power Station will have a total capacity of 320,000 kW, and will operate under an average net head of 1,050 feet. The flow through the station when operating on full load under average head will be nearly 4,200 cusecs.

Power will be delivered from the generators at 12,500 volts to a bank of underground transformers which will raise the voltage to 330,000 volts. From the transformers, power will be led through high tension cables to the surface and across a bridge to the left bank of the Tumut River. High voltage overhead lines will take the power from this point to a central switching station high on the right bank of the Tumut River, then on to load centres in New South Wales and Victoria.

(v) *T<sub>2</sub> Power Station.* Station T<sub>2</sub> will utilize the water discharged from Station T<sub>1</sub>, developing a gross head of 935 feet between the outlet from that Station and the upper end of the future Lob's Hole Reservoir.

The outflow from Station T<sub>1</sub> will be impounded by a dam 140 feet in height, located 1.4 miles downstream from the outlet from T<sub>1</sub> tailrace tunnel. The net available storage capacity of the pondage will be 1,350 acre feet. From this pondage a tunnel will lead for a distance of 15,700 feet to a point on the right bank of the Tumut River near its junction with Eight Mile Creek, where Station T<sub>2</sub> surge chamber will be constructed. The water will be led from the surge chamber through two sloping pressure shafts to an underground power station located 650 feet beneath the surface. The Station will comprise four turbo-generators, each of 70,000 kW capacity, giving a total capacity of 280,000 kW. After passing through the turbines the water will be discharged into a tailrace tunnel 19,000 feet in length leading back into the Tumut River at the head of the future Lob's Hole Reservoir.

Both the headrace and the tailrace tunnels will be concrete lined and 21 feet in internal diameter. The headrace tunnel will be entirely in granite. The tailrace tunnel will also be mainly in granite, but near its lower end it will cross through a regional contact between granites and sediments.

The power station chamber will be excavated in granite. Its machine hall will be approximately 300 feet long, 55 feet wide and 100 feet maximum height. Access will be gained by a sloping vehicular tunnel, and by a lift shaft. As in the case of Station T<sub>1</sub>, the high voltage transformers will be placed underground, power being brought from them to the surface by high tension cables.

(vi) *Development on the lower reaches of the Tumut River.* Downstream from Station T<sub>2</sub> the further development of the Tumut River will take the form of a series of three reservoirs, with a power station immediately downstream of the dam in each case.

The first of these developments will be the T5 Project, which includes Lob's Hole Reservoir. This reservoir will be formed by an earth and rock fill dam some 240 feet in height and will extend down the Tumut Valley from the outlet from Station T2 for a length of 9.6 river miles. The total storage capacity of the reservoir will be 104,000 acre feet. Station T5 will be located immediately downstream of the dam and will have an installed capacity of 180,000 kilowatts operating on an average net head of 220 feet.

Downstream from Station T5 the next reservoir will extend for 12.7 river miles along the Tumut Valley to Cumberland Dam. The dam will be an earth and rock fill structure some 300 feet in height, located about 6.4 river miles upstream from Talbingo. Power Station T6 at the foot of Cumberland Dam will have an installed capacity of 230,000 kW. Under the present proposals, the station will be located underground with a 21,000 feet tailrace tunnel leading downstream to the head of the Blowering Reservoir, the third storage of the group.

Blowering Reservoir will function primarily to store water passed through the Upper Tumut projects during the winter, and to hold it for release to the Murrumbidgee River during the summer irrigation season. It will be an earth and rock fill embankment approximately 250 feet in height. The total storage capacity of Blowering Reservoir will be in the vicinity of 860,000 acre feet. Full supply level will be at Elevation 1,200 feet. Station T7 at the foot of Blowering Dam will utilize these releases for power production. It will have a capacity of 60,000 kW on an average net head of 200 feet.

(vii) *The Tooma-Tumut Diversion.* The function of the Tooma-Tumut Diversion will be to provide additional water to the series of power stations on the Tumut River and to divide the additional irrigation water to be supplied by the Scheme between the Murray and Murrumbidgee Rivers in the required proportions.

Diversion of the Upper Tooma River will be from a reservoir at a point near its confluence with Toolong Creek. The proposed Tooma Dam will be an earth and rock fill structure with full supply level at Elevation 4,000 feet. The height of the embankment will be approximately 220 feet and the net storage capacity of the reservoir 22,000 acre feet. From this reservoir a tunnel will lead north-eastwards for a distance of about 9 miles to the Tumut River at Tumut Pond. The tunnel will be in granite for most of its length and will be excavated to a section equivalent of 14 feet diameter. At intermediate points along the length of the tunnel tributary streams of the Tooma will be diverted through shafts into the tunnel to supplement the main diversion. The quantity of water diverted from the Tooma catchment will average approximately 285,000 acre feet per annum.

Provision will be made for the diversion of Tooma water either into Tumut Pond or alternatively directly into the Eucumbene-Tumut tunnel on the Eucumbene side of the main control gate at the Tumut Pond end of that tunnel. The latter procedure will enable the whole head available between Tooma Reservoir and Adaminaby Reservoir to be utilized, thus ensuring the diversion of the maximum quantity of Tooma water to storage in Adaminaby Reservoir.

(viii) *The Murrumbidgee-Eucumbene Diversion.* Under the original plans, prepared by the Commonwealth-States Technical Committee, it was proposed to divert the Upper Murrumbidgee River westwards into the Yarrangobilly Valley, and then to the Tumut River at Lob's Hole. Two power stations were to be built, developing the full available head between the Upper Murrumbidgee and the Tumut River. It is now proposed to amend that lay-out by diverting the Upper Murrumbidgee southwards into Adaminaby Reservoir on the Eucumbene River. Under the latter arrangement, Murrumbidgee water will pass through Adaminaby Reservoir and augment the flow through power stations T1, T2, T5, T6 and T7 on the Tumut River.

The dam on the Upper Murrumbidgee, known as Tantangara Dam, will be located at the Gulf where the river leaves a wide basin and enters a narrow gorge. It will be approximately 200 feet in height. The reservoir will have a net storage of about 500,000 acre feet.

The tunnel through the Main Divide from Tantangara Reservoir to Adaminyabey Reservoir will be  $9\frac{1}{2}$  miles long. Its route passes through alternating granites and sediments, the maximum depth of rock over the tunnel line being 1,500 feet. It will be approximately 10 feet by 12 feet in section.

The average quantity of water diverted from the Upper Murrumbidgee will be approximately 230,000 acre feet per annum.

B. THE SNOWY-MURRAY DEVELOPMENT (*see plans on pages 1108 and 1110*).

The principal feature of the Snowy-Murray Development is the diversion of the main stream of the Snowy River at Jindabyne by tunnels, totalling nearly 30 miles in length, westwards through the Great Dividing Range into the Swampy Plain River in the catchment of the Upper Murray River. A balancing pondage will be constructed at the point where the tunnel route crosses the Geehi River, a headwater tributary of the Murray. From this pondage down to the lower Swampy Plain River the diverted Snowy water will fall about 2,000 feet, developing in two power stations approximately 1 million kW. The outflow from the last of these stations will pass into a regulating pondage on the lower Swampy Plain River before flowing into the Upper Murray and on to the Hume Reservoir.

Associated with the main Snowy-Murray Diversion are the power developments of the Upper Snowy River and the Upper Geehi River. The Upper Snowy group will comprise a series of four power projects, utilizing the fall in the waters of the Snowy River from Kosciusko Reservoir at Elevation 5,770 feet to Island Bend at Elevation 3,930 feet, then down a 1,100 feet shaft into the main Snowy-Murray tunnel. One of these developments, the Guthega Project, came into operation in February, 1955.

On the western side of the Divide, developments on the Upper Geehi will similarly utilize the upper reaches of that river from an altitude of 5,190 feet through a series of three power stations down to the level of the Geehi Pondage.

(i) *Jindabyne Dam*. The Snowy River emerges from the mountains into a broad open valley some 5 miles upstream from the town of Jindabyne. Immediately below the town, the valley again narrows and from that point southwards to the sea its course is generally through hilly and rather rugged country. Jindabyne Dam, which will impound the Snowy River and divert it westwards under the main range into the Murray catchment, will be located about one mile downstream from the present township. The storage area will cover the whole of the Jindabyne basin and extend upstream above the junction of the Crackenback River with the Snowy. The dam will be an earth and rock fill embankment, 275 feet in height, impounding a net storage of 1,100,000 acre feet.

(ii) *The Snowy-Murray Tunnel (Jindabyne to Geehi)*. The first section of the Snowy-Murray tunnel, leading from Jindabyne Reservoir under the Dividing Range to Geehi Pond, will be 19 miles in length, the longest single tunnel in the Snowy Mountains Scheme. The cross-section dimensions of the tunnel have yet to be determined but it is expected that its diameter will be in the vicinity of 20 feet. Where it passes beneath the crest of the Dividing Range the tunnel will be about 3,800 feet below surface level.

At Island Bend, about half way along the length of the tunnel, the route crosses beneath the Snowy River and at this point the tunnel will be intercepted by a shaft about 1,100 feet in depth. The shaft will serve as a point of access for the construction of the tunnel. In addition it is probable that Station M3 will later be built into the base of the shaft, to generate power from the Upper Snowy waters as they pass from the shaft into the Snowy-Murray tunnel.

(iii) *The Snowy-Murray Tunnel (Geehi to Swampy Plain)*. The section of the development between Geehi Pondage and Swampy Plain River is still under investigation and therefore can only be described in general terms. There are a number of possible

alternatives. One of these developments is that suggested by the original Commonwealth-States Technical Committee in its examination of the Scheme (see plans on pages 1108 and 1110).

This proposal involves a two-stage development, the first section, which includes M6 Power Station, utilizing about 975 feet of head between Geehi Pond and a pondage on Bogong Creek. The second section, which includes M7 Power Station, extends from the Bogong Creek pondage to the lower Swampy Plain River. Under this proposal, both Stations M6 and M7 would be located underground.

To supplement the flow of the diverted Snowy and Geehi Rivers, it is proposed to divert part of the run-off from the western slopes of the Great Dividing Range by means of a series of surface aqueducts and tunnels.

13. *Operation of the Scheme and its Relationship to the Thermal System.*—The future electric power installations on the mainland of Australia will be predominantly thermal or possibly thermo-nuclear installations. When compared with future requirements, the amount of hydro-electric energy that can be developed is very limited. It is important, therefore, to make the most of our hydro-electric potential by using it to the utmost advantage.

(i) *The Load Factor of the Hydro Stations.* 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. In a hydro installation the increase in energy cost with reduction in load factor is much less marked than for thermal plants, and as the load factor decreases the economy of hydro plant becomes increasingly favourable compared with that of thermal plant.

There are a number of reasons for this. One, from the operation viewpoint, is that thermal units are not well suited to a constantly varying output. It is not always possible to predict the exact time of day at which the peak of the load will occur. Therefore, if the peak is to be taken by thermal units it is necessary for these units either to remain on stand-by, in which case there are unavoidable heat losses, or for the plant to operate on part-load in readiness to meet the peak when it occurs. In either case this type of operation is not conducive to efficiency. Hydro units, on the other hand, are well adapted to following the very rapid changes in load which occur during peak hours. The combined use of thermal and hydro equipment, with the former operating on virtually constant output and the latter adjusting itself to varying load, is the ideal arrangement.

This general conclusion must be qualified to take into account a number of factors which can influence the desirable inter-operation of hydro and thermal plant in any particular case. For instance, the relative cost of production of energy as between old thermal plant and new thermal plant is of particular significance in the case of the New South Wales and Victorian generating systems at the present time. Recent technical developments in thermo-electric generation have brought about a considerable improvement in efficiency, with a consequent marked difference between the cost of energy from new and from old plant. The existing New South Wales and Victorian systems comprise a proportion of relatively old and less efficient installations, generally situated in the metropolitan area, and utilizing relatively expensive transported fuel. These installations operate in conjunction with a proportion of newer, more efficient equipment, generally situated close to the coalfields. While it may always be desirable to have a limited proportion of the thermal generating capacity located in metropolitan areas and therefore operating with higher cost fuel, the future trend will be to concentrate the bulk of the thermal generating plant outside metropolitan areas and close to the fuel source. For the time being, however, and as long as a considerable proportion of existing older type metropolitan plant remains in operation, there will be an incentive to use this equipment on peak load in the interests of fuel economy. While this situation obtains it is desirable for any hydro stations introduced into the system to operate on a rather higher load factor than would otherwise be the case, leaving the relatively expensive thermal plant to take the extreme peak load until it is finally withdrawn from service.

Two factors contribute to making this state of affairs a relatively short-term one. Firstly, much of this older-type plant is reaching the end of its economic life and will be withdrawn progressively over the next 10 or 15 years. Secondly, the system load is increasing at a very rapid rate, more than doubling itself every 10 years. The proportion of the peak load which the existing high-cost metropolitan stations can take is therefore rapidly decreasing. As the load increases and the proportion of the peak taken by these thermal stations becomes progressively less, a larger section of the peak load will require to be taken either by relatively new thermal installations or preferably by hydro plant. Hydro-electric developments such as those at Kiewa, Eildon and Hume now under construction by the State Electricity Commissions will contribute to meeting the peak load, but these are limited in total capacity. The hydro stations of the Snowy Mountains Scheme will be relied upon principally for this function in the future.

To utilize the potential of the Snowy Mountains Scheme most effectively, it is proposed to arrange the order of development so that the early stations will 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.

(ii) *Regulation of energy output by storage reservoirs.* It is desirable, under most circumstances, for the day by day output of electrical energy from the Scheme to be reasonably constant. As there is a marked seasonal variation in the flow in the rivers of the area, considerable emphasis has been placed on the construction of very large storages, notably at Aaminaby and Jindabyne, to reduce the effect of these variations. Certain of the power stations will necessarily operate on inflows not regulated by the main storages and the output from these stations will vary considerably. A feature of the design and the proposed operation of the Scheme, however, is that the variable output from these stations on uncontrolled streams will be balanced by corresponding variations in the output of other stations operating on flows controlled by the main reservoirs. In this way the total output from the Scheme will be kept almost constant, and the energy delivered from operating stations on uncontrolled streams will, in effect, be regulated by the main storages. This method of operation, which shows a marked change from that envisaged by the original Commonwealth-States Technical Committee, will not only considerably increase the quantity of electricity the Scheme can guarantee to its customers, but it will also greatly improve the irrigation value of the Scheme.

(iii) *Transmission of energy from the Scheme.* The Snowy Mountains Scheme is situated geographically about midway between the principal load centres of Sydney and Melbourne and, as already mentioned, will be connected to these centres by high-tension 330,000 volt transmission lines. It will consequently be in a strategic 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, as already indicated, most of the output from the Scheme will go to the States of New South Wales and Victoria, the Commonwealth Government also has rights, vested in the Seat of Government Act, to draw from the Scheme its requirements of power and energy for the Australian Capital Territory and for defence purposes. For convenience, the Commonwealth share of power and energy will be drawn from the New South Wales transmission network by an exchange arrangement between the Commonwealth and the Electricity Commission of New South Wales. The remaining power and energy from the Scheme, after fulfilling the Commonwealth rights, will be divided between the States of New South Wales and Victoria in the average ratio of 2 : 1.

**14. Irrigation Features of the Scheme.**—Since the inception of the Scheme, the diversion of the waters of the Snowy River inland to supplement irrigation developments in the Murray and Murrumbidgee river valleys has been regarded as one of its primary features.

The irrigation at present carried out in the valleys of the Murray and Murrumbidgee Rivers provides a considerable proportion of the total Australian irrigation production, but further increases are strictly limited by the availability of additional water.

The supply to Victorian irrigation schemes has been increased in recent years by additions to the storage capacity of Hume Weir and by the construction of the enlarged Eildon Dam and storages at Cairn Curran and elsewhere. Amplifications of supply are now reaching their limit and there is very little room for further large scale addition to the supply of irrigation water in Victoria other than by the diversion of the Snowy River.

The New South Wales irrigation areas on the Murray River, which will also benefit from the additional capacity being provided at Hume Reservoir, have not reached the same critical stage, but the position in the Murrumbidgee Irrigation Area is similar to that in Victoria. On the Murrumbidgee River and its tributaries, the principal works in progress or in prospect are the provision of increased storage capacity at Burrinjuck Reservoir and the proposed control works at Menindee Lakes. The latter works will provide a considerable part of the New South Wales quota of the South Australian share of Murray water, and will thereby increase the amount of water which may be diverted for use in the Murrumbidgee Irrigation Area further upstream. On the completion of these works, however, there will be little possibility of further significant increases in irrigation development in the important Murrumbidgee Irrigation Area other than by the supply of additional water from the Snowy Scheme.

The total additional regulated supply of irrigation water in the Murray and Murrumbidgee Rivers, directly resulting from the operation of the Scheme and the re-regulating storages, will be approximately 1,800,000 acre feet per annum, or an increase of 70 per cent. on the total present diversions from these rivers and their tributary streams in the States of New South Wales and Victoria. The increase in New South Wales will be more than 150 per cent. on the present diversions from the Murrumbidgee and Murray Rivers in that State.

The additional regulated irrigation water to be supplied to the State of Victoria will probably be used largely to provide for more intensive development of areas already reticulated with channels and served from the diversion weirs at Yarrawonga and Torrumbarry. There will be some extension of channels to high quality lands adjoining existing irrigation districts and some further developments by pumping from diversion points along the river.

The New South Wales Government has for some time been carrying out studies on soils, drainage and other matters which could affect the use of the additional waters in the Murrumbidgee Valley from the Snowy Scheme. It is understood that special attention is being given to the Billabidgee area between the Murrumbidgee and Billabong Creek, and to the country north of the Murrumbidgee between Griffith and Hay. Extensive work on distribution canals and preparation of land will be required in the immediate future if advantage is to be taken of the additional irrigation water which will shortly be available.

The value of increased irrigation production resulting from the additional supplies of water to be provided by the Scheme will amount to nearly £30,000,000 per annum based on present-day figures. It will have a very marked effect on stabilizing rural production in the irrigation areas of the Murray and Murrumbidgee Valleys and will substantially increase export revenues.

Apart from the direct diversion of new irrigation water from the Snowy River, a considerable advantage will be gained from the regulation afforded to the Snowy, Eucumbene, Tooma, Tumut and Murrumbidgee Rivers by the operation of the Scheme. As previously mentioned, the development is being so designed that the total output of energy is reasonably constant from season to season, and from year to year. With the method of operation now proposed in which the stations supplied from the main storages will balance the varying output from the stations on uncontrolled rivers, the actual releases of water from the principal reservoirs will be greater in dry seasons than in wet seasons. In the case of Adamina Reservoir this effect could extend over several years.

For the fullest advantage to be taken of the outflows from the power stations, it is essential that releases during the winter months be held for use during the summer

irrigation season. As already indicated, it is proposed to accomplish this by means of re-regulation in the enlarged Hume Reservoir on the Murray River and in the proposed Blowering Reservoir on the Lower Tumut River.

Blowering Reservoir will have a storage capacity of some 860,000 acre feet. This will be sufficient to retain almost the whole of the releases from the Snowy-Tumut section of the Scheme during the non-irrigation months. The construction of Blowering Reservoir will be undertaken by the Water Conservation and Irrigation Commission of New South Wales.

The principal diversions and the allocation of additional regulated irrigation water between the States of New South Wales and Victoria are shown diagrammatically on page 111. It is noted that there will be a period during the early stages of construction of the Scheme during which the Tooma-Tumut diversion will be in operation prior to the completion of the compensating Snowy-Murray diversion. During these initial years the diverted Tooma water will be regarded as a part of the share of the State of New South Wales in the waters of the Murray River. In effect this share of the Murray water will become available to New South Wales as additional water in the Murrumbidgee River instead of as a part of the New South Wales allocation of Murray water. In relatively dry years, this diverted Tooma water will probably be used to meet part of the New South Wales quota of the water required to flow down to South Australia.

On completion of the Snowy-Murray Diversion, water turned into the Murray will more than compensate for the Tooma Diversion.

In the formal Agreement between the States of New South Wales and Victoria and the Commonwealth Government now being negotiated provisions are included which will assure the two States of increases in the supply of water during the initial as well as in the final stages of the Scheme. Thus, during a declared period of water supply restrictions in the Murray Valley, the Irrigation Commission of New South Wales will be able to call for releases of water from Adamaby Reservoir via the Tumut River, sufficient in quantity to compensate fully for the effect of the diversion of the Tooma River from the Murray catchment to the Murrumbidgee catchment. This provision will not apply after the completion of the compensating Snowy-Murray Diversion. It will then be replaced by a similar provision which will ensure certain minimum releases of additional water into the Murray River during periods of restriction. A further provision will assure the State of New South Wales of certain minimum releases from Tumut River stations at all stages of the Scheme.

A principle was established at the Premier's Conference in 1949 that the cost of providing irrigation water from the Scheme would be defrayed by charges for power. Although the considerable increase in interest rates since that time has added greatly to the annual charges to be carried by the Scheme insistence on the application of this unusual principle has been maintained. It is estimated that over £60,000,000 of the cost of the Scheme is attributable to the provision of irrigation water. In this respect the arrangements for financing the Snowy Mountains Scheme differ considerably, and much to the Snowy Scheme's disadvantage, from those of other notable dual-purpose power and irrigation developments constructed overseas in recent years, particularly in the United States. It has generally been considered in such developments that the costs attributable to irrigation works should be treated separately. This is the present policy in the case of irrigation headworks constructed by the State Irrigation Commissions in Australia. Most of the cost of these structures will also ultimately be met from public revenues. In the case of the Snowy Scheme, however, it is proposed that the whole cost of the irrigation features of the Scheme will be financed by the sale of power.

The first release of new irrigation water from the Scheme will become available on completion of the Eucumbene-Tumut tunnel late in 1959. Before that date, the water of the Eucumbene River, a tributary of the Snowy, will have been stored in advance of the diversion for a period of approximately  $1\frac{1}{2}$  years. On the present construction programme, the main stream of the Snowy River at Jindabyne will be impounded in 1965 and diversion of the Snowy to the Murray will be accomplished in 1966. By that date



most of the additional irrigation water from the Scheme will be available. If the construction of distribution systems in the irrigation areas has kept pace with the construction of the Scheme a very great increase in irrigation production in the Murrumbidgee and Murray areas will then be apparent.

15. *Defence Aspects of the Scheme.*—The joint State-Commonwealth action to initiate construction of the Scheme in 1949 was prompted by the urgent need to build up power resources and primary production in the interests of national defence. The lag in construction of new generating plant during the war years has not yet been overtaken, and it is evident that provision of adequate power for industry will continue to be a problem for many years to come.

In addition to its general contribution to power and irrigation production, the Scheme has certain features which add considerably to its value from the defence viewpoint. The experience of the 1939-45 War has shown that thermal power stations are particularly susceptible to damage under light as well as heavy attack, because much of the equipment can be put out of service relatively easily. The damage which would result to thermal power stations in exposed positions on the coastline or near the main cities in a concerted attack with modern weapons could be very great indeed. On the other hand, the strategic location of the Scheme in a mountainous region, distant from the coastline, would make a concerted attack difficult to carry out. The power stations are mainly sited in deep underground galleries and it is most unlikely that they would be affected by any form of aerial bombardment. The tunnels, too, would be relatively safe.

With regard to the water storages on the Snowy Scheme, it was the experience of the last war that a systematic attack on dams could bring about their destruction. In the case of relatively low-head hydro schemes, the destruction of headworks reservoirs would effectively put such stations out of operation, but in the case of high-head developments such as those of the Snowy Mountains Scheme the destruction of reservoirs would merely result in a reduction in the amount of controlled energy; it would not result in the stations being put completely out of service.

The position of the Scheme midway between the two main load centres of Sydney and Melbourne is of particular significance as the output from the Scheme could be used to support the load in either of these centres if one of them suffered war damage. The transmission lines also traverse areas in both States suitable for the establishment of dispersed industries.

Although the design of the Scheme is based largely on economic and geographic considerations, it is very similar in many respects to certain recent European and Scandinavian developments which have been designed with protection against damage from modern weapons as a primary consideration. The power potential of the Scheme is certain to play an essential part in future national defence planning.

16. *Progress already achieved on the Scheme.*—During the six years since the passing of the Snowy Mountains Act, the Authority has established an organization comprising a staff of approximately 1,060 officers, including 340 engineers, geologists, physicists, soil conservationists and other professional men, many recruited overseas. It has erected three new townships and a number of large construction camps, involving the establishment of 800 houses, messes, hostels, office buildings, shops, stores, recreation facilities, water and electricity supplies, workshops, and probably the largest civil engineering laboratories in Australia.

About 100 miles of public roads have been reconstructed. One hundred and ten miles of new heavy duty roads and 150 miles of light roads and access tracks have also been built. A feature of the Authority's roadwork has been the opening up of a potentially valuable tourist and recreation area. It is believed that some of the Authority's new roads will later form important links in the inter-state transport systems of New South Wales and Victoria. In particular, the Alpine Way now being constructed across the Main Divide within five miles of Mount Kosciusko will traverse an alpine scenic area unequalled in Australia.

Following the opening up of the area by the construction of roads, two regional townships were established, one at Island Bend in the southern section of the Scheme and one at Cabramurra in the northern section. These served as bases for further preliminary works. A system of radio and telephone communications and a construction power network had to be established throughout the Area. Much of this early work was carried out during winter conditions when snow and low temperatures made working very difficult.

The original Snowy River Committee had only a very short time in which to carry out the preliminary investigation and planning of the Scheme. It was also seriously handicapped by lack of data. Access for surveys was difficult and much of the work had to be based on aerial photographs and unreliable maps. The available hydrological records were also limited. It was necessary, therefore, for the Authority to confirm the work of the Committee and extend it in much greater detail. With the objectives of generation of power and diversion of irrigation water at the earliest possible time, the Authority began an intensive programme for the collection and analysis of field data. Unsurveyed country had to be mapped and hydrological and geological information had to be gathered, all in mountainous country, some of which was inaccessible except on foot and by pack horse.

Due to the comprehensive nature of the Scheme it was necessary to investigate on broad lines the whole of the development and its inter-related components before any section could be designed in detail. This work involved, amongst other things, a study of the inter-operation of the stations of the Scheme with those of the State thermal systems, and an analysis of the effect of the proposed diversions on the availability of irrigation water in the Murray and Murrumbidgee Rivers. The problem of integrating the operation of the components of the Scheme was one of considerable complexity, requiring consideration of a large number of power stations, storages and diversions.

General investigations of the whole Scheme had to be followed closely by studies to determine the basis for the development of each project, and the detailed investigation of the sites of proposed structures. Designs followed the detailed investigations and by August, 1951, construction had commenced on the first of the Authority's power projects, the Guthega Project.

Faced with the problems of building up a large organization and commencing major construction work at the earliest possible date, the Authority sought and obtained the assistance of the Bureau of Reclamation of the Department of the Interior, United States of America, in the preparation of designs and specifications. The Bureau with its 50 years of experience in the construction of reclamation works by contract, was in a unique position to advise the Authority, to give technical assistance in the preparation of designs and specifications and to advise on staff training. This technical assistance enabled the Authority to proceed with confidence and to achieve a much greater rate of progress than would otherwise have been possible. In addition to the preparation of designs and specifications for about two-thirds of the Authority's contracts and the training of the Authority's staff on large construction works in the United States, the Bureau of Reclamation has also made available the services of a group of experienced engineering advisors who are now resident in the Snowy Mountains Area.

The first section of the Scheme chosen for construction was the Guthega Project on the Upper Snowy River. This project was selected because it offered the possibility of developing power within a comparatively short space of time. It could also be undertaken with much less preparatory work than would have been required in the case of the other larger projects. Construction began in August, 1951, and proceeded through winter and summer until its completion in February, 1955, when the first power from the Scheme was fed into the New South Wales transmission system. The civil engineering work was carried out by the Norwegian firm, Selmer Engineering Pty. Ltd.

Because of the acute shortage of manpower when the project was commenced, the contract specifications required the successful tenderer to import 90 per cent. of his labour and staff, and all materials then in short supply in Australia. About 400 Norwegians

were brought to Australia to work on the project. Later, when the labour market improved, numbers were supplemented by the employment of Australians, particularly for tunnelling.

The Guthega works area is at an elevation of approximately 5,200 feet and is only 8 miles from the summit of Mount Kosciusko. It is normally under snow from May to October, falls of over 3 feet being quite common. Low temperatures and snow condition added greatly to the difficulty and hazard of the work.

The Authority's own forces have constructed more than 84,000 feet of concrete aqueducts to divert additional waters from downstream of the works into the Guthega pondage and the surge chamber. As the elevation and the exposed position of these aqueduct lines makes winter construction uneconomic, if not impossible, the work is carried out in the summer in conjunction with a winter programme of road building and other work at lower elevations.

The Authority has constructed 47 miles of 132,000 volt lines from Guthega Power Station to Cooma and over 100 miles of 66,000 and 11,000 volt lines for distribution of construction power within the area.

Adaminaby Dam, on the Eucumbene River is being designed and constructed for the Authority by the Public Works Department of New South Wales. Construction on a large scale commenced in 1953. More than 220 homes and several barrack blocks for employees have been erected in the works township of Eaglehawk, adjacent to the site of the dam. The 2,300 feet long by 25 feet diameter diversion tunnel around the dam site was completed in 1955 by Allied Constructions Pty. Ltd., as sub-contractors to the Public Works Department. Stripping of the abutments of the dam and foundation consolidation grouting were completed by the Department in 1955, permitting a commencement to be made on the placement of earth and rock fill immediately after the diversion of the river. Tenders closed in March, 1956 for the construction of the major part of the embankment and a contract was placed in May with the Kaiser-Walsh-Perini-Raymond group of American contractors. Storage of the Eucumbene River behind the partially completed wall is scheduled to begin by mid-1957. The dam will be completed in 1959.

The deviation of the Snowy Mountains Highway, formerly the Monaro Highway, around the eastern side of Adaminaby Reservoir has already been almost completed over a length of 25 miles. This work is being carried out by the Department of Main Roads, with the Authority's construction force assisting during the winter. Thirty-one miles of new road construction is involved. As most of the existing township of Adaminaby will be inundated when the reservoir is filled, the Authority is building a new township near the eastern perimeter of the reservoir and about four miles from the existing township.

In October, 1954, the Kaiser-Walsh-Perini-Raymond group began to drive the Eucumbene-Tumut tunnel from the Adaminaby Reservoir through the Great Dividing Range to the Tumut River. In preparation for the tunnel works, the Authority constructed 15 miles of first-class road from the Snowy Mountains Highway over the Great Dividing Range to Eucumbene Portal at the southern end of the tunnel; also a 13-mile branch road across the elevated Happy Jacks Plain to the site of Junction Shaft, a working point on the tunnel at the confluence of the Tumut and Happy Jacks Rivers. Initial accommodation was provided for the contractors' forces, as well as construction power.

At the end of March, 1956, the contractors had driven a distance of over 2½ miles from the Eucumbene Portal. The 300 feet junction shaft had been completed and tunnellers driving from the bottom of the shaft had progressed over 3,000 feet in each direction. The existing world's record for excavation of a tunnel of this size has been broken on at least four occasions by the Kaiser-Walsh-Perini-Raymond group, a footage of 474 feet having been achieved in one week of six working days during March, 1956.

A 4,000 feet long access and drainage adit leading to the downstream end of the main tunnel from a point downstream of Tumut Pond dam was driven during 1955 by

the Australian firm of Allied Constructions Pty. Ltd., sub-contractors to Kaiser-Walsh-Perini-Raymond. It is anticipated that the Eucumbene-Tumut tunnel will be in service by the end of 1959.

As already mentioned, Tumut Pond Dam will regulate and control waters from the Tumut, the Tooma, the Eucumbene and the Murrumbidgee Rivers and pass them through a pressure tunnel to T1 Power Station. Both the dam and the pressure tunnel are being constructed by the Kaiser-Walsh-Perini-Raymond group of American contractors. Construction commenced on the 3,000 feet pressure tunnel in January, 1955, and by the end of March, 1956 excavation had progressed for a distance of approximately 1½ miles. Preparatory work is already well under way for the construction of Tumut Pond Dam. The dam and pressure tunnel will be in service by the end of 1958.

The construction of T1 Power Station is being carried out by a group of French contractors, the sponsoring company being the firm of Etudes et Entreprises. The turbines are being manufactured by the English Electric Company and the generators by A.S.E.A. Electrics, Vasteras, Sweden. The first two units of the power station should be in service by the end of 1958, and the second two units about one year later.

Preparatory work for the construction of the next power station on the Tumut River, T2, is already well advanced. All investigations have been completed and designs are now in progress in preparation for calling tenders for the civil engineering works early in 1957. The Authority's field construction forces are building a road from the Regional Centre of Cabramurra to the power station site. This road traverses very difficult country, passing down the side of a 2,000 feet gorge.

Designs for the Tooma-Tumut diversion are well advanced and tenders will be called in 1956. The construction of a road leading from Tumut Pond to the site of the Tooma Dam has already been completed, giving direct access from the Regional Centre at Cabramurra. It is anticipated that construction of the Tooma Dam and the Tooma-Tumut tunnel will commence early in 1957, with completion scheduled for the end of 1959.

Office and field investigation of the Murrumbidgee-Eucumbene Diversion is nearing completion and it is anticipated that designs will be sufficiently advanced for construction to begin in 1957. The diversion works will be in service in 1962, Murrumbidgee water probably being stored in Tantangara Dam for at least one year in advance of that date.

Investigations and preparatory work are now proceeding on the Snowy-Murray section of the Scheme. These include detailed studies of the main diversion works and the principal power stations, together with an extensive programme of geological, diamond drilling, and survey field work. A new road, which will link the Authority's Head-quarters at Cooma on the eastern side of the Great Dividing Range with the Snowy-Murray works on the western side of the mountains is already in use.

In the Geehi area access roads for investigation work have been constructed from the Swampy Plain River to the Upper Geehi Valley and to the Upper Bogong Creek Valley. The nucleus of a regional centre has also been established. The existing regional centre at Island Bend on the eastern side of the range, used in the construction of the Guthega Project, will also be an important centre for the driving of the Snowy-Murray tunnel.

**17. The Programme for the Immediate Future.**—The immediate objective of the Snowy Mountains Authority will be to press on with the Upper Tumut Diversion Works and the T1 and T2 Projects, in accordance with the following schedule.

Adaminaby Dam	..	..	Commencement of storage, mid-1957
			Completion of dam, 1959.
Eucumbene-Tumut Tunnel	..	..	Completion date, 1959.
Tooma-Tumut Diversion	..	..	Completion date, 1959.
Tumut Pond Dam	..	..	Completion date, 1958.
T1 Pressure Tunnel	..	..	Completion date, 1958.

Murrumbidgee-Adaminaby Diversion ..	Completion date, 1962.
T1 Power Station .. ..	Two units in operation, 1958. Four units in operation, 1959.
T2 Project .. ..	Commencement of contract, 1957. Two units in operation, 1962. Four units in operation, 1963.
Under the schedule set out above, power will become available as follows :—	
Guthega Project (already in operation).. 60,000 kW.	
T1 Power Station—	
1958 .. ..	160,000 kW., total 220,000 kW.
1959 .. ..	160,000 kW., total 380,000 kW.
T2 Power Station—	
1962 .. ..	140,000 kW., total 520,000 kW.
1963 .. ..	140,000 kW., total 660,000 kW.
Additional water for irrigation will be supplied to the Murrumbidgee as follows :—	
1959 .. ..	300,000 acre feet per annum.
1961 .. ..	200,000 acre feet per annum.
Total .. ..	500,000 acre feet per annum.

(NOTE.—With the completion of Blowering Dam by the State of New South Wales, these water quantities will be almost doubled.)

Detailed investigations and other preparatory work on the Snowy-Murray section of the Scheme will proceed actively during the next three years, so as to enable full scale construction operations on the Snowy-Murray Diversion to commence in 1959, on the 540,000 kW. M6 Power Station at Bogong Creek in 1960, and on the 540,000 kW. M7 Power Station at Swampy Plains shortly afterwards.

Office and field investigations for the Scheme as a whole will continue to receive the highest priority, in order to bring about refinements and improvements to the various future developments and so ensure the most economical use of the water resources of the area.

**18. Summary.**—The Snowy Scheme is one of the largest engineering works ever undertaken in the world, comparing in magnitude with the great Tennessee Valley Authority's development in the United States of America. It involves the construction of 7 major dams, 15 power stations with possibly two more to be built later—most of which will be hundreds of feet underground, over 80 miles of tunnelling and more than 300 miles of aqueducts along the mountain sides to pick up streams and lead them to reservoirs and tunnels.

New South Wales and Victoria will receive from the Snowy 3,000,000 kW of power and nearly 6,000 million kWh per annum of energy to meet the needs of expanding industry and rapidly increasing population. Perhaps of even greater importance, it will make available to the fertile plains of the Murray and Murrumbidgee Valleys nearly 2,000,000 acre feet of urgently needed water, so enabling this already prosperous area to produce additional foodstuffs to the value of nearly £30,000,000 per annum. The indirect benefits from the supply of water are equally important, irrigation development for instance, will bring about an increase in revenue from taxation of well over £12,000,000 per annum.

The Scheme is economically sound without receiving any financial return for the enormous capital outlay involved in the supply of additional water for irrigation. Few, if any, development works ever carried out in Australia can show a comparable return on capital invested.

The development is not solely a long-term one undertaken for the benefit of future generations. Power is already being produced and 300,000 acre feet per annum of additional water for irrigation will be flowing into the Murrumbidgee in less than 4 years. More power and more water will be supplied progressively, project by project, right throughout the construction period.

## SNOWY MOUNTAINS SCHEME.

## TABLE OF PRINCIPAL FEATURES.

(NOTE.—Where structures not yet under construction are referred to, the dimensions and data are tentative only and subject to revision on more detailed investigation).

## A. Main Storages.

Dams.					Height.	Volume of Fill.	Approximate net Storage Capacity.
					Feet.	Cubic yds.	Acre ft.
Adaminaby ..	..	..	..	..	390	9,500,000	3,500,000
Jindabyne ..	..	..	..	..	274	3,700,000	1,100,000
Tantangara ..	..	..	..	..	200	1,750,000	500,000
Tooma ..	..	..	..	..	222	1,400,000	22,400

## B. Main Diversions.

Tunnels.				Length.	Diameter.
				Feet.	
Eucumbene-Tumut ..	..	..	..	72,860	21' diameter (lined) (under construction)
Snowy-Murray—					
Snowy-Geehi ..	..	..	..	96,000	Not yet determined
Geehi-Murray ..	..	..	..	53,000	Not yet determined
Tooma-Tumut ..	..	..	..	47,000	14' diameter (mainly unlined)
Murrumbidgee-Eucumbene ..	..	..	..	54,900	12' x 10' (mainly unlined)

## C. Power Stations.

Station.	Capacity.	Average Net Head.	Average Flow.	Total Length Headrace plus Tailrace Tunnels.	Headwater Dam.	
					Type.	Height.
	kW.	Feet.	Cusecs.	Feet.		Feet.
M1A ..	60,000	555	248	14,400	Earth ..	90
M1B ..	90,000	800	410	14,500	Gravity ..	110
M2L ..	60,000	415	450	15,500	Gravity ..	145
M2H ..	10,000	605	28	5,000	Earth ..	50
M3 ..	265,000	900	770	1,000	Arch ..	143
M4 ..	75,000	1,775	127	6,700	Gravity ..	110
M5L ..	20,000	145	655	2,500	Gravity ..	276
M5H ..	40,000	285	320	11,800	Gravity ..	80
M6 ..	540,000	930	1,710	21,200	Arch ..	296
M7 ..	540,000	930	1,820	34,000	Gravity ..	180
T1 ..	320,000	1,065	1,300	12,000	Arch ..	290
T2 ..	280,000	863	1,420	36,200	Gravity ..	140
T5 ..	180,000	220	1,680	..	Earth ..	245
T6 ..	230,000	378	1,800	14,900	Earth ..	300
T7 ..	60,000	195	1,880	..	Earth ..	250

NOTES.—Initial capacity at present installed in Station M1B is 60,000 kW. Dam heights are height from river-bed to crest of dam. Total length of headrace and tailrace tunnels includes length of tailrace surge chamber.

## CHAPTER XXX.

### STATISTICAL ORGANIZATION AND SOURCES OF INFORMATION.

#### § 1. Statistical Organization in Australia.

1. 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 primarily intended 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 form 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 Governmental organization for purely statistical purposes was the taking of periodic population censuses, which were initiated in all States under the Crown Colony régime. The growing need for quantitative data concerning the progress of the several young communities of Australia eventually led to the appointment of official Statisticians commissioned to prepare and publish such data.

(iii) *Statistical Conferences*. To enable 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 1901. 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. Commonwealth Bureau of Census and Statistics.—(i) *Origin and Aims*. 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. With the establishment of the Commonwealth Bureau, the movement towards uniformity in information collected and statistical methods employed received a great stimulus. 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. Frequent statistical conferences (*see above*) have assisted the uniform development of existing statistics, and have facilitated expansion into new fields.

The scope of the Commonwealth Bureau 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.

(ii) *Organization.* For administrative purposes the Commonwealth Bureau is divided into a number of Divisions. These are :—Census, Compiling, Development, Publications, Social Accounting and Administrative.

(a) *Census Division.* This Division of the Bureau is responsible for the taking of periodic Population Censuses and the tabulation, summarization and preparation for publication of the results obtained.

(b) *Compiling Division.* The Compiling Division is divided into the following Branches which compile statistics dealing with specific fields of activity :—

Trade and Transport Branch—Responsible for the original compilation, tabulation and analysis of statistics relating to imports and exports, and for the compilation of statistics relating to road and rail transport, aviation, shipping, posts and telegraphs, telephones and wireless.

Prices Branch—Deals with the collection of retail and wholesale prices and the compilation of retail and wholesale price index numbers. A staff of trained field officers is maintained in the several States to facilitate the collection of accurate information.

Employment and Labour Branch—Compiles all employment estimates, wage and labour statistics.

Primary Production Branch—Deals with statistics relating to agricultural and pastoral activities, mining, forestry and fishing. Original data are largely supplied by State Statisticians.

Secondary Production Branch—Compiles all factory statistics both annual and monthly. Collates on a Commonwealth basis original annual data supplied by State Statisticians.

Finance and Taxation Branch—Compiles statistics of private finance (banking, insurance, exchange rates, etc.), public finance (Commonwealth, State and Local and Semi-Governmental authorities), and statistics relating to all aspects of Commonwealth taxation.

Demography Branch—Concerned with statistics of births, deaths, marriages and migration, and is responsible for periodic estimates of population.

(c) *Development Division.* This Division was created in order to develop new statistical collections to meet post-war demands for more adequate and up-to-date statistics, and also to examine current collections in the light of such requirements. It is divided into three Branches, namely :—

Sampling Techniques Branch—undertakes the development and application of sampling procedures to statistical collections and furnishes technical advice to branches and other Government departments.

Development Branch—Develops new statistical collections and examines current collections in the light of present day requirements. Compiles social statistics.

Business Statistics Branch—Conducts censuses and surveys and analyses statistics relating to Internal Trade (Retail), Business and Hire Purchase Activities, and Company Investments and Profits.

(d) *Publications Division.* This Division is responsible for the scrutiny, editing and graphical illustration of all Bureau publications, and, in collaboration with other Divisions, for the initiation, development and co-ordination of statistical publications. It also



maintains a regular flow of statistical series to certain international organizations, and revises statistical material in certain overseas and local publications.

(e) *Social Accounting Division*. This Division undertakes research into the theoretical and practical problems of social accounting. It is divided into three branches as follows:—

Balance of Payments Branch—collects and analyses statistics on Australia's balance of international payments.

National Income and Expenditure Branch—prepares estimates of national income and expenditure.

Quantum Indexes Branch—undertakes research into quantum of production.

(f) *Administrative Division*. The Administrative Division is responsible for all aspects of staff recruitment and direction, supplies, payment of accounts, etc. The Reproduction Section of the Division is equipped with multilith and duplicating machines for processing statistical statements for more immediate requirements. In addition, a special section of this Division is responsible for the examination of statistical methods and systems, and the co-ordination of all statistics in Commonwealth Departments (see para. 3 below). The Mechanical Tabulation Branch and the specialized library of official and unofficial publications on statistics and economics are controlled by the Administrative Division. The Mechanical Tabulation Branch is equipped with modern tabulating equipment and is responsible for all machine tabulating work required by other Divisions of the Bureau with the exception of the Census Division.

3. *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 time and circumstances permit.

## § 2. 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.

2. *Commonwealth Publications*.—Commonwealth publications may be grouped under two heads, namely:—(i) Publications issued by the Commonwealth Statistician; and (ii) Parliamentary and Departmental Reports and Papers.

(i) *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 to June, 1956:—

*Australian Balance of Payments*.—Statements Nos. 1 to 3, 1928–29 to 1951–52.

*Australian Life Tables, 1901–1910. Australian Joint Life Tables, 1901–1910.*

*Australian Life Tables, 1920–1922.*

*Australian Life Tables, 1932–1934. Australian Joint Life Tables, 1932–1934*

*Australian Life Tables, 1946–1948.*

*Australian Mineral Industry Statistics* (formerly *Minerals and Metals Bulletin*).—

Part 2 of Quarterly Bulletin issued jointly with the Bureau of Mineral Resources.

*Australian Primary Industries*.—Report prepared for the Empire Producers' Conference, Sydney, March, 1938.

- 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 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 Statistician's Report and Australian Life Tables 1946-1948, Vol. III.
- Census (1954) Results.*—See Price List at end of volume.
- \**Census of Retail Establishments (1947-48) Results.*—Bulletins, Nos. 1 to 7.
- \**Census of Retail Establishments (1948-49) Results.*—Bulletins, Nos. 1 to 7.
- \**Census of Retail Establishments (1952-53) Results.*—Bulletins, Nos. 1 to 14.
- \**Dairying Industry (formerly Summary of Dairying Industry).*—Statistical Bulletin, monthly; first issue, September, 1937.
- \**Factories, Principal Statistics, Summary.*—Annually, 1948-49 to 1953-54.
- Finance.*—Bulletins 1907 to 1916-17 annually; 1917-18 and 1918-19 (one vol.); 1919-20 and 1920-21 (one vol.); 1922-23 to 1953-54 annually.
- \**Food Production and the Consumption of Foodstuffs and Nutrients in Australia, Report.* Half-yearly, 1946-47 to 1947-48; annually, 1948-49 to 1953-54.
- \**Fruit Growing Industry Summary.*—Annually, 1944-45 to 1953-54.
- Labour and Industrial Statistics.*—Memoranda and Reports, various, to 1913.
- Labour Report.*—Annually, 1913 to 1953.
- \**Livestock Numbers (formerly Summary of Livestock Statistics).*—Statistical Bulletin, annually, 1943 to 1955.
- 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 1953 54.
- \**Monthly Review of Business Statistics.*—First issue, October, 1937.
- \**Occupation Survey (1945) Results.*—Detailed tables.
- Official Year Book of the Commonwealth of Australia.*—Annually, 1907 to present issue (No. 42). Issues Nos. 40 to 42 also published in parts.
- Oversea Trade.*—Bulletins, annually, 1906 to 1954-55.
- \**Oversea Trade.*—Preliminary Bulletins. Annually, 1952-53 to 1955-56.
- \**Oversea Trade Statistics : Imports Cleared for Home Consumption classified according to Individual Items of the Customs Tariff,* 1950-51 to 1954-55.
- Pocket Compendium of Australian Statistics (formerly Statistical Digest).*—1913, 1914, 1916, and 1918 to 1956 annually.
- Population and Vital Statistics.*—Bulletins and Reports, various, 1906-1910.
- Demography,* 1911 to 1954 annually.
- Primary Industries*—Bulletin, annually, 1950-51 to 1953-54, in two parts: Part I. Rural Industries; Part II. Non-Rural Industries and Value of Production.
- Production.*—Bulletin, annually, 1906 to 1947-48. 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, p. 3.
- Quarterly Summary of Australian Statistics.*—First issue, No. 70, December, 1917, replacing *Monthly Summary of Australian Statistics* (Bulletins Nos. 1 to 69).
- \**Report of Proceedings of the Conference of British Commonwealth Statisticians,* 1951.

\* Obtainable from Commonwealth Statistician—for methods of obtaining other publications still in print see back page of this volume.

*\*Rural Land Use and Crop Statistics* (formerly *Summary of Crop Statistics*).—

Statistical Bulletin, annually, 1943-44 to 1954-55.

*Secondary Industries*.—Bulletin, annually, 1950-51 to 1953-54.

*Social Insurance*.—Report to the Hon. the Minister for Trade and Customs, 1910.

*Social Statistics*.—Bulletins, 1907 to 1915 annually, and 1918.

*Superannuation for the Commonwealth Public Service*.—Report to the Hon. the Minister for Home Affairs, 1910.

*\*Survey of Motor Vehicles (1947-48) Results*.—Bulletins Nos. 1 to 7.

*\*Survey of Private Superannuation Schemes 1951-52* (reprinted in *Finance Bulletin* No. 44).

*Transport and Communication*.—Bulletins, 1906, 1908 to 1916 annually, 1919 to 1930 annually, and 1932 to 1954-55 annually.

*\*Vegetables Grown on Farms for Human Consumption*.—Statistical Bulletin, annually, 1942-43 to 1954-55.

*Wages and Prices*.—January, 1932.

*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 Supplies and Utilization*.—Bulletin, annually, 1952-53 to 1954-55.

The foregoing list includes all the printed publications issued from the Bureau, and certain more important mimeographed publications issued for the most part annually. Other mimeographed statements, obtainable on application to the Commonwealth Statistician and dealing with a wide variety of subjects, are issued as follows:—

*Annually*—Bee Farming; Commonwealth and State Taxation Collections; Companies with Oversea Affiliations; Factory Products (Principal); Factory Statistics (Preliminary); Fire, Marine, and General Insurance; Meat Production and Utilization; Milking Machines on Rural Holdings; Mining and Quarrying; New Capital Raisings; Oversea Trade between Australia and Eastern Countries; Registrations of New Motor Vehicles; Rural Statistics of the Australian Capital Territory; Social Services, Expenditure by States; Tractors on Rural Holdings; University Statistics; Value of Production; Wheat Forecast and Estimate; Wool Production.

*Half-yearly*—Australian Balance of Payments; Capital Expenditure; Labour Turnover; Trade of Australia with United Kingdom.

*Quarterly*—Building; Interim Retail Price Index; Quarterly Business Survey; Retail Sales of Goods; Retail Price Variations—All Items ("C" Series) Index; Road Traffic Accidents; Tractor Statistics; Trade of Australia with Monetary Areas.

*Monthly*—Banking; Dairying Industry; Demographic Review; Employment; Exports of Wool from Australia; Export Prices Index; Gold Mining Industry; Hire Purchase Business of Finance Companies; Life Assurance; Oversea Trade; Production Statistics; Registrations of New Motor Vehicles, Savings Bank Deposits and Savings Certificates.

(ii) *Commonwealth Parliamentary and Departmental Reports and Papers*. Lists of the principal official reports and other documents containing statistical information issued from the inauguration of the Commonwealth appear in the Official Year Books up to No. 13, but it is not now practicable to undertake the preparation of such lists.

3. *State Publications*.—The chief statistical publications of each State are set out hereunder. As with the Commonwealth Parliamentary and Departmental Reports and Papers, it is not practicable to enumerate the various Departmental Reports, statements of accounts, etc., issued by officials, boards, local and semi-governmental authorities, etc., in each State.

(a) *New South Wales*—Statistical Register (annually); Official Year Book of New South Wales (annually); Pocket Year Book (annually); Statistical Bulletin (monthly to December, 1919, quarterly to June, 1943, then discontinued to September, 1948); Monthly Summary of Business Statistics.

(b) *Victoria*—Statistical Register (annually to 1916, then discontinued); Victorian Year-book (annually); Statistical Abstracts (quarterly to 1917), then discontinued to December, 1946).

\* Obtainable from Commonwealth Statistician—for methods of obtaining other publications still in print see back page of this volume.

- (c) Queensland—Statistical Register (annually); Official Year Book, 1901; A.B.C. of Queensland Statistics (annually) to 1936, then discontinued; Queensland Year Book (annually 1937 to 1941, then discontinued to 1945); Queensland Pocket Year Book (annually).
- (d) South Australia—Statistical Register (annually); Official Year Book, 1912 and 1913; Statesman's Pocket Year Book of South Australia (annually); Quarterly Summary of Statistics.
- (e) Western Australia—Statistical Register (annually); Statistical Abstracts (quarterly, previously issued monthly to July, 1917); Pocket Year Book of Western Australia (annually).
- (f) Tasmania—Statistical Register (annually); Pocket Year Book of Tasmania (annually); Monthly Review of Business Statistics.

### § 3. The Third Conference of British Commonwealth Statisticians, Canberra, 1951.

Conferences of the Government Statisticians of the British Commonwealth were held first in London in 1920 and then in Ottawa in 1935. The Third Conference was held in Canberra from 12th to 23rd November, 1951. Delegates were present from Australia, Canada, Ceylon, India, New Zealand and the United Kingdom (including a representative of the Colonial Office). Ireland, the Commonwealth Economic Committee and the United Nations were represented by observers, and the Australian State Government Statisticians were also present. A summary of the activities of the conference may be found in Official Year Book No. 39, page 1320.

### § 4. Select List of Works about, or published in, Australia.

(Compiled by the Librarian of the Commonwealth National Library.)

This list aims to meet the growing need, in Australia as publishing develops, and overseas as interest in Australia widens, for an authoritative current reference and reading list of books dealing with Australia or of Australian authorship, wherever published.

Australians will find these books in the National Library and in their State Libraries as well as in leading bookshops. Oversea readers may have access to them in the collections which the National Library maintains at 41 Australian posts abroad. They will be found also, increasingly, in leading libraries and bookshops in many countries. In the United States, for example, Australian books are included in the Farmington Plan in which 62 libraries and research institutions co-operate to ensure that at least one copy of all material published in any part of the world and likely to be required for a serious purpose will be available promptly somewhere in the country.

The list is classified broadly by subject and under each heading there is first a list of the principal standard books still in print, then a list of selected books and official publications (excluding annual reports) which were published during 1954. A few books published earlier, but received too late for inclusion in the previous list, are also included. Where known the retail price in the country of publication is given, but this is subject to fluctuation.

The Library also issues a series of select lists which include, *Australian Public Affairs Information Service* (monthly), subject index of material in new books, pamphlets, current periodicals and government publications from English speaking countries, with an important bearing on investigations into Australian political, economic, cultural and social affairs, and the following full bibliographies.

*Monthly list of Australian Government Publications*, covering both the Commonwealth and the States;

*Books published in Australia* : a monthly list of books supplied to the National Library under copyright.

The two last-mentioned publications are cumulated annually as the *Annual Catalogue of Australian Publications* which includes also a list of books published overseas of Australian interest or by authors resident in Australia, a select list of the more important Australian periodical and serial publications and a directory of publishers.

#### General and Descriptive.

- ABBOTT, C. L. A. Australia's frontier province (the Northern Territory). Syd., Angus & Robertson, 1950. 78. 6d.
- AUSTRALIA : the *Herald* year book : a reference work of world wide range : No. 1 to date. Melb., Herald and Weekly Times, 1949 to date. 178. 6d. Latest issue : 1950.
- AUSTRALIAN ENCYCLOPAEDIA : (ed. by A. W. Jose, H. J. Carter and T. G. Tucker : 3rd ed.): 2v. Syd., Angus & Robertson, 1926-27. (o.p., but new ed. in preparation).
- CAIGER, G., ed. The Australian way of life. Lond., Heinemann, 1953. 128. 6d.
- FINLAYSON, H. H. The red centre : man and beast in the heart of Australia (2nd ed.). Syd., Angus & Robertson, 1952. 218.
- GRATTAN, C. H. Introducing Australia. (2nd Aust. ed.) Syd., Angus & Robertson, 1949. 78. 6d.
- NOBLE, N. S., ed. The Australian environment (2nd ed.). Melb., C.S.I.R.O., 1950. 108. 6d.
- OFFICIAL YEAR BOOK OF THE COMMONWEALTH OF AUSTRALIA : No. 1 to date. Canb., Govt. Pr., 1908 to 1946-47 (No. 37), 58. *per issue*; after No. 38, 108. Latest issue : No. 42, 1956.
- RATCLIFFE, F. N. Flying fox and drifting sand : the adventures of a biologist in Australia : introd. by Julian Huxley. Syd., Angus & Robertson, 1951. 158. First published in 1938.
- TAYLOR, T. G. Australia : a study of warm environments and their effect on British settlement (6th ed.). Lond., Methuen, 1951. 308.
- WALKABOUT : Australian geographical magazine : v. 1 to date. Melb., Australian Geographical Society, 1934 to date. Monthly, 248. *per annum*.
- WHITE, H. L., ed. Canberra : a nation's capital : foreword by Sir Robert Garran. Syd., Angus & Robertson, 1954. 358.

#### RECENT PUBLICATIONS.

- AUSTRALIAN INSTITUTE OF POLITICAL SCIENCE. Northern Australia : task for a nation. Syd., Angus & Robertson, 1954. 198. 6d.
- BARTLETT, N. The pearl seekers. Lond., Melrose, 1954. 168. An historical account of the Australian pearling industry.
- BLUNDEN, G. The land and people of Australia. Philadelphia, Lippincott, 1954. 32.75.
- FRASER, J. A. Gold dish and kava bowl. Lond., Dent, 1954. 188. Autobiography of a gold prospector in Australia, Fiji and the Solomons.
- GRIFFITH, G. NESTA. Some northern homes of N.S.W. Syd., Shepherd Press, 1954. 358.
- HILL, ERNESTINE. Australia : land of contrasts : ed. by Sydney Ure Smith (2nd ed.). Syd., Sands, 1954. 78. 6d.
- IDRIESS, I. L. The nor-westers. Syd., Angus & Robertson, 1954. 188.
- MILES, BERYL. The stars my blanket. Lond., Murray, 1954. 168. Account of an adventurous journey through central Australia in search of aboriginal cave drawings.
- MOOREHEAD, A. C. Rum Jungle. Lond., H. Hamilton, 1954. 128. 6d. Deals not only with the recently discovered uranium field, but with many aspects of life in northern and central Australia.
- REID, F. The romance of the Great Barrier Reef. Syd., Angus & Robertson, 1954. 228. 6d.
- WANNAN, W., comp. The Australian : yarns, ballads, legends and traditions of the Australian people. Melb., Australasian Book Society, 1954. 188. 6d.
- WHITE, MYRTLE R. No roads go by : illus. by Elizabeth Durack (2nd ed.). Syd., Angus & Robertson, 1954. 168. An account of the daily life on a cattle station in South Australia forty years ago. First published in 1932.

## Territories Outside Australia.

- AUSTRALIAN NATIONAL ANTARCTIC RESEARCH EXPEDITION. 1947-1949. Reports. Melb., Antarctic Division, Department of External Affairs, 1951 to date.
- GORDON, D. C. The Australian frontier in New Guinea 1870-1885. N.Y., Columbia Univ. Press, 1951. \$4.25.
- HOGGIN, H. I. Transformation scene: the changing culture of a New Guinea village. Lond., Routledge, 1951. 30s.
- MEAD, Margaret. From the South Seas: studies of adolescence and sex in primitive societies. 3 v. in 1. N.Y., Morrow, 1939. \$4.
- NEW ZEALAND ANTARCTIC SOCIETY. The Antarctic to-day: a mid-century survey: ed. by Frank A. Simpson. Well., Reed, 1952. 47s. 6d.
- PAPUA AND NEW GUINEA, Territory of. Official research publications: no. 1 to date. Port Moresby, Govt. Pr., 1951 to date.
- PAPUA AND NEW GUINEA, Territory of—Laws, statutes &c. Laws of the Territory of Papua-New Guinea, 1945-1949 (annotated) . . . together with supplements to the Laws of the Territory of Papua, 1888-1945 (annotated) and the laws of the Territory of New Guinea 1921-1945 (annotated). Syd., Govt. Pr., 1952.
- RIESENFELD, A. Megalithic culture of Melanesia. Leiden, Brill, 1950. 35 glds.
- SCHOLES, W. A. Seventh continent: saga of Australian exploration in Antarctica 1895-1950. Lond., Allen & Unwin, 1953. 21s.
- STANNER, W. E. H. The South Seas in transition: a study of post-war rehabilitation and reconstruction in three British Pacific dependencies. Syd., A'asian Pub. Co., 1953. 50s.
- WILLIAMS, F. E. Orokaiva magic. Oxf., Oxford Univ. Press, 1928. 12s. 6d.
- Orokaiva Society. Oxf., Oxford Univ. Press, 1930. 25s.
- Papua of the Trans-Fly. Oxf., Oxford Univ. Press, 1936. 30s.
- See also the annual reports of the Administrators of the various Territories, and reports to the General Assembly of the United Nations on trusteeship territories, the anthropological reports of the Governments of Papua and New Guinea, and material appearing in *Oceania*.

## RECENT PUBLICATIONS.

- BARRETT, C. L. Isles of the sun. Melb., Heinemann, 1954. 22s. 6d. Observations of a naturalist in Papua-New Guinea.
- BELSHAW, C. S. Changing Melanesia: social economics of culture contact. Melb., Oxford Univ. Press, 1954. 17s. 6d.
- DUPRYRAT, A. Mitsinari: twenty-one years among the Papuans. Lond., Staples, 1954. 15s. First published in France.
- HANDBOOK OF PAPUA AND NEW GUINEA, 1954: comp. and ed. by R. W. Robson, Syd., Pacific Publications, 1954. 15s.
- LEESON, IDA. A bibliography of bibliographies of the South Pacific. Melb., Oxford Univ. Press, 1954. 15s. Published under the auspices of the South Pacific Commission.
- LUNDQVIST, E. Un Suédois chez les Malais et les Papous. Paris, Julliard, 1954. f8.60.
- SIMPSON, C. Adam in plumes. Syd., Angus & Robertson, 1954. 25s.

## History.

- CLARK, C. M. H., ed. Select documents in Australian history 1788-1800: selected and ed. by C. M. H. Clark with the assistance of L. S. Pryor. 2v. Syd., Angus & Robertson, 1950. 112s.
- CRAWFORD, R. M. Australia. Lond., Hutchinson's Univ. Library 1952. 8s. 6d.
- FITZPATRICK, B. C. British Empire in Australia: an economic history 1834-1939 (2nd ed.). Melb., Melbourne Univ. Press, 1949. 17s. 6d.
- HISTORICAL RECORDS OF AUSTRALIA: (ed. by J. F. Watson). Syd., Commonwealth National Library, 1914 to date. 12s. 6d. *per v.* 34 v. have so far appeared. Publication has been suspended since 1925.
- HISTORICAL STUDIES: AUSTRALIA AND NEW ZEALAND: No. 1 to date. Melb., Melbourne Univ. Press, 1945 to date. Bi-annual. 16s. *per annum*.
- O'BRIEN, E. M. The foundation of Australia (1786-1800): a study in English criminal practice and penal colonization in the eighteenth century: foreword by John M. Ward (2nd ed.). Syd., Angus & Robertson, 1950. 25s.
- SHANN, E. O. G. An economic history of Australia. Melb., Georgian House, 1948. 18s. First published in 1930.
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## DIARY OF PRINCIPAL ECONOMIC EVENTS, 1952 to 1955.

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The principal economic events for the years 1931 to 1938 were shown on pp. 968 to 977 of Official Year Book No. 33, those for the years 1939 to 1944 on pp. 1129 to 1141 of Official Year Book No. 36 while those for the years 1945 to 1951 were included in the range of years covered by the three Official Year Books following (Nos. 37 to 39). For reasons of space some of the items originally shown for the years 1952 and 1953 have been omitted from this issue. Previous issues should be consulted for additional information for these years.

### 1952.

Migration was on a reduced scale during 1952. The decline in immigration was associated with unsettled employment conditions in Australia, and total numbers employed (excluding rural and household domestic workers and the defence forces) fell from 2,637,000 in December, 1951, to 2,533,000 in December, 1952. Except for small increases in February and December, this decline continued throughout 1952, while the number of persons on unemployment benefit increased from 2,000 to 40,000.

68,000 new houses were started and 79,000 completed during the year. Production of coal, gas, electricity, pig-iron and steel was maintained or increased, and electricity restrictions were much less severe than in recent years.

In the early part of the year continuing drought and bushfires, particularly in New South Wales, Queensland and the Northern Territory, seriously affected pastures and restricted meat and butter production. Conditions improved later in the year and meat and milk production increased quickly. For crops, weather conditions generally were favorable and wheat production in 1952-53 was considerably higher than in 1951-52. Average yield per acre reached an all-time record of about 19 bushels. Wool production is estimated to have reached an all-time record in 1952-53, being 19 per cent. above 1951-52.

The high level of imports reached in the latter half of 1951 continued into 1952. This increase in imports, together with a drop in the receipts for exports, resulted in a balance of payments deficit on current account for the latter half of 1951, and the continuation of these conditions in 1952 led to the imposition of severe import restrictions to safeguard overseas reserves. Licences to import goods from dollar areas were also recalled and reviewed. The value of imports fell by more than 50 per cent. in the second half of the year and the balance of payments deficit of £269 million in the first half of the year was changed to a surplus of £75 million in the second half of the year.

Average earnings per employee continued to rise and in the December quarter were about 11 per cent. above the corresponding level of the previous year. Retail prices increased by about 10 per cent. and wholesale prices by about 9 per cent. during the year.

During 1952 uncertainty about the future of interest rates for public authority borrowing resulted in a number of loan failures until some stability in interest rates was reached towards the end of the year. Bank overdraft and deposit rates were also raised from the beginning of August.

*2nd January.*—The Australian Mutual Provident Society to take over a large low-rainfall area in the Mallee-Wimmera District for development and improvement for settlement under the Victorian Land (Development Leases) Act 1951. (See also 18th August, 1949, Official Year Book No. 39.)

*5th January.*—Australia and Pakistan signed a one-year trade agreement.

*17th January.*—Commonwealth Conciliation Commissioner Galvin refused an application by eleven metals trades unions for marginal wage increases. (See 29th February, 1st March, 1952, and 11th November, 1953.)

*21st January.*—A conference of British Commonwealth Finance Ministers, attended by the Treasurer of Australia, issued a statement on the measures considered necessary to correct the sterling area situation.

*25th January.*—Widespread bushfires in New South Wales, Victoria and the Australian Capital Territory.

*19th February.*—Good rains in the northern areas of New South Wales end the worst drought experienced for many years, during which extensive areas of pastures and crops were destroyed by bushfires. Drought conditions continued in Queensland and the Northern Territory.

*23rd February.*—Discovery announced of important high-grade uranium deposits at Rum Jungle in the Northern Territory.

*26th February.*—Introduction into the House of Representatives of the Fisheries and Pearl Fisheries Bills to conserve swimming and sedentary fisheries in Australian waters. (Acts assented to 13th March.)

*7th March.*—The Commonwealth Bank prohibited the establishment of further import credits until licences had been obtained for the goods involved.

*8th March.*—Imposition of severe restrictions on imports from all sources and on amounts available for Australians travelling overseas.

*11th March.*—Arrival of the President of the International Bank for Reconstruction and Development to survey development progress and to discuss loan prospects with the Commonwealth Government.

*1st April.*—Agreement between the Commonwealth and South Australian Governments and the combined Development Agency of the British and American Governments on the development of uranium deposits at Radium Hill, South Australia.

*9th April.*—The Waterside Workers' Federation, in connexion with its claim for higher margins, imposed an Australia-wide ban on overtime.

*29th April.*—Wages of about 50,000 workers in the pastoral industry in all States, except Queensland (where a State award is in operation), reduced by Commonwealth Conciliation Commissioner because of a decline in wool prices.

*3rd May.*—A special Loan Council meeting approved programmes amounting to £247,500,000 for Government loans and £128,000,000 for local and semi-governmental authorities loans, the Commonwealth Government being prepared to guarantee subscriptions to an extent of £125,000,000 (subsequently increased to £135,000,000).

*7th May.*—Introduction into the House of Representatives of the Aluminium Industry Bill, an amending bill designed to increase by £4,250,000 the capital originally contributed in 1944 (£3,000,000) for the establishment of the industry at Bell Bay, Tasmania, and provide for the annual production of 13,000 tons of aluminium ingots. (Act assented to 30th May.)

*22nd May.*—Modification of the Commonwealth Bank's advance policy to secure greater flexibility and to enable individual banks to apply the policy appropriately in individual cases.

The Conciliation and Arbitration Bill introduced into House of Representatives providing for a limited right of appeal from decisions of Conciliation Commissioners to a court of three Arbitration Court Judges, and an increase in the number of Arbitration Court Judges to at least seven, so that two full courts may sit at once. (Act assented to 17th June.)

23rd May.—Good rains brought relief to north and central Australia which had suffered from prolonged drought causing heavy losses in cattle industry.

29th May.—Bill introduced to approve agreement between the Commonwealth Government and the Bulolo Gold Dredging Ltd. to form a joint company to cut 10,000,000 super. feet of timber annually from pine forests at Bulolo, New Guinea. (Act assented to 17th June.)

18th June.—Wagga, Forbes, Cowra and many other towns were badly flooded by water from the Murrumbidgee and Lachlan Rivers and their tributaries.

24th June.—Employers' organizations lodged a claim with the Commonwealth Court of Conciliation and Arbitration seeking the following adjustments to awards of 25 metal trades unions, affecting about 250,000 workers in all States except Western Australia:— (i) Reduction in basic wage by amounts of from £2 5s. to £2 7s. per week; (ii) Reduction of the female rate from 75 per cent. to 60 per cent. of the male rate; (iii) An increase in working hours from 40 to 44 hours per week, to be worked in either 5 or 5½ days; (iv) Abandonment of the system of automatic quarterly cost of living adjustments to the basic wage. (See 12th September, 1953.)

1st July.—New five-year Dairy Industry Stabilization Scheme commenced to operate.

7th July.—At a conference of the Prime Minister and State Premiers a total of £135,900,000 was decided on as tax reimbursement grant to the States for 1952-53, plus Special Grants to Victoria and Tasmania of £800,000 and £70,000 respectively.

9th July.—The International Bank for Reconstruction and Development announced the granting of a further loan to Australia of \$50,000,000 for a twenty-year term at 4½ per cent. interest.

14th July.—Relaxation of bank advance policy to provide hire-purchase finance for farm equipment announced.

24th July.—Announced that as a result of present economic situation the migration programme for 1952 and 1953 would be reduced.

1st August.—Revocation of the order made by the Commonwealth Bank under National Security Regulations fixing maximum rates of interest. This was followed by a general increase in interest rates.

6th August.—The Commonwealth Budget for 1952-53 introduced into the House of Representatives. (For details, see Official Year Book No. 40, p. 1198.)

26th August.—Arrival of Santa Gertrudis cattle from King Ranch, Texas, U.S.A., to start the breed on the Darling Downs, Queensland.

27th August.—The new blast furnace lit at Port Kembla, New South Wales, expected to increase output of pig iron at that centre by 1,500 tons daily.

11th September.—Announced that Consolidated Zinc Pty. Ltd. would develop the Rum Jungle, Northern Territory, uranium deposits on behalf of the Commonwealth Government, the United States of America Atomic Energy Commission to supply uranium refining plant to begin operating in 1954.

30th September.—All controls over building operations and materials ended in New South Wales.

6th October.—The Commonwealth Bank announced the cessation of restrictions on bank advances for any purpose, except where the control of capital issues is involved.

14th October.—The Navigation Bill, proposing the transfer of jurisdiction over maritime industrial disputes from the Maritime Industry Commission to a single judge of the

Commonwealth Court of Conciliation and Arbitration and the abolition of the Maritime Industry Commission, introduced into the House of Representatives. (Act assented to 8th December.)

Broken Hill Proprietary Steel Industry Agreement Bill introduced into the Western Australian Legislative Assembly to ratify an agreement for the establishment of a steel rolling mill and fence post factory at a cost of approximately £4,000,000 at Kwinana, near Fremantle, Western Australia. (Act assented to 18th December.)

16th October.—A Bill to provide for the sale of the Commonwealth's holding of shares in Commonwealth Oil Refineries Ltd. to the Anglo-Iranian Oil Co. Ltd. introduced into the House of Representatives (Act assented to 6th November). The Anglo-Iranian Oil Co. Ltd. is to construct an oil refinery with a capacity of about 3,000,000 tons a year, to cost about £40,000,000, at Kwinana.

22nd October.—Owing to the increased production of coal, the Coal Industry Tribunal granted an application to advance the date for commencement of the long service leave scheme from 1st January, 1954 to 1st January, 1953. (See 7th September, 1949, Official Year Book No. 39.)

27th November–11th December.—The Prime Minister and other Australian Ministers attended the British Commonwealth Economic Conference in London. All subjects were discussed in the light of the necessity to curb inflation and rises in the cost of living, to encourage sound economic development, and to extend a multilateral trade and payment system over the widest possible area.

5th December.—The Coal Industry Stabilization Plan was announced by the Commonwealth Government, its main features being the financing by the Commonwealth of the stockpiling of surplus production, and of the sale of coal on a credit basis to major consumers; the foregoing by the Commonwealth of interest charges on mining plant which might become idle, and the daily review of production and demand.

31st December.—The first good rains for many months were recorded in Northern Territory drought-stricken areas.

### 1953.

The immigration programme was cut further during the year and net migration amounted to only about 43,000, compared with 94,000 in 1952 and over 100,000 in each of the preceding three years.

Total employment (excluding rural and household domestic employment and the defence forces) rose from 2,533,000 in December, 1952 to 2,612,000 in December, 1953. Numbers on unemployment benefit dropped to less than half the level of 41,600 reached in January.

Production of coal was down slightly from the 1952 level, but production of gas and electricity and of many basic materials continued to increase. Production of refrigerators, washing machines, radios and other domestic electrical goods, many clothing and textile lines and sporting goods increased substantially after the set back of the previous year. There was also some revival in house building, but the number of houses started did not regain the 1951 level.

Seasonal conditions were satisfactory. Meat production was substantially increased. The average wheat yield was lower than the previous year's record but still high at 17 bushels per acre. Acreage was somewhat greater and total production was estimated at about 199 million bushels compared with 195 million bushels in the 1952–53 harvest. The wool clip for 1953–54 was only 3 per cent. under the record of the previous year.

After some weakness at the close of the 1952–53 season, wool prices firmed again at the opening sales in September and during the first half of the 1953–54 season averaged 85d. compared with 81.8d. in 1952–53. Export prices generally remained above the previous year's level and the value of exports was considerably higher than in 1952. During the second half of the year imports also increased substantially over the low level of the previous twelve months, and the balance of payments credit on current account which reached about £100 million in the first half of the year dropped to about £20 million in the second half.

Rises in internal prices and earnings were much smaller. Average earnings per employee rose by 4 per cent., the basic wage by 2 per cent., retail prices by 4 per cent., and wholesale prices by 5 per cent. before falling towards the close of the year, compared with increases of about 10 per cent. in 1952.

Interest rates were kept stable during the year at  $4\frac{1}{2}$  per cent. on Commonwealth bonds,  $4\frac{1}{2}$  per cent. on local and semi-governmental securities and 5 per cent. on bank advances. Both Commonwealth loans raised during the year at  $4\frac{1}{2}$  per cent. were over-subscribed, and during the second half of the year there was some speculation about a possible drop in interest rates.

*5th January.*—New deposits of coal, bauxite, tin and zinc discovered as a result of surveys carried out by the Bureau of Mineral Resources, Geology and Geophysics.

*8th January.*—Ten-year agreement signed for sale to the United States of America of uranium from deposits at Rum Jungle, Northern Territory.

*10th January.*—United Kingdom and Queensland Governments agreed to abandon the Queensland-British Food Corporation's farming project in Central Queensland.

*22nd January.*—For first time since 1945, basic wage adjustment for December quarter showed no change in average for six capital cities.

*18th February.*—Television Bill introduced into House of Representatives to permit the establishment of both National and Commercial television transmitting stations. (Act assented to 20th March.)

*19th February.*—The Commonwealth Bank Bill 1953, which sets up the Commonwealth Trading Bank under a General Manager, in place of the General Banking Division of the Commonwealth Bank, and the Banking Bill 1953, which provides for a new method of determining the maximum amounts which the trading banks may be required to lodge with the Commonwealth Bank, introduced into House of Representatives. (Both Acts assented to 28th March.)

*20th February.*—Premiers' Conference in Canberra failed to reach agreement on return of income tax powers to the States.

*1st April.*—Further relaxation of import restrictions to allow additional imports to the value of £50,000,000 during the next twelve months other than from the dollar area and Japan.

*13th April.*—New International Wheat Agreement signed in Washington fixing Australia's annual wheat export quota at 75,000,000 bushels. (Later legislation introduced into House of Representatives, 11th October.)

*18th April.*—Commonwealth Scientific and Industrial Research Organization announced that a process had been developed to prevent shrinkage in wool.

*15th May.*—Australia and United States of America signed conventions to end double taxation between the two countries. (Acts ratifying these conventions were assented to 11th December.)

*19th May.*—Australian Loan Council meeting at Canberra adopted programme of £231,000,000 for State Government works during 1953-54. Borrowing programme of £90,486,000 by Local Government and Semi-governmental authorities also approved. Loan Council decided to retain ruling interest rates on public loans for at least twelve months.

*8th June.*—Britain and Australia signed agreement for reciprocity in social services benefits.

*9th June.*—Conference of Commonwealth Prime Ministers on defence, economic and political issues concluded in London.

*24th June.*—Contract prices for sale of Australian butter and cheese to the United Kingdom Ministry of Food during 1953-54 increased by approximately  $3\frac{1}{2}$  per cent.

*1st July.*—Commonwealth Medical Benefits Scheme commenced, under which persons who are contributors to an approved medical benefits organization are entitled to receive part reimbursement by the Commonwealth of payments made for medical services to themselves or their dependants.

Conditions of purchase by Australian Atomic Energy Commission of acceptable uranium ores and concentrates from 1st July announced, including guaranteed minimum prices for five years.

Further relaxation of restrictions on imports from sterling countries came into operation. Some increases in imports from Japan also to be allowed.

*15th July.*—Announced that the United Kingdom Government would pay higher prices, representing increases of  $7\frac{1}{2}$  and  $5\frac{1}{2}$  per cent. respectively, for Australian lamb and mutton in 1953-54.

*7th August.*—Shipping freights to United Kingdom rose by  $7\frac{1}{2}$  per cent.

*13th August.*—Commonwealth Government rejected a Japanese request for a conference to discuss trade relations between Australia and Japan.

*9th September.*—The Commonwealth Budget for 1953-54 introduced into the House of Representatives. (For details, see Official Year Book No. 41, p. 1086.)

*10th September.*—Pearl Fisheries Bill introduced, providing for a licensing system and other measures to control pearl fisheries (Act assented to 17th September). *See also* 11th September.

*11th September.*—Australian sovereignty proclaimed over sea-bed, subsoil, and continental shelf adjoining Australia and Australian territories. (Australia subsequently agreed to submit issues arising from the Pearl Fisheries Act to the International Court of Justice for adjudication.)

*12th September.*—Commonwealth Court of Conciliation and Arbitration refused applications by employers for reduction of current basic wages and for an increase of standard hours of work and also refused applications by unions for increases of basic wages. The employers' applications for abandonment of the system of automatic adjustment of the basic wage in accordance with retail price indexes were, however, granted. Later, the extension by the Court, on its own motion, of this decision to awards not the subject of an application before the Court was challenged in the High Court by the unions concerned but the power of the Arbitration Court to so vary awards was upheld.

*24th September.*—Australian Council of Trade Unions Congress withdrew its policy of unqualified opposition to incentive payments, leaving individual unions free to accept incentive payment schemes if they so desire.

*1st October.*—Announced that Australia would receive an increase of  $5\frac{1}{2}$  per cent. in the price of beef and veal shipped to the United Kingdom during 1953-54 under the fifteen-year meat agreement with United Kingdom.

Further relaxation of import restrictions on goods from sterling areas came into operation, allowing additional annual imports valued at £45 million.

*7th October.*—All States agreed to a price of 14s. per bushel for wheat sold in Australia for the three years ending 1955-56.

*13th October.*—Wheat Marketing Bill providing for orderly marketing of wheat for next three harvests introduced into House of Representatives. (Act assented to 26th October.)

Bill providing for ratification of the International Wheat Agreement, under which portion of Australia's crop for the next three seasons will be exported within certain price limits, introduced into House of Representatives. (Act assented to 26th October.)

Queensland State Full Industrial Court rejected application by employers' organizations to end basic wage adjustments.

*22nd October.*—Commonwealth Court of Conciliation and Arbitration refused New South Wales transport authorities permission to withdraw applications for relief from basic wage adjustments.

*26th October.*—Factories and Shops (Wages Boards) Bill 1953 introduced in Victoria to pay latest cost-of-living increase in basic wages. (Act assented to 25th November.)

*30th October.*—Tasmanian Government abolished price control on all goods other than copper.

*11th November.*—Commonwealth Court of Conciliation and Arbitration completed hearing of evidence by Australian Engineering Union and other organizations in the margins case and reserved its decision. (See 5th November, 1954.)

*12th November.*—Industrial Arbitration (Amendment) Bill, giving absolute preference to unionists, introduced in New South Wales Parliament. (Act assented to 17th December.)

*3rd December.*—Commonwealth Trading Bank of Australia commenced operations.

*4th December.*—Oil discovered at Exmouth Gulf, 680 miles north of Perth. The oil, discovered at a depth of approximately 3,600 feet, was stated to be a very high grade crude oil.

*31st December.*—With the expiration of the Defence Preparations Act, control of Capital Issues ceased.

Price control abandoned in Western Australia.

### 1954.

Immigration was greater than in 1953. Net migration increased from 43,000 in 1953 to 68,000 in 1954, but was still well below the level of the preceding four years. Employment increased continuously throughout 1954. Total employment (excluding rural and household domestic employment and the defence forces) rose from 2,612,000 in December, 1953 to 2,701,000 in December, 1954. In April total employment exceeded the previous peak of 2,643,000 reached in November, 1951. Numbers on unemployment benefit fell from 13,423 in January to 2,975 in November, 1954. Production of pig-iron and steel was practically the same as in 1953, but there were rises in the production of coal, gas and electricity, and many basic materials (copper, lead, zinc, acids, cement, superphosphate). Production of domestic electrical appliances and of many textile and clothing lines also increased. More new houses were commenced in 1954 than in 1953, but the number completed was slightly below the 1953 figure. Meat production increased slightly in 1954. The wheat acreage for 1954-55 was about the same as in 1952-53, but both the total crop and the average yield are estimated to be below the levels of the previous two seasons. A substantial fall in exports, however, resulted in a level of stocks at 30th November, more than twice as high as a year earlier. The 1954-55 wool clip is estimated to be practically the same as the record 1952-53 clip and about 3 per cent. higher than the 1953-54 clip. In April there was a further relaxation of import restrictions (imposed in March, 1952) on trade with countries other than dollar area and Japan, and imports were substantially higher than in 1953. A fall in wool and wheat prices and a lower volume of wheat exports contributed to a decline in exports. In the second half of 1954 there was a debit balance, estimated at £96 million, in the balance of payments on current account compared with a debit balance of £62 million in the first half of the year, and a credit balance of £54 million in the second half of 1953. Quotas were re-imposed on some imports in October. Average earnings per employee rose by 4 per cent., the same as the previous year's rise. In 1954, however, retail and wholesale prices showed practically no change whereas in 1953 they rose by 4 per cent. and 3 per cent. respectively. Bank interest rates were not altered during the year. The three Commonwealth loans were issued at  $4\frac{1}{2}$  per cent. for long dated bonds and most local and semi-governmental loans at  $4\frac{1}{2}$  per cent.

*7th January.*—Reciprocal agreement with the United Kingdom on Social Services became operative.

*8th-15th January.*—Conference of British Finance Ministers held in Sydney with the Prime Minister as Chairman and other Australian Ministers in attendance. Conference reaffirmed the British Commonwealth's objectives of strengthening the internal economies of member countries and of establishing with other countries the widest possible system of multilateral trade and payments.

*19th January.*—It was announced that Australia would sign the declaration extending until 30th June, 1955 the schedule of tariff concessions under the General Agreement on Tariffs and Trade.

*5th February.*—Tariff Board increased to seven by the appointment of three new members.

*25th February.*—Interim decision by Full Arbitration Court on claim by Metal Trades employees for increased margins left rates of pay unchanged (*see* 5th November, 1954).

*4th March.*—Loan of \$54 million from the International Bank, to be used to import capital goods and equipment.

*10th March.*—19th Security Loan of £35 million closed with a subscription of about £50 million.

*1st April.*—United Kingdom Free and Assisted Passages Migration Agreement with Australia renewed for another year.

*9th April.*—Contract for £25 million let to Kaiser group, of U.S.A. for the construction of the Eucumbene—Tumut tunnel and other works in the Snowy Mountains Scheme.

*16th April.*—Revision of the 15 year marketing agreement for Australian meat sold in the United Kingdom, occasioned by the change over from bulk purchasing to private trading.

*27th April.*—£3.9 million contract for building the Upper Tumut power station of the Snowy Mountains Scheme let to a French group of contractors.

*4th June.*—Queensland Industrial Court increased margins to workers under Mechanical Engineering Award.

*16th June.*—Premier of South Australia announced two new uranium finds in north-east of State.

*28th June.*—Australia signed International Tin Agreement as a consuming country. Savings Bank deposits in Australia reached £1,000 million for the first time.

*30th June.*—Loan Council approved borrowing programme of £290 million for 1954-55 comprising Government loans, £200 million, Semi-Governmental loans, £75 million, and Local Government loans, £15 million. Tax reimbursement Grants to States to be £150 million for 1954-55. Australian population census taken.

*1st July.*—Forecast that by 31st July stocks of wheat carried over by the four major producing countries will total 1,601 million bushels compared with 1,061 million in 1953.

*4th July.*—Commonwealth Budget for 1953-54 resulted in a surplus of £56,300,000 Favourable trade balance of £149,400,000 for 1953-54.

*13th July.*—Heavy rain and gales caused damage to 200 miles of coastal area from Queensland to Northern New South Wales with floods in river districts of S.E. Queensland and Northern New South Wales. For the seventh time in five years (and twice in 1954) the New South Wales North Coast towns have been flooded. Damage estimated at £17,000,000.

*16th July.*—Retail prices index for June showed, on average, a slight fall throughout Australia.

*4th August.*—£1,800,000 hydro-electric project approved for Warragamba Dam (New South Wales).

*13th August.*—Wool sold in Australia in 1953-54 season realized £390.7 million, £14 million less than last year, but third highest on record.

*18th August.*—Commonwealth Budget for 1954-55 introduced into the House of Representatives, providing for an estimated expenditure of £1,016,923,000, revenue of £1,017,174,000 and an estimated surplus of £251,000. Major items of estimated expenditure from Consolidated Revenue Fund were:—Defence Services, £200,000,000;



War and Repatriation Services, £118,000,000; National Welfare Fund, £193,000,000; Payments to or for the States, £199,000,000; Capital Works and Services, £104,500,000; Estimated expenditure from Loan Fund included £5,000,000 for War Service Land Settlement and £5,000,000 for redemption of War Savings Certificates. Budget included proposals for increases in expenditure on repatriation benefits (£1,500,000) and social services benefits (£16,500,000); and reductions in taxation of an estimated annual value to taxpayers of £35,000,000. Proposals for reductions in taxation included reduced rates of income tax with increased allowances and exemptions (£23,000,000), sales tax (£10,000,000) and increased annual exemption from pay-roll tax (£1,500,000).

*19th August.*—Miners' Federation convention unanimously agreed to the mechanical extraction of pillar coal. (See 20th September, 1954.)

*31st August.*—New South Wales Government granted £125,000 to New South Wales University of Technology for research in nuclear engineering (previously £50,000 was granted to the University of Sydney for research into nuclear physics). £50 million Commonwealth Cash and Conversion Loan oversubscribed by £1 million.

*17th September.*—Prime Minister officially opened at Rum Jungle first uranium plant established in Australia.

*20th September.*—Mechanical extraction of pillar coal commenced in some New South Wales mines.

*29th September.*—The Tariff Board annual report issued a warning against any general increase in the tariff level and on high cost in industry.

*30th September.*—New import restrictions announced on imported materials and equipment (goods on which quota restrictions were abandoned in April, 1954), on the basis of 100 per cent. of imports in the base year, 1950-51.

*5th October.*—Hon. H. E. Holt, Federal Minister for Labour and National Service, announced the formation of a National Joint Production Council representing management and workers.

*14th October.*—Announced that Commonwealth would grant £24 million for roads in 1954-55.

*29th October.*—Tariff changes increased tariffs on certain imports and increased protection to eight Australian industries. Government bounties on rayon yarn in Australia and scutched flax fibre produced from flax grown in Australia were announced.

*3rd November.*—Bounty paid on sulphuric acid as from 1st July, 1954. Legislation introduced to appropriate £600,000 annually for five years. Waterside workers declared a general strike on the Australian waterfront as a protest against proposed new Stevedoring legislation. (See 5th November.)

*5th November.*—Federal Arbitration Court granted higher margins for skilled workers in a judgment intended to be a guide to other wage fixing authorities. New Stevedoring legislation introduced into House of Representatives which, in effect, gave employers the right to nominate new waterside workers. Previously the right of deciding eligibility for work in the industry had been the prerogative solely of the Unions. Government will pay subsidy on gold produced in Australia, Papua and New Guinea in the next three years.

*19th November.*—Privy Council ruled New South Wales State Transport (Co-ordination) Act is invalid insofar as it applied to interstate Transport.

*22nd November.*—New arrangements for regulation of trading with Japan gave Japanese exporters the opportunity of obtaining a larger share of Australia's trade.

*23rd November.*—Commonwealth Government set target of migrants for 1954-55 at 115,000.

*25th November.*—Commonwealth Government called tenders for equipment necessary for television stations in Sydney and Melbourne.

*2nd December.*—Australian wheat prices guaranteed under the wheat stabilization plan will remain at 12s. 7d. per bushel for 1954-55 season.

*10th December.*—\$25 million loan floated by Australia on United States market oversubscribed.

*14th December.*—£13 million lag in cash section of Commonwealth Government £125 million cash and conversion loan.

*15th December.*—Increased margins for coal industry employees, applying in New South Wales, Queensland, Victoria and Tasmania, announced by Coal Industry Tribunal.

*31st December.*—Governor of Commonwealth Bank announced an increase of 5s. per cent. in rates of interest on bank fixed deposits and Savings Bank deposits, to operate from 1st January, 1955.

## 1955.

When the Treasurer presented the budget in August he said that there were "unmistakable signs of active inflation". A boom had been getting under way in consumer spending and private investment, and labour shortages had become general. No concessions in taxation were made in the budget. During the year several measures were introduced to check inflation. In July the Commonwealth Bank directed the trading banks to restrict new loans which would increase the scale of hire purchase. Towards the end of the year the Prime Minister held a series of conferences with representatives of financial and industrial institutions to enlist their co-operation in checking inflation. Hire purchase and finance companies agreed to restrict the increase in their loans to 10 per cent. above the level at September, 1955. The level of total bank advances changed little in the second half of the year. In spite of lower wool and wheat prices the value of exports was slightly higher than in 1954. The value of imports was much greater than in 1954 and the balance of payments deficit was therefore greater in 1955. Import restrictions were made more severe in April and again in September. Following the judgment of the Commonwealth Court of Conciliation and Arbitration late in 1954, margins for skill were adjusted upwards in many occupations. Nominal wages rose throughout the year, and by December, 1955 were 3½ per cent. higher than in December, 1954. Over the same period average earnings rose by 7 per cent. and retail prices by 4½ per cent. Employment rose steadily during the year, and the number of persons receiving unemployment benefit fell to the lowest level since 1951. Investment by private businesses in 1955 was well above the level of 1954. Dwelling construction also continued at a high level. There were 78,000 new houses completed in 1955, a higher number than in any post-war year except 1952. The number commenced was 3,000 less than in 1954, but was higher than in 1952 or 1953. Secondary production was generally maintained at the high level of the previous year, and output of primary products increased. The wheat acreage in 1955-56 is estimated to have been slightly less than in any other post-war year, but the average yield was estimated to be the highest on record. The total crop was therefore well above the 1954-55 level and nearly as high as in 1953-54. It was predicted that the production of wool in 1955-56 would be over 1,400 million pounds compared with the previous record of about 1,290 million pounds in 1954-55. Net immigration during 1955 was 95,000. This compared with 68,000 in 1954, and 43,000 in 1953 but was still well below the 1950 and 1951 levels of 153,000 and 111,000 respectively.

*1st January.*—Price control in Victoria ended after 14 years. Increased Bank Deposit interest rates.

*12th January.*—Harbour at Cockburn Sound, Western Australia, opened to provide shipping facilities for Kwinana. Kwinana £40 million oil refinery began operations—to be in production by mid-March.

*4th February.*—Announced that arrangements completed for issue of £6 million public loan in Switzerland to Commonwealth Government.

*7th February.*—Australia's first aluminium plant, at Bell Bay, Tasmania, began production.

*17th February.*—Special conference agreed that Waterside Workers Federation should have right to nominate waterside recruits; counteracts legislation passed last November. (see 5th November, 1954).

*22nd February.*—Guthega power station in operation, first power generated from Snowy Mountains Hydro-electric scheme being fed into New South Wales electricity system.

*24th February.*—Disastrous floods cover large areas of Central West New South Wales and Hunter Valley. Damage estimated at £15 million to townships, stock and grazing lands, and many lives lost.

*18th March.*—Government plan announced for sale to tenants of houses built under Commonwealth and State Housing Agreement. Maximum advance to be £2,750 repayable over 45 years at 4½ per cent. interest, minimum deposit 5 per cent. of first £2,000 of sale price, repayments of principal included in rent previously paid to be credited as part of deposit.

*19th March.*—Details announced of new 15 year 5½ million dollar loan from International Bank of Reconstruction to Australia at 4½ per cent. interest, including Bank's 1 per cent. commission.

*21st March.*—New import restrictions imposed, cutting Australia's rate of imports by about 20 per cent; to operate from 1st April.

*23rd March.*—First commercial shipment of Australian uranium oxide, worth about £200,000, dispatched to United States.

*15th April.*—All price control ended in New South Wales.

*20th April.*—Broken Hill Pty. Company announced plans for spending £67 million on plant in next five years at Newcastle and Port Kembla.

*12th May.*—Increase of interest rates for home purchase and building finance from 5 per cent. to 5½ per cent. announced by most of major life assurance companies in Australia.

*16th May.*—Commonwealth Government to build ammunition filling and assembly factory at St. Marys, near Sydney, at estimated cost of £23 million.

*5th June.*—Australia's 1955-56 immigration programme to be increased to basic intake of 125,000 migrants (including 70,000 under assisted-passages scheme).

*10th June.*—Full High Court in reserved judgment declared invalid recent legislation imposing a road-tax on interstate road hauliers.

*19th June.*—Commonwealth abandons control of tea.

*21st-23rd June.*—At annual Loan Council meeting, Prime Minister rejected proposals by State Premiers for substantially increased loan programme to finance State Works in 1955-56. Loan Council, by majority vote, approved borrowing programme of £193,500,000 for public works in 1955-56. Prime Minister announced that Commonwealth Government would grant States £157 million taxation reimbursements for 1955-56, an increase of £7 million on 1954-55.

*19th July.*—Decision by Federal Cabinet to cut subsidy on local consumption of butter and cheese, followed by increase in butter and cheese prices. General Motors-Holden's announced £21.6 million expansion programme for plants throughout Australia.

*26th-28th July.*—Price control re-imposed in New South Wales and South Australia.

*9th August.*—Western Australian State Arbitration Court increased Western Australian basic wage by 5s. 11d.

*14th August.*—Prime Minister stated that Australia would not extend trading concessions to Japan under G.A.T.T.

*22nd August.*—First International Wool Textile Research Conference to be held in Australia opened in Sydney. Attended by 100 research workers, including 52 scientists from overseas.

*23rd August.*—Contract system of shipping Australian wool exports to Europe and United Kingdom broke down as British and European shipowners refused to renew contracts at less than 10 per cent. increase in freight rates.

*24th August.*—Commonwealth Budget for 1955-56 introduced into the House of Representatives, providing for an estimated expenditure of £1,123,599,000, revenue of £1,123,769,000 and an estimated surplus revenue of £170,000. The major items of estimated expenditure from Consolidated Revenue Fund were:—Defence Services, £190,000,000; War and Repatriation Services, £121,000,000; National Welfare Fund, £218,500,000; Payments to or for the States, £220,000,000; Capital Works and Services, £104,000,000. Estimated expenditure from Loan Fund includes £8,500,000 for War Service Land Settlement and £3,000,000 for redemption of War Savings Certificates. The Budget included proposals for increases in expenditure on repatriation benefits (£1,750,000) and social services benefits (£11,000,000).

*26th August.*—Overall prices of Australian iron and steel raised by 5 per cent.

*30th August.*—New £30 million hot-strip steel mill of Australian Iron and Steel Ltd. at Port Kembla (N.S.W.) opened by the Prime Minister who described it as "a great and historic event in the development of Australia".

*12th-21st September.*—Prime Minister called series of conferences with representatives of trading banks, hire purchase companies, and trade-union leaders to discuss financial aspects of Australian economic problems and suggested remedies. Fresh tightening of bank credit.

*13th September.*—Bank of New South Wales Savings Bank Ltd. registered in Sydney. The first new savings bank established in Australia for 40 years.

*1st October.*—Increase of  $7\frac{1}{2}$  per cent. in shipping freights for Australian exports to most oversea countries became effective. Reductions of from  $7\frac{1}{2}$  per cent. to 25 per cent. operated on licensed imports.

*6th October.*—15 million dollars (£A6.8 million) loan successfully negotiated in Canada by Australian Government.

*4th November.*—Legislation passed to re-introduce automatic quarterly basic wage adjustments in New South Wales.

*18th November.*—Queensland and New South Wales coal producers combined to form Australian Coal Association with main object of trying to find new and improved ways of producing, preparing and marketing coal.

*22nd November.*—For the first time in history, brown coal coke was successfully used at a Richmond (Vic.) foundry to smelt iron commercially.

*26th November.*—Reduction of about 10 per cent. in Queensland shearing rates under the State Shearing industry award ordered in Industrial Court judgment of 25th November.

*13th December.*—Trade Unions case for increased basic wages and restoration of quarterly cost of living adjustments brought before Arbitration Court.

*17th December.*—Commonwealth £30 million cash Loan undersubscribed by £2 million. Commonwealth Arbitration Court upholds appeal by Public Service Board against salary increases granted under "Castieau" Award of June, 1955, based on metal trades " $2\frac{1}{2}$  times" formula; Court, however, granted certain adjustments.

## CHRONOLOGICAL TABLE.

## CHRONOLOGICAL TABLE OF CHIEF EVENTS SINCE THE ESTABLISHMENT OF SETTLEMENT IN AUSTRALIA.

NOTES.—For each earlier year this Table contains rarely 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.

The Government was centralized in Sydney, New South Wales, up to 1825, when Tasmania (Van Diemen's Land) was made a separate colony. In the Table the names now borne by the States serve to indicate the localities.

Year.

- 1788 N.S.W.—Arrival of "First Fleet", under Captain Arthur Phillip, at Botany Bay. Land in vicinity being found unsuitable for settlement, the expedition moved to Sydney Cove, and formal possession of the colony was taken on 26th January. Formal proclamation of colony and establishment of regular government on 7th February. Branch Settlement established at Norfolk Island. French navigator La Pérouse visited Botany Bay. First cultivation of wheat and barley. First grape vines planted.
- 1789 N.S.W.—First wheat harvest at Parramatta, near Sydney. Discovery of Hawkesbury River.
- 1790 N.S.W.—Scarcity of provisions. "Second Fleet" reached Port Jackson. Landing of the New South Wales Corps.
- 1791 N.S.W.—Arrival of "Third Fleet". Territorial seal brought by Governor King.
- 1792 N.S.W.—Visit of *Philadelphia*, first foreign trading vessel.
- 1793 N.S.W.—First free immigrants arrived in *Bellona*. First Australian church opened at Sydney. Tas.—D'Entrecasteaux discovered the Derwent River.
- 1794 N.S.W.—Establishment of settlement at Hawkesbury River.
- 1795 N.S.W.—Erection of the first printing press at Sydney. Descendants of strayed cattle discovered at Cowpastures, Nepean River.
- 1796 N.S.W.—First Australian theatre opened at Sydney. Coal discovered by fisherman at Newcastle.
- 1797 N.S.W.—Introduction of merino sheep from Cape of Good Hope.
- 1798 Tas.—Insularity of Tasmania proved by voyage of Bass and Flinders.
- 1800 N.S.W.—Hunter River coal-mines worked. First Customs House in Australia established at Sydney. Flinders' charts published.
- 1801 N.S.W.—First colonial manufacture of blankets and linen.
- 1802 Vic.—Discovery of Port Phillip by Lieut. Murray. Q'land.—Discovery of Port Curtis and Port Bowen by Flinders. S.A.—Discovery of Spencer's and St. Vincent Gulfs by Flinders.
- 1803 N.S.W.—First Australian wool taken to England by Capt. Macarthur. Issue of *The Sydney Gazette*, first Australian newspaper. Vic.—Attempted settlement at Port Phillip by Collins. Discovery of Yarra by Grimes. Tas.—First settlement formed at Risdon by Lieut. Bowen.
- 1804 Vic.—Abandonment of settlement at Port Phillip. Tas.—Foundation of settlement at Hobart by Collins.
- 1805 N.S.W.—First extensive sheep farm established at Camden by Capt. Macarthur.
- 1806 N.S.W.—"The great flood" on the Hawkesbury. Shortage of provisions. Tas.—Settlement at Launceston.
- 1807 N.S.W.—First shipment of merchantable wool (245 lb.) to England.
- 1808 N.S.W.—Deposition of Governor Bligh.
- 1809 N.S.W.—Free school established.
- 1810 N.S.W.—Post Office officially established at Sydney.
- 1813 N.S.W.—Passage across Blue Mountains discovered by Wentworth, Lawson and Blaxland. Macquarie River discovered by Evans.
- 1814 N.S.W.—Flinders suggested the name "Australia", instead of "New Holland". Creation of Civil Courts.

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- 1815 N.S.W.—First steam engine in Australia erected at Sydney. Lachlan River discovered by Evans. Tas.—Arrival of first immigrant ship with free settlers. First export of wheat to Sydney.
- 1816 N.S.W.—Sydney Hospital opened.
- 1817 N.S.W.—Oxley's first exploration inland. Discovery of Lakes George and Bathurst and the Goulburn Plains by Meehan and Hume. First bank in Australia—Bank of New South Wales—opened at Sydney.
- 1818 N.S.W.—Liverpool Plains, and the Peel, Hastings and Manning Rivers discovered by Oxley, and Port Essington (N.T.) by Captain King.
- 1819 N.S.W.—First Savings Bank in Australia opened at Sydney.
- 1820 Tas.—First importation of pure merino sheep from Camden Park (N.S.W.) flocks.
- 1821 Tas.—Establishment of penal settlement at Macquarie Harbour.
- 1822 N.S.W.—Formation of Agricultural Society of New South Wales.
- 1823 N.S.W.—New South Wales Judicature Act passed. Discovery of gold at Fish River by Assistant-Surveyor McBrien. Qld.—Brisbane River discovered by Oxley.
- 1824 N.S.W.—Constituted a Crown Colony. Executive Council formed. Establishment of Supreme Court at Sydney, and introduction of trial by jury. First Australian Enactment (Currency Bill) passed by the Legislative Council. Proclamation of freedom of the press. First manufacture of sugar. Vic.—Hume and Hovell, journeying overland from Sydney, arrived at Corio Bay. Qld.—Penal settlement founded at Moreton Bay (Brisbane). Fort Dundas Settlement formed at Melville Island, N. Terr.
- 1825 Tas.—Van Diemen's Land (Tasmania) proclaimed a separate colony. Qld.—Major Lockyer explored Brisbane River to its source and discovered coal.
- 1826 N.S.W.—Settlement in Illawarra District. Vic.—Settlement at Corinella, Western Port, formed by Captain Wright.
- 1827 Qld.—Darling Downs and the Condamine River discovered by Allan Cunningham. W.A.—Military settlement founded at King George's Sound by Major Lockyer. First official claim of British Sovereignty over all Australia.
- 1828 N.S.W.—Second constitution. First Census. Sturt's expedition down Darling River. Gas first used at Sydney. Richmond and Clarence Rivers discovered by Captain Rous. Vic.—Abandonment of settlement at Western Port. Qld.—Cunningham discovered a route from Brisbane to the Darling Downs, and explored Brisbane River.
- 1829 N.S.W.—Sturt's expedition down Murrumbidgee River. W.A.—Foundation of settlement at Swan River. Foundation of Perth.
- 1830 N.S.W.—Sturt, voyaging down Murrumbidgee and Murray Rivers, arrived at Lake Alexandrina. Tas.—Black line organized to force aborigines into Tasman's Peninsula, but failed. Small remnant subsequently (1830 to 1835) persuaded to settle on Flinders Island.
- 1831 N.S.W.—Crown lands first disposed of at auction. Mitchell's explorations north of Liverpool Plains. SS. *Surprise*, first steamship built in Australia, launched at Sydney. First coal shipped from Australian Agricultural Company's workings at Newcastle, N.S.W. First assisted immigration to N.S.W. S.A.—Wakefield's first colonization committee. W.A.—Appointment of Executive and Legislative Councils.
- 1832 N.S.W.—State Savings Bank established.
- 1833 N.S.W.—First School of Arts established at Sydney.
- 1834 N.S.W.—First settlement at Twofold Bay. Vic.—Settlement formed at Portland Bay by Henty Brothers. S.A.—Formation of the South Australian Association. W.A.—Severe reprisals against Murray River natives at Pinjarrah for continued attacks on settlers.
- 1835 Vic.—John Batman arrived at Port Phillip; foundation of Melbourne.
- 1836 N.S.W.—Mitchell's overland journey from Sydney to Cape Northumberland. Vic.—Proclamation of Port Phillip district as open for settlement. S.A.—Settlement founded at Adelaide under Governor Hindmarsh.

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- 1837 N.S.W.—Appointment in London of Select Committee on Transportation. Vic.—First overlanders from Sydney arrived at Port Phillip.
- 1838 N.S.W.—Discontinuance of assignment of convicts. Qld.—Settlement of German missionaries at Brisbane—first free colonists. S.A.—“Overlanding” of cattle from Sydney to Adelaide along the Murray route by Hawden and Bonney. Settlement at Port Essington, Northern Territory, formed by Captain Bremer.
- 1839 N.S.W.—Gold found at Vale of Clwydd by Count Strzelecki. S.A.—Lake Torrens discovered by Eyre. Port Darwin discovered by Captain Stokes. W.A.—Murchison River discovered by Captain Grey.
- 1840 N.S.W.—Abolition of transportation to New South Wales. Land regulations—proceeds of sales to be applied to payments for public works and expenditure on immigration. Vic.—Determination of northern boundary. Qld.—Pensal settlement broken up and Moreton Bay district thrown open. S.A.—Eyre began his overland journey from Adelaide to King George’s Sound.
- 1841 N.S.W.—Gold found near Hartley. W.A.—Completion of Eyre’s overland journey from Adelaide to King George’s Sound. New Zealand proclaimed a separate colony.
- 1842 N.S.W.—Incorporation of Sydney. Vic.—Incorporation of Melbourne. S.A.—Discovery of copper at Kapunda.
- 1843 N.S.W.—First Representative Constitution (under Act of 1842). Qld.—Moreton Bay granted legislative representation as a distinct electoral division.
- 1844 Qld.—Leichhardt’s expedition to Port Essington (N.T.). S.A.—Sturt’s last expedition inland.
- 1845 N.S.W.—Mitchell’s explorations on the Barcoo. Qld.—Explorations by Mitchell and Kennedy. S.A.—Discovery of the Burra copper deposits. Sturt discovered Cooper’s Creek.
- 1846 N.S.W.—Initiation of meat-preserving. Qld.—Foundation of settlement at Port Curtis. S.A.—Proclamation of North Australia.
- 1847 N.S.W.—Iron-smelting commenced near Berrima. Overland mail established between Sydney and Adelaide. Qld.—Explorations by Leichhardt, Burnett and Kennedy.
- 1848 N.S.W.—National and Denominational School Boards established. Qld.—Leichhardt’s last journey. Kennedy speared by the blacks at York Peninsula. Chinese brought in as shepherds.
- 1849 N.S.W.—Indignation of colonists at arrival of convict ship *Hashemy*. Exodus of population to gold-fields of California. Vic.—*Randolph* prevented from landing convicts. Qld.—Assignment of *Hashemy* convicts to squatters on Darling Downs. W.A.—Commencement of transportation to Western Australia.
- 1850 N.S.W.—Final abolition of transportation. First sod of first Australian railway turned at Sydney. Sydney University founded. Vic.—Gold discovered at Clunes. Representative government granted. S.A.—Representative government granted. W.A.—Pearl oysters found by Lieut. Helpman at Saturday Island Shoal. Tas.—Representative government granted.
- 1851 N.S.W.—Payable gold discovered by Hargraves at Lewis Ponds and Summerhill Creek. Vic.—Port Phillip created an independent colony under the name of Victoria. Discovery of gold in various localities. W.A.—Proclamation of Legislative Council Act.
- 1852 N.S.W.—Arrival of *Chusan*, first P. and O. mail steamer from England. S.A.—First steamer ascended the Murray River to the junction with the Darling. Tas.—Meeting of first elective Council protested against transportation. Payable gold discovered at The Nook, near Fingal, and at Nine Mile Springs.
- 1853 Tas.—Abolition of transportation. Vic.—Melbourne University founded.
- 1854 Vic.—Opening of first Victorian railway—Flinders Street to Port Melbourne. Riots on Ballaarat gold-fields. Storming of the Eureka Stockade, 3rd Dec. Telegraph first used.

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- 1855 N.S.W.—Opening of railway—Sydney to Parramatta. Mint opened.
- 1856 N.S.W.—Pitcairn Islanders placed on Norfolk Island. W.A.—A. C. Gregory's expedition in search of Leichhardt.  
Responsible Governments in N.S.W., Vic., S.A. and Tas. (Act of 1855).
- 1857 N.S.W.—Select Committee on Federation. Vic.—Manhood suffrage and vote by ballot. S.A.—Passage of Torrens' Real Property Act.
- 1858 N.S.W.—Establishment of manhood suffrage and vote by ballot. Telegraphic communication between Sydney, Melbourne and Adelaide. Qld.—Canooona gold rush.  
Population of Australia reached 1,000,000.
- 1859 Qld.—Proclamation of Queensland as separate colony. Tas.—First submarine cable, via Circular Head and King Island to Cape Otway.
- 1860 Vic.—Burke and Wills left Melbourne and crossed to Gulf of Carpentaria. S.A.—Copper discoveries at Wallaroo and Moonta. McDouall Stuart reached centre of continent and named "Central Mount Stuart".
- 1861 N.S.W.—Anti-Chinese riots at Lambing Flat and Burrangong gold-fields. Opening of first tramway in Sydney. Regulation of Chinese immigration. Vic.—Burke and Wills perished at Cooper's Creek, near Innamincka, S.A.
- 1862 N.S.W.—Abolition of State aid to religion. Real Property (Torrens) Act passed. S.A.—Stuart crossed the Continent from south to north. W.A.—First export of pearl-shell.
- 1863 Vic.—Intercolonial Conference at Melbourne. S.A.—Northern Territory taken over. W.A.—Initiation of settlement in the north-west district. Henry Maxwell Lefroy discovered and traversed area now comprised in the Coolgardie-Kalgoorlie gold-field.
- 1864 Qld.—First sugar made from Queensland cane.
- 1865 N.S.W.—Destruction by fire of St. Mary's Cathedral, Sydney.
- 1866 N.S.W.—Passage of Public Schools Act of (Sir) Henry Parkes. S.A.—Introduction of camels for exploration, etc.
- 1867 Vic.—Imposition of protective tariff. Qld.—Discovery of gold at Gympie.
- 1868 W.A.—Arrival of *Hougomont*, last convict ship.
- 1869 Vic.—Record gold nugget "Welcome Stranger" 2,284 oz. found near Dunolly. W.A.—First telegraph line opened from Perth to Fremantle.
- 1870 N.S.W.—Intercolonial Exhibition opened at Sydney. Imperial troops withdrawn. Vic.—Intercolonial Congress at Melbourne. S.A.—Commencement of trans continental telegraph.
- 1871 N.S.W.—Permanent military force raised. W.A.—Forrest's explorations. Tas.—Discovery of tin at Mount Bischoff.
- 1872 Vic.—Mint opened. S.A.—Cable from Java to Port Darwin. Completion of transcontinental telegraph line.
- 1873 N.S.W.—Intercolonial Conference at Sydney. First volunteer encampment. Inauguration of mail service with San Francisco.
- 1874 N.S.W.—Triennial Parliaments Act passed. Intercolonial Conference. S.A.—University of Adelaide founded. W.A.—John and Alexander Forrest arrived at Overland Telegraph from Murchison.
- 1875 Qld.—Transfer of Port Albany Settlement to Thursday Island.
- 1876 N.S.W.—Completion of cable—Sydney to Wellington. W.A.—Giles crossed colony from east to west. Tas.—Death of Truganini, last representative of Tasmanian aboriginals.
- 1877 W.A.—Opening of telegraphic communication with South Australia.  
Population of Australia reached 2,000,000.
- 1878 Qld.—Restriction of Chinese immigration.  
Introduction of telephone into Australia.
- 1879 N.S.W.—First artesian bore at Kallara Station, near Bourke. First steam tramway. W.A.—A. Forrest's explorations in the Kimberley district. and discovery of the Fitzroy pastoral country.



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- 1880 N.S.W.—Public Instruction Act passed. Vic.—First Australian Telephone Exchange opened in Melbourne.  
Federal Conference at Melbourne and Sydney.
- 1881 N.S.W.—Further restrictions on Chinese immigration.  
First Australia-wide censuses on same date taken.
- 1882 W.A.—Nugget of gold found between Roebourne and Cossack.
- 1883 N.S.W.—Discovery of silver at Broken Hill. Completion of railway between New South Wales and Victoria. Qld.—Annexation of New Guinea—repudiated by Imperial authorities.  
Federal Conference held at Sydney. Federal Council created.
- 1884 Federation Bill passed in Victoria and rejected in New South Wales. British protectorate declared over New Guinea.
- 1885 N.S.W.—Military contingent sent to the Sudan. Opening of the Broken Hill Proprietary Silver Mines. W.A.—Gold found by prospectors on the Margaret and Ord Rivers in the Kimberley district. Tas.—Silver-lead discovered at Mount Zeehan.
- 1886 Tas.—Discovery of gold and copper at Mount Lyell.  
First session of Federal Council held at Hobart on 26th January.
- 1887 W.A.—Gold discovered at Southern Cross.  
First "Colonial" Conference in London. Australasian Naval Defence Force Act passed.
- 1888 N.S.W.—Restrictive legislation against Chinese, imposing poll-tax of £100.  
Qld.—Railway communication opened between Sydney and Brisbane.  
Conference of Australian Ministers at Sydney to consider question of Chinese immigration. First meeting of the Australasian Association for the Advancement of Science held in Sydney.
- 1889 Qld.—Railway communication established between Brisbane and Adelaide.  
W.A.—Framing of new Constitution. Tas.—University of Tasmania founded.  
Population of Australia reached 3,000,000.
- 1890 W.A.—Responsible Government granted.  
Meeting at Melbourne of Australasian Federation Conference.
- 1891 N.S.W.—Arrival of Australian Auxiliary Squadron. Cessation of assisted immigration. W.A.—Discovery of gold on the Murchison.  
First Federal Convention in Sydney, draft bill framed and adopted.
- 1892 W.A.—Discovery of gold at Coolgardie.
- 1893 Financial crisis, chiefly affecting the eastern States.
- 1894 S.A.—Women's suffrage granted—first State to do so.
- 1895 N.S.W.—Free-trade tariff. Land and income taxes introduced.  
Conference of Premiers on Federation at Hobart.
- 1896 N.S.W.—People's Federal Convention at Bathurst. Vic.—Wages Board system established by Act of Parliament.
- 1897-8 Sessions of Federal Convention at Adelaide, Sydney and Melbourne.
- 1898 Draft Federal Constitution Bill submitted to electors in Victoria, New South Wales, South Australia and Tasmania. Requisite statutory number of votes not obtained in New South Wales.

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- 1899 First contingent of Australian troops sent to South Africa. Conference of Premiers in Melbourne to consider amendments to Federal Constitution Bill. Referendum—Bill accepted by New South Wales, Victoria, Queensland, South Australia and Tasmania. First Labour Government (Queensland).
- 1900 N.S.W.—Old-age pensions instituted.  
Contingents of naval troops sent to China. Commonwealth Constitution Act received Royal Assent, 9th July. Proclamation of Commonwealth signed 17th September. Mr. (afterwards Sir) Edmund Barton formed first Federal Ministry.
- 1901 Proclamation of the Commonwealth at Sydney. First Federal Parliament opened at Melbourne by the Duke of Cornwall and York. Interstate free-trade established.
- 1902 Completion of Pacific Cable (all-British). First Federal Tariff.
- 1903 Coolgardie and Kalgoorlie Water Supply Scheme completed. Inauguration of the Federal High Court.
- 1904 Commonwealth Conciliation and Arbitration Act.
- 1905 Population of Australia reached 4,000,000. Re-introduction of assisted immigration in New South Wales.
- 1906 Wireless telegraphy installed between Queenscliffe, Vic., and Devonport, Tas. Papua taken over by Commonwealth. Excise Tariff Act imposed duties on agricultural machinery except when manufactured "under conditions as to the remuneration of labour which are declared . . . . . to be fair and reasonable . . . . ."
- 1907 First telephone trunk line service between Capital Cities, i.e., Sydney and Melbourne. Imperial Conference in London. Declaration of first basic wage in "Harvester Judgment".
- 1908 Canberra chosen as site of Australian Capital.
- 1909 Imperial Defence Conference in London. Visit of Lord Kitchener to report and advise on Australian military defence. Queensland University founded.
- 1910 Penny Postage. Arrival of *Yarra* and *Parramatta*, first vessels built for the Royal Australian Navy. Australian Notes Act passed and first Commonwealth notes issued. Admiral Sir R. Henderson visited Australia to advise on naval defence.
- 1911 First Federal Census. Transfer of Australian Capital Territory and Northern Territory to Commonwealth. Introduction of compulsory military training. University of Western Australia founded.
- 1912 Opening of Commonwealth Bank. First payments of Maternity Bonus. First sod turned at Port Augusta of Trans-Australian Railway.
- 1913 Australian Capital named Canberra and foundation stone laid. Appointment of Interstate Commission.

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- 1914 Visit of General Sir Ian Hamilton to report on military defence scheme. Double dissolution of Federal Parliament. Transfer of Norfolk Island to Commonwealth.

European War declared 4th August. Australian Navy transferred to British Navy. Australian offer to equip and furnish 20,000 troops accepted. German possessions in South-West Pacific seized by Australian Naval and Military Expeditionary Force. German cruiser *Emden* destroyed by H.M.A.S. *Sydney* at Cocos Islands, 9th November. First contingent landed in Egypt. Australian and New Zealand Army Corps (A.N.Z.A.C.) formed under Sir William Birdwood.

- 1915 Opening of Broken Hill Proprietary's Ironworks at Newcastle, N.S.W.

Australian and New Zealand troops landed at Gallipoli, 25th April. Evacuation, 18th-20th December. Australian warships with Grand Fleet.

- 1916 Purchase of steamships by the Commonwealth.

Australian and New Zealand mounted troops organized in mounted divisions and camel corps, operating thereafter in Egypt, Palestine and Syria. Other troops transferred to France. First proposal for compulsory military service overseas defeated by referendum.

- 1917 National Ministry formed under Rt. Hon. W. M. Hughes. Transcontinental (Kalgoorlie-Port Augusta) Railway completed.

Australian Flying Corps operating with R.F.C. in Palestine and France. Second proposal for compulsory military service overseas defeated by referendum.

- 1918 Population of Australia reached 5,000,000. Australia House (Strand, London) opened by the King.

Five Australian divisions in France formed into army corps, 1st January. Armistice with Germany, 11th November. Repatriation Commission created.

- 1919 Peace Conference. Return of Australian troops. Flight England to Australia by Capt. (Sir) Ross Smith and Lieut. (Sir) Keith Smith. Peace Treaty signed at Versailles, 28th June.

- 1920 Visit to Australia of H.R.H. the Prince of Wales. Imperial Statistical Conference in London.

- 1921 Mandate given to Australia over Territory of New Guinea. First direct wireless press message, England to Australia. Second Federal Census.

- 1922 First lock on River Murray opened at Blanchetown, South Australia. Queensland Legislative Council abolished.

- 1923 First sod turned on the site of Federal Parliament House at Canberra.

- 1924 Directorate of Commonwealth Bank appointed. Australian Loan Council formed.

- 1925 Population of Australia reached 6,000,000. Solar Observatory established at Canberra.

- 1926 Council for Scientific and Industrial Research established. Imperial Conference. Dominion Status defined.

- 1927 Transfer of Seat of Commonwealth Government from Melbourne to Canberra. Beam wireless established. Financial agreement between Commonwealth and States.

- 1928 State Debts referendum carried.

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- 1929 Commonwealth Bank empowered to mobilize gold reserve. Abolition of peacetime compulsory military training in favour of voluntary system.
- 1930 Effects of world-wide severe economic depression felt throughout Australia. Brisbane-Grafton (N.S.W.) railway, first step towards uniform gauge railway communication between capitals of mainland States, opened. First Australian—Rt. Hon. Sir Isaac Alfred Isaacs, G.C.M.G., Chief Justice of the High Court—appointed Governor-General of Australia.
- 1931 Depression continues. Initiation of Premiers' Conference plan to meet the financial situation. Commonwealth Bank Act amended to provide for temporary lower reserve against notes. England departed from gold standard. Commonwealth Bank assumed control of exchange rate and lowered it to 125 (previously 130).
- 1932 Sydney Harbour Bridge opened. Australian Broadcasting Commission established. Legislation passed enabling note reserve to be held in sterling securities. Imperial Economic Conference at Ottawa.
- 1933 World Economic Conference in London. Secession Referendum carried (Western Australia). Antarctica and Ashmore and Cartier Islands taken over by the Commonwealth. Third Federal Census.
- 1934 Inauguration of England-Australia Air Mail Service.
- 1935 Empire Statistical Conference at Ottawa.
- 1936 Joint Commonwealth and State Marketing Schemes invalidated by decision of the Privy Council in the James case. Tasmania linked with mainland by submarine telephone cable.
- 1937 Imperial Conference in London. Report of the Royal Commission on Monetary and Banking Systems in Australia.
- 1938 New Defence Programme involving expenditure of £63,000,000 over three years. New Trade Treaty with Japan.
- 1939 Population of Australia reached 7,000,000.  
War declared on Germany, 3rd September. Royal Australian Navy placed at disposal of Great Britain. Advance party of Australians embarked for Middle East, 15th December.
- 1940 Exchange of Ministers between Australia and United States of America marked Australia's entry into field of direct diplomatic representation with countries other than the United Kingdom.  
First Australian convoy (6th Australian Division) sailed for Middle East. Cruiser *Sydney* crippled Italian cruiser *Bartolomeo Colleoni*.
- 1941 Establishment of Commonwealth Child Endowment Scheme. United States Congress passed Lend-Lease Bill.  
Arrival of units of Eighth Australian Division in Malaya. Australian destroyers in "Tobruk Ferry Run". *Sydney* lost after fight with *Kormoran*. R.A.A.F. in defence of Britain, in Middle East and at Singapore. Australian forces engaged in Middle East, Greece, Crete and Syria. Japanese attack on Pearl Harbour. Australia declared war on Japan, 9th December.
- 1942 Federal uniform taxation adopted. Commonwealth widows' pensions introduced. Rationing of commodities.  
Japanese landed at Rabaul. Fall of Singapore. Darwin bombed. United States armed forces landed in Australia. Headquarters of South-West Pacific Command set up by General Douglas MacArthur in Melbourne. Coral Sea Battle. Japanese midget submarines in Sydney Harbour. Australian cruisers in attack on Solomon Islands. Australians withdrew from Kokoda. Japanese forced to withdraw from Milne Bay. Owen Stanley Ranges offensive. Ninth Australian Division at El Alamein (North Africa). Kokoda recaptured. Further Australian successes in New Guinea.

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- 1943 Price Stabilization Scheme. Mortgage Bank Department of Commonwealth Bank opened. National Works Council formed.

Australian forces combined with American forces to recapture many places in New Guinea. Commencement of long series of amphibious operations in which R.A.N. ships took part. R.A.A.F. from 1943 till end of war operated on all fronts.

- 1944 Pay-as-you-earn taxation operated from 1st July. Referendum refused Commonwealth Government increased powers in post-war period.

Australian advances in Northern New Guinea. Allied invasion of France. Australians landed on New Britain; took over from Americans in Bougainville, Solomon Islands, and at Aitape, New Guinea.

- 1945 Captain Cook Dock opened by Governor-General, the Duke of Gloucester. Re-establishment and Employment Act. Banking Act to regulate banking and to protect the currency and public credit. Australia ratified United Nations Charter.

Cessation of hostilities in Europe, 8th May. Cessation of hostilities against Japan, 15th August. Australian forces operating in New Guinea, Solomon Islands and Borneo. General demobilization commenced.

- 1946 Cessation of man-power controls. Commonwealth Government accepted responsibility for supply and maintenance of BCOF in Japan. Inauguration of Commonwealth Employment Service. Joint Organization (Wool Disposal) commenced operations. Act to establish National University at Canberra. Coal Industry Act providing, *inter alia*, for a joint Commonwealth-State authority. Commonwealth and State agreement on housing. Trans-Australia Airlines (Government) began operations. Constitution Alteration Referendum granted powers in regard to social services to Commonwealth. Double taxation relief agreement between Australia and Britain. Approval for establishment of guided missile range in Central Australia.

- 1947 End of demobilization. Census of Australia—first since 1933. Full High Court declared invalid section of Banking Act 1945 prohibiting banks from conducting business for State authorities. Legislation to nationalize trading banks enacted (*see* 1948). Australian National Antarctic Research Expedition to establish scientific research station at Heard Island. First "displaced persons" reached Australia.

- 1948 Forty-hour week effective throughout Australia. Membership of Commonwealth Parliament increased. Constitution Alteration (Rents and Prices) proposal defeated. High Court declared invalid vital sections of Banking Act 1947. International Trade Organization Act (General Agreement on Tariffs and Trade and Havana Charter for International Trade Organization).

- 1949 Nationality and Citizenship Act operative. Broadcasting Control Board came into operation. New Guinea placed under international trusteeship and administrative union of Papua and New Guinea established. Certain Australian aboriginals for first time granted franchise at Federal elections. Establishment of New South Wales University of Technology. Dispute over hours, wages and leave claims rendered all Australian black coal mines idle from 27th June until 15th August, causing restrictions in dependent services and unemployment. Australian Whaling Commission established. Reduction of 25 per cent. in Australia's imports from dollar areas. Devaluation of sterling against American dollar, and commensurate devaluation of Australian pound to two dollars twenty-four cents. Commencement of Snowy Mountains Hydro-electric Power Scheme. Australia's population reached 8,000,000.

## Year.

- 1950 Severe flooding for twenty-five years in south-east corner of New South Wales. Arrival of Field-Marshal Sir William Slim, Chief of Imperial General Staff, for defence talks. Disastrous floods on north coast of New South Wales. Following attacks by forces of North Korea on forces of Republic of Korea and failure of Security Council's call for immediate cessation of hostilities, the Council called on members to furnish assistance to Republic of Korea. Australian naval and air forces in vicinity of Korea placed at disposal of United Nations, and decision to withdraw Australian troops with BCOF in Japan countermanded. Loan of \$100,000,000 for Australia by International Bank for Reconstruction and Development. Inauguration of modified free medicine scheme. All volunteers in Australian Regular Army and Citizen Military Forces to be liable for service anywhere in the world—but only in the event of a major war. Australian ground troops joined British Commonwealth Brigade in Korean conflict. Adult franchise for Victorian Legislative Council replaced existing franchise dependent on property qualifications. Commonwealth Court of Conciliation and Arbitration ruling of increase of £1 in male basic wage, and increase in female basic wage from 54 to 75 per cent. of male rate. Railway dispute caused cessation of railway services in Victoria from 16th October to 8th December, and in South Australia from 23rd October to 19th November. National Service Bill to establish a system of national training for defence forces of Australia introduced in House of Representatives. Commonwealth Government to contribute £31,250,000 to Colombo Plan for Co-operative Economic Development in South and South-east Asia and £3,500,000 for technical assistance programme. Conference of Commonwealth Prime Ministers in London.
- 1951 Opening of Jubilee celebrations to mark the fiftieth year of Australian federation. British Government's confirmation of transfer of Heard Island and the Macdonald Islands (Southern Indian Ocean) to Australia as from 26th December, 1947. Governor-General granted double dissolution of nineteenth Parliament. Return of Menzies-Fadden Government after general election. The Governor-General opened the twentieth Parliament with special Jubilee ceremonies. Official cessation of hostilities with Germany. Conferences at all levels of business, finance, and working classes called by Prime Minister to discuss methods of dealing with adverse economic trends. Security Treaty signed in Washington by the United States of America, Australia and New Zealand for action in the event of an armed attack in the Pacific. Japanese Peace Treaty signed at San Francisco. Constitution Alteration (Powers to deal with Communists and Communism) referendum defeated. Australia to provide an additional infantry battalion for United Nations forces in Korea. Third Conference of Government Statisticians of the British Commonwealth held in Canberra. Opening of new Legislative Council of Papua and New Guinea, which included, for the first time in the history of Australian Legislature, representatives of the native peoples. New mace presented to the House of Representatives by the House of Commons, to commemorate the Australian Commonwealth Jubilee.
- 1952 Nuclear experiments commenced at National University, Canberra. Refusal by Commonwealth Conciliation Commissioner of an application by eleven metal trades unions for marginal wage increases ("Galvin" Award) affected more than 250,000 metal trades workers throughout Australia. Widespread bushfires in New South Wales, Victoria and Australian Capital Territory. Prototype of first unmanned radio-controlled jet aircraft designed and built in Australia successfully tested. Death of His Majesty King George VI.; Princess Elizabeth proclaimed Queen. Third British Commonwealth Scientific Official Conference held in Canberra and Melbourne. Good rains in

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1952—  
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northern areas of New South Wales ended the worst drought experienced there for many years. Important high-grade uranium deposits discovered at Rum Jungle, Northern Territory. 1st Battalion, The Royal Australian Regiment, sailed from Sydney for service in Korea. Australia ratified Pacific Pact between United States of America, New Zealand and Australia. Commonwealth Bank prohibited the establishment of further import credits until licences had been obtained for the goods involved. Severe restrictions imposed on imports from all sources and on amounts available for Australians travelling overseas. Agreement between the Commonwealth and South Australian Governments and the Combined Development Agency of the British and American Governments, on the development of uranium deposits at Radium Hill, South Australia. At Berala, near Sydney, in first collision between two electric trains in New South Wales to result in fatalities, ten persons killed and more than 100 injured. Good rains brought relief to north and central Australia, after prolonged drought conditions. Nine people died and 22 were injured in a level-crossing smash at Boronia in Victoria. An amendment to the Conciliation and Arbitration Act provided for a limited right of appeal to the Commonwealth Court of Conciliation and Arbitration from decisions of Conciliation Commissioners, and for an increase in the number of Judges. Many towns in central and south-west New South Wales experienced one of the worst floods in their history. In the Basic Wage and Standard Hours Inquiry before the Commonwealth Court of Conciliation and Arbitration, employers' organizations sought reductions in wages, longer hours and abandonment of the system of automatic quarterly cost of living adjustments to the basic wage. (See 1953.) Representatives of New Zealand, the United States of America and Australia met at Honolulu to consider the Pacific defence pact (A.N.Z.U.S.). Qantas Empire Airways began first direct service between Sydney and Johannesburg, South Africa, via Perth, Cocos Islands and Mauritius. Commonwealth legislation requiring employers to give preference in employment to ex-servicemen extended for three years. Commonwealth Government disposed of shares in Commonwealth Oil Refineries to the Anglo-Iranian Oil Co. Britain's first atomic weapon detonated on the Monte Bello Islands, near the north-west coast of Australia. Agreement between the Commonwealth Government and Australian National Airways Pty. Ltd. guaranteeing the latter a loan to purchase new aircraft and an equal share with Trans-Australia Airlines in government business, and reducing air route charges. British Commonwealth Economic Conference in London attended by Prime Minister of Australia. Good rains in Northern Territory terminated prolonged drought there.

- 1953 Ten-year agreement signed for sale to the United States of America of uranium from deposits at Rum Jungle, Northern Territory. Inquiry by Royal Commission into the establishment of television in Australia. Television Act authorized the establishment of both National and Commercial television transmitting stations. Commonwealth Bank Act 1953 and Banking Act 1953 passed. Premiers' Conference in Canberra failed to reach agreement on return of income tax powers to States. 2nd Battalion sailed from Sydney for service in Korea. Bill introduced into Northern Territory Legislative Council to give citizenship rights to Northern Territory aborigines, except those committed to State care (assented to 17th April). Atomic Energy Act 1953, established Atomic Energy Commission. H.M.A.S. *Sydney* sailed from Melbourne for England with Coronation Contingent. National Health Bill 1953 consolidated legislation relating to pharmaceutical, medical and hospital benefits and other health services. Australian designed and built radio-controlled jet plane for use in guided missile research successfully tested. Field-Marshal Sir William Slim sworn in as Governor-General of Australia.

Year.

1953—  
*contd.*

Australia and United States of America signed conventions to end double taxation between the two countries. Australian Loan Council adopted programme of £231,000,000 for 1953-54. Borrowing programme of £90,486,000 by Local Government and Semi-Governmental Authorities also approved. Loan Council decided to retain ruling interest rates on public loans for at least twelve months. Full Court of Victoria upheld validity of Electoral Reform Bill providing for two State seats for each Commonwealth Electorate. Coronation of Her Majesty Queen Elizabeth the Second. Britain and Australia signed agreement for reciprocity in social services benefits. Conference of Commonwealth Prime Ministers on defence, economic and political issues held in London. Commonwealth Medical Benefits Scheme commenced. Korean armistice signed by United Nations and Communist Forces at Panmunjom, bringing to an end over three years of fighting. Pearl Fisheries Act providing for stricter control of pearl fisheries. Commonwealth Court of Conciliation and Arbitration refused applications by employers for reduction of current basic wages and for an increase of standard hours of work, and also refused applications by unions for increases of basic wages. The employers' applications for abandonment of the system of automatic adjustment of the basic wage in accordance with retail price index numbers were, however, granted. Arrangements made with United Kingdom for sharing cost of guided missile research at Woomera, South Australia. Commonwealth Trading Bank of Australia commenced operations. Oil, stated to be a very high grade crude oil, discovered at Exmouth Gulf, about 680 miles north of Perth.

1954

Her Majesty the Queen and His Royal Highness the Duke of Edinburgh arrived in Sydney on 3rd February to commence their tour of Australia, making the first visit of the reigning sovereign to Australia. Australian and Japanese Governments exchanged notes for the submission of dispute over extent of Australian sovereignty over sea-bed and control of pearl fisheries to the International Court of Justice. Agreement signed on a provisional régime to regulate Japanese pearling in Australian waters in the interim. The Australian Antarctic Research Expedition established a station at Mawson on the coast of MacRobertson Land to conduct meteorological and other research. An Australian Services mission visited Singapore for a conference between Service representatives of the United Kingdom, the United States of America, Australia, and New Zealand. Her Majesty the Queen opened the Federal Parliamentary session and unveiled the Australian-American War Memorial at Canberra. Australian Academy of Science incorporated by Her Majesty the Queen. New South Wales Government granted Sydney University £100,000 for nuclear research. Inaugural meeting of Nuclear Research Foundation. Commonwealth grant of £50,000 to Sydney University for fundamental nuclear research. Royal tour of Australia ended on 1st April. Contract for £25 million let to Kaiser group, of the United States of America, for the construction of the Eucumbene-Tumut tunnel and other works in the Snowy Mountains Scheme. Mr. and Mrs. Vladimir Petrov of the Soviet Embassy granted political asylum. On 25th April, the Soviet Government informed the Australian Government that it had decided to recall its Embassy in Australia, and the Ambassador and his staff sailed from Fremantle on 25th April. The Australian Embassy left Moscow on the same date. Royal Commission into espionage in Australia set up. Political conference on Korea and Indo-China opened in Geneva, with Australia represented by the Minister for External Affairs. £3.9 million contract for building the Upper Tumut power station of the Snowy Mountains Scheme let to a French group of contractors. Royal Commission into Television recommended introduction of television into Australia as soon as practicable. Australia took part in Five Power military talks, at Washington, on South-East Asia. Premier



Year.

1954—  
contd.

of South Australia announced two new uranium finds in north-east of State. Australian population census taken. Carnegie Corporation granted £250,000 to help finance the building of a giant radio telescope (the balance, £300,000 to be found in Australia). Pan Indian Ocean Science Congress held in Perth. Australia at the Manila Conference signed a treaty pledging collective defence against aggression in South-East Asia and the South-West Pacific. 3rd Battalion withdrawn from Korea. At Rum Jungle, Prime Minister officially opened first uranium treatment plant established in Australia. Minister for Labour and National Service announced the formation of a National Joint Production Council representing both management and workers. Atomic Energy Commission authorized to construct an advanced type of nuclear reactor and research laboratories as part of a programme of co-operation in atomic research with the United Kingdom. Control of Cocos Islands handed over to Australia by Great Britain. Privy Council ruled that New South Wales State Transport (Co-ordination) Act was invalid insofar as it applied to inter-state transport.

- 1955 Harbour at Cockburn Sound, W.A. opened to provide shipping facilities for Kwinana. Mr. David McNicol first Australian Minister to Vietnam, Laos, and Cambodia. Commonwealth Government announced that about 135 Japanese pearl divers would be permitted to enter Australia to operate with pearling fleets from Broome to Darwin. Dr. N. Tamzil first Ambassador to Australia from Indonesia. Conference of British Commonwealth Prime Ministers held in London; attended by Mr. Menzies. Australia's first Aluminium plant, opened at Bell Bay by Minister of Supply, began production (Feb. 7). Minister for External Affairs after month's tour of South East Asian countries attended first council meeting of signatories to Manila Treaty. Prime Minister visited Washington as guest of President Eisenhower to talk on defence policy and Australia's role in South East Asia. New airport opened for traffic at West Beach, Adelaide, 7 miles closer to city than Parafield. First power generated from Snowy Mountains fed into New South Wales electricity system; Guthega power station opened by Prime Minister. Disastrous floods cover large areas of Central West New South Wales and Hunter Valley, causing damage to townships, stock and grazing lands estimated at £15 million and the loss of many lives. Electoral boundaries changed after examination of Census results by Commissioner. Australian population reaches 9 million. Kwinana Oil Refinery commenced operations. Federal Cabinet lifts ban on passports to certain countries. All price control ended in New South Wales. Announced that Australia would make Salk polio vaccine at Commonwealth Serum Laboratories, Melbourne. Commonwealth Government announced licensing of 4 commercial television stations for Australia (2 in Sydney and 2 in Melbourne). Major contracts let to A.W.A. Limited for construction of National Television Stations in Melbourne and Sydney. Commonwealth Government decided to build an ammunition filling and assembly factory at St. Mary's near Sydney, at an estimated cost of £23 million. Australia's 1955-56 immigration programme to be increased to a basic intake of 125,000 migrants, of whom 70,000 would be assisted-passage. Privileges committee of Commonwealth Parliament found Messrs. Brown and Fitzpatrick guilty of serious breach of privilege. House of Representatives committed both to prison for three months. Commonwealth Full High Court in reserved judgment declared that recent legislation imposing a road tax on interstate hauliers was invalid. South Australian State Government's uranium treatment plant at Port Pirie began operations. Prime Minister announced Australia's acceptance of British invitation to join expedition to cross Antarctic in summer of 1957-58. First International Wool Textile Research Conference to be held in Australia opened in Sydney, and was attended by 100 research workers including 52 scientists

Year.

1955—  
*contd.*

from overseas. First F.A.O. Conference to be held in Australia opened in Brisbane, discussion centred on livestock production under tropical conditions. First S.E.A.C.D.T. defence talks to be held in Australia began in Melbourne, representatives from Australia, New Zealand, Pakistan, the Philippines, Thailand, the United Kingdom and the United States of America were present. Australian task force left for Malaya. New £30 million hot-strip steel mill of Australian Iron and Steel Ltd. at Port Kembla (N.S.W.) opened by Prime Minister who described it as "a great historic event in the development of Australia". Abolition of subsidy on tea results in substantial increase in retail price. Bank of New South Wales Savings Bank Ltd. registered in Sydney, first new savings bank established in Australia for 40 years. Report of Royal Commission on Espionage tabled in House of Representatives. Minister for Health announced that Commonwealth Government had decided to apply means test to Pensioner Medical Service, to be based on income of new pensioners and to apply to all pensions granted under scheme after 31st October. Prime Minister of Ceylon, Rt. Hon. Sir John Kotelawala, K.B.E., visited Australia as guest of Commonwealth Government. New South Wales Government reintroduced quarterly automatic Basic Wage adjustments. Cocos (Keeling) Islands became Territory under authority of Commonwealth. Australian legations in Thailand and the Philippines raised to status of Embassies; Messrs. Hay and Shann first Ambassadors. Government of Victoria issued High Court writ for declaration that present system of uniform taxation is illegal.

# STATISTICAL SUMMARY, AUSTRALIA.

NOTE.—(1) In most cases where figures are available back to 1861, these were shown in Official Year Book No. 39, pp. xxviii-xxix.

(2) Most of the statistics in this Summary relate to the periods shown in the table headings. In those comparatively few cases where the statistics relate to other periods, this is indicated in footnotes.

Item.	Year ended 30th June—							
	1892.	1902.	1912.	1922.	1932.	1942.	1952.	1955.
<b>Demography(a)—</b>								
Population(b) { '000 Males ..	1,737	2,005	2,382	2,799	3,333	3,599	4,311	4,598
Population(b) { '000 Females ..	1,504	1,820	2,192	2,712	3,220	3,545	4,217	4,492
Population(b) { '000 Persons ..	3,241	3,825	4,574	5,511	6,553	7,144	8,528	9,090
Net Oversea Migration ..	'000 26.9	3.0	74.4	17.5	-10.1	5.2	111.4	68.2
Marriages ..	'000 24	28	39	47	39	75	77	71
Divorces(d) and Judicial Separations ..	Rate(c) 7.5	7.3	8.8	8.6	6.0	10.6	9.2	7.9
Births ..	'000 190	399	522	1,502	1,955	3,330	7,327	6,528
Deaths ..	Rate(c) 34.5	27.2	27.2	25.0	18.2	18.9	22.9	22.5
Deaths ..	'000 47	46	48	54	57	71	82	82
Infant Deaths ..	Rate(c) 14.8	12.2	10.7	9.9	8.7	10.0	9.7	9.1
Infant Deaths ..	'000 12.7	10.7	8.4	9.0	5.0	5.3	4.9	4.5
Infant Deaths ..	Rate(e) 115.3	103.6	68.5	65.7	42.1	39.7	25.2	22.5
<b>Wages (Adult Males)(a)—</b>								
Nominal Weekly Wage Index Numbers ..	(f)	848	1,000	1,826	1,752	1,997	4,495	5,632
Real Wage Index Numbers(g) ..	(f)	(f)	1,000	1,087	1,210	1,194	1,439	1,459
<b>Production—</b>								
<b>Agricultural(h)—</b>								
Wheat { Area mill. acs. ..	3.3	5.1	7.4	9.7	14.7	12.0	10.4	10.7
Wheat { Yield mill. bus. ..	26	39	72	129	191	167	160	169
Wheat { Av. Yield bus. ..	7.7	7.5	9.6	13.3	12.9	13.9	15.4	15.8
Oats { Area '000 acs. ..	246	461	617	733	1,085	1,460	2,305	2,574
Oats { Yield mill. bus. ..	5.7	9.8	9.6	12.1	15.2	22.3	34.5	32.8
Oats { Av. Yield bus. ..	23.3	21.2	15.5	16.6	14.0	15.3	14.6	12.8
Barley { Area '000 acs. ..	68	75	116	299	342	784	1,118	1,691
Barley { Yield mill. bus. ..	1.2	1.5	2.1	6.1	6.3	18.0	21.9	29.4
Barley { Av. Yield bus. ..	17.3	20.4	17.7	20.4	18.4	23.0	19.6	17.4
Maize { Area '000 acs. ..	284	295	340	305	269	301	170	170
Maize { Yield mill. bus. ..	9.3	7.0	8.9	7.8	7.1	7.4	4.0	5.1
Maize { Av. Yield bus. ..	32.6	23.9	26.3	25.7	26.2	24.7	23.7	29.9
Hay { Area '000 acs. ..	942	1,688	2,518	2,995	2,635	2,758	1,549	1,984
Hay { Yield '000 tons ..	1,067	2,025	2,868	3,902	3,167	3,575	2,345	2,856
Hay { Av. Yield tons ..	1.13	1.20	1.14	1.30	1.20	1.30	1.51	1.44
Potatoes { Area '000 acs. ..	113	110	130	149	145	99	118	107
Potatoes { Yield '000 tons ..	380	323	301	388	397	333	509	468
Potatoes { Av. Yield tons ..	3.37	2.94	2.31	2.50	2.74	3.35	4.31	4.36
Sugar-cane { Area '000 acs. ..	45	87	101	128	242	255	282	374
Sugar-cane { Yield '000 tons ..	738	1,368	1,682	2,437	4,213	5,154	5,327	10,086
Sugar-cane { Av. Yield tons ..	16.2	15.7	16.7	19.0	17.4	20.3	18.9	27.0
Vineyards { Area '000 acs. ..	49	64	61	92	113	130	136	136
Vineyards { Wine mill. gals. ..	3.4	5.3	5.0	8.5	14.2	16.0	35.3	24.0
Total Area of Crops mill. acs. ..	5.4	8.4	12.1	15.4	21.2	20.5	19.8	21.7
<b>Pastoral, Dairying etc.—</b>								
Livestock(j) { Horses mill. ..	1.6	1.6	2.3	2.4	1.8	1.6	0.9	0.8
Livestock(j) { Cattle ..	11.1	8.5	11.8	14.4	12.3	13.6	14.9	15.8
Livestock(j) { Sheep ..	106	72	97	86	111	125	118	131
Livestock(j) { Pigs ..	0.9	0.9	1.1	1.0	1.2	1.5	1.0	1.3
Wool(k) ..	mill. lb. (a) 634	(a) 539	(a) 798	723	1,007	1,167	1,080	1,283
Butter ..	'000 tons (a) 19	(a) 46	(a) 95	(a) 119	175	168	135	191
Cheese ..	'000 tons (a) 4.5	(a) 5.3	(a) 7.1	(a) 14.6	14.0	30.1	40.6	45.2
<b>Meat(l)—</b>								
Beef and Veal ..	"	"	"	"	339	350	534	720
Mutton and Lamb ..	"	"	"	"	218	307	372	388
Pork ..	"	"	"	"	11.1	22.7	58.1	47.2
Bacon and Ham ..	"	"	"	"	26.2	31.8	42.5	38.4
Total Meat ..	"	"	"	"	608	727	1,027	1,207

(a) Year ended previous December. (b) At 31st December of previous year. (c) Number per 1,000 of mean population. (d) Decrees made absolute, including decrees for nullity of marriage. (e) Number per 1,000 live births. (f) Not available. (g) Index of nominal weekly wage rates for adult males divided by the "C" Series Retail Price index number. (h) Season ending in year shown. (i) Cane cut for crushing. (j) As at 31st December of previous year for years to 1942 as at 31st March thereafter. (k) In terms of greasy. (l) Bone-in weight in terms of fresh meat; cured weight, bacon and ham.

## STATISTICAL SUMMARY, AUSTRALIA—continued.

NOTE.—See headnotes on page 1175.

Item.	Year ended 30th June—							
	1892.	1902.	1912.	1922.	1932.	1942.	1952.	1955.
<b>Production—continued.</b>								
<b>Mineral(a)(b)—</b>								
Copper(c) ..	'000 tons	(d)	(d)	(d)	13.5	20.9	17.9	40.9
Gold(c) ..	'000 fine oz.	1,243	3,300	2,484	758	595	1,497	896
Lead(c) ..	'000 tons	(d)	(d)	(d)	150.8	289.4	212.0	284.9
Zinc(c) ..	"	(d)	(d)	(d)	66.1	232.6	189.2	252.7
Black Coal	mill. tons	4.4	6.9	10.6	12.8	8.4	14.2	17.6
Brown Coal	"	"	"	(e)	0.1	2.2	4.6	7.8
								9.3
<b>Forestry—</b>								
Sawn output of native timber	mill. sup. ft.	(d)	(a) 452	(a) 605	590	237	914	1,393
								1,438
<b>Factories—</b>								
Number of factories	'000	(f)	(f)	{ 14.5	18.0	21.7	27.0	45.8
Persons employed ..	"	(f)	(f)	{ 312	379	337	725	978
Salaries and wages paid	£m.	(f)	(f)	{ 28	68	56	180	612
Value of production(g)—								
Chemicals, etc. ..	"			{ 1.1	3.2	7.9	24.8	63.7
Industrial metals, etc.	"			{ 12.0	23.6	22.8	119.9	413.1
Textiles, etc. ..	"	(d)	(d)	{ 7.5	19.2	6.9	21.0	56.6
Clothing ..	"	(d)	(d)	{ 11.1	23.6	11.1	23.6	81.1
Food, etc. ..	"	(d)	(d)	{ 11.8	27.2	28.7	53.2	141.1
Paper, etc. ..	"	(d)	(d)	{ 4.2	9.0	9.6	17.1	68.2
All groups ..	"	23.3	29.1	{ 47.5	112.5	111.0	316.5	1,024.0
Value of plant and machinery	"	(d)	(d)	{ 31.4	78.1	121.5	169.2	412.5
Value of land and buildings	"	(d)	(d)	{ 32.5	67.3	106.6	156.3	360.2
								556.0
<b>Net value of production(h)—</b>								
Agriculture ..	£m.	17.0	23.8	38.8	81.9	49.7	64.0	246.7
Pastoral ..	"	31.3	27.2	52.7	75.1	43.0	85.4	400.5
Dairying ..	"	6.0	7.6	16.1	35.3	22.6	34.3	103.8
Poultry ..	"	1.9	2.0	4.0	9.0	5.7	6.5	31.5
Bee-farming ..	"	0.1	0.1	0.1	0.1	0.1	0.4	0.8
Total, Rural ..	"	56.3	60.7	111.7	201.4	121.1	190.6	783.3
Trapping ..	"	(d)	(d)	(d)	(d)	1.5	5.0	6.7
Forestry ..	"	(d)	(d)	(d)	(d)	3.9	10.2	37.9
Fisheries ..	"	4.4	2.8	{ 1.1	1.4	1.4	1.8	5.7
Mines and Quarries(i)	"	12.1	22.0	23.3	20.0	13.5	33.4	97.2
Total, Non-Rural ..	"	16.5	24.8	29.2	30.5	20.3	50.4	147.5
Total, Primary ..	"	72.8	85.5	140.9	231.9	141.4	241.0	930.8
Factories(g) ..	"	23.3	29.1	47.5	112.5	111.0	316.5	1,024.0
Total All Industries	"	96.1	114.6	188.4	344.4	252.4	557.5	1,954.8
								2,414.3
<b>Building(j)—</b>								
Permits, New Dwellings {	'000	(d)	(d)	(d)	(d)	{ 2.1	9.7	32.8
.. All Buildings(k)	£m.	(d)	(d)	(d)	(d)	{ 1.5	9.6	80.4
	£m.	(d)	(d)	(d)	(d)	{ 4.6	13.5	116.4
								215.1
<b>Overseas Trade—</b>								
Imports ..	£m. f.o.b.	(a) 34	(a) 38	(a) 61	94	52	174	1,053
Exports ..	"	36	50	79	128	108	169	675
								774
<b>Principal Exports (l)—</b>								
Wool ..	{ mill. lb.(m) ..	641	529	734	946	903	938	1,036
	{ £m. f.o.b. ..	20	15	26	48	32	58	323
Wheat ..	{ '000 tons ..	258	543	1,477	2,677	3,413	598	1,685
	{ £m. f.o.b. ..	1.9	2.8	9.6	28.6	19.2	4.6	55.3
Flour ..	{ '000 short tons	33	97	176	360	611	414	789
	{ £m. f.o.b. ..	0.3	0.6	1.4	5.5	3.8	4.2	33.0
Butter ..	{ mill. lb. ..	4	35	102	127	202	130	25
	{ £m. f.o.b. ..	0.2	1.4	4.6	8.0	10.3	8.1	4.6
								24.6

(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) Not available. (e) Less than .05. (f) Owing to variation in classification, effective comparison is impossible. (g) For definition see page 349. (h) Gross value from 1891 to 1921–22. Prior to 1922 figures are for years ended previous December. For definitions of gross and net value see page 106r. (i) Incomplete. (j) Six capital cities and suburbs. (k) Includes additions and alterations. (l) Australian produce except gold, which includes re-exports. (m) In terms of greasy.

## STATISTICAL SUMMARY, AUSTRALIA—continued.

NOTE.—See headnotes on page 1175.

Item.	Year ended 30th June—							
	1892.	1902.	1912.	1922.	1932.	1942.	1952.	1955.
Overseas Trade—continued.	(a)	(a)	(a)					
Principal Exports(b)—continued.								
Hides and Skins fm. f.o.b.	0.9	1.3	3.2	3.1	2.3	6.0	17.1	19.7
Meats .. .. .	0.5	2.6	4.3	5.5	6.4	14.1	35.5	63.1
Fruit (c) .. .. .	..	0.2	0.5	3.0	4.8	4.0	19.5	32.7
Sugar .. .. .	..	(d)	(d)	(d)	2.5	2.6	6.9	31.2
Gold .. .. .	5.7	14.3	12.0	3.5	11.9	9.2	7.0	13.7
Silver and Lead(e) ..	1.9	2.3	3.2	2.7	2.9	7.4	32.1	31.1
Ores and Concentrates ..	..	(d)	3.7	0.8	0.2	1.3	20.4	10.3
Principal Imports—			(a)					
Vegetable foodstuffs, etc. ..	(f)	{	3.6	3.7	4.0	2.6	6.1	25.0
Apparel, etc. .. .. .			10.9	16.2	31.0	15.4	32.7	203.6
Oil, etc. .. .. .			1.2	1.6	4.7	5.5	16.2	87.5
Metals, etc. .. .. .			7.8	14.0	22.8	7.4	71.8	392.9
Rubber, etc. .. .. .			0.5	1.4	1.7	0.8	3.2	35.1
Paper, etc. .. .. .			1.6	2.6	4.4	4.4	4.3	68.6
Transport and Communication—								
Shipping—	(a)	(a)	(a)					
Overseas Vessels, { No. ..	3,778	4,028	4,174	3,111	3,057	2,544	4,136	4,505
Entrances and { mill. tons	4.7	6.5	10.0	9.1	11.4	10.8	18.2	20.0
Clearances								
Overseas Cargo—								
Discharged .. mill. tons(g)	(f)	{	(f)	{	(f)	{	(f)	{
Shipped .. .. .								
Interstate Vessels, { No. ..								
Entrances and { mill. tons								
Clearances								
Interstate Cargo Shipped								
mill. tons(g)								
Government Railways—	(h)	(h)	(h)					
Route-miles .. .. .	10.4	12.8	16.8	23.5	27.0	27.2	26.8	26.6
Passenger-journeys ..	84	115	228	335	303	475	501	517
Goods and livestock carried								
mill. tons .. .. .	9.4	15.5	25.5	31.5	26.1	38.9	44.3	47.7
Train-miles run .. .. .	29.7	38.2	55.2	56.1	63.8	88.5	93.4	94.0
Tramways and Omnibuses—								
Passenger-journeys—								
Trams .. .. .	(f)	(f)	{	(f)	{	(f)	{	(f)
Omnibuses(i) .. .. .								
Motor vehicles on the register—								
Cars .. .. .	{	{	(f)	{	{	{	{	{
Commercial vehicles ..								
Civil Aviation (Internal)—								
Plane-miles flown .. .. .	..	..	..	..	2.5	7.8	41.8	43.5
Passengers carried .. .. .	..	..	..	..	57	152	1,829	1,918
Passenger-miles .. .. .	..	..	..	..	(f)	76	722	766
Freight car- { '000 short tons	{	{	{	{	{	{	{	{
ried .. .. .								
mill. ton-miles .. .. .	..	..	..	..	0.1	1.2	57.5	78.7
Postal—	(a)	(a)	(a)					
Postal matter dealt with(j)								
mill. articles .. .. .	242	324	595	702	(k) 871	(k) 1,100	(k) 1,148	1,619
Telegrams and cablegrams mill.	10.0	9.9	13.3	16.8	13.9	26.1	29.8	25.5
Telephones—								
Instruments .. .. .	7	29	103	259	485	739	1,301	1,587
Lines .. .. .	(f)	25	85	196	364	531	927	1,127
Calls—Trunk .. .. .	(f)	(f)	(f)	14.0	28.9	45.3	69.4	39.9
Local .. .. .	(f)	(f)	(f)	221	369	664	968	1,103
Broadcast Listeners' Licences	..	..	..	(l) 36	369	1,320	1,961	2,035
Public Finance—								
Commonwealth—								
Consolidated Revenue Fund—		(h)	(h)					
Revenue .. .. .	..	11	21	64	72	210	1,017	1,067
Expenditure .. .. .	..	4	15	64	70	210	1,017	997
Net loan fund expenditure ..	..	..	1	5	4	213	55	63
Taxation collections .. .. .	..	9	16	50	54	180	934	938

(a) Year ended previous December. (b) Australian produce except gold, which includes re-exports. (c) Excludes fruit juices. (d) Less than .05. (e) Includes concentrates. (f) Not available. (g) Tons weight plus tons measurement. (h) Year ended 30th June. (i) Government and municipal only. (j) Letters, postcards, lettercards and newspapers. (k) Includes packets. (l) Year 1923-24.

## STATISTICAL SUMMARY, AUSTRALIA—continued.

NOTE.—See headnotes on page 1175.

Item.	Year ended 30th June—								
	1892.	1902.	1912.	1922.	1932.	1942.	1952.	1955.	
<b>Public Finance—continued.</b>									
<b>State—</b>									
<b>Consolidated Revenue Funds—</b>									
Revenue .. .. .	£m. (a)	28	41	85	100	152	387	493	
Expenditure .. .. .	" (a)	29	41	87	121	149	390	496	
Net loan expenditure(b) .. .. .	" (a)	9	16	34	6	8	198	161	
Taxation collections .. .. .	" (a)	3	5	18	33	57	63	89	
<b>Public Debt(c)—</b>									
<b>Commonwealth—</b>									
State .. .. .	£m. (d) 155	213	279	519	789	911	1,869	1,924	
Total .. .. .	" (d) 155	213	285	873	1,108	1,549	3,265	3,750	
Overseas .. .. .	" (a)	(a)	194	412	522	516	406	436	
In Australia .. .. .	" (a)	(a)	91	461	586	1,033	2,859	3,314	
<b>Private Finance—</b>									
Commonwealth Note Issue(e) £m. (a)	(a)	(a)	8	54	51	103	303	363	
<b>Cheque-paying banks—</b>									
Advances(f) .. .. .	" (d) 125	94	109	183	261	270	677	809	
Deposits(g) .. .. .	" (d) 98	91	143	289	319	387	1,189	1,326	
Bank clearings(d) .. .. .	" (a)	338	662	1,702	1,581	2,828	12,160	13,046	
Savings bank deposits(g) .. .. .	" 15	31	59	154	198	274	892	1,074	
<b>Life Assurance(d)(h)—</b>									
<b>Ordinary—</b>									
Policies .. .. .	'000	(a)	414	484	730	871	1,340	2,553	
Sum assured .. .. .	£m.		108	109	181	285	463	1,212	
<b>Industrial—</b>									
Policies .. .. .	'000		236	467	973	1,550	2,780	3,843	
Sum assured .. .. .	£m.		5	10	30	67	127	254	
<b>Total—</b>									
Policies .. .. .	'000	(a)	650	951	1,703	2,421	4,120	6,396	
Sum assured .. .. .	£m.		113	119	211	352	590	1,466	
<b>Social Statistics—</b>									
<b>Commonwealth Social Services—</b>									
Age and Invalid Pensions .. .. .	'000(e) .. .. .	..	90	144	256	336	420	510	
.. .. .	£m. .. .. .	..	2.2	5.4	11.1	19.3	59.8	88.0	
Child Endowment, Claims in force .. .. .	'000(e) .. .. .	..	..	..	..	488	1,205	1,304	
.. .. .	£m. .. .. .	..	..	..	..	11.3	46.6	52.5	
<b>Total Commonwealth Health and Social Services(i) £m. .. .. .</b>									
War Pensions .. .. .	'000(e) .. .. .	..	2.2	6.1	11.5	30.9	137.6	189.3	
.. .. .	£m. .. .. .	..	..	225	274	220	525	584	
Service Pensions .. .. .	'000(e) .. .. .	..	..	7.0	7.4	7.5	31.8	(f) 44.5	
.. .. .	£m. .. .. .	..	..	..	..	14	17	22	
<b>State Social Services(l)—</b>									
<b>Education(d)—</b>									
<b>Government Schools—</b>									
Schools .. .. .	'000	6.2	7.0	8.0	9.4	10.1	9.5	7.6	
Staff .. .. .	" 12.6	14.5	17.0	26.1	33.8	32.1	36.7	42.3	
Students .. .. .	" 561	638	639	819	937	887	1,013	1,211	
<b>Non-government Schools—</b>									
Schools .. .. .	'000	2.0	2.5	1.9	1.7	1.8	1.9	2.0	
Staff .. .. .	" 6.0	8.3	7.8	8.8	10.0	11.4	13.3	14.4	
Students .. .. .	" 125	149	161	199	221	257	326	388	
<b>Universities(m)—</b>									
Number .. .. .	.. .. .	4	5	6	6	8	9	9	
Staff(n) .. .. .	(a) 4	(a) 4	249	482	703	1,416	3,082	3,313	
Students .. .. .	'000 1.6	1.8	3.4	8.0	9.8	13.9	31.7	29.4	
<b>Public Hospitals—</b>									
Number .. .. .	(d) (d)	(d) 285	355	404	513	566	675	709	
Staff—Medical .. .. .	'000 (a)	(a) 1.1	1.1	1.5	3.2	3.9	6.9	7.7	
Nursing .. .. .	" (a)	(a) 5.1	5.1	6.8	9.3	15.4	24.6	27.6	
In-patients, cases treated .. .. .	o p 54	(p) 91	134	215	371	595	896	1,046	
<b>Police and Prisons(d)—</b>									
Police .. .. .	'000 5.3	5.8	6.4	6.9	8.6	9.7	12.3	12.6	
Prisons .. .. .	" (a)	(a) 104	91	85	70	69	73	73	
Prisoners .. .. .	'000 (a)	4.3	3.1	2.9	4.2	3.2	4.4	5.0	
<b>Prices(d)—</b>									
"C" Series Retail Price Index .. .. .	.. .. .	..	1,000	1,680	1,448	1,673	3,124	3,860	

(a) Not available (b) Loan Expenditure in works, services, etc. (c) At 30th June.  
 (d) Year ended previous December. (e) At end of June. (f) Figures for 1892 are averages of weekly balances for the December quarter; the remainder are for the June quarter. All cheque-paying banks to 1931-32, Private Trading Banks thereafter. (g) 1891 at 31st December, thereafter at 30th June. (h) Existing business in Australia. (i) Excludes war and service pensions.  
 (j) Includes Service pensions. (k) Included with War pensions. (l) Includes Northern Territory and Australian Capital Territory. (m) Excludes Australian National University.  
 (n) Teaching and research staff. Includes part-time. (o) Year 1891-92 for Victoria. (p) South Australia includes Adelaide Hospital only.

## APPENDIX.

(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, as also the latest available statistics, reference should be made to other publications issued by this Bureau (*see* pages 1133-5), notably the *Monthly Review of Business Statistics* and the *Quarterly Summary of Australian Statistics*.)

### CHAPTER II.—PHYSIOGRAPHY.

#### § 2. Climate and Meteorology of Australia.

**Rainfall:** Australian Capital Cities, p. 52.—Rainfall recorded in Australian capital cities during 1955 (1954 in parentheses) was as follows :—Canberra, 30.85 ins. (18.81 ins.); Perth, 46.52 (28.05 ins.); Adelaide, 24.58 ins. (16.73 ins.); Brisbane, 50.41 ins. (61.36 ins.); Sydney, 72.46 ins. (41.29 ins.); Melbourne, 30.70 ins. (33.53 ins.); Hobart, 22.32 ins. (27.20 ins.).

### CHAPTER III.—GENERAL GOVERNMENT.

#### § 1. Scheme of Parliamentary Government.

**Number and Salary of Members of the Legislatures, p. 69.**—At 30th June, 1956 the annual salaries of members of the Queensland and Western Australian Legislatures were £2,480 10s. and £2,120 respectively. The annual salary of members of the Tasmanian Legislature at 31st December, 1955 was £1,382.

#### § 2. Parliaments and Elections.

**Commonwealth Elections, p. 71.**—Following the dissolution of the twenty-first Parliament on 4th November, 1955 a Commonwealth election for the Senate and the House of Representatives was held on 10th December, 1955.

(a) *Senate.* Particulars of electors and voting in the several States are as follows :—

#### SENATE ELECTION, 10th DECEMBER, 1955.

State.	Electors Enrolled.			Electors who Voted.			Percentage of Electors who Voted.		
	Males.	Females.	Total.	Males.	Females.	Total.	Males.	Females.	Total.
New South Wales	972,265	1,024,116	1,996,381	930,597	970,099	1,900,696	95.71	94.73	95.21
Victoria ..	702,812	741,223	1,444,035	666,313	699,070	1,365,383	94.81	94.31	94.55
Queensland ..	379,143	373,502	752,645	356,410	353,846	710,256	91.00	94.74	94.37
South Australia	224,507	238,240	462,747	216,679	228,148	444,827	96.51	95.76	96.13
West. Australia	171,069	171,944	343,013	162,637	163,126	325,763	95.07	94.87	94.97
Tasmania ..	85,929	87,693	173,622	83,382	83,787	167,169	97.04	95.55	96.28
Total ..	2,535,725	2,636,718	5,172,443	2,416,018	2,498,076	4,914,094	95.28	94.74	95.01

(b) *House of Representatives.* Particulars of electors and voting in the several States are shown below :—

**ELECTION FOR HOUSE OF REPRESENTATIVES, 10th DECEMBER, 1955.(a)**

State.	Electors Enrolled.			Electors who Voted.			Percentage of Electors who Voted.		
	Males.	Females.	Total.	Males.	Females.	Total.	Males.	Females.	Total.
New South Wales	891,668	932,493	1,824,161	853,275	883,573	1,736,848	95.69	94.75	95.21
Victoria ..	702,812	741,223	1,444,035	666,313	699,070	1,365,383	94.81	94.31	94.55
Queensland ..	336,251	331,487	667,738	315,287	314,218	629,505	93.77	94.79	94.27
South Australia	224,507	238,240	462,747	216,679	228,148	444,827	96.51	95.76	96.15
West. Australia	94,367	97,123	191,490	89,449	92,593	182,042	94.79	95.34	95.07
Tasmania ..	85,929	87,693	173,622	83,382	83,787	167,169	97.04	95.55	96.28
Aust. Cap. Terr.	8,317	7,864	16,181	7,715	7,262	14,977	92.76	92.34	92.56
Australia	2,343,851	2,436,123	4,779,974	2,232,100	2,308,651	4,540,751	95.23	94.77	95.00

(a) Contested Electorates only. Northern Territory was uncontested.

The twenty-second Parliament opened on 15th February, 1956.

**State Elections, pp. 73-74.**—(a) *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 and Western Australia.

**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	1955	695,638	734,492	1,430,130	542,270	570,681	1,112,951	91.69	91.37	91.52
South Australia ..	1956	(a)	(a)	174,241	(a)	(a)	16,002	(a)	(a)	99.69
Western Australia	1956	70,958	29,815	100,773	35,372	15,503	50,935	74.23	71.32	73.31

(a) Not available.

Particulars of voting at the latest contested elections for the Legislative Council in Tasmania in 1956 are as follows.—Number of electors on the roll, 9,538; number of votes recorded, 8,129; percentage of enrolled voters who voted, 85.23.

(b) *Lower Houses.* The following table shows particulars of the voting at the most recent election for the Lower House in New South Wales, Queensland, South Australia and Western Australia.

**STATE LOWER HOUSE ELECTIONS.**

State.	Year of Latest Election.	Electors Enrolled—Whole State.			Contested Electorates.					
					Electors who Voted.			Percentage of Electors who Voted.		
		Males.	Females.	Total.	Males.	Females.	Total.	Males.	Fe-males.	Total.
N. S. Wales	1956	979,706	1,031,552	2,011,258	843,786	878,842	1,722,628	93.81	92.64	93.21
Queensland	1956	388,997	386,261	775,258	331,987	330,693	662,680	92.91	93.11	93.01
S. Australia	1956	(a)	(a)	468,303	(a)	(a)	280,811	(a)	(a)	93.90
W. Australia	1956	171,234	170,784	342,018	118,511	123,352	241,863	91.95	92.40	92.18

(a) Not available.

**State Parliaments, pp. 74-77.**—The dates of dissolutions and openings, respectively, of State Parliaments which have occurred since those recorded on pp. 74-77 are as follows (the number of the Parliament concerned being shown in parentheses):—New South Wales, 6th February, 1956 (thirty-seventh), 10th April, 1956 (thirty-eighth); Queensland, 17th April, 1956 (thirty-third), 31st July, 1956 (thirty-fourth); South Australia, 29th February, 1956 (thirty-fourth), 22nd May, 1956 (thirty-fifth); Western Australia, 6th April, 1956 (twenty-first), 2nd August, 1956, (twenty-second).



### § 3. Administration and Legislation.

Commonwealth Ministries, p. 80.—On 18th October, 1956 the Menzies Ministry was reconstructed as follows :—

MENZIES MINISTRY—from 11th January, 1956.

(The State from which each Minister was elected to Parliament is added in parentheses.

<i>Departments.</i>	<i>Ministers.</i>
Prime Minister .. ..	The Rt. Hon. ROBERT GORDON MENZIES, C.H., Q.C. (Vic.).
Treasurer .. ..	The Rt. Hon. SIR ARTHUR WILLIAM FADDEN, K.C.M.G. (Qld.).
Minister for Labour and National Service .. ..	The Rt. Hon. HAROLD EDWARD HOLT (Vic.).
Minister for Trade .. ..	The Rt. Hon. JOHN MCEWEN (Vic.).
Minister for External Affairs .. ..	The Rt. Hon. RICHARD GARDINER CASEY, C.H., D.S.O., M.C. (Vic.).
Minister for Defence .. ..	The Hon. SIR PHILIP ALBERT MARTIN MCBRIDE, K.C.M.G. (S.A.).
Vice-President of the Executive Council; and Attorney-General .. ..	Senator the Hon. NEIL O'SULLIVAN (Qld.).
Minister for National Development .. ..	Senator the Hon. WILLIAM HENRY SPOONER, M.M. (N.S.W.).
Minister for Immigration .. ..	The Hon. ATHOL GORDON TOWNLEY (Tas.).
Minister for Territories .. ..	The Hon. PAUL MEERNAA CAEDWALLA HASLUCK (W.A.).
Minister for Supply; and Minister for Defence Production .. ..	The Hon. HOWARD BEALE, Q.C. (N.S.W.).
Minister for Primary Industry .. ..	The Hon. WILLIAM MCMAHON (N.S.W.).
[The above Ministers constitute the Cabinet.]	

Minister for Repatriation .. ..	Senator the Hon. WALTER JACKSON COOPER, M.B.E. (Qld.).
Minister for Shipping and Transport; and Minister for Civil Aviation .. ..	Senator the Hon. SHANE DUNNE PALTRIDGE (W.A.).
Minister for Health .. ..	The Hon. DONALD ALASTAIR CAMERON, O.B.E. (Qld.).
Minister for the Army .. ..	The Hon. JOHN OSCAR CRAMER, (N.S.W.).
Postmaster-General; and Minister for the Navy .. ..	The Hon. CHARLES WILLIAM DAVIDSON, O.B.E. (Qld.).
Minister for Air .. ..	The Hon. FREDERICK MEARES OSBORNE, D.S.C. (N.S.W.).
Minister for the Interior; and Minister for Works .. ..	The Hon. ALLEN FAIRHALL (N.S.W.).
Minister for Social Services .. ..	The Hon. HUGH STEVENSON ROBERTON, (N.S.W.).
Minister for Customs and Excise .. ..	Senator the Hon. NORMAN HENRY DENHAM HENTY (Tas.).

State Ministers, pp. 81-83.—The composition of the Ministry in each State at 31st October, 1956 was as follows :—

#### NEW SOUTH WALES.

(From 15th March, 1956.)

<i>Premier and Colonial Treasurer—</i> THE HON. J. J. CAHILL.	<i>Minister for Local Government and Highways—</i> THE HON. J. B. RENSHAW.
<i>Deputy Premier and Minister for Education—</i> THE HON. R. J. HEFFRON.	<i>Minister for Transport—</i> THE HON. A. G. ENTICKNAP.
<i>Attorney-General, Minister of Justice and Vice-President of the Executive Council—</i> THE HON. R. R. DOWNING, M.L.C.	<i>Minister for Housing—</i> THE HON. A. LANDA.
<i>Chief Secretary, Minister for Immigration and Minister for Co-operative Societies—</i> THE HON. C. A. KELLY.	<i>Minister for Public Works—</i> THE HON. J. F. MCGRATH—
<i>Minister for Agriculture and Food Production—</i> THE HON. E. H. GRAHAM.	<i>Minister for Conservation—</i> THE HON. E. WETHERELL.
<i>Minister for Health—</i> THE HON. W. F. SHEAHAN, Q.C.	<i>Minister for Lands and Mines—</i> THE HON. R. B. NOTT.
<i>Minister for Child Welfare and Social Welfare—</i> THE HON. F. H. HAWKINS.	<i>Minister for Labour and Industry—</i> THE HON. J. J. MALONEY, M.L.C.
	<i>Minister without Portfolio—</i> THE HON. W. M. GOLLAN.
	<i>Minister without Portfolio—</i> THE HON. J. B. SIMPSON.

## VICTORIA.

(From 7th June, 1955.)

*Premier, Treasurer and Minister for Conservation—*

THE HON. H. E. BOLTE.

*Chief Secretary and Attorney-General—*

THE HON. A. G. RYLAH.

*Minister of Transport and a Vice-President of the Board of Land and Works—*THE HON. SIR ARTHUR WARNER,  
M.L.C.*Minister of Agriculture and a Vice-President of the Board of Land and Works—*

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

*Minister of Education—*

THE HON. J. S. BLOOMFIELD.

*Commissioner of Public Works and a Vice-President of the Board of Land and Works—*

THE HON. SIR THOMAS MALTBY.

*Minister of Health—*

THE HON. E. P. CAMERON, M.L.C.

*Minister of Water Supply and Minister of Mines—*

THE HON. W. J. MIBUS.

*Minister of Forests and Minister of State Development and Decentralization—*

THE HON. G. S. MCARTHUR, M.L.C.

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

THE HON. G. O. REID.

*Minister of Housing and Minister of Immigration—*

THE HON. H. R. PETTY.

*Commissioner of Crown Lands and Survey, Minister of Soldier Settlement and President of the Board of Land and Works—*

THE HON. K. H. TURNBULL.

*Ministers without Portfolio—*

THE HON. M. V. PORTER.

THE HON. A. J. FRASER.

## QUEENSLAND.

(From 22nd June, 1956.)

*Premier and Chief Secretary and Vice-President of the Executive Council—*

THE HON. V. C. GAIR.

*Minister for Transport—*

THE HON. J. E. DUGGAN.

*Treasurer—*

THE HON. E. J. WALSH.

*Secretary for Agriculture and Stock—*

THE HON. H. H. COLLINS.

*Secretary for Labour and Industry—*

THE HON. A. JONES.

*Secretary for Health and Home Affairs—*

THE HON. W. M. MOORE.

*Attorney-General—*

THE HON. W. POWER.

*Secretary for Public Lands and Irrigation—*

THE HON. P. J. R. HILTON.

*Secretary for Mines—*

THE HON. G. H. DEVRIES.

*Secretary for Public Works, Housing and Immigration—*

THE HON. C. G. MCCATHIE.

*Secretary for Public Instruction—*

THE HON. L. F. DIPLOCK.

## SOUTH AUSTRALIA.

(From 15th May, 1944.)

<i>Premier, Treasurer and Minister of Immigration—</i>	<i>Minister for Works and Minister of Marine—</i>
THE HON. T. PLAYFORD.	THE HON. SIR MALCOLM MCINTOSH, K.B.E.
<i>Chief Secretary, Minister of Health and Minister of Mines—</i>	<i>Minister of Education—</i>
THE HON. SIR LYELL MCEWIN, K.B.E., M.L.C.	THE HON. B. PATTINSON.
<i>Attorney-General and Minister of Industry and Employment—</i>	<i>Minister of Local Government, Minister of Roads and Minister of Railways—</i>
THE HON. C. D. ROWE, M.L.C.	THE HON. N. L. JUDE, M.L.C.
<i>Minister of Lands, Minister of Repatriation and Minister of Irrigation—</i>	<i>Minister of Agriculture and Minister of Forests—</i>
THE HON. C. S. HINCKS.	THE HON. G. G. PEARSON.

## WESTERN AUSTRALIA.

(From 20th April, 1956.)

<i>Premier, Treasurer and Minister for Child Welfare—</i>	<i>Minister for Health and Justice—</i>
THE HON. A. R. G. HAWKE.	THE HON. E. NULSEN.
<i>Minister for Works and Water Supplies and Deputy Premier—</i>	<i>Minister for Education and Labour—</i>
THE HON. J. T. TONKIN.	THE HON. W. HEGNEY.
<i>Minister for Transport, Housing and Forests—</i>	<i>Minister for Mines, Industrial Development and Fisheries—</i>
THE HON. H. E. GRAHAM.	THE HON. L. F. KELLY.
<i>Chief Secretary and Minister for Local Government and Town Planning—</i>	<i>Minister for Railways, North-West and Shipping—</i>
THE HON. G. FRASER, M.L.C.	THE HON. H. C. STRICKLAND, M.L.C.
<i>Minister for Lands and Agriculture—</i>	<i>Minister for Police and Native Welfare—</i>
THE HON. E. K. HOAR.	THE HON. J. J. BRADY.

## TASMANIA.

(From 22nd October, 1956.)

<i>Premier—</i>	<i>Treasurer and Minister for Health—</i>
THE HON. R. COSGROVE.	THE HON. R. J. D. TURNBULL.
<i>Attorney-General—</i>	<i>Minister for Housing, Licensing and Police—</i>
THE HON. R. F. FAGAN.	THE HON. C. AYLETT.
<i>Minister for Agriculture—</i>	<i>Minister for Forests, Tourist and Immigration—</i>
THE HON. J. J. DWYER, V.C.	THE HON. W. A. NEILSON.
<i>Minister for Lands and Works—</i>	<i>Minister for Transport and the Metropolitan Transport Trust—</i>
THE HON. E. E. REECE.	THE HON. A. CASHION.
<i>Chief Secretary—</i>	
THE HON. A. J. WHITE.	

Leaders of the Opposition, p. 83.—The Leader of the Opposition in the Tasmanian House of Assembly is the Hon. W. Jackson.

### § 5. Cost of Parliamentary Government, p. 86.

The cost of Parliamentary Government, Commonwealth and individual States, for the year 1954-55 was as follows:—

Commonwealth, £2,007,013 (4s. 5d. per head); New South Wales, £710,639 (4s. 1d.); Victoria, £535,939 (4s. 4d.); Queensland, £348,458 (5s. 3d.); South Australia, £281,351 (7s. 0d.); Western Australia, £320,572 (9s. 11d.); Tasmania, £189,699 (12s. 1d.); and total, £4,393,671 (9s. 8d.).

The amounts expended under the major headings for all Governments during 1954-55 were:—Governor-General or Governor, £321,477; Ministry, £266,194; Parliament, £2,923,630; Electoral, £762,725.

## CHAPTER IV.—LAND TENURE AND SETTLEMENT.

### § 9. Settlement of Returned Service Personnel: 1939-45 War.

War Service Land Settlement Scheme, pp. 98-101.—At 30th June, 1955 an area of 16,163,037 acres had been submitted by the several States for land settlement. Of this, 13,893,774 acres had been approved by the Commonwealth as suitable for soldier settlement and 12,968,172 acres had actually been acquired by the States. The acreages and holdings allotted to ex-servicemen by the States at 30th June, 1955 were as follows:—New South Wales, 8,522,677 (2,320); Victoria, 913,122 (2,356); Queensland, 218,640 (470); South Australia, 312,750 (658); Western Australia, 1,136,547 (711); Tasmania, 121,000 (217); total 11,224,736 (6,732).

The total expenditure of the War Service Land Settlement Division to 30th June, 1955, £56,396,887, includes War Service Land Settlement, £45,434,123; agricultural loans, £6,201,644; agricultural allowances, £2,277,500; administrative expenses, £1,061,628; rural training, £1,422,792. Aggregate expenditure in the States and Territories to 30th June, 1955 was as follows:—New South Wales, £5,007,555; Victoria, £3,853,664; Queensland, £1,571,803; South Australia, £14,925,015; Western Australia, £22,874,672; Tasmania, £8,146,990; Northern Territory, £10,748; New Guinea, £6,440.

After deducting repayments of expenditure to 30th June, 1955, £7,668,265 and miscellaneous receipts, £5,981,719, the net expenditure to 30th June, 1955 was £42,746,903.

### § 11. Alienation and Occupation of Crown Lands.

Summary, p. 110.—The alienation and occupation of Crown lands in Australia at 31st December, 1955, were as follows:—

Private Lands—154,266,000, acres (8.1 per cent.) alienated; 32,652,000 acres (1.7 per cent.) in process of alienation.

Crown Lands—1,025,901,000 acres (53.9 per cent.) leased or licensed; 690,913,000 acres (36.3 per cent.) other Crown lands.

## CHAPTER VI.—LABOUR, WAGES AND PRICES.

### A. RETAIL PRICES AND PRICE INDEXES.

#### § 4. Tabular Statements of Retail Price Index Numbers.

The Interim Retail Price Index, p. 158.—The following table shows the interim retail price index numbers for the March and June quarters, 1956 for each capital city and for the six capital cities combined, showing separate series for each of the four main groups of items:—

#### INTERIM RETAIL PRICE INDEX NUMBERS.

(Base of each Index: Year 1952-53 = 100.)

Period.	Sydney.	Mel- bourne.	Brisbane.	Adelaide.	Perth.	Hobart.	Six Capitals. (a)
GROUP I.—FOOD.							
March Qtr., 1956 ..	109.1	112.6	108.7	110.1	112.0	114.7	110.6
June „ „ ..	113.1	117.2	111.1	115.2	113.9	115.8	114.5

For footnotes see next page.

INTERIM RETAIL PRICE INDEX NUMBERS—*continued*.

Period.	Sydney.	Mel- bourne.	Brisbane.	Adelaide.	Perth.	Hobart.	Six Capitals. (a)
GROUP II.—CLOTHING AND DRAPEY.							
March Qtr., 1956 ..	102.8	104.0	103.1	103.1	103.0	104.5	103.3
June " " ..	103.1	104.0	103.2	102.5	103.3	105.4	103.4
GROUP III.—RENT(b) (4 AND 5 ROOMED HOUSES).							
March Qtr., 1956 ..	111.7	120.7	107.3	116.1	160.4	139.4	118.8
June " " ..	112.0	121.3	107.8	118.0	164.1	145.2	119.7
GROUP IV.—OTHER ITEMS.(c)							
March Qtr., 1956 ..	103.6	110.7	110.0	102.8	106.2	109.9	106.7
June " " ..	106.2	114.6	114.7	106.6	109.9	113.5	110.1
ALL GROUPS.							
March Qtr., 1956 ..	106.2	110.4	107.3	106.8	113.1	113.0	108.3
June " " ..	108.5	113.3	109.5	109.7	115.2	115.1	110.8

(a) Weighted average. (b) The rent index numbers measure the proportionate rise and fall in the average weekly rentals paid for houses of four and five rooms taking corresponding houses throughout. See footnote (b) on page 159. (c) A group of items under the following headings—Electricity, Gas, and Firewood; Household Sundries; Services; Cinema Admission, Radio Licences, and Newspapers; Fares; and Tobacco and Cigarettes.

## § 5. The "C" Series Retail Price Index.

"C" Series Retail Price Index, Six Capital Cities, p. 161.—The following table shows "C" Series index numbers for the year 1955 and the March and June quarters, 1956, for the six capital cities combined:—

## "C" SERIES RETAIL PRICE INDEX NUMBERS: SIX CAPITAL CITIES COMBINED.

(Base of each Group: Weighted Average of Six Capital Cities, 1923-27 = 1,000.)

Period.	Food and Groceries.	Rent (4 and 5 Roomed Houses).(a)	Clothing.	Miscel- laneous.	Total "C" Series Index.
1955—Year ..	2,811	1,226	3,237	2,081	2,393
1956—March Quarter ..	2,926	1,310	3,243	2,137	2,465
June " " ..	3,054	1,320	3,248	2,212	2,528

(a) See footnote (b), page 159.

## B. WHOLESALE PRICES AND PRICE INDEXES.

## § 2. Wholesale Price (Basic Materials and Foodstuffs) Index.

Index Numbers, p. 163.—Index numbers for each group of commodities and for all groups combined for the index of wholesale prices of basic materials and foodstuffs are shown below for the year 1955-56.

## WHOLESALE PRICE (BASIC MATERIALS AND FOODSTUFFS) INDEX NUMBERS.

(Base of each Group : Average of three years ended June, 1939 = 100.)

Period.	Basic Materials.							Food- stuffs and To- bacco.	Basic Materials and Foodstuffs.		
	Metals and Coal. (a)	Oils, Fats and Waxes.	Tex- tiles.	Chem- icals.	Rub- ber and Hides.	Build- ing Ma- terials.	Total.		Goods princi- pally Im- ported. (b)	Goods princi- pally Home Pro- duced.	Total All Groups
1955-56—											
July ..	397	214	486	315	307	398	338	331	281	357	334
August ..	397	215	452	315	323	398	337	329	282	354	333
September ..	405	215	441	315	333	398	340	329	290	352	334
October ..	405	215	441	315	336	398	340	325	289	350	332
November ..	404	216	437	317	347	407	342	331	291	355	336
December ..	404	216	447	317	342	407	342	326	291	352	334
January ..	405	216	453	317	330	407	343	327	288	354	334
February ..	405	216	453	317	325	408	343	318	288	347	329
March ..	405	230	446	317	323	425	350	332	299	357	340
April ..	403	230	456	318	326	442	353	337	303	362	344
May ..	410	231	477	317	322	444	357	344	304	369	350
June ..	409	231	482	318	326	444	357	351	299	376	353
Year 1955-56 ..	404	220	456	317	328	415	345	332	292	357	338

(a) Special purpose index for the "Metals and Coal" group excluding coal and briquettes was 429 for June, 1956 and 406 for the year 1955-56.

(b) Represents only such imported commodities as are included in the Wholesale Price Index and does not measure changes in price of all imports.

(c) Subject to revision.

## D. WAGES.

## § 1. Arbitration and Wages Boards Acts and Associated Legislation.

**Commonwealth Conciliation and Arbitration Act 1904-1956.**—An amendment to the Commonwealth Conciliation and Arbitration Act 1904-1955, assented to on 30th June, 1956, altered the structure of the arbitration machinery by setting up two authorities, namely, the Commonwealth Industrial Court and the Commonwealth Conciliation and Arbitration Commission, to handle the respective judicial and arbitral functions under the Act.

The Commonwealth Industrial Court, as constituted, comprises a Chief Judge and not more than two other Judges and is empowered to carry out judicial and award enforcement functions under the Act.

The Commonwealth Conciliation and Arbitration Commission, as constituted, shall consist of the following members:—(i) a President, (ii) not less than two Deputy Presidents, (iii) a Senior Commissioner and (iv) not less than five Commissioners. In addition Conciliators shall be appointed for the purposes of this Act.

The Commission is empowered to prevent or settle industrial disputes by conciliation or arbitration, and shall make all suggestions and do all such things as appear to it to be right and proper (a) for effecting a reconciliation between parties to industrial disputes, (b) for preventing and settling industrial disputes by amicable agreement and (c) for preventing and settling, by conciliation or arbitration, industrial disputes not prevented or settled by amicable agreement. The Commission may exercise its powers under the Act on its own motion or on the application of a party to an industrial dispute or of an organization or person bound by an award.

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 of the Conciliators.

When an industrial dispute occurs or appears likely to occur, a Commissioner shall take such steps as he thinks fit 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. If an agreement is arrived at between the parties to an industrial dispute, a memorandum of its terms shall be made in writing, and may be certified by a Commissioner. A certified memorandum shall have the same effect as an award for all purposes of the Act.

The Commission in Presidential Session (that is, the Commission constituted by at least three presidential members) and not otherwise, is empowered to deal with the making of awards or certifying agreements in so far as they concern standard hours, basic wages and long service leave.

A Commissioner shall, upon application by a party to an industrial dispute which is being dealt with by him, decide, in consultation with the President, whether the dispute is of such importance that in the public interest it should be dealt with by the Commission constituted by not less than three members nominated by the President, of whom at least one is a presidential member of the Commission, and another, where practicable, is the Commissioner concerned. The President may direct this Commission to hear the dispute; however, after consideration the Commission may refer the dispute or part of the dispute back to the Commissioner originally dealing with the dispute, for determination.

An appeal against the decision of a Commissioner may be heard by a Commission of not less than three members nominated by the President, of whom at least two are presidential members of the Commission. However, an appeal will not be heard unless the Commission considers it is a matter of public interest.

The following appointments were announced on 12th August, 1956:—

(i) *The Commonwealth Industrial Court—*

Chief Justice Spicer, Justices Dunphy, Morgan.

(ii) *The Commonwealth Conciliation and Arbitration Commission—*

(a) President, Kirby, J.

(b) Deputy Presidents, Foster, Wright, Ashburner, J.J.

(c) Senior Commissioner, E. A. Chambers.

(d) Commissioners, L. P. Austin, J. R. Donovan, G. A. Findlay, F. D. Kelly, J. H. Portus, E. W. Tonkin, F. J. Webb.

In effect, Judges of the previous Arbitration Court were made either members of the Commonwealth Industrial Court or presidential members of the Commonwealth Conciliation and Arbitration Commission. Conciliation Commissioners became non-presidential members of the Commission.

The first meeting of the Commonwealth Industrial Court was held on 23rd August, 1956 and that of the Commonwealth Conciliation and Arbitration Commission on 21st August, 1956.

The Public Service Arbitration Act, the Navigation Act, the Coal Industry Act and the Snowy Mountains Hydro-electric Power Act have been amended to make provision for the revised structure of the Commonwealth Conciliation and Arbitration Act.

## § 2. Rates of Wage and Hours of Labour.

Weekly Rates of Wage, pp. 168-9.—The following table shows for each State and Australia the weighted average nominal weekly rates of wage payable, and the index numbers based thereon, for adult males and for adult females, at the end of each quarter during the period 31st March, 1955 to 30th June, 1956.

### WEEKLY WAGE RATES OF ADULT MALES AND FEMALES.

(WEIGHTED AVERAGE NOMINAL WEEKLY RATES PAYABLE FOR A FULL WEEK'S WORK AND INDEX NUMBERS OF WAGE RATES.)

Date.	N.S.W.	Vic.	Q'land.	S. Aust.	W. Aust.	Tas.	Aust. (a)
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#### ADULT MALES—RATES OF WAGE.

	s. d.	s. d.	s. d.	s. d.	s. d.	s. d.	s. d.
31st March, 1955 ..	302 2	288 0	280 7	283 10	295 1	301 11	293 2
30th June, 1955 ..	302 8	290 10	280 8	284 3	299 1	302 3	294 6
30th September, 1955	303 1	292 10	282 10	284 8	304 2	302 6	295 11
31st December, 1955	310 1	296 7	284 11	284 9	304 9	302 7	300 0
31st March, 1956 ..	312 11	299 5	286 7	284 10	306 2	306 7	302 4
30th June, 1956 ..	317 3	307 1	292 2	295 2	309 1	317 6	308 5

#### ADULT MALES—INDEX NUMBERS.

(Base : Weighted Average Wage for Australia (51s. 3d.), 1911 = 1,000.)

31st March, 1955 ..	5,896	5,619	5,476	5,538	5,758	5,891	5,720
30th June, 1955 ..	5,905	5,675	5,476	5,546	5,836	5,897	5,746
30th September, 1955	5,914	5,714	5,519	5,554	5,935	5,903	5,774
31st December, 1955	6,051	5,787	5,559	5,555	5,946	5,905	5,853
31st March, 1956 ..	6,106	5,843	5,591	5,557	5,973	5,982	5,900
30th June, 1956 ..	6,190	5,991	5,701	5,758	6,030	6,196	6,018

#### ADULT FEMALES—RATES OF WAGE.

	s. d.	s. d.	s. d.	s. d.	s. d.	s. d.	s. d.
31st March, 1955 ..	201 0	200 9	190 5	199 11	191 6	196 11	199 1
30th June, 1955 ..	201 0	203 3	191 0	199 11	191 6	197 0	200 2
30th September, 1955	201 8	204 11	192 1	200 1	193 11	197 7	201 4
31st December, 1955	205 3	206 9	192 10	199 11	193 7	197 11	203 4
31st March, 1956 ..	205 11	207 11	192 10	199 11	194 0	200 0	204 1
30th June, 1956 ..	210 5	214 5	198 2	207 5	198 10	207 4	209 9

#### ADULT FEMALES—INDEX NUMBERS.

(Base : Weighted Average for Australia (27s. 2d.), 30th April, 1914 = 1,000.)

31st March, 1955 ..	7,398	7,390	7,007	7,358	7,049	7,248	7,328
30th June, 1955 ..	7,398	7,480	7,028	7,359	7,049	7,250	7,367
30th September, 1955	7,424	7,543	7,069	7,363	7,137	7,272	7,410
31st December, 1955	7,554	7,608	7,098	7,358	7,125	7,284	7,483
31st March, 1956 ..	7,580	7,654	7,099	7,358	7,141	7,361	7,512
30th June, 1956 ..	7,745	7,891	7,293	7,635	7,319	7,630	7,721

(a) Weighted average for Australia.



### § 3. Average Weekly Wage Earnings.

Average Weekly Total Wages Paid and Average Earnings, p. 178.—Particulars of average weekly total wages paid and average earnings per employed male unit for the year 1955-56 are shown in the following table :—

#### AVERAGE WEEKLY TOTAL WAGES PAID AND AVERAGE EARNINGS, 1955-56.

Particulars.	N.S.W.(a)	Vic.	Qld.	S.A.(b)	W.A.	Tas.	Aust.
Average Weekly Total Wages Paid . . £'000.	18,955	13,358	5,809	4,195	2,897	1,476	46,690
Average Weekly Earnings per Employed Male Unit £	18.16	18.22	15.34	17.10	16.37	16.66	17.51

(a) Includes Australian Capital Territory. (b) Includes Northern Territory. (c) Male units represent total male employment plus a proportion of female employment based on the approximate ratio of female to male earnings. The same ratio has been used in each State, and because the average ratio of female to male earnings may vary between States, precise comparisons between average earnings in different States cannot be made on the basis of the figures above.

### § 4. Basic Wages in Australia.

Basic Wage Enquiry, 1955-56.—On 4th November, 1956, the Amalgamated Engineering Union and others made application to the Commonwealth Court of Conciliation and Arbitration for an alteration of the basic wage in the following respects, namely, for an increase in the basic wage to the amount it would have reached if automatic quarterly adjustments, deleted by the Court in September, 1953, had remained in force ; an increase of a further 20s. in the basic wage ; the reintroduction of automatic quarterly adjustments ; and the abolition of the 3s. country differential.

The hearing commenced on 13th December, 1955, but later that day was adjourned until 14th February, 1956, after the Court had considered questions of procedure for the purpose of expediting the hearing of the case. The Commonwealth Government indicated to the Court its intention to intervene in the public interest under Section 26 of the Conciliation and Arbitration Act, and each of the State Governments was represented as a respondent.

When the hearing was resumed, the Court, consisting of Kirby, Dunphy, Wright and Morgan JJ., heard evidence from the parties, and then the Commonwealth Government, appearing as an intervenor in the public interest, submitted factual and statistical material about the state of the economy. The hearing concluded on 16th April, 1956 and the Court reserved its decision.

The Court's decision was announced on 25th May, 1956, rejecting (a) the claim for restoration of the system of automatic quarterly adjustments abolished in 1953 ; (b) the claim that the differential of 3s. less for country districts than the basic wage for the capital cities should be abolished ; (c) the claim for an increase in the basic wages to the amounts which they would have reached if the provisions for automatic quarterly

adjustments, deleted by the Court in 1953, had remained; and increasing the adult male basic wage by 10s. per week from the beginning of the first pay-period in June, 1956. Adult females received 7s. 6d. per week and juniors proportionate increases.

The new basic wage rates of the Commonwealth Court of Conciliation and Arbitration for adult males payable in the capital city of each State from the beginning of the first pay-period in June, 1956 are as follows:—

Sydney.	Melbourne.	Brisbane.	Adelaide.	Perth.	Hobart.	Six Capital Cities.(a)
s. d.	s. d.	s. d.	s. d.	s. d.	s. d.	s. d.
253 0	245 0	228 0	241 0	246 0	252 0	246 0

(a) Weighted average.

State Basic Wage Rates, p. 192.—The table below shows the "basic" weekly wage rates of State industrial tribunals, operative in May and August, 1956.

#### STATE BASIC WAGE—WEEKLY RATES.

State.	May, 1956.			August, 1956.		
	Date of Operation.	Males.	Females.	Date of Operation.	Males.	Females.
	(a)	s. d.	s. d.	(a)	s. d.	s. d.
New South Wales—(b)						
Metropolitan and Country excluding Broken Hill ..	May, 1956	256 0	192 0	Aug., 1956	263 0	197 0
Broken Hill .. .. .	May, 1956	256 0	192 0	Aug., 1956	261 0	195 6
Victoria(c) .. .. .	May, 1956	256 0	192 0	Aug., 1956	263 0	197 0
Queensland—						
Southern Division (Eastern District)—including Brisbane(d) .. .. .	23.4.56	233 0	157 0	23.7.56	237 0	160 8
South Australia(e) .. ..	Aug., 1953	231 0	173 0	June, 1956	241 0	180 6
Western Australia—(f)						
Metropolitan Area .. ..	23.4.56	257 1	167 1	23.7.56	261 6	170 0
South-West Land Division ..	23.4.56	253 11	165 0	23.7.56	258 10	168 3
Goldfields and other areas ..	23.4.56	255 11	166 4	23.7.56	258 10	168 3
Tasmania(g) .. .. .	May, 1956	268 0	201 0	Aug., 1956	272 0	204 0

(a) Where dates are not quoted wage rates operate from beginning of first pay-period commencing in month shown. (b) Automatic adjustment discontinued from 23rd October, 1953, following decision of the Commonwealth Court of Conciliation and Arbitration on 12th September, 1953 (see page 188). Automatic adjustment re-introduced from first pay-period in November, 1955. (c) No basic wage declared but rates shown (Melbourne) are those commonly adopted by Wages Boards. The Victorian Labour and Industry Act requires Wages Boards to provide for the automatic adjustment of wage rates in accordance with variations in retail price index numbers. (d) The Queensland Industrial Court each quarter announces the variation, if any, in the basic wage after considering movements in the "C" Series retail price index numbers. (e) The "living wage" declared applies to the whole State except for a 5s. loading at Whyalla. Quarterly variations in the "living wage" were discontinued, following the decision of the Commonwealth Court of Conciliation and Arbitration on 12th September, 1953. On 31st May, 1956, the Governor proclaimed a 10s. increase in the "living wage" payable from 4th June, 1956 to conform with the increase of 10s. announced on 25th May, 1956 by the Commonwealth Court of Conciliation and Arbitration. (f) The Western Australian Arbitration Court each quarter announces the variation, if any, in the basic wage, after considering movements in the cost of living statements prepared by the Government Statistician. (g) None declared but rates shown (Hobart) are those commonly adopted by Wages Boards. Commencing with the first pay-period in February, 1956, Wages Boards re-introduced automatic quarterly adjustments, based on movements in the "C" Series retail price index numbers.

## E. EMPLOYMENT AND UNEMPLOYMENT.

## § 1. Employment.

Wage and Salary Earners in Civilian Employment, pp. 197-9.—The following are particulars of wage and salary earners in civilian employment, excluding rural wage earners, females in domestic work in private homes, persons on the paid strength of the Defence Forces and National Service trainees in camp, for the month of June, 1956.

## WAGE AND SALARY EARNERS IN CIVILIAN EMPLOYMENT, JUNE, 1956.

(Excluding Rural Wage Earners, Female Domestics in Private Homes, Persons on Paid Strength of Defence Forces and National Service Trainees in Camp.)

('000.)

Particulars.	N.S.W.	Vic.	Q'land.	S. Aust.	W. Aust.	Tas.	Aust.(a)
Males ..	787.8	564.2	276.0	184.5	135.5	64.4	2,025.9
Females ..	300.2	233.0	91.2	62.9	44.6	22.8	758.9
Persons ..	1,088.0	797.2	367.2	247.4	180.1	87.2	2,784.8

Particulars.	Governmental. (b)	Private Employers.	Mining and Quarrying.	Factories. (c)	Transport and Communication.	Retail Trade.	Other Commerce and Finance.
Males ..	604.8	1,421.1	57.3	722.2	310.4	129.9	212.7
Females ..	129.8	629.1	1.2	228.3	40.1	122.9	88.1
Persons ..	734.6	2,050.2	58.5	950.5	350.5	252.8	300.8

(a) Includes Australian Capital Territory and Northern Territory. (b) Includes all employees of Governmental Authorities (Commonwealth, State, Local and Semi-Governmental) on services such as railways, tramways, banks, post office, air transport, education, broadcasting, police, public works, factories and munitions establishments, migrant hostels, etc., as well as administrative employees, within Australia. (c) Subject to revision.

Government Employees, p. 199.—The number of Government employees in Australia in June, 1956 was as follows:—

Commonwealth Government—males, 162,300; females, 46,100; persons, 208,400; State Government and Semi-Government Bodies—males, 377,000; females, 77,600; persons, 454,600; Local Government Authorities—males, 65,500; females, 6,100; persons, 71,600; Total—males, 604,800; females, 129,800; persons, 734,600.

## § 4. Industrial Disputes.

Summary of Disputes (Involving Stoppage of Work), p. 203.—The following table shows particulars of industrial disputes in each State and Territory during 1955:—

## INDUSTRIAL DISPUTES : SUMMARY, 1955.

State or Territory.	Number.	Workers Involved.			Working Days Lost.	Estimated Loss in Wages. (£)
		Directly.	Indirectly. (a)	Total.		
New South Wales(b)	1,072	260,353	13,678	274,031	673,325	2,230,935
Victoria ..	66	33,255	2,287	35,542	138,507	435,356
Queensland ..	274	83,026	3,626	86,652	99,318	328,046
South Australia ..	43	23,969	129	24,098	66,881	203,182
Western Australia ..	16	9,504	345	9,849	9,582	32,704
Tasmania (b) ..	48	13,204	240	13,444	20,387	70,927
Northern Territory ..	12	1,013	2	1,015	2,740	8,551
Australian Capital Territory ..	1	16	..	16	144	620
Australia(b) ..	1,532	424,340	20,307	444,647	1,010,884	3,310,321

(a) Persons thrown out of work at the establishments where the stoppages occurred but not themselves parties to the dispute.

(b) Includes disputes not settled at the end of 1954.

## G. LABOUR ORGANIZATIONS.

## § 1: Labour Organizations in Australia.

Trade Unions, pp. 208-9.—The following tables show the number and membership of trade unions at 31st December, 1955 in each State and Territory and in each industrial group.

## TRADE UNIONS : NUMBER AND MEMBERSHIP, 1955.

Particulars.	N.S.W.	Vic.	Qld.	S.A.	W.A.	Tas.	N.T.	A.C.T.	Aust.
Separate Unions(a) ..	235	160	130	138	154	101	20	32	372
Members ..	731,960	446,372	305,509	146,422	111,959	51,401	2,440	5,799	1,801,862
Percentage Increase in Membership(b) ..	-0.1	2.9	0.1	-0.8	2.2	2.2	12.5	-2.9	0.8

(a) Without interstate duplication.

(b) On preceding year.

NOTE.—Minus sign (—) denotes decrease.

## TRADE UNIONS : INDUSTRIAL GROUPS, AUSTRALIA, 1955.

Industrial Group.	No. of Unions. (a)	No. of Mem- bers.	Industrial Group.	No. of Unions. (a)	No. of Mem- bers.
Manufacturing—			XI. Shipping, etc...	14	41,612
I. Wood, Furniture, etc.	6	47,678	XII. Pastoral, Agricultural, etc.	3	66,224
II. Engineering, Metal Works etc.	15	266,897	XIII. Domestic, Hotels, etc...	12	37,722
III. Food, Drink, Tobacco, etc.	37	106,865	XIV. Miscellaneous—		
IV. Clothing, Textiles, etc.	7	107,618	(i) Banking, Insurance and Clerical ..	19	114,218
V. Books, Printing, etc.	6	41,514	(ii) Public Service ..	62	203,437
VI. Other Manufacturing	36	85,023	(iii) Retail and Wholesale ..	12	71,583
VII. Building ..	29	134,224	(iv) Municipal, Sewerage and Labouring ..	10	83,572
VIII. Mining, Quarrying, etc.	13	46,641	(v) Other Miscellaneous	57	134,006
IX. Railway and Tramway Services ..	25	146,401	Total .. ..	372	1,801,862
X. Other Transport ..	9	66,627			

(a) Without interstate duplication.

## CHAPTER VII.—TRANSPORT AND COMMUNICATION.

## B. GOVERNMENT RAILWAYS.

Summary of Operations, p. 227.—The following table gives a summary of the operations of all Government railways open for general traffic during the year 1954-55 :—

## GOVERNMENT RAILWAYS : SUMMARY OF OPERATIONS, 1954-55.

Particulars.	N.S.W.	Vic.	Q'land.	S. Aust.	W. Aust.	Tas.	C'wealth.	Aust.
Mileage open (route) at 30th June, 1955 .. miles	6,102	4,451	6,553	2,564	4,111	605	2,201	26,587
Gross revenue .. £'000.	73,361	37,667	31,025	12,939	12,315	2,322	3,741	173,970
Working expenses .. £'000.	68,397	37,032	30,946	15,414	14,690	3,077	2,921	172,477
Net revenue .. £'000.	4,964	635	679	2,475	2,375	755	820	1,493
Interest .. £'000.	7,100	2,545	2,460	1,288	1,411	282	(a) 407	15,493
Train-miles run .. '000	37,294	18,740	19,637	7,216	7,769	2,066	2,029	94,751
Passenger-journeys .. '000	281,477	169,204	35,919	16,849	10,139	3,114	215	516,857
Goods, etc., carried '000 tons	(b) 19,386	10,082	8,492	4,474	3,407	1,041	816	47,698

(a) Includes exchange.

(b) Partly estimated.

NOTE.—Minus sign (—) denotes loss.

## D. MOTOR OMNIBUS SERVICES.

Government and Municipal Services, p. 240.—The following is a summary of the operations of government and municipal motor omnibus services in Australia during 1954-55 :—Length of route, 4,492 miles; gross revenue, £9,613,000; working expenses, £12,063,000; omnibus-miles run, 57,513,000; passenger-journeys, 346,749,000 (including estimated figures for the Australian Capital Territory). Revenue and working expenses include particulars for Queensland trolley-buses. All items except route-mileage exclude particulars of Hobart and Launceston Municipal Council Omnibus Services.

Private Services, p. 245.—The following is a summary of the operations of motor omnibus services under the control of private operators during 1954-55 in the States of New South Wales (Metropolitan and Newcastle Transport Districts only), South Australia and Western Australia respectively :—Gross revenue, £2,536,000; £669,000; £1,674,000; omnibus-miles run, 20,587,000; 6,213,000; 13,190,000; passenger-journeys, 89,508,000; 14,058,000; 33,860,000.

## F. MOTOR VEHICLES.

Motor Vehicle Registrations, p. 247.—Motor vehicles registered at 30th June, 1956 and new motor vehicles registered during 1955-56 were as follows :—

## MOTOR VEHICLES : REGISTRATIONS, 1955-56.

State or Territory.	Number of Motor Vehicles Registered at 30th June, 1956.(a)				Number of New Motor Vehicles Registered, 1955-56.(a)			
	Motor Cars.(b)	Com-mercial Vehicles.(c)	Motor Cycles.	Total.	Motor Cars.(b)	Com-mercial Vehicles.(c)	Motor Cycles.	Total.
New South Wales ..	483,397	242,514	37,039	762,950	56,074	25,994	2,971	85,039
Victoria(d) ..	498,644	151,597	27,675	677,916	53,511	16,882	2,360	72,753
Queensland ..	179,190	127,393	20,394	326,977	19,629	11,371	1,689	32,689
South Australia ..	154,358	63,630	20,713	238,701	17,461	6,510	1,925	25,896
Western Australia ..	98,875	65,626	13,873	178,374	10,115	5,258	1,089	16,462
Tasmania ..	48,973	22,975	4,800	76,748	5,461	2,632	332	8,425
Northern Territory ..	1,911	3,077	566	5,554	214	343	63	620
Aust. Capital Territory ..	6,978	2,580	515	10,073	1,133	322	101	1,556
Total ..	1,472,326	679,392	125,575	2,277,293	163,598	69,312	10,530	243,440

(a) Excludes Defence Service vehicles. Prior to 1st January, 1956 Department of the Navy vehicles were included. Excludes also trailers, road tractors, etc., and dealer's plates. (b) Includes taxis and hire cars. (c) Includes lorries, vans, buses and utilities. (d) Registration in Victoria is according to purpose of use and not type of vehicle; consequently, motor cars registrations are overstated by the inclusion of commercial vehicles registered for private use.

Drivers' and riders' licences in force at 30th June, 1956 numbered 2,457,246. This figure excludes licences in Queensland which are no longer issued on an annual basis.

## G. ROAD TRAFFIC ACCIDENTS.

Total Accidents Recorded, p. 249.—The following table is a summary of the total number of accidents (known to the police) which occurred in public thoroughfares during 1954-55, the number involving casualties and the number of persons killed or injured in each State and the Commonwealth excluding the Northern Territory.

## ACCIDENTS (KNOWN TO THE POLICE) WHICH OCCURRED IN PUBLIC THOROUGHFARES: ACCIDENTS RECORDED AND CASUALTIES, 1954-55.

State or Territory.	Total Accidents Recorded. (a)	Accidents Involving Casualties.	Casualties.	
			Persons Killed.	Persons Injured.(b)
New South Wales .. .. .	35,315	12,557	798	15,959
Victoria .. .. .	15,093	10,217	528	12,833
Queensland .. .. .	21,438	6,586	273	8,421
South Australia .. .. .	12,304	3,098	173	3,926
Western Australia .. .. .	10,715	3,149	206	4,036
Tasmania .. .. .	2,642	864	57	1,111
Australian Capital Territory ..	251	131	7	179
Total .. .. .	97,758	36,602	2,042	46,465

(a) Total accidents causing death or injury to persons or, except in Tasmania, damage exceeding £10 to property. (b) Persons injured to an extent requiring surgical or medical treatment.

## I. POSTS, TELEGRAPHS, TELEPHONES AND WIRELESS.

## § 1. General to § 4. Telephones.

Summary of Operations, pp. 257-268.—The following table gives a summary of the operations of the Postmaster-General's Department during the year 1954-55:—

## POSTMASTER-GENERAL'S DEPARTMENT: SUMMARY OF OPERATIONS, 1954-55.

State.	Gross Re-venue.	Ex-pen-diture.	Total Postal Matter Dealt with. (a)	Money Orders Issued, value.	Postal Notes Issued, value.	Tele-grams Dis-patch-ed.	Telephones.			
							Lines Con-nected. (b)	Instru-ments Con-nected. (b)	Local Calls.	Trunk Line Calls.
	£'000.	£'000.	mill.	£'000.	£'000.	'000.	'000.	'000.	mill.	mill.
New South Wales(c)	28,560	37,322	675.8	30,641	4,400	8,755	421	606	463	30
Victoria .. .. .	21,129	25,896	466.0	14,137	2,980	5,019	356	505	333	26
Queensland .. .. .	10,128	13,870	208.4	7,570	955	4,199	152	203	132	16
South Australia(d)	6,482	8,327	135.7	4,150	1,706	1,973	100	138	86	9
Western Australia	4,544	5,927	114.9	3,333	560	2,119	65	90	65	5
Tasmania .. .. .	1,982	3,525	53.0	1,870	216	648	33	45	24	4
Australia .. .. .	72,825	103,786	1,653.8	61,701	10,226	22,713	1,127	1,587	1,103	90

(a) Comprises (in millions):—Letters, cards, etc. 1,345.2; newspapers and packets 274.2; parcels, 16.8; registered articles other than parcels, 17.6. (b) At 30th June. (c) Includes Australian Capital Territory.

(d) Includes Northern Territory. (e) Includes £8,919,000, Central Office expenditure. (f) Excludes international telegrams—dispatched, 1,376,000 received, 1,422,000.

## § 5. Cable and Radio Communication.

**Radio-communication Stations Authorized, p. 270.**—The following radio-communication stations were authorized in Australia and the Territory of Papua and New Guinea at 30th June, 1956 :—Transmitting and receiving stations—amateur, 3,253 (53); aeronautical, 87 (12); coast, 66 (12); land, 3,092 (302); mobile (general), 13,212 (77) (including ship, 1,322; aircraft, 277; other mobile stations, 484); and miscellaneous, 104. In addition, there were 371 land and 61 mobile (general) stations for the purpose of receiving only. The figures in parentheses refer to the Territory of Papua and New Guinea and are included in the totals preceding them.

## § 6. Broadcasting and Television.

**Broadcasting Stations, p. 270.**—The following table shows the number of broadcasting stations in operation at 30th June, 1956 :—

BROADCASTING STATIONS, 30th JUNE, 1956.

Type of Station.	N.S.W.	Vic.	Qld.	S.A.	W.A.	Tas.	N.T.	A.C.T.	Papua-New Guinea.	Total.
National—										
Medium Frequency	14	5	12	6	7	4	2	2	1	53
Short-wave ..	1	3	2	..	2	..	..	..	1	9
Commercial ..	36	20	20	8	14	8	..	1	..	107

**Broadcast Listeners' Licences, p. 276.**—Licences in force at 30th June, 1956 were as follows :—New South Wales, 776,284; Victoria, 554,339; Queensland, 301,371; South Australia, 228,625; Western Australia, 153,445; Tasmania, 74,729; Australia, 2,088,793. Figures for the Northern Territory and the Australian Capital Territory have been included with those for South Australia and New South Wales respectively.

## CHAPTER VIII.—TRADE.

**NOTE.**—Values are expressed in £A. f.o.b., port of shipment.

### § 6. Total Oversea Trade.

**Summary of Movements, p. 290.**—The following is a summary of the total overseas trade movements of Australia during the year 1955-56 :—Merchandise—Exports, £770,836,470, Imports, £818,292,717, Commodity balance, -£47,456,247; Bullion and Specie—Exports, £11,027,179, Imports, £2,795,495, Balance, +£8,231,684; Total balance, -£39,224,563.

### § 7. Direction of Oversea Trade.

**According to Countries, p. 291.**—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 1955-56.

**TOTAL OVERSEA TRADE, AUSTRALIA : COUNTRIES OF ORIGIN OR  
CONSIGNMENT, 1955-56.**  
(£'000.)

Country.	Imports.	Exports.	Country.	Imports.	Exports.
United Kingdom ..	355,912	257,414	China ..	2,275	2,701
Australian Territories—			Czechoslovakia ..	2,728	4,775
New Guinea ..	5,166	7,889	Finland ..	2,823	144
Papua ..	1,129	6,191	France ..	15,626	67,314
Borneo (British) ..	9,801	1,042	Germany, Federal Republic of	34,998	36,431
Canada ..	23,417	10,911	Indonesia ..	22,401	6,705
Ceylon ..	8,632	8,687	Iran ..	22,819	744
Fiji ..	1,307	3,881	Italy ..	11,821	34,621
Hong Kong ..	2,775	14,053	Japan ..	22,592	86,450
India ..	23,469	12,159	Mexico ..	2,203	4,197
Malaya, Federation of	16,118	9,337	Netherlands ..	13,233	6,192
New Zealand ..	8,531	40,928	Norway ..	5,786	608
Rhodesia and Nyasaland	4,294	1,916	Poland ..	152	8,253
Singapore ..	1,453	12,100	Sweden ..	12,048	3,483
South Africa, Union of	4,617	2,438	Switzerland ..	10,596	2,654
Other British Countries	12,582	16,454	United States of America	98,789	55,004
			Other Foreign Countries	16,814	27,021
<b>Total British Countries</b>	<b>479,203</b>	<b>405,400</b>	<b>Total Foreign Countries..</b>	<b>341,885</b>	<b>376,464</b>
Arabian States ..	28,606	2,039			
Austria ..	3,994	915	<b>Total All Countries ..</b>	<b>821,088</b>	<b>781,864</b>
Belgium—Luxemburg	11,581	26,173			

According to Currency Area, p. 292.—The following table shows the trade of Australia during 1955-56 according to currency areas.

**OVERSEA TRADE OF AUSTRALIA ACCORDING TO CURRENCY AREAS, 1955-56.**

Currency Area.	£'000.	Currency Area.	£'000.
<b>STERLING.</b>		<b>OTHER NON-STERLING.</b>	
<b>Imports—</b>		<b>Imports—</b>	
From—United Kingdom ..	355,912	From—Countries of the O.E.E.C., including dependencies	125,823
Other Sterling Area Countries ..	123,879	Other Countries ..	88,836
<b>Total ..</b>	<b>479,791</b>	<b>Total ..</b>	<b>214,659</b>
<b>Exports—</b>		<b>Exports—</b>	
To—United Kingdom ..	257,414	To—Countries of the O.E.E.C., including dependencies	187,461
Other Sterling Area Countries..	141,478	Other Countries ..	122,115
<b>Total ..</b>	<b>398,892</b>	<b>Total ..</b>	<b>309,576</b>
<b>Excess of Exports (+) or Imports (—)</b>	<b>—80,899</b>	<b>Excess of Exports (+) or Imports (—)</b>	<b>+94,917</b>
<b>DOLLAR.</b>			
<b>Imports—</b>			
From—United States of America ..	98,789		
Canada ..	23,417		
Other Dollar Area Countries	4,432		
<b>Total ..</b>	<b>126,638</b>		
<b>Exports—</b>		<b>ALL CURRENCY AREAS.</b>	
To—United States of America ..	55,004	<b>Total Imports ..</b>	<b>821,088</b>
Canada ..	10,911		
Other Dollar Area Countries..	7,481	<b>Total Exports ..</b>	<b>781,864</b>
<b>Total ..</b>	<b>73,396</b>	<b>Excess of Exports (+) or Imports (—)</b>	<b>—39,224</b>
<b>Excess of Exports (+) or Imports (—)</b>	<b>—53,242</b>		



### § 11. Classified Summary of Australian Oversea Trade.

Imports and Exports in Statistical Classes, p. 302.—The following table shows the values of total imports and total exports in statistical classes for the year 1955-56 :—

#### TOTAL OVERSEA TRADE, AUSTRALIA : CLASSES, 1955-56.

(£'000.)

Class.	Imports.	Exports
I. Foodstuffs of Animal Origin .. .. .	7,566	113,366
II. Foodstuffs of Vegetable Origin, Non-alcoholic Beverages .. .. .	22,059	148,760
III. Spirituous and Alcoholic Liquors .. .. .	2,101	1,460
IV. Tobacco, Cigars, Cigarettes and Snuff .. .. .	16,215	518
V. Live Animals .. .. .	727	1,188
VI. Animal Substances (mainly unmanufactured), not Foodstuffs .. .. .	4,000	360,692
VII. Vegetable Substances and Fibres; Cork and Manufactures; Plastic Moulding Materials and Synthetic Fibres .. .. .	17,482	2,432
VIII. Yarns and Manufactured Fibres, Textiles and Apparel—		
(a) Yarns and Manufactured Fibres .. .. .	24,730	1,270
(b) Textiles .. .. .	75,121	577
(c) Apparel .. .. .	11,469	373
IX. Oils, Fats and Waxes .. .. .	99,640	14,053
X. Pigments, Paints and Varnishes .. .. .	5,937	977
XI. Rocks, Minerals and Hydrocarbons .. .. .	7,293	22,677
XII. Metals, Metal Manufactures and Machinery—		
(a) Metals and Metal Manufactures .. .. .	177,028	51,677
(b) Dynamo Electrical Machinery, Electrical Appliances and Equipment .. .. .	35,521	2,752
(c) Machines and Machinery .. .. .	109,519	10,065
XIII. Rubber and Leather and Manufactures thereof—		
(a) Rubber and Rubber Manufactures .. .. .	22,030	667
(b) Leather and Leather Manufactures .. .. .	791	2,612
XIV. Wood and Wicker .. .. .	17,881	2,985
XV. Earthenware, Cement, China, Glass and Stoneware .. .. .	14,292	897
XVI. Paper and Stationery—		
(a) Pulp, Paper and Board .. .. .	32,575	481
(b) Paper Manufactures and Stationery .. .. .	11,650	2,180
XVII. Sporting Material, Toys, Fancy Goods, Jewellery and Timepieces .. .. .	10,069	547
XVIII. Optical, Surgical and Scientific Instruments and Appliances and Photographic Goods, n.e.i. .. .. .	10,803	1,053
XIX. Chemicals, Medicinal and Pharmaceutical Products, Essential Oils and Fertilizers .. .. .	29,984	5,417
XX. Miscellaneous .. .. .	51,811	21,161
XXI. Gold and Silver; Bronze Specie .. .. .	2,795	11,027
Total .. .. .	821,088	781,864

The following table shows the total quantities of some of the principal commodities exported from Australia during 1955-56:—

**TOTAL OVERSEA TRADE, AUSTRALIA : PRINCIPAL EXPORTS, 1955-56.**

Article.	Unit of Quantity.	Quantity.	Article.	Unit of Quantity.	Quantity.
Barley (unprepared) ..	ton	470,210	Meats preserved by cold process—		
Butter ..	"	82,639	Beef and veal ..	ton	144,084
Cheese ..	"	17,181	Lamb ..	"	36,440
Eggs—	'000 doz.	16,071	Mutton ..	"	15,472
In shell ..	'000 lb.	21,243	Pork ..	"	1,104
Not in shell ..	ton	595,423	Milk and cream ..	'000 lb.	127,385
Flour (wheaten)			Ores and concentrates ..	ton	488,155
Fruit—	"	62,938	Sheep and lamb skins ..	'000	16,661
Dried ..	'000 bus.	6,688	Sugar (cane) ..	ton	592,229
Fresh ..			Wheat ..	"	1,902,896
Preserved in airtight containers ..	ton	93,407	Wool—		
Lead, pig ..	"	145,144	Greasy ..	mill. lb.	1,063
Meats preserved in airtight containers ..	"	58,300	Scoured, etc. ..	"	115

**§ 15. Australian Index of Export Prices.**

Monthly Index (Fixed Weights), p. 311.—The following are the export price index numbers for the year 1955-56.

**EXPORT PRICE INDEXES : AUSTRALIA.**

**SIMPLE AGGREGATIVE INDEX : FIXED WEIGHTS.**

**INDIVIDUAL COMMODITIES, GROUPS OF COMMODITIES AND ALL GROUPS (COMBINED).**

(Base of each section : Average of three years ended June, 1939 = 100.)

Period.	Wool.	Wheat.	Butter.	Metals. (a)	Meats. (b)	Sugar.	Dried Fruits. (c)	Tallow.	Hides. (d)	Gold. (e)	All Groups	
											Excluding Gold.	Including Gold.
1955-1956—												
July ..	(f) 505	352	313	538	359	468	266	342	225	178	437	419
August ..	453	351	313	538	365	468	266	341	234	178	411	395
September ..	437	334	313	545	398	468	278	344	235	178	404	388
October ..	437	329	337	543	408	454	282	351	238	178	406	390
November ..	437	323	364	549	383	454	284	366	227	178	407	391
December ..	453	315	368	575	364	454	283	365	232	178	414	398
January ..	460	313	361	590	348	441	285	356	239	178	416	400
February ..	460	311	328	592	331	441	288	364	240	178	411	395
March ..	453	312	304	592	322	441	292	364	247	178	404	388
April ..	468	310	273	579	317	441	293	354	248	178	406	390
May ..	498	321	265	556	324	441	302	344	241	178	421	404
June ..	505	319	299	548	335	441	317	347	252	178	429	411
Year 1955-56	464	324	320	562	355	451	286	353	238	178	414	397

(a) Non-ferrous—silver, copper, tin, zinc, lead. (b) Beef, lamb, mutton, pork. Guaranteed minimum prices are used when operative. (c) Sultanas, lexlax, currants. (d) Cattle hides, calfskins. (e) Where Australian gold has been sold on the overseas premium markets such price has been used in the index. (f) Nominal. (g) Subject to revision.

### § 19. The Australian Balance of Payments.

NOTE.—Further details of the summarized estimates presented here will be found in *The Australian Balance of Payments, 1928-29 to 1951-52* and in the mimeographed publication *The Australian Balance of Payments 1951-52 to 1955-56* obtainable from the Commonwealth Statistician.

Australia's Balance of Payments on Current and Capital Account, pp. 316-8.—The following table shows in summary form revised estimates for 1953-54 and 1954-55 and preliminary estimates for 1955-56 :—

#### AUSTRALIA : BALANCE OF PAYMENTS, SUMMARY.

(£A. million.)

Particulars.	1953-54.	1954-55.	1955-56. (a)
<b>CURRENT ACCOUNT.</b>			
(Credit items +, Debit items -)			
Exports f.o.b. .. .. .	+ 811.7	+ 761.4	+ 772.7
Imports f.o.b. .. .. .	- 681.9	- 846.9	- 819.5
Trade Balance .. .. .	+ 129.8	- 85.5	- 46.8
Invisible Credits .. .. .	+ 125.3	+ 138.0	+ 146.6
Invisible Debits .. .. .	- 270.1	- 309.8	- 321.3
Invisible Balance .. .. .	- 144.8	- 171.8	- 174.7
Balance on Current Account .. .. .	- 15.0	- 257.3	- 221.5
<b>CAPITAL ACCOUNT.</b>			
(Plus sign (+) indicates net increases in assets or net decreases in liabilities and minus sign (-) indicates net decreases in assets or net increases in liabilities)			
International Reserves .. .. .	+ 9.5	- 142.4	- 73.3
Public Authority Debt Domiciled Overseas .. .. .	+ 10.1	- 2.3	- 7.9
International Monetary Fund and International Bank for Reconstruction and Development .. .. .	- 10.8	- 12.0	- 18.0
Miscellaneous Identified Transactions .. .. .	+ 6.0	- 1.3	- 5.9
Undistributed Income Accruing between Australian and Foreign Companies (Net) .. .. .	- 27.0	- 26.7	- 29.0
Foreign Banks' Holdings of Australian Currency .. .. .	+ 0.5	+ 0.5	+ 0.3
Private Capital Movements and Balancing Items .. .. .	- 3.3	- 73.1	- 87.7
Balance on Capital Account .. .. .	- 15.0	- 257.3	- 221.5

(a) Preliminary.

Australia's Balance of Payments on Current Account—Various Countries, p. 319.—Summarized estimates of Australia's regional balance of payments in 1953-54, 1954-55 and 1955-56 (preliminary estimate) are given in the following table.

**AUSTRALIA : BALANCE OF PAYMENTS ON CURRENT ACCOUNT, VARIOUS COUNTRIES AND MONETARY AREAS. (a)**

(£A. million.)

Particulars.	Gold Production.	Sterling Area.		Dollar Area.			Other Non-Sterling.		Total.
		United Kingdom.	Other.	United States of America.	Canada.	Other.	O.E.E.C.	Other. (b)	
1953-54—									
Exports f.o.b.	..	295.8	125.7	55.7	11.0	4.6	208.3	110.6	811.7
Imports f.o.b.	..	332.7	110.3	75.6	18.7	1.1	90.8	52.7	681.9
Invisibles (net)	16.7	71.0	16.8	41.6	8.3	0.2	11.6	12.4	144.8
Balance on Current Account ..	16.7	107.9	1.4	61.5	16.0	3.7	105.9	45.5	15.0
		109.3		73.8			151.4		
1954-55—									
Exports f.o.b.	..	288.6	131.8	52.7	10.5	6.1	185.7	85.7	761.4
Imports f.o.b.	..	378.7	141.6	108.1	23.8	1.2	122.3	71.2	846.9
Invisibles (net)	16.2	84.5	21.7	45.4	9.1	0.3	11.9	15.7	171.8
Balance on Current Account ..	16.2	174.6	31.5	100.8	22.4	5.5	51.5	1.2	257.3
		206.1		117.7			50.3		
1955-56 (c)—									
Exports f.o.b.	..	255.7	131.7	55.8	10.9	8.4	188.0	122.2	772.7
Imports f.o.b.	..	355.4	121.0	98.5	23.4	4.4	126.0	90.8	819.5
Invisibles (net)	15.4	67.0	26.9	43.7	11.2	1.4	13.9	26.0	174.7
Balance on Current Account ..	15.4	166.7	16.2	86.4	23.7	2.6	48.1	5.4	221.5
		182.9		107.5			53.5		

(a) For a list of the countries included in each monetary area see page 292.

(b) Includes international bodies.

(c) Preliminary.

NOTE.—Minus sign (—) denotes debit; other items are credits.

Australia's Balance of Payments with the Dollar Area, p. 322.—The following table presents revised estimates of Australia's dollar balance of payments for 1953-54 and 1954-55 and preliminary estimates for 1955-56 :—

**AUSTRALIA : BALANCE OF PAYMENTS WITH THE DOLLAR AREA.**

(United States \$ million.)

Particulars.	1953-54.	1954-55.	1955-56. (a)
<b>CURRENT ACCOUNT. . .</b>			
Merchandise Trade.			
1. Merchandise exports f.o.b. to United States of America and Canada . . .	+ 150	+ 142	+ 149
2. Merchandise imports f.o.b. from United States of America and Canada . . .	— 212	— 295	— 273
3. Trade balance with United States of America and Canada . . .	— 62	— 153	— 124
4. Trade balance with other American account countries . . .	+ 8	+ 11	+ 9
5. Trade balance with the Dollar Area . . . . .	— 54	— 142	— 115

(a) Preliminary.

**AUSTRALIA: BALANCE OF PAYMENTS WITH THE DOLLAR AREA—**  
*continued.*  
 (United States \$ million.)

Particulars.	1953-54.	1954-55.	1955-56. (a)
<b>Other Current Transactions.</b>			
6. Freight on imports .. .. .	- 22.8	- 32.5	- 41.0
7. Other transportation .. .. .	- 2.2	- 2.7	- 2.5
8. Expenditure by Australian travellers .. .. .	- 2.8	- 3.5	- 3.9
9. Expenses of Australian companies in North America .. .. .	- 3.4	- 5.5	- 0.1
10. Film remittances .. .. .	- 5.4	- 5.8	- 5.8
11. Profits and dividends remitted .. .. .	- 30.6	- 28.5	- 25.5
12. Undistributed income accruing to companies incorporated in dollar area (net) .. .. .	- 38.3	- 35.8	(b) - 38.1
13. Public authority interest payments .. .. .	- 7.6	- 7.0	- 6.3
14. Other miscellaneous debits .. .. .	- 13.0	- 16.2	- 15.0
15. Miscellaneous credits .. .. .	+ 14.9	+ 15.9	+ 18.3
16. Other items (net) .. .. .	+ 2.4	+ 17.5	+ 13.6
17. Invisible balance with the Dollar Area .. .. .	- 109	- 104	- 112
18. Balance on current account (5 + 17) .. .. .	- 163	- 246	- 227
<b>INVESTMENT ACCOUNT.</b>			
19. Increase in debt of public authorities .. .. .	- 31	- 11	+ 19
20. Undistributed income (see item 12) .. .. .	+ 38	+ 36	(b) + 38
21. Identified private capital inflow .. .. .	.. .. .	+ 52	+ ..
22. Balancing item .. .. .	+ 7	+ 32	+ 44
23. Balance on Investment Account .. .. .	+ 14	+ 109	+ 101
24. Dollar Surplus or Deficit (18 + 23) .. .. .	- 149	- 137	- 126
<b>DOLLAR FINANCING.</b>			
25. Dollar purchases from I.M.F. (net) (-) .. .. .	- 24	- 26	.. ..
26. Dollar loans from I.B.R.D. net (+) .. .. .	+ 48	+ 53	+ 40
27. Estimated dollar drawings from (+) or contributions to (-) Sterling Area Dollar Pool .. .. .	+ 97	+ 121	+ 90
28. Movement in Australian dollar balances (increase -) .. .. .	+ 28	- 11	- 4
29. Total .. .. .	+ 149	+ 137	+ 126

(a) Preliminary. (b) Provisional estimate only.

NOTE.—In current account plus sign (+) indicates credit items, and minus sign (-) indicates debit items. In investment account plus sign (+) indicates net increases in liabilities or net decreases in assets; minus sign (-) indicates net decreases in liabilities or net increases in assets.

## CHAPTER IX.—MANUFACTURING INDUSTRY.

Summary, p. 327.—The tables following give a summary of operations in manufacturing industries during 1954-55.

### FACTORIES: 1954-55, SUMMARY.

Particulars.	N.S.W.	Vic.	Q'land.	S. Aust.	W. Aust.	Tas.	Aust.
1. Factories .. .. . No.	20,837	15,861	5,284	3,750	3,727	1,597	51,056
2. Persons employed(a) .. .. .	419,810	346,648	100,293	89,565	49,314	25,452	1,031,082
3. Salaries and wages paid(b) £'000	326,615	262,750	68,300	70,373	34,738	18,864	781,940
4. Value of power, fuel, light, etc., used £'000	60,925	31,767	11,620	12,897	8,046	3,127	128,382
5. " materials used £'000	802,617	616,666	224,336	169,136	80,583	47,360	1,940,698
6. " production(c) £'000	583,127	452,223	120,061	111,028	60,956	38,114	1,365,509
7. " output £'000	1,446,669	1,100,656	356,017	293,061	149,585	88,601	3,434,589
8. " land and buildings £'000	221,519	186,324	46,187	42,133	30,230	29,603	555,996
9. " plant and machinery £'000	258,596	226,347	76,367	52,145	54,958	29,879	698,292

(a) Average over whole year; includes working proprietors. (b) Excludes amounts drawn by working proprietors. (c) Value of production equals figures in line 7 less totals of figures in lines 4 and 5.

Value of Production in Classes of Industry, p. 350.—The following table shows, for the year 1954-55 the value of production in Australia for the various classes of factories.

**FACTORIES : VALUE OF PRODUCTION, AUSTRALIA, 1954-55.**  
(£.)

Class of Industry.	Value of Production, 1954-55.
I. Treatment of Non-metalliferous Mine and Quarry Products ..	31,503,782
II. Bricks, Pottery, Glass, etc .. .. .	30,306,447
III. Chemicals, Dyes, Explosives, Paints, Oils and Grease ..	98,125,407
IV. Industrial Metals, Machines, Implements and Conveyances ..	532,969,186
V. Precious Metals, Jewellery and Plate .. .. .	6,856,949
VI. Textiles and Textile Goods .. .. .	78,394,254
VII. Skins and Leather .. .. .	16,917,197
VIII. Clothing .. .. .	98,416,716
IX. Food, Drink and Tobacco .. .. .	186,538,758
X. Woodworking and Basketware .. .. .	74,236,555
XI. Furniture, Bedding, etc .. .. .	23,656,847
XII. Paper, Stationery, Printing, Bookbinding, etc. ..	90,540,122
XIII. Rubber .. .. .	22,725,165
XIV. Musical Instruments .. .. .	2,065,016
XV. Miscellaneous Products .. .. .	25,585,094
XVI. Heat, Light and Power .. .. .	46,671,155
Total .. .. .	1,365,508,650

## CHAPTER XII.—EDUCATION.

### § 2. Government Schools.

**Number of Schools, Teachers and Pupils, p. 462.**—The following table gives a summary of particulars relating to government schools in 1954. It excludes senior technical colleges.

State or Territory.	Schools open at end of year.	Teachers Employed (Excluding Teachers in Training).	Teachers in Training.	Net Enrolment.
New South Wales(a) .. .. .	2,557	15,521	2,875	501,923
Victoria .. .. .	2,003	10,924	2,413	313,963
Queensland .. .. .	1,555	6,407	1,608	191,648
South Australia .. .. .	679	4,326	480	122,994
Western Australia .. .. .	483	3,051	752	(b) 88,748
Tasmania .. .. .	321	2,048	312	54,333
Northern Territory(c) .. .. .	9	68	..	(b) 1,676
Australia .. .. .	7,607	42,345	8,440	1,275,285

(a) Includes Australian Capital Territory.  
ended 30th June, 1955.

(b) Average weekly enrolment.

(c) Year

**Average Enrolment and Attendance of Pupils, p. 462.**—The following table gives a summary of average enrolment and attendance of pupils in government schools in 1954. It excludes senior technical colleges.

State or Territory.	Average Weekly Enrolment.	Average Daily Attendance.	Percentage of Attendance to Enrolment.
New South Wales(a) .. .. .	467,441	415,860	88.96
Victoria .. .. .	299,070	272,548	90.95
Queensland .. .. .	184,210	161,835	87.85
South Australia .. .. .	117,245	109,395	93.30
Western Australia .. .. .	88,748	82,677	93.16
Tasmania .. .. .	51,825	47,169	91.02
Northern Territory(b) .. .. .	1,676	1,520	90.69
Australia .. .. .	1,110,315	1,091,004	90.10

(a) Includes Australian Capital Territory.

(b) Year ended 30th June, 1955.

Expenditure on Government Schools, pp. 463-4.—The following table gives a summary of particulars of net expenditure on maintenance of government schools, and on government school buildings in 1954. It excludes senior technical colleges.

State or Territory.	Net Expenditure on Maintenance.	Net Expenditure on Buildings.	Total net Expenditure on Government Schools.
	£	£	£
New South Wales(a) .. .. .	21,486,088	5,493,800	26,979,888
Victoria(b) .. .. .	14,446,872	4,667,265	19,114,137
Queensland .. .. .	6,978,485	1,286,620	8,265,105
South Australia .. .. .	4,443,816	1,146,487	5,590,303
Western Australia .. .. .	5,143,030	1,458,278	6,601,308
Tasmania .. .. .	(c)	(c)	(c)
Northern Territory .. .. .	125,062	15,608	140,670
 Australia .. .. .	 (c)	 (c)	 (c)

(a) Gross figures, receipts not being available. Includes Australian Capital Territory. (b) Excludes junior technical schools. (c) Not yet available.

### CHAPTER XIII.—PUBLIC JUSTICE.

#### § 2. Lower (Magistrates') Courts, § 3. Higher (Judges') Courts,

#### § 4. Civil Courts. § 5. Police and Prisons.

Convictions, Bankruptcies, Police, Prisons, pp. 502, 503, 505, 510, 512-3.—The following table is a summary of the more important statistics of this chapter for the latest year for which information is available.

#### PUBLIC JUSTICE: SUMMARY, 1954.

Particulars.	N.S.W.	Vic.	Qld. (a)	S.A.	W.A.	Tas.	N.T. (a)	A.C.T.	Aust.
Convictions for serious crime, magistrates' courts .. No.	17,085	7,471	3,546	1,867	4,241	898	177	231	35,516
Convictions for drunken- ness .. No.	72,541	19,955	23,947	4,765	5,809	798	474	240	128,529
Convictions at higher courts—									
Offences against the person .. No.	(a) 490	266	149	108	71	64	24	11	1,185
Offences against pro- perty .. No.	(a) 1,095	594	227	174	135	166	16	14	2,421
Other offences .. No.	(a) 46	52	6	30	10	14	15	1	174
 Total .. ..	 (a) 1,631	 912	 382	 312	 216	 244	 55	 26	 3,775
Bankruptcies(a) .. No.	360	200	155	111	100	49	2	(b)	977
Liabilities .. £	1,162,001	764,083	461,874	338,481	315,157	121,108	3,638	(b)	3,166,432
Assets .. £	789,226	365,151	338,257	241,597	237,222	78,851	7,413	(b)	2,057,717
Police .. No.	4,610	3,021	2,355	(a) 1,086	(a) 964	(a) 471	62	60	12,629
Prisons .. No.	(a) 16	11	7	16	(a) 19	(a) 2	2	..	73
Prisoners in Gaol .. No.	(a) 2,238	1,186	587	377	386	163	50	..	4,958

(a) Year 1954-55.

(b) Included in New South Wales.

**CHAPTER XIV.—PUBLIC HEALTH AND RELATED INSTITUTIONS.****A. PUBLIC HEALTH.****§ 4. Control of Infectious and Contagious Diseases, page 531.**

**DISEASES NOTIFIABLE IN EACH STATE AND TERRITORY OF AUSTRALIA AND NUMBER OF CASES REPORTED DURING THE YEAR 1955.**

Disease.	N.S.W.	Vic.	Qld.	S.A.	W.A.	Tas.	A.C.T.	N.T.	Total.
Acute rheumatism ..	180	135	178	16	39	*	..	5	553
Amoebiasis ..	12	3	5	1	9	1	..	2	21
Ankylostomiasis ..	23	265	1	1	..	..	..	25	307
Brucellosis ..	5	23	4	3	5	1	..	..	41
Chorea (St. Vitus Dance) ..	24	16	1	1	4	..	..	..	46
Diarrhoea, infantile ..	234	721	222	7	30	3	31	8	1,256
Diphtheria ..	154	172	68	26	480	3	..	8	911
Dysentery, bacillary ..	137	206	63	127	12	3	..	2	550
Erythema Nodosum ..	21	2	..	6	..	..	..	..	29
Encephalitis ..	26	54	4	29	..	2	1	..	116
Hydatid disease ..	11	..	..	1	16	..	..	..	28
Infective Hepatitis ..	2,501	3,946	..	502	254	27	17	17	7,264
Lead poisoning ..	..	..	24	3	3	..	..	..	30
Leprosy ..	..	2	6	..	29	..	..	2	39
Leptospirosis ..	2	..	191	..	..	..	..	..	193
Malaria ..	117	9	..	..	5	..	..	56	170
Meningococcal Infection ..	117	113	53	10	13	18	..	1	325
Ophthalmia ..	1	..	..	..	35	..	..	..	35
Ornithosis ..	1	2	..	..	..	..	..	..	3
Paratyphoid fever ..	5	2	..	..	4	..	..	..	11
Pollomyelitis ..	234	246	190	182	33	7	1	4	897
Puerperal fever ..	11	4	48	1	5	1	..	..	70
Rubella ..	..	2,464	14	179	227	..	2	..	2,887
Salmonella infection ..	..	..	..	..	58	..	..	6	68
Scarlet fever ..	622	1,048	716	289	68	14	1	..	2,758
Tetanus ..	..	20	25	5	9	..	..	2	61
Trachoma ..	..	2	..	..	1,470	..	..	..	1,472
Tuberculosis ..	1,924	1,039	748	327	440	163	2	46	4,689
Typhoid fever ..	14	14	10	1	13	2	..	5	59
Typhus—flea mite or tick borne ..	4	..	55	1	22	..	..	..	82

\* Not notifiable.

NOTE.—No cases of Anthrax, Bilharziasis, Cholera, Dengue, Filariasis, Homologous Serum Jaundice, Plague, Smallpox, Trichinosis, Epidemic Typhus or Yellow Fever were notified.

**CHAPTER XV.—WELFARE SERVICES.****A. COMMONWEALTH SOCIAL SERVICE BENEFITS.****§ 2. Commonwealth Expenditure on Social and Health Services.**

States, p. 545.—The following table shows particulars of payments of social and health services in each State during 1955–56.

**COMMONWEALTH EXPENDITURE ON SOCIAL AND HEALTH SERVICES, 1955–56.**  
(£'000.)

Service.	N.S.W.	Vic.	Qld.	S.A.	W.A.	Tas.	N.T.	A.C.T.	Over-seas.	Total.
Age and Invalid Pensions ..	42,406	24,836	15,178	8,859	6,681	3,450	33	110	72	101,625
Child Endowment ..	21,971	16,165	9,383	5,498	4,684	2,285	150	239	6	60,381
Commonwealth Rehabilitation Service ..	119	165	56	88	61	16	..	..	..	505
Funeral Benefits ..	131	83	44	29	23	9	..	..	..	319
Maternity Allowances ..	1,207	935	526	304	276	137	8	15	2	3,410
Unemployment Benefits ..	215	70	288	11	77	10	..	1	..	672
Sickness Benefits ..	641	350	244	134	94	51	2	3	..	1,519
Special Benefits (a) ..	125	127	69	20	16	14	..	1	..	372
Widows' Pensions ..	3,160	1,799	1,328	609	531	268	3	12	13	7,723
National Health Services—										
Hospital Benefits ..	3,979	2,293	1,384	748	779	312	37	21	..	9,553
Medical Benefits ..	2,449	1,299	528	491	533	113	..	..	..	5,413
Medical Benefits for Pensioners ..	1,346	668	347	254	198	55	..	6	..	2,874
Nutrition of Children ..	1,040	539	307	183	136	185	1	14	..	2,405
Pharmaceutical Benefits ..	3,881	2,572	1,073	747	593	171	..	1,343	..	10,380
Pharmaceutical Benefits for Pensioners ..	709	314	223	137	96	29	..	..	..	1,508
Miscellaneous ..	46	33	73	8	11	19	7	13	..	510
Tuberculosis Campaign (b) ..	2,135	1,521	852	446	509	220	..	14	..	5,697
Total ..	85,560	53,769	31,903	18,566	15,298	7,344	241	2,092	93	214,866

(a) Includes payments to migrants.

(b) Includes allowances and reimbursements to the States.



### § 3. Age and Invalid Pensions, § 4. Maternity Allowances, § 5. Child Endowment, § 6. Widows' Pensions, § 7. Unemployment and Sickness Benefits.

General, pp. 549-558.—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 1955-56 :—

#### SOCIAL SERVICES : SUMMARY, 1955-56.

Particulars.	N.S.W.	Vic.	Qld.	S.A.	W.A.	Tas.	N.T.	A.C.T.	Total.
<b>Age Pensioners—</b>									
Males .. ..	65,359	33,016	25,543	13,067	11,110	4,585	71	203	152,954
Females .. ..	115,184	79,633	40,656	28,716	19,134	9,489	67	374	293,253
Persons .. ..	180,543	112,649	66,199	41,783	30,244	14,074	138	577	446,207
<b>Invalid Pensioners—</b>									
Males .. ..	23,755	10,036	6,669	2,439	2,542	1,275	21	37	46,774
Females .. ..	16,764	8,077	5,496	2,421	1,883	1,321	7	32	36,001
Persons .. ..	40,519	18,113	12,165	4,860	4,425	2,596	28	69	82,775
<b>Maternity Allowances—</b>									
Claims paid ..	75,591	58,385	32,764	19,036	17,180	8,328	510	961	212,865
<b>Child Endowment—</b>									
Family claims in force	506,512	361,848	194,028	122,425	100,047	47,552	2,419	4,847	1,339,807
Endowed children ..	104,990	760,667	437,588	261,074	220,792	108,285	5,311	10,643	2,854,524
<b>Widows' Pensions—</b>									
Pensions in force ..	17,357	10,246	7,293	3,505	3,015	1,419	25	70	42,930
Class "A" pensions in force(d) .. ..	8,260	4,302	3,493	1,548	1,143	718	10	37	19,511
<b>Unemployment, Sickness and Special Benefits—</b>									
Persons on benefit at end of year—									
<b>Unemployment Benefit—</b>									
Males .. ..	1,585	1,134	897	210	1,499	63	..	7	5,395
Females .. ..	728	278	373	109	107	8	..	5	1,608
Persons .. ..	2,313	1,412	1,270	319	1,606	71	..	12	7,003
<b>Sickness Benefit—</b>									
Males .. ..	2,298	1,234	828	498	328	202	4	9	5,401
Females .. ..	806	440	320	153	82	39	2	1	1,843
Persons .. ..	3,104	1,674	1,148	651	410	241	6	10	7,244
<b>Special Benefit—(e)</b>									
Males .. ..	197	71	89	37	23	13	1	1	432
Females .. ..	482	458	326	88	76	82	..	3	1,515
Persons .. ..	679	529	415	125	99	95	1	4	1,947
<b>Total—(e)</b>									
Males .. ..	4,080	2,439	1,814	745	1,850	278	5	17	11,228
Females .. ..	2,016	1,176	1,019	350	265	129	2	9	4,966
Persons .. ..	6,096	3,615	2,833	1,095	2,115	407	7	26	16,194
<b>Admissions to Benefit—</b>									
<b>Unemployment Benefit—</b>									
Males .. ..	8,061	3,169	13,115	750	4,781	358	3	65	30,302
Females .. ..	2,578	974	2,718	311	386	96	6	13	7,082
Persons .. ..	10,639	4,143	15,833	1,061	5,167	454	9	78	37,384
<b>Sickness Benefit—</b>									
Males .. ..	16,866	9,261	7,907	4,164	3,486	1,675	64	79	43,502
Females .. ..	5,500	3,049	2,067	872	695	275	9	16	12,483
Persons .. ..	22,366	12,310	9,974	5,036	4,181	1,950	73	95	55,985
<b>Special Benefit—(e)</b>									
Males .. ..	811	371	603	203	137	63	2	4	2,194
Females .. ..	424	648	202	88	65	52	..	6	1,485
Persons .. ..	1,235	1,019	805	291	202	115	2	10	3,679
<b>Total—(e)</b>									
Males .. ..	25,738	12,801	21,625	5,117	8,404	2,096	69	148	75,998
Females .. ..	8,502	4,671	4,987	1,271	1,146	423	15	35	21,050
Persons .. ..	34,240	17,472	26,612	6,388	9,550	2,519	84	183	97,048
<b>Benefits paid—</b>									
Unemployment ..	£ 215,672	69,664	287,871	10,961	76,888	9,963	73	728	671,820
Sickness .. ..	£ 641,550	350,172	243,952	134,243	93,854	50,901	1,487	2,914	1,519,073
Special(f) .. ..	£ 124,747	127,437	69,178	20,086	16,291	13,710	124	647	372,220
<b>Total (f)</b>	£ 981,969	547,273	601,001	165,290	187,033	74,574	1,684	4,289	2,563,113

(a) Includes 110 claims paid overseas. (b) Includes 129 oversea claims in force. (c) Includes 263 children overseas. (d) Pensions paid to widows who maintain at least one child under 16 years of age. (e) Excludes migrants. (f) Includes payments to migrants.

**B. OTHER SERVICES.**

1. Benevolent Homes, p. 562.—Expenditure under the Aged Persons Homes Act 1954 was £436,236 in 1954-55 and £397,994 in 1955-56. Estimated expenditure for 1956-57 is £700,000.

**CHAPTER XVI.—POPULATION.****§ 3. Growth and Distribution of Population.**

Growth of Population, pp. 569-70.—The following table shows the estimated population of each State and Territory at 31st December, 1955 and 30th June, 1956 :—

**ESTIMATED POPULATION.**

(EXCLUDING FULL-BLOOD ABORIGINALS.)

Particulars.	N.S.W.	Vic.	Qld.	S.A.	W.A.	Tas.	N.T.	A.C.T.	Aust.
<b>31ST DECEMBER, 1955.</b>									
Males	1,770,966	1,288,058	692,920	423,413	345,487	165,994	10,345	17,746	4,714,029
Females	1,754,957	1,266,963	657,764	411,222	325,263	159,807	6,662	15,724	4,598,362
Persons	3,525,923	2,555,021	1,350,684	834,635	670,750	325,801	17,007	33,470	9,312,391
<b>30TH JUNE, 1956.</b>									
Males	1,785,243	1,314,537	703,925	431,209	348,967	164,020	10,949	18,717	4,777,567
Females	1,768,189	1,290,551	666,772	417,317	328,422	155,628	7,348	15,764	4,649,991
Persons	3,553,432	2,605,088	1,370,697	848,526	677,389	319,648	18,297	34,481	9,427,558

**§ 4. Mean Population.**

Mean Population, p. 577.—Mean population estimates for the calendar year ended 31st December, 1955 and for the financial year ended 30th June, 1956 are as follows :—

**MEAN POPULATION.**

(EXCLUDING FULL-BLOOD ABORIGINALS.)

Period.	N.S.W.	Vic.	Qld.	S.A.	W.A.	Tas.	N.T.	A.C.T.	Aust.
Year ended—									
31st Dec., 1955	3,492,385	2,526,275	1,338,995	820,143	658,747	316,153	17,040	32,412	9,202,150
30th June, 1956	3,524,379	2,564,849	1,352,629	834,465	669,040	319,192	17,474	33,642	9,315,670

### § 5. Elements of Increase.

Natural Increase, p. 578, Increase by Net Migration, p. 580 and Total Increase, p. 582.—The following table shows particulars of natural increase, increase by recorded net migration and total increase during the year 1955 :—

#### POPULATION : NATURAL INCREASE, INCREASE BY RECORDED NET MIGRATION AND TOTAL INCREASE, 1955.

(EXCLUDING FULL-BLOOD ABORIGINALS.)

State or Territory.	Natural Increase (Excess of Births over Deaths).	Recorded Net Interstate and Oversea Migration.	Total Increase.
New South Wales .. .. .	41 854	21,756	63,610
Victoria .. .. .	33,809	40,335	74,144
Queensland .. .. .	21,045	6,887	27,932
South Australia .. .. .	10,958	15,434	26,392
Western Australia .. .. .	11,244	10,091	21,335
Tasmania .. .. .	5,600	690	6,290
Northern Territory .. .. .	396	471	867
Australian Capital Territory .. .. .	735	1,591	2,326
<b>Australia .. .. .</b>	<b>125,641</b>	<b>97,255</b>	<b>222,896</b>

### § 7. General Characteristics.

Age Distribution, p. 587.—The following table shows the estimated population of Australia at 30th June, 1955 in five-year age groups.

#### POPULATION : ESTIMATED AGE DISTRIBUTION, AUSTRALIA, 30th JUNE, 1955.

(EXCLUDING FULL-BLOOD ABORIGINALS.)

Age Group (Years).	Males.	Females.	Persons.	Age Group (Years).	Males.	Females.	Persons.
0-4 ..	502,532	481,737	984,269	40-44 ..	332,475	315,711	648,186
5-9 ..	481,642	459,238	940,880	45-49 ..	293,598	268,514	562,112
10-14 ..	377,656	362,496	740,152	50-54 ..	247,591	230,330	477,921
15-19 ..	314,866	299,017	613,883	55-59 ..	203,631	212,901	416,532
20-24 ..	309,014	284,839	593,853	60-64 ..	176,082	198,343	374,425
25-29 ..	370,135	333,871	704,006	65 and over	344,941	425,928	770,869
30-34 ..	374,710	351,689	726,399				
35-39 ..	328,178	319,026	647,204	<b>Total ..</b>	<b>4,657,051</b>	<b>4,543,640</b>	<b>9,200,691</b>

### § 8. Dwellings.

Occupied Private Dwellings.—*Weekly Rent.* (a) *All 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).

# TENANTED PRIVATE DWELLINGS CLASSIFIED ACCORDING TO WEEKLY RENT (UNFURNISHED), AUSTRALIA, 1947 AND 1954.

(EXCLUDING DWELLINGS OCCUPIED SOLELY BY FULL-BLOOD ABORIGINALS.)

Weekly Rent (Unfurnished).	Number of Occupied Private Dwellings.								
	Census, 30th June, 1947.				Census, 30th June, 1954.(a)				
	Private House. (b)	Share of Private House.(c)	Flat.	Total Private Dwellings. (d)	Private House. (b)	Share of Private House.(c)	Flat.	Other.	Total Private Dwellings.
METROPOLITAN URBAN.									
Under 5s. ..	303	77	20	456	206	64	29	70	369
5s. and under 10s. ..	2,992	1,157	110	4,664	1,290	238	51	97	1,676
10s. " " 15s. ..	22,678	4,551	626	28,903	8,292	1,231	171	403	10,097
15s. " " 20s. ..	44,526	4,984	1,847	53,095	16,680	1,486	461	556	19,183
20s. " " 25s. ..	68,155	7,272	5,342	82,739	33,203	3,634	1,582	1,191	39,610
25s. " " 30s. ..	67,162	6,308	8,520	83,418	36,380	3,037	3,252	1,144	43,813
30s. " " 35s. ..	48,973	4,079	13,045	67,933	37,612	4,573	6,332	1,541	50,058
35s. " " 40s. ..	23,343	2,201	12,468	38,456	25,523	2,298	8,371	837	37,029
40s. " " 50s. ..	15,745	1,636	14,242	31,958	34,047	4,517	16,250	1,470	56,284
50s. " " 60s. ..	4,778	467	5,489	10,854	14,278	2,327	10,642	855	28,102
60s. " " 70s. ..	1,883	151	2,226	4,300	9,327	1,523	6,294	584	17,728
70s. " " 80s. ..	702	45	1,047	1,815	4,287	602	3,163	286	8,338
80s. " " 90s. ..	446	11	621	1,084	2,679	421	2,199	167	5,466
90s. " " 100s. ..	206	9	271	487	940	116	1,283	66	2,405
100s. and over ..	440	10	679	1,129	2,877	282	3,398	165	6,722
Not Stated ..	26,642	21,918	18,336	90,229	36,062	23,900	22,259	30,844	113,065
Total Private Dwellings..	328,974	55,776	84,889	501,529	263,683	50,249	85,737	40,276	439,945
Average Weekly Rent (Unfurnished) per Private Dwelling	25s. 9d.	23s. 6d.	37s. 9d.	27s. 5d.	34s. 9d.	35s. 8d.	51s. 10d.	37s. 4d.	38s. 3d.

## OTHER URBAN.

Under 5s. ..	775	85	1	876	369	33	13	25	440
5s. and under 10s. ..	3,404	714	48	4,296	2,025	190	18	61	2,294
10s. " " 15s. ..	13,840	1,670	249	15,940	6,946	596	109	136	7,787
15s. " " 20s. ..	18,751	1,385	584	20,876	9,305	544	226	141	10,216
20s. " " 25s. ..	24,555	1,894	1,651	28,365	15,650	1,159	594	282	17,685
25s. " " 30s. ..	18,296	1,305	1,331	21,092	14,109	896	914	294	16,213
30s. " " 35s. ..	10,582	784	1,225	12,659	15,745	1,360	1,346	316	18,767
35s. " " 40s. ..	3,312	213	685	4,237	8,447	501	1,001	214	10,163
40s. " " 50s. ..	2,148	131	641	2,940	13,140	1,181	1,834	321	16,476
50s. " " 60s. ..	477	26	183	691	6,649	578	1,181	192	8,600
60s. " " 70s. ..	155	8	43	206	4,462	287	659	97	5,505
70s. " " 80s. ..	56	4	10	70	1,938	75	391	37	2,441
80s. " " 90s. ..	29	..	9	38	824	56	166	13	1,059
90s. " " 100s. ..	8	..	2	10	264	19	69	4	356
100s. and over ..	12	..	..	12	551	28	123	12	714
Not Stated ..	12,627	6,229	4,050	25,473	22,190	6,865	7,603	3,903	40,561
Total Private Dwellings..	109,027	14,448	10,712	137,781	122,614	14,368	16,247	6,048	159,277
Average Weekly Rent (Unfurnished) per Private Dwelling	21s. 5d.	19s. 3d.	27s. 9d.	21s. 8d.	31s. 11d.	31s. 1d.	41s. 10d.	32s. 6d.	32s. 8d.

(a) The figures shown for 1954 exclude dwellings occupied by "Tenants (Governmental Housing)" in each State.  
 (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) Includes "other private dwellings" not shown in the table.

**TENANTED PRIVATE DWELLINGS CLASSIFIED ACCORDING TO WEEKLY RENT (UNFURNISHED). AUSTRALIA, 1947 AND 1954—continued.**

Number of Occupied Private Dwellings.									
Weekly Rent (Unfurnished).	Census, 30th June, 1947.				Census, 30th June, 1954.(a)				
	Private House. (b)	Share of Private House.(c)	Flat.	Total Private Dwellings. (d)	Private House. (b)	Share of Private House.(c)	Flat.	Other.	Total Private Dwellings.
<b>RURAL.</b>									
Under 5s. ..	5,758	137	4	5,915	1,266	29	8	7	1,310
5s. and under 10s. ..	19,212	758	40	20,063	6,437	132	15	9	6,593
10s. " " 15s. ..	30,873	1,276	199	32,403	10,356	240	36	49	10,681
15s. " " 20s. ..	21,598	877	288	22,816	7,920	177	54	19	8,170
20s. " " 25s. ..	19,506	957	428	20,951	11,644	282	129	81	12,136
25s. " " 30s. ..	9,469	444	301	10,253	5,850	147	88	27	6,112
30s. " " 35s. ..	5,075	247	213	5,557	5,622	190	95	36	5,943
35s. " " 40s. ..	1,315	57	76	1,450	1,670	49	42	11	1,772
40s. " " 50s. ..	1,109	49	89	1,249	3,681	129	96	24	3,930
50s. " " 60s. ..	318	7	26	351	1,561	58	51	14	1,684
60s. " " 70s. ..	134	3	9	146	981	20	27	5	1,033
70s. " " 80s. ..	28	2	2	32	359	8	7	1	375
80s. " " 90s. ..	21	..	1	22	248	4	5	2	259
90s. " " 100s. ..	2	..	..	2	75	2	..	..	77
100s. and over ..	14	..	..	14	206	6	2	..	214
Not Stated ..	46,140	3,987	1,431	52,214	42,003	1,991	745	340	45,079
Total Private Dwellings ..	160,572	8,801	3,107	173,440	99,879	3,464	1,400	625	105,368
Average Weekly Rent (Unfurnished) per Private Dwelling	15s. 5d.	15s. 11d.	23s. 4d.	15s. 7d.	22s. 1d.	23s. 4d.	30s. 11d.	25s. 1d.	22s. 2d.
<b>TOTAL, AUSTRALIA.</b>									
Under 5s. ..	6,836	299	25	7,247	1,841	126	50	102	2,119
5s. and under 10s. ..	25,608	2,629	198	29,023	9,752	560	84	167	10,563
10s. " " 15s. ..	67,391	7,497	1,074	77,246	25,594	2,067	316	588	28,565
15s. " " 20s. ..	84,875	7,246	2,719	96,787	33,905	2,207	741	716	37,569
20s. " " 25s. ..	112,216	10,123	7,421	132,055	60,497	5,075	2,305	1,554	69,431
25s. " " 30s. ..	94,927	8,057	10,152	114,763	56,339	4,080	4,254	1,465	66,138
30s. " " 35s. ..	64,630	6,010	14,483	86,149	58,979	6,123	7,773	1,062	74,768
35s. " " 40s. ..	27,970	2,471	13,229	44,143	35,640	5,287	9,484	1,814	48,964
40s. " " 50s. ..	19,002	1,816	14,972	36,147	50,868	5,827	18,180	1,061	76,690
50s. " " 60s. ..	5,573	500	5,698	11,896	22,488	2,963	11,874	686	38,386
60s. " " 70s. ..	2,172	162	2,278	4,661	14,770	1,830	6,980	686	24,266
70s. " " 80s. ..	786	51	1,059	1,917	6,584	685	3,561	324	11,154
80s. " " 90s. ..	496	11	631	1,144	3,751	481	2,370	182	6,784
90s. " " 100s. ..	216	9	273	499	1,279	137	1,353	70	2,838
100s. and over ..	466	10	679	1,155	3,634	316	3,523	177	7,650
Not Stated ..	85,409	32,134	23,817	167,916	100,235	32,756	30,607	35,087	198,705
Total Private Dwellings ..	598,573	79,025	98,708	812,750	486,176	68,081	103,384	46,949	704,590
Average Weekly Rent (Unfurnished) per Private Dwelling	22s. 8d.	22s. 0d.	36s. 7d.	24s. 2d.	32s. 2d.	34s. 2d.	50s. 6d.	36s. 2d.	35s. 0d.

(a) The figures shown for 1954 exclude dwellings occupied by "Tenants (Governmental Housing)" in each State.  
 (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) Includes "other private dwellings" not shown in the table.

(b) *Private Houses of Three to Six Rooms.* The following table shows, for metropolitan urban, other urban and rural areas, the average weekly rent per room of tenanted private houses of three to six rooms with walls of wood, brick or stone at the Censuses of 30th June, 1947 and 30th June, 1954.

**AVERAGE WEEKLY RENT (a) PER ROOM OF TENANTED PRIVATE HOUSES  
THREE TO SIX ROOMS, WITH WALLS OF WOOD, BRICK OR STONE  
AUSTRALIA, 1947 AND 1954.**

(EXCLUDING DWELLINGS OCCUPIED SOLELY BY FULL-BLOOD ABORIGINALS.)

Average Weekly Rent per Room.											
Particulars.	Census, 30th June, 1947.					Census, 30th June, 1954.					Increase. 1947-54. (Aus- tralia.)
	Urban.		Rural.	Total, Aus- tralia.	Urban.		Rural.	Total, Aus- tralia.			
	Metro- politan.	Other.			Metro- politan.	Other.					
Private Houses (a) with Walls of—	s. d.	s. d.	s. d.	s. d.	s. d.	s. d.	s. d.	s. d.	s. d.	s. d.	
Wood—											
3 rooms .. ..	5 1	5 1	3 10	4 7	7 3	7 11	5 10	7 1	2 6		
4 " .. ..	5 0	4 7	3 5	4 4	6 9	7 0	4 10	6 4	2 0		
5 " .. ..	4 9	4 3	3 3	4 2	6 8	6 4	4 6	6 1	1 11		
6 " .. ..	4 5	3 10	2 11	3 10	5 10	5 5	3 11	5 3	1 5		
3 to 6 rooms ..	4 9	4 4	3 3	4 2	6 6	6 3	4 6	5 11	1 9		
Brick or Stone—											
3 rooms .. ..	5 7	5 7	4 5	5 6	8 3	9 4	6 8	8 3	2 9		
4 " .. ..	5 9	5 0	3 8	5 7	7 10	7 2	5 1	7 8	2 1		
5 " .. ..	5 6	4 9	3 8	5 3	7 2	6 8	4 9	7 0	1 9		
6 " .. ..	5 4	4 6	3 6	5 1	6 9	6 1	4 3	6 6	1 5		
3 to 6 rooms ..	5 6	4 10	3 9	5 4	7 3	6 8	4 9	7 1	1 9		
Wood, Brick or Stone—											
3 rooms .. ..	5 5	5 3	3 11	5 1	7 11	8 4	6 0	7 9	2 8		
4 " .. ..	5 6	4 8	3 6	5 0	7 6	7 1	4 11	7 1	2 1		
5 " .. ..	5 3	4 4	3 4	4 9	7 0	6 5	4 6	6 7	1 10		
6 " .. ..	5 0	4 1	3 1	4 6	6 5	5 7	4 0	5 11	1 5		
3 to 6 rooms ..	5 3	4 5	3 4	4 9	7 0	6 5	4 7	6 7	1 10		

(a) Rents relate to tenanted private houses (one family) in 1947 and to all tenanted private houses, excluding those occupied by "Tenants (Governmental Housing)" in 1954.

**Date of Building.**—The numbers of occupied private dwellings in Australia at the Census of 30th June, 1954, classified according to date of building, were as follows:—Built before 30th June, 1947, 1,758,448; 1st July–31st December, 1947, 19,742; 1948, 60,360; 1949, 63,897; 1950, 78,965; 1951, 85,852; 1952, 91,712; 1953, 88,467; 1st January–30th June, 1954, 44,725; built after 30th June, 1947 but particular year not stated, 19,641; not stated, 31,612; total, 2,343,421.

## § 9. Oversea Migration.

**Classes of Arrivals and Departures, p. 608.**—Arrivals and departures during 1955 were:—Permanent new arrivals, 130,795; Australian residents returning from abroad, 52,877; temporary visitors arriving, 53,565; total arrivals, 237,237; Australian residents departing permanently, 35,478; Australian residents departing temporarily, 52,180; temporary visitors departing, 52,324; total departures, 139,982.

## § 11. Citizenship and Naturalization.

**Certificates Granted, p. 620.**—The number of certificates granted under the Nationality and Citizenship Act 1948–1955 during the year 1955 was 17,160. Former nationalities of the recipients were: Polish, 3,229; Hungarian, 2,300; Italian, 1,749; Czechoslovak, 1,583; Latvian, 1,288; Yugoslav, 1,172; other nationalities, 5,839.

## § 12. Population of Territories, p. 621.

The population of the external Territories of Australia at 30th June, 1955 was as follows:—Norfolk Island, 880; Papua, 6,794 (non-indigenous); New Guinea, 12,545 (non-indigenous) and Nauru, 1,741 (non-indigenous).

## CHAPTER XVII.—VITAL STATISTICS.

## § 1. Marriages, § 2. Fertility and Reproduction, and § 3. Mortality.

Numbers and Rates, pp. 624-5, 633-4, 644-5 and 649.—The following table shows totals and rates for marriages, live births, deaths and infant deaths for 1955 :—

## MARRIAGES, BIRTHS, DEATHS AND INFANT DEATHS, 1955.

Particulars.	N.S.W.	Vic.	Qld.	S.A.	W.A.	Tas.	N.T.	A.C.T.	Aust.
Marriages .. { Number	27,645	20,056	10,098	6,226	5,145	2,600	151	251	72,172
Rate(a)	7.92	7.94	7.54	7.59	7.81	8.22	8.86	7.74	7.84
Live Births .. { Number	74,407	56,336	32,352	18,494	16,623	8,089	515	861	207,677
Rate(a)	21.31	22.30	24.16	22.55	25.23	25.59	30.22	26.56	22.57
Deaths .. { Number	32,553	22,527	11,307	7,536	5,379	2,489	119	126	82,036
Rate(a)	9.32	8.92	8.44	9.19	8.17	7.87	6.98	3.89	8.91
Infant Deaths.. { Number	1,850	1,035	656	431	373	189	26	12	4,572
Rate(b)	24.86	18.37	20.28	23.30	22.44	23.37	50.49	13.94	22.01

(a) Number per 1,000 of mean population. (b) Number of deaths of children aged under one year per 1,000 live births registered.

## § 1. Marriages.

Age and Conjugal Condition at Marriage, p. 626.—A summary of the previous conjugal condition of bridegrooms and brides in 1955 in relation to age at marriage is as follows :—

## AGE AND CONJUGAL CONDITION OF BRIDEGROOMS AND BRIDES : AUSTRALIA, 1955.

Age at Marriage (Years).	Bridegrooms.				Brides.			
	Bachelors.	Widowers.	Divorced.	Total.	Spinsters.	Widows.	Divorced.	Total.
Under 20 ..	2,643	..	..	2,643	16,689	4	10	16,703
20-24 ..	29,779	6	43	29,828	31,663	66	304	32,033
25-29 ..	20,135	85	543	20,763	9,150	223	1,025	10,398
30-34 ..	6,541	168	990	7,699	3,183	350	1,227	4,760
35-39 ..	2,443	219	566	3,528	1,272	412	956	2,640
40-44 ..	1,331	320	834	2,485	772	493	759	2,030
45-49 ..	769	392	555	1,717	450	496	387	1,333
50-54 ..	357	418	368	1,143	240	408	230	878
55-59 ..	220	423	185	828	122	366	88	576
60-64 ..	93	450	92	635	93	298	43	434
65 and over ..	96	735	72	903	73	294	20	387
Total ..	64,407	3,216	4,549	72,172	63,713	3,410	5,049	72,172

In 1955 the proportional distribution (per cent.) of bridegrooms and brides according to previous conjugal condition was :—

Bridegrooms : Bachelors, 89.24; Widowers, 4.46; Divorced .6.30.

Brides : Spinsters, 88.28; Widows, 4.72; Divorced, 7.00.

The average age in 1955 of bridegrooms was 28.68 years and of brides 25.42 years.

Celebration of Marriages, p. 632.—The number of marriages in 1955 celebrated by ministers of religion in the various denominations or by civil officers was as follows.

## MARRIAGES IN EACH DENOMINATION, 1955.

Denomination.	N.S.W.	Vic.	Qld.	S.A.	W.A.	Tas.	N.T.	A.C.T.	Australia.	
									No.	Proportion of Total.
										%
Church of England	9,622	5,269	2,728	1,273	1,523	929	26	89	21,459	29.73
Roman Catholic	6,812	4,843	2,571	1,051	1,142	492	33	84	17,028	23.59
Presbyterian	3,995	3,645	1,924	297	375	143	8	16	9,593	13.17
Methodist	2,723	2,494	1,492	1,615	599	429	26	9	9,387	13.01
Baptist	366	324	204	173	48	69	..	1	1,135	1.64
Congregational	277	286	121	261	122	58	..	2	1,135	1.64
Lutheran	123	244	263	407	32	11	11	5	1,096	1.52
Church of Christ	88	382	63	173	75	17	..	2	800	1.11
Greek Orthodox	240	278	66	60	51	..	1	3	699	0.97
Salvation Army	96	84	91	35	29	25	9	..	369	0.51
Seventh-Day Adventist	89	43	34	9	20	13	..	..	268	0.29
Other Christian	182	227	140	47	119	29	3	..	691	0.96
Hebrew	137	183	11	4	15	1	..	..	351	0.48
Total	23,850	18,302	9,708	5,405	4,150	2,216	117	211	63,959	88.62
Civil Officers	3,795	1,754	390	821	995	384	34	40	8,213	11.38
Grand Total	27,645	20,056	10,098	6,226	5,145	2,600	151	251	72,172	100.00

PROPORTION OF TOTAL.  
(Per Cent.)

Denominational ..	86.27	91.25	96.14	86.81	80.66	85.23	77.48	84.06	88.62
Civil ..	13.73	8.75	3.86	13.19	19.34	14.77	22.52	15.94	11.38

## § 2. Fertility and Reproduction.

Gross and Net Reproduction Rates for Females, p. 636.—In 1955 the gross reproduction rate was 1.594 and the net reproduction rate (based on 1946-48 mortality experience) was 1.513.

Fertility of Marriages, p. 637.—For the year 1955 the number of nuptial confinements per marriage on the basis explained on p. 637 was 2.71. This figure must be read in conjunction with the text on that page.

Age, Duration of Marriage and Issue of Mothers, p. 640.—The average number of children born to mothers in the various age groups in 1955 was :—Under 20 years, 1.22 ; 20-24 years, 1.72 ; 25-29 years, 2.41 ; 30-34 years, 3.09 ; 35-39 years, 3.79 ; 40-44 years, 4.61 ; over 45 years, 5.44. The average for mothers of all ages was 2.50.

A classification of mothers by age group and previous issue is given for 1955 in the following table :—

## NUPTIAL CONFINEMENTS : AGE OF MOTHER AND PREVIOUS ISSUE, AUSTRALIA, 1955.

Previous Issue.	Age of Mother (Years).							Total Married Mothers.
	Under 20.	20-24.	25-29.	30-34.	35-39.	40-44.	45 and over.	
0 .. ..	8,438	28,031	16,410	6,385	2,279	651	34	62,238
1 .. ..	1,807	18,400	22,186	10,253	3,379	821	39	56,885
2 .. ..	201	6,578	14,819	11,074	4,245	952	43	37,912
3 .. ..	13	1,865	6,614	7,017	3,692	1,016	47	20,264
4 .. ..	1	409	2,485	3,479	2,445	801	52	9,672
5 .. ..	..	81	928	1,650	1,403	558	32	4,652
6 .. ..	..	16	305	808	772	402	36	2,339
7 .. ..	..	5	96	409	514	291	25	1,340
8 .. ..	..	1	31	181	288	188	18	707
9 .. ..	..	..	9	71	152	142	18	392
10 and over	..	..	..	50	195	243	28	516
Total Married Mothers ..	10,460	55,386	63,893	41,377	19,364	6,065	372	196,917



Nuptial First Births, p. 642.—The number and proportion of first births in 1955 according to duration of marriage of the mother was :—

### FIRST BIRTHS : DURATION OF MARRIAGE, AUSTRALIA, 1955.

Duration of Marriage.	Number of First Births	Proportion of Total First Births.	Duration of Marriage.	Number of First Births.	Proportion of Total First Births.
		%			%
Under 8 months ..	11,185	17.97	2- 3 years ..	7,672	12.33
8 months ..	2,084	3.35	3- 4 " ..	4,393	7.06
9 " ..	4,543	7.30	4- 5 " ..	2,738	4.40
10 " ..	3,773	6.06	5-10 " ..	4,476	7.19
11 " ..	3,114	5.00	10-15 " ..	682	1.10
			15 years and over ..	139	0.22
Total under 1 year ..	24,697	39.68			
1- 2 years ..	17,439	28.02	Total ..	62,238	100.00

### § 3. Mortality.

Age Distribution, p. 653.—A summary of the ages at death for Australia for the year 1955 is given in the following table :—

### AGE AT DEATH : AUSTRALIA, 1955.

Age at Death.	Males.	Fe- males.	Per- sons.	Age at Death.	Males.	Fe- males.	Per- sons.
Under 1 week ..	1,629	1,183	2,812	Total 5- 9 years..	284	212	496
1 week and under 2 weeks..	122	97	219	" 10-14 " ..	223	135	358
2 weeks " " 3 " ..	64	43	107	" 15-19 " ..	487	156	643
3 " " " 28 days ..	48	33	81	" 20-24 " ..	528	183	711
				" 25-29 " ..	612	221	833
Total under 28 days ..	1,863	1,356	3,219	" 30-34 " ..	683	378	1,061
				" 35-39 " ..	749	503	1,252
28 days and under 3 months	242	140	382	" 40-44 " ..	1,163	790	1,953
3 months and under 6 " ..	250	187	437	" 45-49 " ..	1,748	1,062	2,810
6 " " " 12 " ..	270	264	534	" 50-54 " ..	2,520	1,355	3,875
				" 55-59 " ..	3,438	1,898	5,336
Total under 1 year ..	2,625	1,947	4,572	" 60-64 " ..	4,686	2,874	7,560
				" 65-69 " ..	6,247	3,079	9,326
1 year ..	270	221	491	" 70-74 " ..	6,317	4,763	11,080
2 years ..	175	119	294	" 75-79 " ..	5,459	5,228	10,687
3 " ..	120	90	210	" 80-84 " ..	4,194	4,711	8,905
4 " ..	89	86	175	" 85-89 " ..	2,520	3,311	5,831
				" 90-94 " ..	877	1,314	2,191
Total under 5 years ..	3,279	2,463	5,742	" 95-99 " ..	137	286	423
				" 100 and over..	21	20	41
				Age not stated ..	16	6	22
				Total, All Ages ..	46,188	35,848	82,036

## CHAPTER XIX.—PRIVATE FINANCE.

### A. CURRENCY.

#### § 2. Coinage.

Issues of Australian Coins, p. 714.—The net issues of Australian coins to 30th June, 1956, were:—silver, £34,722,000; bronze, £2,884,000; total, £37,606,000.

#### § 3. Notes.

The Australian Note Issue, p. 716.—The average value of notes in circulation for the year 1955–56 was £376,336,000. This amount was distributed in denominations as follows:—10s., £10,496,000; £1, £70,564,000; £5, £180,565,000; £10, £113,809,000; £20, £4,000; £50, £46,000; £100, £50,000; and £1,000, £802,000. The amount held by the banks was £42,909,000 and by the public, £333,427,000.

### B. BANKING.

#### § 1. Cheque-Paying Banks.

Commonwealth Bank, p. 725.—The average liabilities of the Central Banking Business (including Note Issue Department) of the Commonwealth Bank for the year ended June, 1956 amounted to £906,229,000. Capital and Reserve Funds amounted to £14,945,000; Notes on Issue to £374,096,000; Special Accounts of Trading Banks to £272,841,000; Other Deposits of Trading Banks to £35,630,000; Other Liabilities to £208,717,000.

Particulars of the average assets were as follows:—Gold and Balances held abroad; £298,885,000; Australian Coin, £2,364,000; Cheques and Bills of other Banks, £6,505,000, Government and Other Securities (including Treasury Bills), £515,716,000; Bills Receivable and Remittances in Transit, £3,746,000; and Other Assets, £79,013,000.

Commonwealth Trading Bank, pp. 726 and 729.—The average liabilities in Australia of the Commonwealth Trading Bank for the year ended June, 1956, were £199,670,000. Of this amount Deposits not bearing interest amounted to £135,617,000; Deposits bearing interest to £46,243,000; Balances due to other Banks to £314,000; Other Liabilities to £17,496,000.

The average assets in Australia, £202,071,000, included Cash and Cash Balances £10,213,000; Special Deposit Account with Central Bank, £33,155,000; Balances with other Banks, £1,238,000; Treasury Bills, £6,333,000; Other Australian Public Securities, £38,599,000; Other Securities, £1,824,000; Loans, Advances and Bills Discounted, £103,894,000; Other Assets, £6,815,000.

Private Trading Banks, p. 729.—Average liabilities in Australia of the Private Trading Banks for the year ended June, 1956, were £1,319,044,000. Interminable Deposits or Deposit Stock amounted to £6,000; Deposits not bearing interest to £1,032,332,000; Deposits bearing interest to £263,107,000; Notes in Circulation to £158,000; Balances due to other Banks to £6,528,000; Other Liabilities to £16,913,000.

Average assets in Australia amounted to £1,355,623,000. These comprised Cash and Cash Balances, £66,883,000; Special Accounts with Commonwealth Bank, £238,803,000; Balances with other Banks, £19,672,000; Treasury Bills, £50,015,000; Other Australian Public Securities, £113,977,000; Other Securities, £5,821,000; Loans, Advances and Bills Discounted, £804,392,000; All Other Assets, £56,060,000.

Classification of Advances within Australia—Commonwealth Trading Bank and Private Trading Banks, p. 732.—Advances within Australia at the end of December, 1955 dissected by industries were:—Business advances—Agriculture, Dairying and Grazing, £212,375,000; Manufacturing, £178,955,000; Transport, Storage and Communication, £16,198,000; Finance and Property, £90,348,000; Commerce, £155,532,000; Miscellaneous, £59,437,000; Not elsewhere specified, £10,969,000; Total Business advances, £723,814,000; Advances to Public Authorities, £21,686,000; Personal advances, £147,869,000; Total, £893,369,000.

Clearing House Returns, p. 734.—The average weekly bank clearings in each capital city for the year ended June, 1956 were as follows:—Sydney, £109,975,000; Melbourne, £101,153,000; Brisbane, £22,488,000; Adelaide, £21,021,000; Perth, £14,089,000; Hobart, £3,962,000; Total, £272,688,000.

Debits to Customers' Accounts—All Cheque-paying Banks, p. 734.—The average weekly debits to customers' accounts in each State for the year 1955-56 for all cheque-paying banks (excluding debits to accounts of Australian Governments in capital cities) were as follows:—New South Wales, £200,852,000; Victoria, £185,369,000; Queensland, £56,028,000; South Australia, £39,564,000; Western Australia, £26,918,000; Tasmania, £11,615,000; Australian Capital Territory, £1,025,000; Total, £521,371,000.

## § 2. Savings Banks.

All Savings Banks, pp. 736-737.—The amounts on deposit in the several States at 30th June, 1956 were:—New South Wales, £386,676,000; Victoria, £386,176,000; Queensland, £132,700,000; South Australia, £135,756,000; Western Australia, £57,934,000; Tasmania, £37,211,000; Northern Territory and Australian Capital Territory £4,666,000; Total, £1,141,119,000. Total excess of deposits over withdrawals during 1955-56 was £44,440,000 and interest added was £23,285,000.

The number of operative accounts in the several States at 30th June, 1956 was:—New South Wales, 2,463,000; Victoria, 2,232,000; Queensland, 907,000; South Australia, 787,000; Western Australia, 446,000; Tasmania, 285,000; Northern Territory and Australian Capital Territory, 32,000; Total, 7,152,000.

## D. INSURANCE.

### § 2. Life Assurance.

'Life Assurance, pp. 747-753.—The following is a summary of the life assurance business transacted in Australia during 1955 (figures for 1954 in parentheses) compiled from monthly returns collected from the 20 companies registered under the Life Insurance Act 1945-1953, 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 XIX., which are derived from annual returns and include business of the State Government Offices.

Ordinary Department and Industrial Department, respectively:—New Policies issued in Australia—Number, 289,560 (283,945), 213,124 (234,504); Sum Assured, £324,017,000 (£271,148,000), £32,775,000 (£33,395,000); Policies Matured or Otherwise Discontinued in Australia—Number, 155,820 (146,320), 273,298 (270,167); Sum Assured, £102,206,000 (£86,803,000), £22,756,000 (£21,705,000). Particulars of annuities are excluded.

Premium receipts of Ordinary and Industrial Departments in Australia in 1955 amounted, respectively, to £66,072,000 (£58,696,000) and £14,634,000 (£14,417,000.) Claims, etc., paid amounted to £25,348,000 (£22,627,000) and £9,199,000 (£8,445,000) respectively. Particulars of annuities are included.

## CHAPTER XX.—PUBLIC FINANCE.

### A. COMMONWEALTH FINANCE.

Consolidated Revenue Fund, pp. 764 and 772.—The table below shows details of revenue and expenditure for the years 1954–55 and 1955–56:—

#### COMMONWEALTH CONSOLIDATED REVENUE FUND: REVENUE AND EXPENDITURE.

(£'000.)

Revenue.			Expenditure.		
Item.	Amount.		Item.	Amount.	
	1954–55.	1955–56.		1954–55.	1955–56.
<b>Taxation—</b>			<b>Defence Services</b> ..	153,303	153,071
Customs .. ..	101,254	87,508	War and Repatriation Services ..	120,151	124,524
Excise .. ..	143,149	168,264	Subsidies and Bounties ..	21,539	17,393
Sales Tax .. ..	100,446	110,001	Departmental ..	79,337	88,767
Land Tax .. ..	13	..	National Welfare Fund—		
Income Taxes (a) ..	532,976	573,988	Expenditure on Social		
Pay-roll Tax .. ..	41,455	45,543	Services .. ..	189,319	214,865
Estate Duty .. ..	9,614	10,120			
Entertainments Tax ..	2	1	<b>Business Undertakings—</b>		
Other Taxes .. ..	8,768	8,357	Postmaster - General's		
			Department .. ..	76,246	85,627
<b>Total</b> .. ..	<b>937,613</b>	<b>1,003,780</b>	Broadcasting Services ..	4,871	5,590
			Railways .. ..	3,622	3,721
<b>Business Undertakings—</b>			<b>Total</b> .. ..	<b>84,739</b>	<b>94,938</b>
Postmaster - General's			<b>Territories</b> .. ..	<b>12,971</b>	<b>14,603</b>
Department .. ..	72,825	79,341			
Broadcasting Services ..	3,875	3,897	<b>Capital Works and Services—</b>		
Railways .. ..	3,510	4,583	Defence Services ..	33,003	38,479
<b>Total</b> .. ..	<b>80,210</b>	<b>87,821</b>	Business Undertakings ..	29,212	32,461
			Other .. ..	64,754	69,439
<b>Territories</b> .. ..	<b>2,419</b>	<b>2,240</b>	<b>Total</b> .. ..	<b>126,969</b>	<b>140,379</b>
<b>Other Revenue</b> .. ..	<b>47,199</b>	<b>44,508</b>	<b>Payments to or for States</b>	<b>200,729</b>	<b>220,542</b>
			<b>Other Expenditure</b> ..	<b>8,233</b>	<b>7,663</b>
<b>Grand Total</b> .. ..	<b>1,067,441</b>	<b>1,138,358</b>	<b>Grand Total</b> .. ..	<b>997,290</b>	<b>1,076,745</b>

(a) Includes Wool Deduction.

NOTE.—Minus sign (–) denotes an excess of refunds.

## C. COMMONWEALTH AND STATE FINANCE.

Revenue and Expenditure, p. 803.—The following table shows particulars of Commonwealth and State revenue and expenditure during the year 1954-55 and estimated revenue and expenditure for the year 1955-56.

## COMMONWEALTH AND STATE REVENUE AND EXPENDITURE.(a)

(£'000.)

Government of—	Consolidated Revenue Fund.			Loan Fund— Net Expenditure on Works and Services.
	Revenue.	Expenditure.	Surplus (+) or Deficit (—)	

1954-55.

New South Wales(b)	..	..	193,039	195,187	— 2,148	51,314
Victoria ..	..	..	116,789	115,453	+ 1,336	38,781
Queensland ..	..	..	73,820	73,602	+ 218	18,024
South Australia ..	..	..	48,684	50,918	— 2,234	23,444
Western Australia ..	..	..	46,070	46,554	— 484	14,731
Tasmania ..	..	..	14,495	14,707	— 212	14,251
Six States ..	..	..	492,897	496,421	— 3,524	160,545
Commonwealth ..	..	..	1,067,441	997,290	+ 70,151	33,182
Grand Total—Unadjusted	..	..	1,560,338	1,493,711	+ 66,627	193,727
Adjusted	..	..	1,384,808	1,318,181	+ 66,627	193,727

1955-56: ESTIMATED.

New South Wales(b)	205,600	207,872	— 2,272	(c)
Victoria ..	120,805	122,655	— 1,850	
Queensland ..	77,337	77,319	+ 18	
South Australia ..	55,715	56,463	— 748	
Western Australia ..	49,317	49,771	— 454	
Tasmania ..	16,880	17,455	— 575	
Six States ..	525,654	531,535	— 5,881	..
Commonwealth (d) ..	1,138,340	1,076,722	+ 61,618	44,000
Grand Total—Unadjusted	1,663,994	1,608,257	+ 55,737	(c)
Adjusted	1,475,234	1,419,477	+ 55,737	

(a) To avoid duplication in aggregating particulars for the Commonwealth and States the grand totals exclude payments by the Commonwealth to the States for compensation in respect of uniform taxation, interest on States' debts, special grants and special financial assistance, also pay-roll tax payments by States to the Commonwealth. The totals of revenue and expenditure of the States have also been adjusted.  
 (b) Excludes Main Roads Department, Road Transport and Traffic Fund, and recoups of interest, etc., from undertakings outside the Budget.  
 (c) Not available.  
 (d) Actual receipts and expenditure.

## D. COMMONWEALTH AND STATE PUBLIC DEBT.

## § 3. Commonwealth and State Public Debt Outstanding.

Public Debt and Annual Interest Payable, pp. 807-8.—The following table shows details of the public debt of the Commonwealth and States and the annual interest payable thereon at 30th June, 1956.

**COMMONWEALTH AND STATE PUBLIC DEBT AND ANNUAL INTEREST PAYABLE  
AT 30th JUNE, 1956.**

Particulars.	Maturing in—					Total. £'000.
	Australia. £A'000.	London. £Stg.'000.	New York. £'000.(a)	Switzerland. £'000.(b)	Canada. £'000.(a)	

**DEBT.**

Commonwealth—						
War (1914-18) ..	122,346	7,534	..	..	..	129,880
War (1939-45) ..	1,399,347	5,725	..	..	..	1,405,072
Works and other purposes ..	268,287	48,796	59,199	12,251	3,082	391,615
Total ..	1,789,980	62,055	59,199	12,251	3,082	1,926,567
States ..	1,651,243	288,449	22,336	..	..	1,962,028
Grand Total ..	3,441,223	350,504	81,535	12,251	3,082	3,888,595

**ANNUAL INTEREST PAYABLE.**

Commonwealth ..	51,361	2,084	2,592	475	116	56,628
States ..	60,479	9,303	828	..	..	70,610
Grand Total ..	111,840	11,387	3,420	475	116	127,238

(a) £ payable in dollars which have been arbitrarily converted to £ at the rate of \$4.8665 to £1.  
 (b) Loan raised in Switzerland has been converted to £ at the rate of 1,000 Swiss francs to £102 18. 10d.  
 as provided in Loan Agreement.

**§ 4. Commonwealth Loan Raisings.**

Loans Raised, pp. 815-818.—Particulars of loans raised by the Commonwealth between 1st July, 1954 and 30th June, 1956 are given in the following table.

**COMMONWEALTH LOANS RAISED, 1954-56.(a)**

Month of Raising.	Where Raised.	Amount Invited.	Amount Sub-scribed.	Rate of Interest. (b)	Year of Maturity.	Purpose.
		£'000.	£'000.	%		
1954-55—						
August, 1954 ..	Australia	50,000	{ 7,866 43,593	{ 3 4½	{ 1957 1967	{ State purposes, £46,505,000; Conversion, £4,959,000.
November, 1954 ..	Australia	125,000	{ 17,355 79,764	{ 3 4½	{ 1957 1968	{ State purposes, £37,159,000; Conversion, £59,960,000.
December, 1954 ..	New York	5,137	5,137	3½	1969	Conversion.
March, 1955 ..	Australia	40,000	{ 12,526 31,570	{ 3 4½	{ 1957 1968	{ State purposes, £41,095,000.
“ “ ..	Australia	198,942	{ 64,652 124,222	{ 3 4½	{ 1957 1968	{ Conversion, £188,874,000.
June, 1955 ..	Australia	48,000	{ 10,000 38,000	{ 3 4½	{ 1957 1968	{ War (1939-45) and Repatriation Ser- vices, £3,452,000; Advances for housing, £29,201,000; State purposes, £15,347,000.

For footnotes see next page.

## COMMONWEALTH LOANS RAISED, 1954-56(a)—continued.

Month of Raising.	Where Raised.	Amount Invited.	Amount Subscribed.	Rate of Interest. (b)	Year of Maturity.	Purpose.	
		£'000.	£'000.	%			
1955-56—							
August, 1955	..	Australia	35,000	{ 16,051 16,408 7,173 3,082	{ 3 4½ 4½ 4	{ 1956 1965 1970 1970	{ State purposes, £39,627,000.
November, 1955	..	Canada	3,082	{ 8,519 14,639 4,892	{ 3 4½ 4½	{ 1956 1965 1970	{ State purposes, £28,032,000.
November, 1955	..	Australia	30,000	{ 32,297 41,815 39,589	{ 3 4½ 4½	{ 1956 1965 1970	{ Conversion.
November, 1955	..	Australia	129,488	{ 12,907 20,127	{ 3½ 5	{ 1957 1963	{ State purposes, £33,000,000. Conversion. £6,795,000.
May, 1956 ..	..	Australia	30,000	{ 76,000 17,205	{ 3½ 5	{ 1957 1963	{ War (1939-45) and Repatriation Ser- vices, £8,354,000; Advances for Housing, £32,805,000; State purposes £48,848,000.
June, 1956 ..	..	Australia	100,000	{ 76,000 17,205	{ 3½ 5	{ 1957 1963	{ War (1939-45) and Repatriation Ser- vices, £8,354,000; Advances for Housing, £32,805,000; State purposes £48,848,000.

(a) During 1954-55, and 1955-56 £2,521,000 and 43,383,000 respectively were drawn against loans made available by the International Bank for Reconstruction and Development. In 1954-55 a loan of 60,000,000 Swiss francs was raised in Switzerland. (b) Australian loans bearing interest at 4½ per cent. were issued at par and those at 3 per cent. were issued at prices ranging from £99 15s. to £98 10s. London loans raised in 1954-55 were issued at par. The New York loan was issued at £99, and the Canadian loan at £98 5s.

## CHAPTER XXI.—AGRICULTURAL PRODUCTION.

## § 3. Distribution, Production and Value of Crops.

Principal Crops, pp. 740-3.—The following table shows the area, production and yield per acre of wheat in each State for 1954-55 and 1955-56.

## WHEAT FOR GRAIN: AREA, PRODUCTION AND YIELD PER ACRE.

Season.	N.S.W.	Vic.	Q'land.	S. Aust.	W. Aust.	Tas.	A.C.T.	Aust.
AREA ('000 ACRES).								
1954-55	..	2,919	2,390	688	1,689	2,979	7	10,673
1955-56(a)	..	2,730	2,141	582	1,609	2,890	6	9,959
PRODUCTION ('000 BUSHELS).								
1954-55	..	37,718	48,484	16,478	31,463	34,300	158	168,606
1955-56(a)	..	37,000	41,083	14,922	28,892	33,250	129	153,295
AVERAGE YIELD PER ACRE (BUSHELS).								
1954-55	..	12.9	20.3	24.0	18.6	11.5	21.7	15.4
1955-56(a)	..	20.9	19.2	25.7	18.0	18.4	20.7	19.6

(a) Preliminary, subject to revision.

The area, production and yield per acre of other principal crops in Australia during 1954-55 are set out hereunder :—

Area (acres) : Oats, 2,574,000 ; Maize, 170,000 ; Hay, 1,984,000 ; Sugar-cane, 386,000 ; Total Crops, 21,695,000.

Production : Oats, 32,834,000 bushels ; Maize, 5,076,000 bushels ; Hay, 2,856,000 tons ; Sugar-cane crushed, 10,087,000 tons ; Cane sugar, 1,328,000 tons.

Yield per Acre : Oats, 12.8 bushels ; Maize, 29.9 bushels ; Hay, 1.4 tons ; Sugar-cane, 27.0 tons ; Cane-sugar, 3.6 tons. (Sugar-cane and cane sugar yields are per acre of productive crop.)

## CHAPTER XXII.—PASTORAL PRODUCTION.

Livestock, Meat and Wool Produced.—The following table shows, for each State, the numbers of live stock at 31st March, 1955, and 1956, and the amounts of meat and wool produced during 1954-55 and 1955-56 :—

### LIVESTOCK, MEAT AND WOOL PRODUCED.

Period.	N.S.W.	Vic.	Q'land.	S. Aust.	W. Aust.	Tas.	N.T.	A.C.T.	Aust.
HORSES ('000.), p. 903.									
1955 ..	258	132	267	49	47	16	(a) 33	1	803
1956 (b) ..	247	119	261	44	46	15	(a) 37	1	770
CATTLE ('000.), p. 904.									
1955 ..	3,461	2,456	7,238	524	861	319	(a) 969	8	15,836
1956 (b) ..	3,679	2,616	7,330	566	897	332	(a) 1,028	9	16,457
SHEEP ('000.), p. 909.									
1955 ..	59,200	22,330	20,222	12,817	13,411	2,595	(a) 29	245	130,849
1956 (b) ..	62,988	23,343	22,116	13,585	14,128	2,673	(a) 33	258	139,124
PIGS ('000), p. 945.									
1955 ..	375	264	407	85	107	58	(a) 1	..	1,297
1956 (b) ..	343	227	373	73	99	50	(a) 1	..	1,166
BEEF, INCLUDING VEAL ('000 TONS BONE-IN WEIGHT), p. 906.									
1954-55 ..	215	143	272	34	37	14	3	2	720
1955-56 (b) ..	225	137	291	38	38	16	3	2	750
MUTTON AND LAMB ('000 TONS BONE-IN WEIGHT), p. 910.									
1954-55 ..	122	156	19	50	28	12	..	1	388
1955-56 (b) ..	122	141	22	45	33	12	..	1	376
TOTAL MEAT (INCLUDING PIG-MEATS) IN TERMS OF FRESH ('000 TONS BONE-IN WEIGHT)									
1954-55 ..	371	320	314	92	74	29	4	3	1,207
1955-56 (b) ..	377	300	335	91	79	31	3	3	1,219
WOOL (AS IN THE GREASE) PRODUCED ('000 lb.), p. 915.									
Season—1954-55	540,977	253,364	176,548	155,761	129,667	23,797	311	2,232	1,282,657

(a) For year ended previous December.

(b) Preliminary, subject to revision.



## CHAPTER XXIII.—FARMYARD, DAIRY AND BEE PRODUCTS.

Principal Farmyard, Dairy and Bee Products.—Particulars of the total production of these products in each State during 1954-55 and 1955-56 are shown below :—

## PRODUCTION OF PRINCIPAL FARMYARD, DAIRY AND BEE PRODUCTS.

Season.	N.S.W.	Vic.	Q'land.	S. Aust.	W. Aust.	Tas.	A.C.T.	Aust.
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## TOTAL WHOLE MILK PRODUCED ('000 GALS.), p. 938.

1954-55 .. ..	315,719	536,835	275,605	90,699	54,194	52,022	725	1,325,799
1955-56 (a) .. ..	335,234	578,493	282,723	91,109	55,578	60,959	913	1,405,009

## BUTTER(b) (TONS), p. 939.

1954-55 .. ..	40,128	80,182	46,223	8,704	7,266	8,571	4	191,078
1955-56 (a) .. ..	42,325	91,421	48,459	8,656	7,542	10,183	4	208,590

## CHEESE(b) (TONS), p. 940.

1954-55 .. ..	2,508	20,302	7,921	13,101	1,086	275	..	45,193
1955-56 (a) .. ..	3,391	13,955	7,497	12,636	847	259	..	38,585

## PORK (TONS, BONE-IN WEIGHT), p. 946.

1954-55 .. ..	17,026	11,078	8,948	3,521	4,362	2,027	192	(d) 47,219
1955-56 (a) .. ..	14,629	11,047	7,708	3,452	3,481	2,215	204	(e) 42,770

## BACON AND HAM (TONS, CURED WEIGHT), p. 947.

1954-55 .. ..	11,769	8,074	10,807	3,378	3,316	1,027	..	38,371
1955-56 (a) .. ..	11,426	7,774	10,217	3,586	3,236	1,033	..	37,272

## SHELL EGGS : PRODUCTION(f) RECORDED BY EGG BOARDS ('000 DOZ.), p. 948.

1954-55 .. ..	55,057	26,377	8,312	12,359	8,909	889	..	111,903
1955-56 .. ..	51,635	24,985	7,848	11,820	7,687	943	..	104,918

## HONEY ('000 lb.), p. 951.

1954-55 .. ..	16,411	8,834	1,732	3,671	2,721	243	20	(g) 33,633
1955-56(a) .. ..	15,707	7,010	2,329	(h)	4,482	235	18	(h)

(a) Preliminary, subject to revision. (b) Includes an estimate of farm production. (c) Includes Northern Territory, 69 tons. (d) Includes Northern Territory, 65 tons. (e) Includes Northern Territory, 68 tons. (f) Receipts from consignors and sales by producer agents. (g) Includes Northern Territory, 1,180 lb. (h) Not yet available.

## CHAPTER XXVI.—MINERAL INDUSTRY.

## § 1. The Mineral Wealth of Australia.

Quantity and Value of Production, pp. 985-6.—In the table hereunder particulars are given of the quantity and value of production in Australia of the principal minerals during the year 1955 :—

## MINERAL PRODUCTION : QUANTITIES AND VALUES, AUSTRALIA.

## METALLIC MINERALS.

Year.	Principal Contents of Metallic Minerals Produced.								Total Value of Output of Metal Mining.
	Copper.	Gold.	Iron.	Lead.	Silver.	Tin.	Zinc.	Sulphur. (a)	
	Tons.	Fine oz.	Tons.	Tons.	'000 fine oz.	Tons.	Tons.	Tons.	
1955 (b) ..	45,496	1,049,039	2,304,165	295,944	14,555	2,017	256,564	267,183	84,374

## NON-METALLIC AND FUEL MINERALS.

Year.	Quantities Produced.						Total Value of Output of Non-metal and Fuel Mining.
	Coal.		Gypsum.	Limestone. (d)	Mica.	Salt.	
	Black.	Brown.					
	'000 tons.	'000 tons.	Tons.	Tons.	lb.	Tons.	£'000.
1955(b) .. ..	19,275	10,112	470,014	3,997,696	76,809	370,000	65,742

(a) Includes sulphur content of spent oxide roasted. (b) Subject to revision. (c) Estimated  
(d) Excludes limestone used as a construction material.

Industrial Census of the Mining and Quarrying Industry, 1954, pp. 989.—A summary of the statistics collected for 1954 is shown in the following table.

## MINING AND QUARRYING : SUMMARY OF OPERATIONS, AUSTRALIA, 1954.

Particulars	Unit.	Metal Mining.	Fuel Mining.	Non-Metal (excluding Fuel) Mining. (a)	Total All Mining.	Construction Material Quarrying. (b)	Total All Mining and Quarrying.
Mines and Quarries ..	No.	818	306	683	1,807	687	2,494
Persons Employed (c) ..	"	21,366	28,268	2,858	52,492	4,121	56,613
Salaries and Wages Paid (d)(e) ..	£'000.	23,308	27,545	1,693	52,546	2,045	54,591
Value of Output (f) ..	"	71,155	58,829	7,015	136,999	12,383	149,382
Total Fuel, Materials, etc., Used ..	"	17,297	10,642	1,422	29,361	1,955	31,316
Value of Production (g) ..	"	53,858	48,187	5,593	107,638	10,428	118,066
Value of Fixed Assets (d)(h) ..	"	44,030	41,327	4,062	89,419	4,201	93,620

(a) Incomplete for some industries outside the normal administrative control of State Mines Departments (e.g., clays and salt). (b) Incomplete in some States. (c) Average number employed (including working proprietors) during whole year. (d) Excludes mines and quarries employing less than four persons (less than five persons in Western Australia). (e) Excludes drawings by working proprietors; the amounts are net after deducting value of explosives sold to employees. (f) Value at mine or quarry. (g) Value of output less cost of power, fuel and light and other materials and stores used; depreciation and maintenance costs have not been deducted. (h) Depreciated value (i.e., book value less any depreciation reserves) at end of year.

**§ 2. Gold, § 3. Silver, Lead, Zinc, § 4. Copper, § 5. Tin, pp. 990-1001.**

The smelter and refinery production of the principal metals in Australia during the year 1955 is shown below.

**SMELTER AND REFINERY PRODUCTION OF PRINCIPAL METALS, AUSTRALIA.**

Year.	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)
1955(b) .. ..	'000 fine oz. 1,055	'000 fine oz. 7,818	Tons. 187,134	Tons. 37,392	Tons. 101,090	Tons. 28,148	Tons. 2,004

(a) Source: Bureau of Mineral Resources.

(b) Subject to revision.

## LIST OF SPECIAL ARTICLES AND MISCELLANEOUS MATTER CONTAINED IN PREVIOUS ISSUES.

This list refers to special articles and other more or less important miscellaneous matter which have appeared in previous issues of the Official Year Book, but which are not included, or are included in abbreviated form only, in the present issue. The list is, in the main, restricted to articles, etc., to which references are not given in the various chapters of this issue.

The figures below indicate, respectively, the number and page of the Official Year Book to which reference is made. In cases where matter was published in more than one previous issue, the volume and page for the last issue containing such matter are given. For possible revisions, however, issues immediately following the one referred to should also be consulted.

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NOTE.—This index is preceded by a list of special articles, etc., in previous issues of the Official Year Book. A list of maps and graphs contained in this issue will be found on pp. ix and x. 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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Census, 1954—					
Bulletins—					
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No. 2: Population and Dwellings in Local Government Areas .. ..	"	Feb., 1955	2 6	3 0	3 2
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Part I.: Analysis of Population in Local Government Areas, etc. ..	"	June, 1955— July, 1956	2 6	3 0 to 3 4	3 2 to 4 0
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|| List of publications in respect of the Censuses of 1911, 1921, 1933 and 1947 may be obtained on application to the Commonwealth Statistician.——¶ Available from Commonwealth Statistician only.——†† Prepared jointly by the Bureau of Mineral Resources and the Commonwealth Bureau of Census and Statistics. Available from the Department of National Development in each capital city.